

Language, Action, and Mind: Language-game and Attitude Ascription

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There are two major philosophical views proposed by Wittgenstein. His earlier view is described in *Tractatus*, and his later one is expressed in *Philosophical Investigations* (*PI*). The transition of his views roughly corresponds to the transition of views in analytical philosophy in the twentieth century. *Tractatus* is based on a correspondence theory of truth, which is related to his *picture theory of meaning*. According to this theory, a sentence has components that represent elements of reality. In *PI* he criticized this idea, and pointed out that there are different kinds of language-games. The later Wittgenstein was interested in how language is used, and how its use is connected to human actions and behaviors.

Some philosophers followed and further developed the later view of Wittgenstein. For example, the speech-act theory was proposed by Austin and accomplished by John Searle. However, the speech-act theory is confronted with a deep philosophical problem. According to this theory, there are three acts that are simultaneously performed by uttering a sentence. They are the locutionary, illocutionary, and perlocutionary act. However, when someone utters a sentence, there seems to be only a single event of utterance, and not three actions. The three sorts of speech acts are therefore nothing but different descriptions of the single utterance. From the current viewpoint, Wittgenstein's proposal of language-games is more attractive than the speech-act theory, because it is free from the above problem. It also accentuates interaction between utterances and actions.

However, I think there are several problems with Wittgenstein's treatment of language-games. One major problem is that he rejected analysis of how language-games are constructed. According to Wittgenstein, language-games are based on our form of life. He thinks this is the point where explanations come to an end (cf. *PI* §1, §654). Another problem is that he nearly ignored children's spontaneity. He tended to identify children's learning with training (cf. *PI* §5). Wittgenstein pointed out that we should carefully observe how language is used in ordinary life, and proposed to view language communication as a game. However, I think we should go further. In this paper I will propose another interpretation of language-games, and will try to defend this interpretation against Wittgensteinian criticisms.

1. Intentional Strategy

According to Wittgenstein, language-games are based on our form of life. However, what is our form of life? In this paper, I propose the thesis that our form of life is based on folk-psychological praxes. In ordinary life, we ascribe beliefs, desires, intentions, and other mental states to others. This praxis of attitude ascription is a basis for language-games. Thus my starting point is the same as that of Dennett (1987). There are different methods to predict behaviors of an object. Dennett (1987) calls one of these strategies *intentional strategy*. A person who applies intentional strategy to an object assumes that the object is a rational agent, and he ascribes beliefs and desires to it. By doing so, he accepts the assumption that a rational agent acts in order to satisfy its desires, and chooses, based on its beliefs, appropriate means to this end. The intentional strategy is successfully applicable not only to human beings but also to higher animals. Nakayama (1998, 1999b) showed that this strategy can be used to explain speech acts and conversational implicatures. In this paper, I would like to propose the thesis that the intentional strategy is a part of our form of life, and constitutes our social activities. To explain language-games, I assume that communication partners mutually apply the intentional strategy.

2. Semantics for Attitude Ascription

Before starting with an analysis of language-games, I define the truth condition of an attitude ascription, whereas a holistic principle is presupposed. The holistic principle says that two communication partners, *S* and *H*, understand their language in the same way. Under presupposition of this holistic principle between *S* and *H*, the central idea of this definition can be explained as follows:

H's attitude ascription "*S* believes (desires, intends) that *p*" is true at *t* iff (if and only if) *S* believes (desires, intends) at *t* that *p*.

More precisely:

H's attitude ascription "*S* believes (desires, intends) : [*p*(*d*₁, ..., *d*_{*n*})]" is true at *t* iff there is a function *f* such that *S* believes (desires, intends) at *t* that *p*(*f*(*d*₁), ..., *f*(*d*_{*n*})), where *d*₁, ..., *d*_{*n*} are Skolem-symbols or *I* or *S*, and *f* is a function that satisfies the following three conditions: (i) *f*(*I*) = *H*, (ii) *f*(*S*) = *I*, (iii) the value of *f*(*d*_{*k*}) is a Skolem-symbol, when *d*_{*k*} ≠ *I* and *d*_{*k*} ≠ *S*.

In the above definition, Skolem-symbols are used to maintain anaphoric connections (cf. Nakayama (1998, 1999a)). In this paper, I use the notations (*S*, *t*) {*Bel*: {*p*, ...}, *Des*: {*q*, ...}, ...} for expressing: *S* believes at *t* that *p* and *S* desires at *t* that *q*. The mental

state of S at t is also expressed by $(S, t) \{Bel: bel\text{-}set(S, t), Des: des\text{-}set(S, t), Int: int\text{-}set(S, t)\}$, where $bel\text{-}set(S, t)$ is a set of sentences that S believes at t .

3. An Anti-Wittgensteinian Interpretation of Language-games

PI §2 describes a language-game:

"Let us imagine a language for which the description given by Augustine is right. The language is meant to serve for communication between a builder A and an assistant B . A is building with building-stones: there are blocks, pillars, slabs and beams. B has to pass the stones, and that in the order in which A needs them. For this purpose they use a language consisting of the words "block," "pillar," "slab," "beam". A calls them out; - B brings the stone which he has learnt to bring at such-and-such a call. - Conceive this as a complete primitive language."

This language-game consists of A 's calls and B 's actions. However, what makes A 's calls and B 's actions harmonic? I think the mutual understanding of both creates this harmony. In other words, A 's and B 's mutual attitude ascriptions are harmonic. I describe their attitude ascriptions by using the notation introduced in section 2.

$(A, t) \{Bel: \{(If\ I\ call\ "X",\ B\ will\ believe\ :[I\ desire\ to\ have\ X]),\ (If\ B\ believes\ :[I\ desire\ to\ have\ X],\ B\ will\ bring\ me\ X),\ \dots\},\ Des: \{I\ have\ a\ block,\ \dots\},\ \dots\}$.

At $t+1$, A calls "block".

$(B, t+2) \{Bel: \{A\ called\ "block",\ A\ desires\ :[I\ bring\ him\ a\ block],\ (If\ I\ do\ what\ Y\ wants\ me\ to\ do,\ Y\ will\ be\ satisfied),\ \dots\},\ Des: \{A\ is\ satisfied,\ \dots\},\ \dots\}$.

At $t+3$, B brings A a block.

$(A, t+4) \{Bel: bel\text{-}set(A, t) \cup \{I\ have\ a\ block\},\ Des: des\text{-}set(A, t) - \{I\ have\ a\ block\},\ \dots\}$.

$(B, t+4) \{Bel: (bel\text{-}set(B, t+2) \cup \{A\ has\ a\ block,\ A\ is\ satisfied\}) \cup \{A\ desires\ :[I\ bring\ him\ a\ block]\},\ Des: des\text{-}set(B, t+2) - \{A\ is\ satisfied\},\ \dots\}$.

(At $t+4$, A 's initial desire is fulfilled and disappears. B 's desire to fulfill A 's desire disappears, because B believes that A is now satisfied.)

In the above case B properly interprets A 's mental states and understands what A wants B to do. This language-game terminated at the moment when B did what A wanted B to do. As this example shows, an explanation of a language-game by using attitude ascriptions can tell its termination condition; a language-game will be terminated when the initial desire of the initiator of the game is satisfied.

The actions of A and B in *PI* §2 can also be interpreted as parts of a joint action. The builder and the assistant share a goal, namely building a house, and they perform

actions to realize the goal. Nakayama (2001) provides an analysis of such joint actions. It is also possible to regard many language-games as joint actions.

4. Learning a Language-game

An adult foreigner has the mental concepts and abilities of attitude ascriptions. He is able to learn new language-games after some trials. Psychological studies showed that four-year old children have sophisticated attitude ascription abilities (cf. Wimmer and Perner (1983)). However, before this stage, children start to learn a language. Therefore, the primitive language-games that small children play with adults would be slightly different from standard language-games. However, there are interactions between attitude ascriptions and actions in children's language-games. Let's think about a language-game between a two-year old boy, *A*, and his mother, *B*. The boy wants to have a block, says "boo," and reaches his hand toward the block.

$(A, t) \{Bel: \{ \dots \}, Des: \{I \text{ have } d, \dots, \dots\}.$

$(d \text{ is a block, but } A \text{ has no concept of block.})$

At $t+1$, *A* says "boo" and reaches his hand toward a block.

$(B, t+2) \{Bel: \{A \text{ said "boo" and reached his hand toward a block, } A \text{ desires : [I bring him a block], (If I do what Y wants me to do, Y will be satisfied), \dots\},$

$Des: \{A \text{ is satisfied, } \dots, \dots\}.$

At $t+3$, *B* brings *A* a block.

$(A, t+4) \{Bel: bel-set(A, t) \cup \{I \text{ have } d\}, Des: des-set(A, t) - \{I \text{ have } d\}, \dots\}.$

$(B, t+4) \{Bel: (bel-set(B, t+2) \cup \{A \text{ has a block, } A \text{ is satisfied}\}) \cup \{A \text{ desires : [I bring him a block]\}, Des: des-set(B, t+2) - \{A \text{ is satisfied}\}, \dots\}.$

(At $t+4$, *A*'s initial desire is fulfilled and disappears. *B*'s desire to fulfill *A*'s desire disappears, because *B* believes that *A* is now satisfied.)

The role of desire seems to be common in all higher animals. Actually, a part of human desires is non-propositional, and one-year old children seem to have these non-propositional desires. These non-propositional desires are fundamental to learning language-games. In the above description, only the mother plays a proper language-game. However, because the purpose of this language-game is satisfaction of the small boy, his mental state is involved in this language-game. This language-game is harmonic, since the intentional strategy that the boy's mother used is also applicable to babies. Wittgenstein characterized learning as training. However, I think parent's readiness to support children's life and their intentional strategy are necessary for their learning. Parents are participants in a game rather than the teachers of that game.

5. Multiplicity of Language-games

In *PI* §6 Wittgenstein pointed out that we use the same utterance for different purposes. For example, the utterance described in *PI* §2 can be used for ostensive teaching of words. Let us think about a situation where *A* teaches *B* and *C* the meaning of the word "slab." Suppose that *B* is a German who cannot speak English, and *C* is a two-year old girl.

(*A*, *t*) {*Bel*: {*d1* is a slab, (If pointing to *d1* I call "X", *B* will believe : [*d2* is X] and *C* will believe : [*d3* is X]), *d2* = *d1*, *d3* = *d1*,...}, *Des*: {*B* believes : [*d2* is a slab], *C* believes : [*d3* is a slab],...}, ...}.

At *t*+1, pointing to a slab *A* calls "slab".

(*B*, *t*+2) {*Bel*: {*A* rief "slab", *A* glaubt: [*d4* ist eine Platte], *d5* ist eine Platte, *d4* = *d5*, ...}, *Des*: {...}, ...}.

(*C*, *t*+2) {*Bel*: {*d6* is a slab, ...}, *Des*: {...}, ...}.

(*A*, *t*+2) {*Bel*: (*bel-set*(*A*, *t*) \cup {Pointing *d1* I called "slab", *B* believes : [*d2* is a slab], *C* believes : [*d3* is a slab]}, *Des*: *des-set*(*A*, *t*) - {*B* believes : [*d2* is a slab], *C* believes : [*d3* is a slab]}, ...}.

(At *t*+2, *A*'s initial desire is fulfilled and disappears.)

Small children have no ability to doubt people, because they cannot yet ascribe propositional attitudes to others. However, even in this stage, learning words is possible by accepting all of the given information without rejection. As Wittgenstein pointed out, language-games are multiple. They are multiple because mental states and communication situations are multiple. How to interpret an utterance depends on what kind of propositional attitudes the hearer ascribes to the speaker in a particular context.

6. Status of Propositional Attitudes

In this paper I have tried to explain language-games as games that involve attitude ascriptions. However, there seem to be some features that are not clear from a Wittgensteinian viewpoint. I would like to now focus on two problems, namely, a problem of belief, and a problem of inference.

What is a belief? Several positions are compatible with the exposition given in this paper. I personally prefer to regard belief as a disposition. I accept, therefore the following principle:

(*S*, *t*) {*Bel*: {*p*, ...}, ...} iff *S* would respond "Yes" at *t*, if *S* is asked "*p*?" and *S* is sincere.

It seems to me that this was also Wittgenstein's view (cf. *PI* §150). Mental states constitute parts of causal processes that create behaviors and actions; people can observe these reactions (cf. *PI* §6, §271). To develop a theory of attitude ascriptions, we do not need to assume that the mental states of humans are independent of their language activities.

In this paper, I have assumed that a person will believe that q if he believes that p and that if p then q . Wittgenstein seems to be opposed to explaining everything by logical inference (cf. *PI* §486). However, this kind of rationality need not be explained by logical inference. For example, this property can be explained by using a network, when the network connects p with q , and q is activated by the activation of p . Thus, the representation of propositional attitudes proposed in this paper is not necessarily against Wittgenstein.

In this paper I have proposed to explain language-games as games that are created by the interaction between actions and attitude ascriptions. This is not Wittgenstein's view, but I believe this is a direction we may take in order to go beyond the place Wittgenstein reached.

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