The Evolution of Miscommunication: Language Game Theory and Other Minds
Nick Zangwill, Tokyo, Hongo Metaphysics Club, 15th February 2023

Human beings as obsessive communicators. We are said to be the communicating species, members of which are frequently getting messages through to each other by means of the extraordinary institution of language, which has the dedicated function of being a means of intra-species transmission of information.

> We use the term 'language' to refer to the general faculty which enables human beings to engage in the verbal exchange of information to 'talk' to each other. (Jackson and Stockwell 1998: 3.)

Linguistic communication seems to yield convergence in outlook about the world, and also understanding of each other's minds. The significant benefits of communication by means of language reinforces the linguistic communicative practice. No!
   Miscommunication about each other's mind is sometimes beneficial, and feedback loops may reinforce miscommunication. This is what I will argue.

§1. Language Game Theory

General evolutionary-game-theoretic considerations about what linguistic conventions are, and how they arise. It turns out that the sort of evolutionary-game-theoretic account we need for sensations and thoughts is distinctive, and not a simple extension of the ordinary case of linguistic conventions for communicating about the non-mental, physical, world.

According to the evolutionary-game-theoretic approach, the meanings of words are mini-institutions arrived at in signaling games by gradual modifications, via feedback mechanisms that generate signaling behavior patterns that are relatively stable over time. Within a group of 'players' with shared interests who interact with each other, there are (mostly) pressures towards convergence in the assignment of references to to symbols.

This is not biological evolution but cultural evolution, where the mechanisms of evolution—biological or cultural—are mathematically describable, and where a central role is played by John Maynard-Smith's notion of an 'Evolutionarily Stable Strategy',

which is a strategy, in the context of other competing strategies, where there incentives for maintaining the strategy and disincentives for changing it (Maynard-Smith 1982).

Semantic and logical structure.
Other linguistic phenomena (expressive aspects, metaphor).

§2. Private Language

The evolutionary game-theoretic account was originally developed to apply to the language for of physical objects and properties, since the immediate payoffs of the matrixes were understood in physical terms. What is controversial—and relatively unexplored—is the extension of the general game-theoretic style of explanation of the language for talking about physical things and properties to the language for talking about other subject matters. This concern with the extension of the evolutionary-game-theoretic account involves attention to the *plurality* of the types of discourse that exist. This was a focus of interest for Wittgenstein as it was for members of the Vienna Circle. What about the language of mathematics, morality, aesthetics, logic, religion, and so on?

The case of private language. We need a typical connection between inner sensations and perceivable causes and effects in behavior in order to *set up* the connection between words and sensations. What I pursue in this talk, however, is a different kind of failure—one where there *are* perceivable causes and effects of the mental states.

We systematically miscommunicate and use words to refer to different objects or properties when we think we are using them to refer to the same objects and properties. This third possibility will be explored here.

§3 Anecdotal Examples of Miscommunication

New-agers, who use the word "energy".

Left-wing groups and hard line Islamicists. ("Freedom", "occupation" and so on.)

The language of love: "… man and woman have different concepts of love; and it is one of the conditions of love in both sexes that neither sex presupposes the same feeling and the same concept of 'love' in the other." (Nietzsche 1974, p. 363).

Miscommunication is not: deception. And it is not ambiguity.

§4. What is the Empirical Evidence for Miscommunication?

Political polarization—which is a coordination phenomenon. Polarization of opinions arises from pressures towards in-group biasing of belief, which facilitates cooperation within groups. This in-group pressure results in polarization between groups.

> "Our results show that in the presence of sufficiently large communication noise and small-world networks, a situation we are arguably in today, a state of polarization in the only stable state" (Turner and Smaldino 2018: 10).
> "…communication noise could … be interpreted as misunderstanding of perfectly reproduced, publicly voiced opinions" (Turner and Smaldino 2018:12).

The writers see miscommunication across groups, within which there is in-group bias, as 'communication noise' that enables polarization. What needs to be added to this is that this miscommunication in turn generates opinion polarization; the two are mutually reinforcing. Both encourage and incentivize the other.

'Conversational repair'.

Miscommunication between patients and caregivers sometimes facilitates learning and decision-making.

Xizhen Qin documents the way the Chinese word 男朋友, usually translated "boyfriend", led to systematic misunderstanding between teachers and pupils.

The language for the 'qualia' associated with colour perception.
Colour blindness. The blue-green borderline.
Cross-linguistic and cultural variation of colour experiences is the different colour language used to describe those experiences. (Magid 2009)

§5. Discussion

The examples that we have considered strongly suggest that there is some systematic miscommunication between human beings specifically in the language for talking about each other's minds. At very least, we may conclude that, when we think quite generally about what the game-theoretic language evolutionary story should look like for mentalistic language, as opposed to physical object language, we should not assume the same happy picture of a general tendency towards agreement on linguistic meanings.

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