Context as Other Minds

The Pragmatics of Sociality, Cognition and Communication

T. Givón

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Preface

In the forty-odd years since the publication of Austin's *How to Do Things with Words* (1962), pragmatics has proven itself to be in equal measures indispensable and frustrating. Indispensable because almost every facet of our construction of reality, most conspicuously in matters of culture, sociality and communication, turns out to hinge upon some contextual pragmatics. Frustrating because almost every encounter one has with context opens up to the slippery slope of relativity, thus sooner or later to the triumphant crowing of the absolutists, who insist that because nothing is 100 percent context-free, everything is 100 percent context-dependent; and that a systematic, analytic investigation of mind, culture and language is therefore hopeless, indeed misguided.

One task pragmatics is yet to measure up to, it seems, is how to account, in a principled way, for the organism's amazing propensity for stabilizing its frames, so that the appearance — or illusion — of firmament, of a stable reality, always emerges in spite of the ubiquity of contextual flux. This is indeed an evolutionary issue of the highest order, sitting as it is at the very crux of adaptation and survival.

The non-objective nature of "context", the fact that the frame around the picture is construed for the occasion through a ubiquitous if still mysterious judgement of "relevance", has been conceded by pragmatists from Lao Tse to Aristotle to Kant to, more recently, Sperber and Wilson (1986). But affirming that "context is a mental construct" only opens up a vast research agenda — how to describe the organism's adaptively-successful framing of reality. That is, how to account for the fact that those organisms who select particular frames thrive, but those who insist on viewing reality via other frames — in principle just as "legitimate" or "valid" — perish. To this day, the challenge of elaborating the neuro-cognitive — thus ultimately evolutionary — mechanisms via which contextual framing exerts its ubiquitous control over what is, to paraphrase Kant, "real to us", remains largely unanswered.

Almost from the moment my *Mind, Code and Context* (1989) came out, indeed even before, I knew — to my sorrow — that the book fell woefully short of my own expectations. Something was missing, something vital and pivotal, whose absence made it impossible to generalize from the pragmatics of individual cognition to the pragmatics of sociality and communication. The bridging principle was not there, the one that would connect first-order framing of 'external' reality, second-order framing of one's own mind, and third-order framing of other minds. That bridge, I believe, can be found in the work of the last two and a half decades — beginning with Premack and Woodruff (1978) — on so-called "Theories of Mind". With the bridge in place, the pragmatics of sociality and communication can now be re-formulated in terms of one's mental models of the mind of one's interlocutor or collaborator, a reformulation that is surely implicit in Grice's "maxims" (1968).

What I have attempted to do here is re-position pragmatics, and most conspicuously the pragmatics of culture, sociality, and communication, in a neuro-cognitive, bio-adaptive, evolutionary context. This is indeed a tall order, and the book is thus, inevitably, only an opening sketch. It begins with a compressed intellectual history of pragmatics (ch. 1). The next two chapters deal with the construction of generic — lexical-semantic — mental categories, primarily thus with 1st-order framing of "external" reality. Chapter 2 treats the formation of generic mental categories, that is with what cognitive psychologists know as "Semantic Memory". It outlines the prototype-like nature of mental categories, showing them to be an adaptive compromise between conflicting but equally valid imperatives: rapid uniform processing of the bulk, and contextual flexibility in special cases that are highly relevant. Chapter 3 elaborates on the network — nodes-and-connections — structure of semantic memory. Within this framework, the metaphoric extension of meaning is revisited, and the contextual-adaptive basis for metaphoric language is reaffirmed.

Chapter 4 outlines the core of the book, the interpretation of "communicative context" as a systematic on-line construction of mental models of the interlocutor's belief and intention states. Within this context, grammar is shown to be a pivotal instrument for automated, high-speed information processing. It is argued that mental models of the interlocutor's epistemic and deontic states are constructed rapidly on-line during grammar-coded human communication. The theoretical underpinnings of this approach to grammar, the so-called "Theories of Mind" tradition, is surveyed from an evolutionary perspective. Three subsequent chapters flesh out this adaptive approach to grammar, ranging over the three main foci of grammatical structure: The grammar of referential coherence (ch. 5), the grammar of verbal modalities (ch. 6), and the grammar of clause-chaining (ch. 7).

The last three chapters extend pragmatics somewhat beyond its traditional bounds. Chapter 8 sketches out the close parallels between the pragmatics of individual cognition (epistemology) and the pragmatics of organized science (philosophy of science). In the latter, the 'relevant interlocutor' whose mind is to be anticipated turns out to be the community of scholars. Chapter 9 contrasts two extreme theories of the "self" — one contextual-pragmatic wherein the self is an illusory, unstable multiple; the other of an invariant, centralized, controller self. Two well-known mental disturbances — schizophrenia and autism — are identified as the respective clinical expressions of these two extreme "selves". The neurological basis for the two disturbances, it turns out, is to be found at two distinct loci of the attentional network. An unimpaired self, it is suggested, must accommodate both extremes, and is thus — much like mental categories — a classical pragmatic-adaptive compromise. Chapter 10, lastly, deals with the contextual pragmatics of the martial arts, whereby one's every move is enacted in the context of the opponent's putative current states of belief and intention. The grammar of social interaction thus turns out to recapitulate the grammar of inter-personal communication; or is it the other way around?

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In writing this book I have benefitted enormously from the vast knowledge and generous comments offered by many correspondents, colleagues and friends. Their help is acknowledged at the appropriate junctures throughout. Whether they approve of the final product or not, I couldn't have done it without them. Nor could I have done any of it without the tireless efforts of my long-time editor, Kees Vaes. And none of it would have been done without the two people who light up my life, Linda and Nathaniel, to whom this book is dedicated.

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Chapter 1

Perspective

1.1. The conundrum of context*

> A context is a psychological construct.
>
> (D. Sperber and D. Wilson 1986: 15)

The de-stabilizing effect of context on the mental construction of reality has bedeviled biological organisms ever since the dawn of evolution, much as it has confounded philosophers and scientists ever since the advent of the study of mind. The relativity inherent in contextual framing can play havoc with the organism's attempt to construct a stable, coherent account of experience. For atomic chunks of reality are but artifacts of their framing, arbitrary time-slices of the experiential continuum. If their frames render them utterly unique, how do we relate them? Or relate to them?

Yes, *that* one there-and-then was 'a snake'. It bit my now-defunct compadre, after which I killed it. Now, *this* one here-and-now — different in color, size and shape — is surely not the same one. Yet it is tantalizingly similar, along the very same dimensions that render it so different. Well, is it or is it not "a snake"? Will it or will it not bite? Will its bite be lethal? Should I kill it?

But the very same aspect of context, its maddening elasticity, has also made it possible to relate unique time slices of experience to each other by tagging some as tokens of the *same type*. Soon, relatively firm islands of similarity are extracted from their ever-fluxing context, gradually assembled into a body of seemingly stable knowledge.

So, this one here-and-now is not the same one as that one then-and-there. In some absolute sense, therefore, it is neither a proven "snake" nor a sure-fire killer. Yet it is my construed contextual differences between the two would-be "snakes" — color, size, shape, space–time coordinates — that let me to extract their similarities. Likewise, the very same cylinder when observed from one perspective looks like a rectangle, from another like a circle. How do we know to ignore such radical differences and decide that the two observations represent the very same object?

This feat of extraction, or abstraction — ascribing the variance to the frame, construing the similarities as an invariant picture — is what makes contextual framing biologically indispensable. For what is extracted is not any good old invariance or similarity, but only those similarities that have proven *adaptively relevant*.

But the core gambit of pragmatics — selecting the relevant frame — is also the source of its ancient conundrum. For it is the act of framing that accounts for both the flux and the invariance of our mental constructs. The challenge facing sentient organisms is how to, somehow, cobble the *right* frame around the picture, set the figure in its *proper* ground, choose an *apt* point-of-view for a description, zoom onto the *relevant* perspective. Such contextual judgements may be logically arbitrary, but

they are adaptively indispensable. The survival of myriad extant species attests to the adaptive validity of old framing choices made by their ancestors; as does the increasing level of stability, automaticity and genetic encoding conferred upon repeatedly-validated framing choices by one's evolutionary forebears.

Likewise, the seeming relativity entailed by that context-dependence of mental constructs is not a matter of principle, to be determined by logic, but an empirical issue to be resolved through the study of the frequency and stability of successful adaptive choices. A reductionist insistence on a forced either/or choice between 'objective' and 'relative' reality is a false framing manoeuver.

1.2. Russell's paradox

> There was only one catch and that was Catch-22, which specified that a concern for one's own safety in the face of danger [...] was the process of a rational mind. Orr was crazy and could be grounded. All he had to do was ask; and as soon as he did, he would no longer be crazy and would have to fly more missions. Orr would be crazy to fly more missions and sane if he didn't, but if he was sane he had to fly them. If he flew them he was crazy and didn't have to; but if he didn't want to he was sane and had to.
>
> (J. Heller, *Catch-22*, 1962: 54)

A picture is not fully specified until it has been framed, but the frame itself remains outside the picture. A figure only stands out vis-à-vis its ground, but the ground is not part of the figure. A map is useless without its scale and coordinates, i.e. without the point-of-view from which it was drawn; but the point-of-view is outside the map. An expression is only meaningful from a given communicative perspective, but the perspective ('I hereby say to you that...') is not part of the expression. These four metaphors of pragmatics are but special cases of the more general — if inadvertent — definition of pragmatics given by Bertrand Russell in his attempt to insulate formal logic from the ravages of recursive framing.

In his *Theory of Types*, Russell (1908) outlined a set-theoretical approach to description, his unintended stand-in for mental representation, that would skirt the contradictory effect of self-inclusion paradoxes, such as the celebrated *Epimenides*:

> Epimenides the Cretan said that all Cretans were liars [. . .] Was this a lie? (1908: 59).

Referring to similar paradoxes, Russell observes:

> In all the above contradictions [...] there is a common characteristic, which we may describe as self-reference or reflexiveness. The remark of Epimenides includes itself within its scope. If *all* classes, provided they are not members of themselves, are members of *w*, this also must apply to *w*. (*ibid.*: 61)

The offending culprit, Russell goes on, are statements about *all* propositions, which must perforce exclude the next statement in the hierarchy of types, the one that affirms the last proposition:

> This, however, makes it clear that the notion 'all propositions' is illegitimate; for otherwise, there must be propositions [...] which are about all propositions, and yet cannot, without contradiction, be included among the propositions they are about. (*ibid.*: 62)

Russell then outlines his — somewhat ungainly — set-theoretical template of all self-inclusion paradoxes:

> In this case, the class *w* is defined by reference to 'all classes', and then turns out to be one among classes. If we seek help by deciding that no class is a member of itself, then *w* becomes the class of all classes, and we have to decide that this is not a member of itself, i.e. is not a class. This is only possible if there is no such thing as the class of all classes in the sense required by the paradox. That there is no such a class results from the fact that, if we suppose there is, the supposition immediately gives rise [...] to new classes lying outside the supposed total of all classes. (*ibid.*: 62)

Put another way (T. K. Bikson, in personal communication):

> The set of all sets that don't include themselves, does it or does it not include itself?

What Russell has given us is another version of Goedel's theorem: A system may be either complete or consistent, but never both. For an entity to be described finitely without succumbing to logical contradiction, a contextual upper bound must be imposed. One must frame the picture and then ignore the frame. One must insist on an arbitrary *closure*.

A system — and thus its description, as Russell's formal logic purported to be — is by definition a hierarchic entity, made out of a progression of levels each acting as a *meta-level* to the one embedded directly within it. Each meta-level frames some lower level. Within such a system, logical consistency can only be maintained if one disallows switching meta-levels (points-of-view, perspectives) in mid-description. In other words, a logically-consistent, and thus in principle incomplete, description can only operate within a fixed perspective, context, meta-level.

But human mental representation, and language as its most celebrated example, is notoriously replete with constant switching of perspective, with zooming in and out, with repeated acts of re-framing; as is the 'mental' representation of all biological organisms. Is human cognition — and natural language, as Russell was inclined to suspect — illogical, contradictory, unequal to the task of representing reality? Have biological organisms since the amoeba been sadly deluded? And how have a billion years of natural selection allowed them to get away with such a monumental folly?

1.3. Objectivism

> Now spoken sounds ['words'] are symbols of affections of the soul['thoughts'], and written marks are symbols of spoken sounds. And just as written marks are not the same for all men ['are language specific'], neither are spoken sounds. But what

> these are in the first place signs of — affections of the soul — are the same for all ['are universal']; and what are these affections are likenesses of — actual things — are also the same for all men.
>
> Aristotle, *De Interpretatione*

Russell's fellow logical positivist Rudolph Carnap shared Russell's low regard for natural language as means of knowledge representation, most emphatically of scientific knowledge. As a self-described *physicalist* (a latter-day species of Aristotelian empiricism), Carnap was only interested in a language that could be defined in terms of observables:

> The thesis of physicalism, as originally accepted in the Vienna Circle, says roughly: Every concept of the language of science can be explicitly defined in terms of observables; therefore every sentence of the language of science is translating into a sentence concerning observable properties. (1963: 59)

Carnap's very definition of pragmatics — and by inference of context — thus relegates it to the domain of empirical observation, i.e. the objective context:

> According to present terminology, we divide the theory of language (semiotics) into three parts: pragmatics, semantics and logical syntax. The descriptive concepts mentioned belong to pragmatics; logical analysis belongs either to semantics (if referring to meaning or interpretation) or to syntax (if formalized). (1950: 432)

Though the 'objective' frame may also be *language use*:

> If in an investigation an explicit reference is made to the speaker, or, to put it in more general terms, to the user of the language, then we assign it to the field of pragmatics. (*ibid.*; cited from Morris 1963: 88).

In his later reflections, Carnap rued the split in 20th century analytic philosophy between philosophy of language and formal logic:

> Only slowly did I recognize how large the divergence is between the views of the two wings of analytic philosophy in the question of natural language versus constructed languages: the view which I share with my friends in the Vienna Circle and later with many philosophers in the United States, and the view of those philosophers chiefly influenced by G. E. Moore and Wittgenstein [...] In the Vienna Circle mathematics and empirical science were taken as models representing knowledge in its best, most systematized form, towards which all philosophical work on problems of knowledge should be oriented. By contrast, Wittgenstein's indifferent and sometime negative attitude towards mathematics and science was accepted by many of his followers, impairing the fruitfulness of their philosophical work. (1963: 68–9)

And in an observation reminiscent of the idealization common to Plato, Saussure and Chomsky, Carnap consigns pragmatics to the domain of empirical investigation:

> The analysis of meanings of expressions occurs in two fundamentally different forms. The first belongs to *pragmatics*, that is, the empirical investigation of historically given *natural languages*. This kind of analysis has long been carried out by

> linguists and philosophers, especially analytic philosophers [...] The second form was developed only recently in the field of symbolic logic; this form belongs to *semantics* (here understood in the sense of pure semantics, while descriptive semantics may be regarded as part of pragmatics), that is, the study of constructed *language systems* given by their rules. (1956: 233)

Pragmatics is grudgingly conceded a useful role:

> Nobody doubts that the pragmatic investigation of natural languages is of greatest importance for an understanding both of the behavior of individuals and of the character and development of whole cultures. (1956: 234)

But for Carnap pragmatics remains a means to and end, subservient to the goals of formal semantics:

> Many of the concepts used today in pure semantics were indeed suggested by corresponding pragmatical concepts which had been used for natural languages by philosophers or linguists, though usually without exact definitions. (1956: 234)

It is perhaps ironic that in imposing his constraint on formal descriptions — no perspective-shifting in mid-description — Russell, in a wave of his magical wand, exorcized the specter of pragmatics out of deductive logic. This intellectual gambit yielded two results, the first intended, the second perhaps not:

- Deductive logic was rescued as a closed, internally-consistent system.
- Deductive logic was removed, once and for all, as serious contender for modeling, describing or explaining language and mind.

Put another way, Russell saved the instrument by giving up on its historic purpose. His (and Carnap's) nemesis, Ludwig Wittgenstein, accomplished much the same in his *Tractatus* (1918), pointing out that the propositions of logic can be all reduced to either tautologies or contradictions. That is, they are purely analytic and thus in principle not capable of representing human knowledge, scientific or otherwise:

> The propositions of logic are tautologies. Therefore the propositions of logic say nothing. (1918: 121)

> This throws some light on the question of why logical propositions cannot be confirmed by experience any more than they can be refuted by it. Not only must a proposition of logic be irrefutable by any possible experience, but it must also be unconfirmable by any possible experience. (*ibid.*: 127)

> Hence there can *never* be surprises in logic. (*ibid.*: 129)

Given Carnap's program of making formal logic the proper instrument for representing scientific knowledge, neither Russell nor Wittgenstein should have rendered him much comfort. For where there is no surprise, there's no information (Shannon and Weaver 1949; Attneave 1959). Closed systems are just that, immune to the accretion of knowledge. The open-ended pragmatics of framing and re-framing is the only venue through which organisms can increase their knowledge base. As we shall see further below (ch. 8), the same turns out to be true of organized science.

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