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# Socio-Cognitive Aspects of Lying

**Ippei INOUE**

## **Introduction**

Diogenes in Ancient Greece, with his lantern, was looking for a single honest man, and he died without finding one. Lying comes so naturally to us that it appears it must be a part of human nature. Indeed, it is fair to say that lying was with us throughout our evolution. Given that most lies are performed with words, a linguistic approach to this phenomenon would be fruitful.

Several different approaches from the fields of linguistics, sociolinguistics and other related fields are possible. Broadly speaking, these include approaches concerned with the utterance containing the lie itself, approaches looking at the social implications of the act of lying, evolutionary and developmental approaches to our ability to lie, and approaches focused on communication, particularly communication using modern online technology. This paper will give a broad overview of the above approaches and demonstrate the meaningfulness of tackling the phenomenon of lying from the viewpoints of linguistics and its related fields.

Gelder (1988) identifies two conceptual roots in traditional analyses of lying, both focused on the properties of the lies themselves rather than lying as an ability. The two approaches comprise of ethical arguments on the one hand, and notions from folk psychology such as belief and intentionality on the other.

Such folk theories see that ethical and linguistic aspects of lying as central. To lie requires the use of language, they say, and implies ethical principles. This leads to our not suspecting animals, babies or machines of lying, for they lack either the linguistic capacity or the background of a society built on ethics. (Gelder 1988)

This paper examines lies from a linguistic perspective, with an emphasis on the pragmatic and socio-linguistic aspects. Discussions of the truth of utterances entered linguistics from the sphere of philosophy of language around the 1970s, leading to the rise of the field of pragmatics. Later, advances in cognitive psychology would yield insights into the development of children's ability of lying. More recently, research is being performed on the communication found on SNS and other internet-based mediums.

A wide range of approaches are possible within linguistics to study the lie itself, the act of lying, and the ability to lie. The following section will take Grice's Cooperative Principle (CP) as a point of departure to examine the Theory of Mind, the development of the ability to lie in children, and lying via SNS.

## **Cooperative Principle**

Grice's Cooperative Principle (CP) is a basic rule which governs general human communication and was instrumental in establishing the field of pragmatics as a linguistic discipline (Grice 1975). The four maxims which comprise the CP work as guidelines, forming a mechanism which allows us to understand more than the literal meaning of an utterance. For example, let us suppose that Eiko has five children. Would it be a lie to say the following regarding her?

Eiko has four children.

Logically (based on truth values) this is no lie. A person with five children certainly also has four. However, the hearer of this utterance, upon learning the truth, would likely feel deceived. This shows that there is another principle at work than truth values. Grice's maxim of quantity, regarding the amount of information offered, is the relevant guideline here.

What of the next sentence?

Margaret Thatcher was made of iron.

Margaret Thatcher, a regular human being, is of course not made of iron. It is curious then

that the above utterance would not normally strike us as a lie but rather as a metaphorical expression. This is explained according to the CP as follows. It is because this expression is so obviously untrue and thus clearly violates the maxim of quality (while still being interpreted within the wider framework of the Cooperative Principle) that we naturally make a metaphorical interpretation (though this conception of metaphor differs from later conceptions within cognitive linguistics).

The Cooperative Principle has become the foundation of pragmatics. However, in the next section we will see how, considering the theory of mind, the significance of the principle extends beyond pragmatics to areas such as human intelligence and evolution.

## **The Theory of Mind**

Theory of Mind (ToM) forms the basis of the Cooperative Principle and is one important concept when considering lies. The concept originates in primatologists Premack and Woodruff's 1978 paper "Does the Chimpanzee Have a Theory of Mind?" in which the authors posited this ability after observing how primates such as chimpanzees behaved as if they were guessing the thoughts of other animals of the same and different species.

Premack and Woodruff designed experiments in order to test whether the chimpanzee has a theory of mind; in other words, if it could recognize the existence of beliefs and intentions in humans or other animals, and how the chimpanzee's own actions are informative for others. It follows that if the chimpanzee had this ability it could manipulate the beliefs of others through its own behavior in some kind of competitive context (Woodruff and Premack 1979).

Philosopher Daniel Dennett suggests that to say a person has a ToM it is necessary that they have the ability to understand false-beliefs: the idea that others decide truth and falsity and form beliefs based on their own knowledge. (Whether primates possess a ToM is still being argued).

## **Cooperative Principle and the Theory of Mind**

CP predicts the same kind of mind reading abilities as ToM (Gibbs 1994). For

example, the interpretation of indirect utterances necessitates a ToM. For it to be possible for your utterance of *It's cold in here* to elicit from your interlocutor your desired act of closing the window, your interlocutor must possess a nested mutual knowledge including not only that closing the window will help alleviate the current coldness and the speaker knows that I am next to the window, but also that the speaker *knows* that I know that and even that the speaker *knows that I know* that they know that and that the person closest to the window is the most appropriate person for the task. This mental phenomenon is known as metarepresentation and is indispensable in understanding both minds and utterances.

ToM relates to lying, including the detection of lies. The ability to detect lies is essential in our daily lives. 'You won't find a better deal anywhere else,' says the salesman. 'Take it or leave it. If this is true, he is the one we should buy this product we want from. But we must also consider the possibility that he may be lying to secure the sale. In order to consider this possibility, we must not only recognize his ability to lie but also our own abilities to detect such as lie.

So-called white lies involve further layers of ToM. While a white lie is a lie that is told in order to be polite or to stop someone from being upset at the truth, it is possible that the hearer realizes that the lie is a lie. In this case, the lie is tolerated due to the metamessage which is sent with it that the speaker is attempting to be polite. Lying is based on this type of multi-layered human knowledge.

Politeness theory in pragmatics and sociolinguistics fundamentally presupposes such multi-layered communication. The politeness of indirect utterances comes from how the indirectness conveys an intention not to intrude on the hearer's domain, and this indirectness can also be used to create irony and sarcasm. White lies are an example of this and are a display of the fundamental nature of human communication.

## **Lies of Animals**

If we accept that lying relates to the core of human communication, it is also necessary to consider deceit behavior in animals. Gelder (1988) gives the example of quail behavior.

The quail pretends to have a broken wing when pursued by a hawk. A simple view would be to say we cannot call this type of behavior a lie due to the lack of language and

ethical norms. However, Gelder (1988) goes on to say that the Cartesian conception of animals as machines can no longer be applied in light of scientific facts on animal interaction and communication. Given that actions comprise of distinct abilities, we cannot say that an action is either wholly mechanical or wholly voluntary. Indeed, the Gelder (1988) says that the both mechanical and intentional nature of the quail's deceit behavior is illustrative for our understanding of the ability to lie.

Additionally, Gärdenfors (2003) raises examples of deceit behavior which suggest that monkeys and other primates may possess a ToM. These include pretending not to notice food (fruit) and waiting until the group passes by to eat it all alone, and mating out of sight of the boss which suggests a ToM understanding of the boss's vision.

There are many possible interpretations of such deceit behavior in animals. It may be wrong to think that even ToM or language belong to humans alone. At the very least, we can say that while deception and lies require a high level of intelligence, the ability for multi-layered metarepresentation is probably solely a human trait.

## **The Ability to Lie**

According to Matsui (2013), children begin to understand that there are things which are wrong to do at around the age of three. This distinction between right and wrong forms the basis of lying. Whether intentionally or not, lying starts with having done something which is said to be wrong. However, children at age three are not able to keep track of their lies so that they are not later discovered; this ability comes at around age seven. This is the age at which a conceptual understanding of lying begins to form. Looking just at non-verbal forms of lying, children as young as four can lie for their own benefit. Moreover, four-year-olds can predict that a person who they have been told is evil or mean might lie. It is said that at age seven children come to understand white lies, and at around age nine begin to understand sarcasm.

Research into the development of lying in children has looked at both when children begin to lie and when they understand the concept of lying. One well-known example is Piager's (1932) work on moral judgments which focused on the development of lying. Piager states that before around the age of seven, utterances are judged to be increasingly bad

the further they stray from the truth, and even impossible exaggerations or simply incorrect statements tend to be judged to be lies. This insight is partially supported by experiments such as those of Wimmer, Gruber, & Pernet (1984).

Both Piaget (1932) and Kohlberg (1981) contributed to the study of lying in children from the perspective of moral development, where the understanding of lies develops along the ability for moral reasoning.

## **Lie over the Internet**

Finally, let us shift our focus and look at communication over the internet. Jeff Hancock and his colleagues made the following observations in the *Sunday Times* (summarized in <http://www.english.org/lesson/linguistics-lies>):

One of the main giveaways is the length of a message. Emails that mask a lie have, on average, 28% more words than truthful messages. ‘When you’re lying, you are trying to give a credible story so you provide more detail, you are in persuasive mode, said Hancock.

Liars are also more likely to use third-person pronouns, such as *they* and *he*, in a bid to distance themselves from a lie because of the guilt associated with it.

‘People also tend to use negative emotional terms because they feel uncomfortable when they are lying, said Hancock. ‘So they tend to use terms like “sad”, “angry”, “unhappy” and “stressed out”’

Another telltale sign of a fib is the overuse of ‘sense terms’ such as *see*, *feel* and *touch*, which Hancock believes are employed to build up an elaborate and evocative account of a scenario that may never have happened.

Finally, liars tend to use fewer ‘causal phrases’ to minimize the chances of being caught out.

Hancock discusses in TED Talk (<http://www.cornell.edu/video/tedx-talk-jeff-hancock-on-social-media-and-deception>) that the way we communicate has been completely transformed by emailing, texting, Skype, Facebook; almost every aspect of human communication has been changed, which has had an impact on lying or deception.

Hancock and his colleagues have been tracking and documenting new types of lies, which call the Butler, the Sock Puppet and the Chinese Water Army. (Hancock *et al.* 2007)

[Butler type]

The Butlers types of lies involves an example of one: “On my way.” (We’re never on our way. We’re thinking about going on our way.) Another example of this type is “Sorry I didn’t respond to you earlier. My battery was dead.” (Your battery wasn’t dead. You weren’t in a dead zone. You just didn’t want to respond to that person that time.) Still another is that, when you’re talking to somebody, and you say, “Sorry, got work, gotta go.” (actually, you’re just bored. You want to talk to somebody else.) These lies are being used by people to create a buffer, as the butler used to do.

Interestingly, they use ambiguity that comes from using technology. People don’t know where the other person is or what he or she is doing or who he or she is with. And this type of deception is aimed at protecting the relationships. People don’t want to talk to him or her now, but I still care about him or her; their relationship is still important.

[Sock Puppet type]

The Sock Puppet is an entirely different type of lie. Put simply, it is the fake reviewer type where, for example, an author will pretend to be someone else in order to praise his or her own work over the internet. This type of lie is based on not ambiguity but rather identity, with the liar acting a part. While not a particularly new form of lie, it has become more prevalent due to the proliferation of online technology.



[Chinese Water Army type]

The third type demonstrated by Hancock is Chinese Water Army. He claimed that Sock Puppet belongs to this type when we get to scale. Sock Puppet Chinese Water Army describes thousands of people in China who gain small amounts of money to produce contents such as review and propaganda. The government and companies hire these people on purpose. In North America, this is called Astroturfing, which is very common now. It is notable that this practice has lot of issues to discuss. We observe this especially with product review, book reviews and everything from hotels to whether the leader is good or not.

Just looking at these types of lie and their examples, it appears that the internet is creating many liars. However, that may not necessarily be the case. Let's focus on the conversations between our friends and our family and our coworkers and our loved ones. Those are the conversations that really matter.

Hancock talks about several types of study which give counterintuitive results regarding lying in different mediums. One clear result is that people tend to be more honest in online communication than face-to-face communication. One example comes from diary studies: experiments in which the participants record all of their communication and lies over a one week period. An analysis of the frequency of lies in different media reveals that people are most honest over email and lie most frequently in phone calls.

More evidence comes from a study comparing traditional paper resumes and resumes on LinkedIn, a social networking site for professionals. On matters such as skills or previous responsibilities, the LinkedIn resumes were more honest than their paper counterparts. Similarly, profiles on the social networking site Facebook were shown to be truly reflective of the profile owners actual personalities.

Furthermore, on online dating websites, while 80 percent of the men examined did lie on their profiles, the lies tended to be small: they lied about their heights by about nine tenths of an inch on average. One reason for this is of course so that the lie is not immediately discovered upon going on a date.

Another significant point regarding online technology as it relates to lies is the fact that everything that is written online is recorded. Humans began to speak between 50,000

and 100,000 years ago but only began to write 5,000 years ago. It follows, then, that human communication evolved for an environment very different from the present one, where no record would be left of any communicative act.

The present abundance of recorded communication has led to successes in the creation of computer algorithms for detecting lies. For example, algorithms can pick out factors such as overuse of the first person singular pronoun in hotel reviews and flag it as a probable fake review. This particular example of the first person pronoun is due to the tendency of fake reviews to attempt to create a narrative about their stay in order to appear more believable. Real reviewers, on the other hand, tend to give more spacial information such as the size of rooms.

Individuals who are skilled in lying are more likely to succeed, at least in the short term, than those who are not. However, this also incentivizes the evolution of appropriate countermeasures to detect lies and avoid deception or to take revenge against the liar. In other words, the ability to lie and the ability to detect lies have co-evolved. This is the so-called Machiavellian intelligence hypothesis. It is safe to say the lying has developed with us throughout our evolution.

## **Concluding Remarks**

This paper has looked at the various aspects of lying from a mainly linguistic perspective. Considering lies from a linguistic and sociolinguistic viewpoint entailed looking at lies as a fundamental, primordial human trait or ability. Phrasing that another way, I believe it has become clear that lying or the ability to lie forms the foundation of human intelligence or communicative ability. It is clear that humans would not have evolved as much as we have without the ability to lie. Many of our workings, both social and cognitive, rely on this ability.

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