

Proceedings of Nobel Symposium 92

OF THOUGHTS

The Relation Between Language and Mind

AND WORDS

Editor

Sture Allén

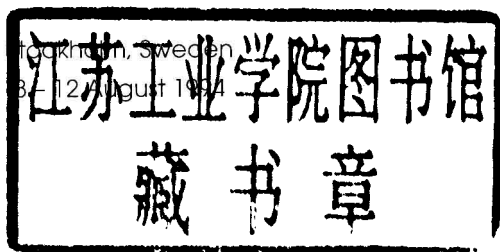
Imperial College Press

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Romeo:

Peace, peace, Mercutio, peace!
Thou talk'st of nothing.

Mercutio:

True. I talk of dreams;
Which are the children of an idle brain,
Begot of nothing but vain fantasy.

Shakespeare

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OF THOUGHTS AND WORDS

Proceedings of Nobel Symposium 92:

The Relation Between Language and Mind

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PREFACE

This book contains the contributions to the Nobel Symposium on the Relation Between Language and Mind, held in Lidingö outside Stockholm at the IBM Nordic Education Center on August 8–12, 1994. Its title *Of Thoughts and Words* was suggested by Joseph Brodsky in the general discussion at the Symposium and promptly adopted.

Nobel Symposia are arranged in accordance with the intentions of Alfred Nobel, the founder of the Nobel Prizes, and sponsored by the Nobel Foundation through its Nobel Symposium Fund. This Symposium was realized under the auspices of the Swedish Academy, founded in 1786 by King Gustav III in order to promote the Swedish language and Swedish literature. Some hundred years ago our Academy, which has eighteen members, accepted the wider task of selecting the recipients of the Nobel Prize for Literature.

This is the third Nobel Symposium supported by the Swedish Academy that has been carried out at the Education Center. The two previous meetings were the Nobel Symposium on Text Processing in 1980 (Proceedings available from Almqvist & Wiksell International, Stockholm) and the Nobel Symposium on Possible Worlds in 1986 (Proceedings available from Walter de Gruyter, Berlin).

In this context, thanks are due to the Nobel Foundation and its Nobel Symposium Committee as well as to several helpful colleagues and assistants: Elisabeth Ahlberg and Monica Holmgren (secretariat), the staff of the Education Center, Bo Svensén (sub-editing and manuscript co-ordination), Lidingö Ordbehandling (text encoding), Linda Schenck (English language editing) and last but not least the empathetic participants in the Symposium.

June 1995

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OPENING ADDRESS

STURE ALLÉN

Dear Colleagues and Friends,

A participant in a holiday course for learners of Swedish was out one evening and came back fairly late. He then found he had forgotten his key and couldn't enter his room. He went to the teacher-in-charge and said, in his rudimentary Swedish: "Jag ute, nyckel inne" ("I out, key in"). This fine effort of a beginner's mind was immediately understood and there was a happy end. I intend to come back to this utterance in a few minutes.

This Nobel Symposium is about a relation, that is what one thing, Language, has to do with another, Mind. What kind of something are they? In what way does the one relate to the other? What kind of connection or correspondence prevails between them? And, excitingly enough, what does one tell us or at least indicate about the other? How is it possible to suppress less relevant information and survey what is more relevant? Furthermore, to what answers can electronic computing contribute?

It is a great privilege and pleasure for me to greet this distinguished group of experts in many fields on this occasion. I do this on behalf of the Swedish Academy, the responsible institution, and with thanks to the Nobel Foundation, our sponsor, as well as its Nobel Symposium Committee.

The concept of mind, as well as the concept of language, was characterized as elusive in the invitation to this Symposium. It would be a considerable achievement of our interdisciplinary gathering if we could contribute to some reduction of this elusiveness, which is what our preprints promise. Among the many facets touched upon there are the questions of creativity, inspiration, linguistic ability, psychic space, soul, consciousness, subconscious processing, system-and-process, modularity, spirit, self-confidence, understanding, intelligence, skills, memory, thinking, dreaming, lying, mind-reading, cognition, inner environment, neural Darwinism, interaction between neurons, practiced and novel conditions, timing and free will, information and ex-formation, semantic transparency, ambiguity, deformation, gestalts, benign instability, etc. In any case, a remaining paramount riddle is the so-called binding problem: how does a unified perception come about? A lexical approximation of *mind* as 'seat of consciousness,

thought, volition, and feeling' is too simplistic and carries the dangerous association of *seat* meaning 'site or location'.

The I-out-key-in-episode is another illustration of what I consider the central component in language ability: the lexicon, words. In fact, not only separate words but all sorts of more or less lexicalized strings of words, collocations, or blocks as I call them. In their capacity of lexical units, blocks are of course part of the paradigmatic system, but since they contain sequences of words they have a syntagmatic quality at the same time. One out of two or three breathless experiences in my life as a linguist was when I saw the immense impact of these connections: set and half-set phrases, continuous and discontinuous strings, complete and open-ended strings, nominal and verbal and prepositional phrases, full-fledged clauses, and entire sentences – and all this in hundreds of thousands of items. I marvelled at the capacity of cerebrum and the versatility of mind. The following is a microscopic sample from English, centered around *time*: to stand the test of time, to gain time, the good old times, time immemorial, in time, time and again, there is a time for everything, she is near her time, now is the time to press your point, it is time I was going. No wonder I declared myself a collocationist.

This happened to me about thirty years ago in the early years of a comprehensive project in corpus linguistics, featuring the ineluctable conjunction between authentic text, linguistic theory, method, and technics. That is also where my real interest in the theme of this meeting was born.

In this vein, the inquiry about the key could perhaps be worded in the following way: "Excuse me for disturbing you. I was out this evening and my preparations left a lot to be desired. I must confess I forgot to bring my key. Could you please let me in?" This is of course nothing but a design of blocks. It seems to me that, as a matter of principle, they have a bearing on general linguistics: an explicit theory has to cope with this incredibly varied category as opposed to the discrete parts of language, often heavily emphasized; also notice that time is a critical factor in cerebral language processing making the large number of choices presupposed in abstract models less realistic than the handling of blocks. On psycholinguistics: a psychologically interesting model of perception and generation should incorporate the large amount of blocks; it is plausible to assume that they are treated as elements in their entirety. On neurology: how are they stored and, not least, how are they accessed; it seems there is a function overriding the ordinary storing function. On computational linguistics and artificial intelligence: if you are unable to take care of them efficiently, even the most sophisticated morphological or syntactic analysis or synthesis is of limited significance, relatively speaking. And of course they have a bearing on literary enterprises, one of whose endeavours is to combat them.

The mass of blocks also plays an important part with respect to such weighty categories in language use as style and fluency. This is not to say that quantities or priorities, although carrying great consequence, are part and parcel of the language system as such. I am convinced they are not. But if you don't master the blocks, you will never approach anything like fluency in a given language.

In addition, the key-episode gives us a neat picture of one of the fundamental aspects of mind: the possibility of having an intention and acting in accordance with it. This is, by the way, where the computer fails most obviously. Actually, intention and attention combined will take us a long way.

The use of language for artistic purposes is another characteristic feature of the human mind that I think ought to be stressed. The extremely interesting question of whether a piece of literary art is wholly or partly the outcome of pure chance is a special problem here.

In this connection, why not hold up wit as an essential aspect of mind? By way of example, let me quote a compatriot of mine who made the following observation (rendered in English):

"There are probably intelligent creatures on other planets.
Otherwise, we should have had them here by now."

Or listen to a Dane trying to draw attention more widely to Danish literature:

"Something is written in the state of Denmark."

Let me add that, to my mind, one of the finest qualities encountered in this world is the deep insight inherent in humour, real humour.

In the true spirit of Nobel Symposia we shall try to come to grips with the questions posed from a variety of viewpoints. I am happy to be able to say that we have got a wealth of stimulating thought&debate-stuff. The headings of the sessions are of course not sacrosanct. You can think of them as a smorgasboard with at least five dishes, alternatively designated *Litterae*, *Lingua*, *Psyche*, *Cerebrum*, and *Instrumentum Computatorium*.

In sum: welcome and let us get started – if you don't mind!

Session 1:

Literature

A CAT'S MEOW

JOSEPH BRODSKY

I

I dearly wish I could begin this monologue from afar, or at least preface it with a bunch of disclaimers. However, this dog's ability to learn new tricks is inferior to its tendency to forget old ones. So let me try to cut straight to the bone.

Many things have changed on this dog's watch; but I believe that a study of phenomena is still valid and of interest only as long as it is being conducted from without. The view from within is inevitably distorted and of parochial consequence, its claims to documentary status notwithstanding. A good example is madness: the view of the physician is of greater import than that of his patient.

Theoretically, the same should apply to "creativity"; except that the nature of this phenomenon rules out the possibility of a vantage point for studying it. Here, the very process of observation renders the observer, to put it mildly, inferior to the phenomenon he observes, whether he is positioned without or within the phenomenon. In a manner of speaking, the report of the physician here is as invalid as the patient's own ravings.

The lesser commenting upon the greater has of course a certain humbling appeal; and at our end of the galaxy we are quite accustomed to this sort of procedure. I hope therefore that my reluctance to objectify creativity bespeaks not a lack of humility on my part but precisely the absence of a vantage point enabling me to pronounce anything of value on the subject.

I don't qualify as a physician; as a patient I am too much of a basket case to be taken seriously. Besides, I detest the very term - creativity - and some of this detestation rubs off on the phenomenon this term appears to denote. Even if I were able to shut down the voice of my senses revolting against it, my utterance on the subject would amount at best to a cat's attempt to catch its own tail. An absorbing endeavor, to be sure; but then perhaps I should be meowing.

Given the solipsistic nature of any human inquiry, that would be as honest a response to the notion of creativity as you can get. Seen from the outside, creativity is the object of fascination or envy; seen from within, it is an unending exercise in uncertainty and a tremendous school for insecurity. In either case, a meow or some other incoherent

sound is the most adequate response whenever the notion of creativity is invoked.

Let me therefore get rid of the panting or bated breath that accompanies this term, which is to say let me get rid of the term altogether. Webster's Collegiate Dictionary defines creativity as the ability to create; so let me stick to this definition. This way perhaps at least one of us will know what he is talking about, although not entirely.

The trouble begins with "create", which is, I believe, an exalted version of the verb "to make", and the same good old Webster's offers us "to bring into existence". The exaltation here has to do presumably with our ability to distinguish between familiar and unprecedented results of one's making. The familiar, thus, is *made*; the unfamiliar, or unprecedented, is *created*.

Now, no honest craftsman or maker knows in the process of working whether he is making or creating. He may be overtaken with this or that incoherent emotion at a certain stage of the process, he may even have an inkling that he manufactures something qualitatively new or unique, but the first, the second, and the last reality for him is the work itself, the very process of working. The process takes precedence over its result if only because the latter is impossible without the former.

The emergence of something qualitatively new is a matter of chance. Hence there is no visual distinction between a maker and a beholder, between an artist and his public. At a reception, the latter may stand out in the crowd at best by virtue of his longer hair or sartorial extravagance, but nowadays the reverse may be true as well. In any case, at the completion of the work, a maker may mingle with beholders and even assume their perspective on his work and employ their vocabulary. It is unlikely, however, that upon returning to his study, studio, or, for that matter, lab, he would attempt to rechristen his tools.

One says "I make" rather than "I create". This choice of verb reflects not only humility but the distinction between the guild and the market, for the distinction between making and creating can only be made retroactively, by the beholder. Beholders are essentially consumers, and that's why a sculptor seldom buys another sculptor's works. Any discourse on creativity, no matter how analytical it may turn out to be, is therefore a market discourse. One artist's recognition of another's genius is essentially a recognition of the power of chance and perhaps of the other's industry in producing occasions for chance to invade.

This, I hope, takes care of the "make" part of Webster's definition. Let's address the "ability" part. The notion of ability comes from experience. Theoretically, the greater one's experience, the more secure one may feel in one's ability. In reality (in art and, I would think, science) experience and the accompanying expertise are the maker's worst enemies.

The more successful you've been, the more uncertain you are, when embarking on a new project, of the result. Say, the greater the masterpiece you just produced, the smaller the likelihood of your repeating the feat tomorrow. In other words, the more questionable your ability becomes. The very notion of ability acquires in your mind a permanent question mark and gradually one begins to regard one's work as a non-stop effort to erase that mark. This is especially true among those engaged in literature, particularly in poetry, which, unlike other arts, is bound to make detectable sense.

But even adorned with an exclamation mark, ability is not guaranteed to spawn masterpieces each time it is applied. We all know plenty of uniquely endowed artists and scientists producing little of consequence. Dry spells, writers' blocks, and fallow stretches are the companions of practically every known genius, all lamenting about them bitterly, as do much lesser lights. Often a gallery signs up an artist or an institution a scientist only to learn how slim the pickings may get.

In other words, ability is not reducible either to skill or an individual's energy, much less the congeniality of one's surroundings, one's financial predicament, or one's milieu. Had it been, we would have had by now a far greater volume of masterpieces on our hands than is the case. In short, the ratio of those engaged throughout just this century in art and science to the appreciable results is such that one gets tempted to equate ability with chance.

Well, it looks like chance inhabits both parts of Webster's definition of creativity rather cozily. It is so much so that it occurs to me that perhaps the term creativity denotes not so much an aspect of human agency as the property of the material to which this agency now and then is applied; that perhaps the ugliness of the term is after all justified, since it bespeaks the pliable or malleable aspects of inanimate matter. Perhaps the One Who dealt with that matter first is not called the Creator for nothing. Hence, creativity.

Considering Webster's definition, a qualifier is perhaps in order. Denoting a certain unidentified resistance, "the ability to make" perhaps should be accompanied by a sobering "war on chance". A good question is of course what comes first: the material or its maker? For all our professed humility, at our end of the galaxy the answer is obvious and resounds with hubris. The other – and a much better question – is whose chance are we talking about here, the maker's or the material's?

Neither hubris nor humility will be of much help here. Perhaps in trying to answer this question, we have to jettison the notion of virtue altogether. But then we always have been tempted to do just that. So let's seize this opportunity: not for the sake of scientific inquiry so much as for Webster's reputation.

But I am afraid we need a footnote.

II

Because human beings are finite, their system of causality is linear, which is to say, self-referential. The same goes for their notion of chance, since chance is not cause-free; it is but a moment of interference by another system of causality, however aberrant its pattern, in our own. The very existence of the term, not to mention a variety of epithets accompanying it (for instance, "blind"), shows that our concepts of order and chance are both essentially anthropomorphic.

Had the area of human inquiry been limited to the animal kingdom, that would be fine. However, it's manifestly not so; it's much larger and, on top of that, a human being insists on knowing the truth. The notion of truth, in its own right, is also anthropomorphic and presupposes, on the part of the inquiry's subject – i. e., the world –, a withholding of the story, if not outright deception.

Hence a variety of scientific disciplines probing the universe in the most minute manner, the intensity of which – especially the language – could be likened to torture. In any case, if the truth about things has not been attained thus far, we should put this down to the world's extraordinary resilience, rather than to a lack of effort. The other explanation, of course, is truth's absence; an absence we don't accept because of its drastic consequences for our ethics.

Ethics – or, to put it less grandly but perhaps more pointedly, pure and simple eschatology – as the vehicle of science? Perhaps; at any rate, what human inquiry indeed boils down to is the animate interrogating the inanimate. Small wonder that the results are inconclusive: smaller wonder still that the methods and the language we employ in the process more and more resemble the matter at hand itself.

Ideally, perhaps, the animate and the inanimate should swap places. That, of course, would be to the liking of the dispassionate scientist, who places such a premium on objectivity. Alas, this is not likely to happen, as the inanimate doesn't seem to show any interest in the animate; the world is not interested in its humans. Unless, of course, we ascribe to the world divine provenance, which, for several millennia now, we've failed to demonstrate.

If the truth about things indeed exists, then, given our status as the world's latecomers, that truth is bound to be unhuman. It is bound to cancel out our notions of causality, aberrant or not, as well as those of chance. The same applies to our surmises as to the world's provenance, be that divine, molecular, or both: the viability of a concept depends on the viability of its carriers.

Which is to say that our inquiry is essentially a highly solipsistic endeavor. For the only opportunity available for the animate to swap places with the inanimate is the former's physical end: when man joins, as it were, matter.

Still, one can stretch matters somewhat by imagining that it is not the inanimate which is under the animate's investigation, but the

other way around. This rings a certain metaphysical bell, and not so faintly. Of course, it's difficult to build either science or a religion on such a foundation. Still, the possibility shouldn't be ruled out, if only because this option allows our notion of causality to survive intact. Not to mention that of chance.

What sort of interest could the infinite take in the finite? To see how the latter might modify its ethics? But ethics as such contains its opposite. To tax human eschatology further? But the results will be quite predictable. Why would the infinite keep an eye on the finite?

Perhaps out of the infinite's nostalgia for its own finite past, if it ever had one? In order to see how the poor old finite is still faring against overwhelming odds? How close the finite may come to comprehending, with its microscopes, telescopes, and all, with its observatories' and churches' domes, those odds' enormity?

And what would the infinite's response be, should the finite prove itself capable of revealing the infinite's secrets? What course of action might the infinite take, given that its repertoire is limited to the choice between being punitive or benevolent? And since benevolence is something we are less familiar with, what form might it assume?

If it is, let's say, some version of life eternal, a Paradise, a Utopia were nothing ever ends, what should be done, for instance, about those who never make it there? And if it were possible for us to resurrect them, what would happen to our notion of causality, not to mention chance? Or maybe the opportunity to resurrect them, an opportunity for the living to meet the dead, is what chance is all about? And isn't the finite's chance to become infinite synonymous with the animate becoming inanimate? Is that a promotion?

Or perhaps the inanimate only appears to be so to the eye of the finite? And if there is indeed no difference, save a few secrets thus far not revealed, where, once they get revealed, are we all to dwell? Would we be able to shift from the infinite to the finite and back, would we have a choice? What would the means of transportation between the two be? An injection, perhaps? And once we lose the distinction between the finite and the infinite, would we care where we are? Wouldn't that be, to say the least, the end of science, not to mention religion?

Have you been influenced by Wittgenstein?, asks the reader.

Acknowledging the solipsistic nature of human inquiry shouldn't, of course, result in prohibitive legislation limiting that inquiry's scope. It won't work: no law based on the recognition of human shortcomings does. Furthermore, every legislator, especially an unacknowledged one, should be, in turn, aware all the time of the equally solipsistic nature of the very law he is trying to push.

Still, it would be both prudent and fruitful to admit that all our conclusions about the world outside, including those about its provenance, are but reflections, or better yet articulations of our physical selves.