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THE NORMATIVITY OF THE MENTAL: ZANGWILL AND A CONSERVATIVE STANDPOINT OF PHILOSOPHY[1]

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This paper is devoted to defending philosophical studies of mind, especially traditional ones. In my view, human mentality is *a dialogue with myself*, which has a social aspect that is never explained nor predicted by scientific studies. We firstly derive this picture from Descartes' classical argmuments (§§2-3), and then develop it in the context of Kantian ethics (§4). Some readers think this combination arbitrary. However, these two philosophers agree on mind/body dualism (§5), and further, the fact that the dialogue is often made in an ethical situation leads us to Kantian ethics. We shall draw this developed picture within the format of modern practical syllogisms (§§5-13). Finally, we shall refer to Nick Zangwill's *normative essentialism* for the completion of our whole picture (§§7-8).

***Keywords*:** Human Mentality, Dialogue with Myself, Kantian Ethics, Normativity, Tree-shaped Practical Polysyllogism.

1. TRADITIONAL PHILOSOPHY

§1. The Aim of this Paper[2]

In this modern world, not a few scientists have a tendency to make little of philosophy. This tendency pervades the studies of mind as well, which have long been regarded as main fields of philosophy.

Especially, the rise of cognitive science is phenomenal (cf. Thagard [2010]). Stimulated with this movement, even inside philosophy, there appeared researchers who criticized traditional philosophy as outdated. Possibly, experimental philosophy (Knobe&Nichols [2008]) and eliminative materialism (Churchland [1981]) are counted as such[3].

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[1] This paper is mainly based on my dissertation (Kaneko [2009]). Therein, I attempted to formalize Kantian ethics in terms of modern analytic philosophy. The hidden aim of this paper is to develop this picture further.

[2] Section numbers are counted continuously regardless of chapter numbers.

[3] Of course, they do not entirely deny the traditional philosophy. Knobe&Nichols say that the criticisms against their movement are mostly from misunderstanding (Knobe&Nichols [2008], pp.3-4). Actually, they show respect for traditional philosophers like Marx, Nietsche, and Feuerbach (ibid., p.7) and gently respond to as much (imaginable) criticisms as possible (ibid., pp.8f.). Nevertheless, at least for me, their approaches are still doubtful.
Churchland's eliminative materialism is, on the other hand, directed to folk psychology (Churchland [1981], p.72). Folk psychology is a theory that explains and predicts human actions

Yet, in my view, human mentality is not exhausted by natural sciences. However many statistical data are gathered, however deeply human brains are investigated, there remains a field they can never reach.

My aim of this paper is to reveal this field. I will characterize it as a "dialogue with myself." This characterization is derived from Descartes' philosophy; so, let me examine his classical arguments first.

§2. Descartes' Mind/Body Dualism

Rene Descartes is widely known for his dictum, "Cogito, ergo sum." Through this dictum, he became the first philosopher who spotlighted human ability of thinking.

(1)[4] …soon after the methodological doubt, I noticed: even while I tried to think of anything as false, it was necessarily the case that "the 'I' who thought it" should exist. Remarking that this truth, "I think, therefore I am" was so firm and so assured that it could not be disturbed however extravagant suppositions skeptics might make, I proceeded to adopt it without scruple as the first principle of philosophy I was seeking for.
(Descartes [1637], AT. VI 32)[5]

This is how Descartes adopted human ability of thinking as the first principle of philosophy. However, our present interest is not in the first principle of philosphy, but in what Descartes deduced from this insight, namely *mind/body dualism*:

(2) …'I' am a substance the essence or the nature of which is nothing but thinking, and which, for its existence, does not require any places, and does not depend on any material objects, either. Thus, the 'I,' that is, the mind…is entirely distinguished from the matter."
(ibid., AT. VI 33)

In this way, Descartes strictly distinguished human mind from its material aspects. However, as Russel commented (e.g. Russel [1946], p.58), it is still unclear what Descartes intended to say by "thinking" within these citations. Doubting, dreaming, reasoning, feeling—all these mental activities are seemingly regarded as "thinking." Then, what is thinking?

§3. Hintikka's Challenge

With regard to this problem, Jakko Hintikka famously put forward a novel interpretation (Hintikka [1962]).

(3) I think, therefore I am. (Cogito, ergo sum.)

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in terms of common-sense (ibid., pp.68-69). Nevertheless, we can interpret his criticism as directed to the traditional philosophy as well, although Churchland did not state it articulately (cf. Churchland [1981], pp.74f., pp.75f.).

[4] Important statements, such as this citation, are numbered continuously.

[5] Citations are often modified without notification. See References below.

According to Hintikka, this dictum of Descartes' is to be interpreted as *performance*. Yet, traditionally, the commentators on Descartes interpreted it as *logical inference*. This is because (3) includes the conjunctive adverb "therefore" (cf. Yamanda [1995], pp.129-131)[6]. However, within this interpretation, we could not yet clarify the meaning of "thinking." As Gassendi criticized (cf. Hintikka [1962], pp.6f.), the verb "thinking" is not exclusively required within this interpretation: walking, feeling, seeing—any verb takes the place of it[7]. Thus, Hintikka alternatively suggested interpreting Descartes' dictum as performance, in other words, *an act of utterance*[8]. And it is in this interpretation that we come to know why "thinking" is exclusively required.

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[6] The most famous interpretation of this kind is the *enthymeme interpretation* (Hintikka [1962], pp.20f.). According to it, though Descartes seems to have deduced "I am" from "I think" directly, he actually presupposed the following syllogism in the background:

Everybody who thinks, exists.
I think.

∴ I exist. (I am.)

Hintikka simply rejected this interpretation since the first premise "Everybody…" impairs the privateness of Descartes' insight (ibid., p.21).

[7] Hintikka explained this point as follows (Hintikka [1962], pp.62f.). Firstly, (3) is translated into the following formula:

$$(\text{I think}) \rightarrow \exists x(x=\text{I})$$

On the premise of the existential presupposition (ibid., pp.7f.), we can prove this formula in the first-order predicate logic. Therefore, Descartes' dictum may be regarded as a logically valid formula. However, its proof is feasible by any verb other than "think."

[8] His argument is summarized as follows. Firstly, he introduces his original concept "existential inconsistency":

> For any speaker "a" and sentence "p," "p" is *existentially inconsistent* for "a" to utter.
> $\Longleftrightarrow$ ⌜p∧∃x[x=a]⌝ is inconsistent. (ibid., p.11)

"⌜ ⌝" is Quine's quasi-quotes. Folowing this formula, "I" cannot utter "I do not exist" since ⌜¬(I exist)∧∃x[x=I]⌝ is inconsistent. Likewise, Descartes cannot utter "Descartes does not exist" since ⌜¬(Descartes exists)∧∃x[x=Descartes]⌝ is inconsistent. But you *can* utter "Descartes does not exist" since ⌜¬(Descartes exists)∧∃x[x=you]⌝ is *not* inconsistent.

However, let us ask: Why can we *not* utter "I do not exist"? What prevents us from uttering so?

According to Hintikka, the answer is found in our discourse (ibid., p.13). During discourse, the speaker tries to make the hearer believe him (her); in turn, hearers also presuppose that the speaker talks only on something believable. This is intelligible, considering a politician's addresses, a scholar's presentation, and so on. (Note that we are not considering the meaningfulness of the utterance but its performative character.) That is why when one makes a discourse, he cannot utter, "I do not exist." Otherwise, his discourse would lose its power to make the hearers believe him since they actually see *he exists*.

Let us define "thinking" as an "act of utterance." Then, we are supposed to utter something to ourselves every time we think. And in this internal utterance, we must avoid inconsistent ones, because such an internal utterance is considered to be an informative dialogue: the dialogue in which the speaker informs the hearer of something believable, aiming at useful conclusions. (Consider the internal speech during an examination, for example.)

"I do not exist" is the first thing to be excluded in the dialogue, because if "I"-as-a speaker utters it to "myself"-as-a hearer, "I"-as-a hearer immediately gets lost whence she (he) heard this utterance. Therefore, whenever I think—make an utterance-as-thinking to myself—, I must exist.

§4. From Cartesian Thinking to Kantian Free Will

This is Hintikka's interpretation of Descartes' dictum. We favor it, and basically regard thinking as a "discourse with myself."

Here, further, let us take up a case where the agent is involved in an ethical dilemma. In my view, it is in this kind of situation that we typically make the dialogue with ourselves. This being the case[9], we can refer to Kant.

Immanuel Kant is a thinker who took the same standpoint as Descartes: mind/body dualism[10]. He expressed it in the name of "free will."[11] In what follows, we shall develop our basic idea just in this direction.

This is true of private discourses as well. When we make a discourse with ourselves, we cannot utter, "I do not exist." For even in such a discourse, we must make "myself"-as-a hearer believe "myself"-as-a speaker. In this respect, there is no difference between *dialogue* and *monologue* (ibid., pp.13f.).
In terms of this *socialized monologue*, so to speak, Descartes' thinking is interpreted as performance in the presence of people.

[9] Of course, I do not say this is always the case. As stated above (in the parentheses: "consider internal speech during an examination."), we make a dialogue with ourselves in non-ethical situations as well. In my opinion, these two aspects of Cartesian dialogue (ethical/non-ethical) are to be integrated from a Kantian viewpoint, that is, practical and theoretical philosophy. But I put off the detailed arguments to another paper.

[10] In the actual writings, however, Kant succeeded Descartes in the context of theoretical philosophy:

"'I think' must attend all of my representations." (Kant [1787], B131)

This is Kant's interpretation of Descartes' dictum (=3). Could we count this as logical interpretation? My answer is no. We should take it into consideration that Descartes' dualism was also the beginning of modern epistemology (e.g. Nitta [1989], pp.80f.). Then, we may say, Descartes' dictum should probably have its own position in Kantian epistemology.
As for the relationship between this epistemological interpretation of Descartes' dictum and our ethical interpretation of it, in my view, they are finally integrated in the system of Kant's theoretical and practical philosophy (e.g. Kant [1788], V3-4).

[11] There is one obstacle to interpret Kant's free will on the extended line of Descartes' thinking; Hintikka refused to identify Descartes' thinking with *willing* (Hintikka [1962], p.12). However, what Hintikka called "willing" is merely a mental event mentioned in our ordinary talks, such as "I will to eat," "I will to wake up," and so on. On the contrary, what we call "free will" in this

Kant famously put forward the following two theses in his third antinomy of *Crititique of Pure Reason*, (Kant [1787], B472-473):

(4) Thesis: The causation under laws of nature is not the only causation from which all of phenomena in the world are derived. Furthermore it is necessary to assume the causation of freedom in order to explain whole phenomena.
Antithesis: There is not causation of freedom. All occurrences in the world fall under laws of nature.

On these two contradictory theses, Kant argued this way: as far as we persist in the approaches of natural science, none of these two theses will be affirmed (Kant [1787], B529); however, considered in ethics, the thesis side turns out to be affirmed from a "practical interest" (ibid., B494 etc.). In this thesis affirmed, the terminology "causation of freedom" is named *free will*.

It is true that free will is indispensable for our practical life; in any society, its member is supposed to have a free will, so that we may well favor the thesis side above. However, this is not Kant's intention; his intention was to reduce human freedom to the observation of *the moral law*:

(5) So act that the maxim of your will can be always at the same time valid as the principle of universal law-giving[12]. (Kant [1788], V30)

According to him, the freedom of our mentality is due to the observation of this moral law. To that extent, our mentality is free, separated from its material aspects.

2. MODERN CONTROVERSY

§5. Davidson's Summary

Donald Davidson summarized the preceding arguments as follows (Davidson [1970], pp.213-214):

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paper is an ability of practical syllogisms, as stated below (§§9-10). This interpretation of Kant's free will is found in the following statement, for example:

"Willing is regarded as an ability to lead itself to an action in accordance with the conception of certain rules." (Kant [1785], IV427, IV412)

See also note 23 below.

[12] As for this translation, see Paton [1947], p.180. "Universal law-giving" means "giving universal laws," not "universally giving laws."

(6)	The mental are the same as the physical.	The mental are *not* the same as the physical.
The mental are ruled by psychophysical laws.	materialism (= Churchland)	parallerism, interactionism, epiphenomenalism
The mental are *not* ruled by psychophysical laws.	anomalous monism (= Davidson)	Cartesianism

Herein, according to Davidson, Kantianism is put in the same entry as *anomalous monism* (its meaning is clear from the above table). This is because it seemed to him that Kant's third antinomy was solved by his anomalous monism. But, in my view, this is not the case, because he slightly misunderstood Kant's arguments[13].

He argued as follows. Two contradictory characters are to be recognized in *mental causation* (see note 13 (i) below): its *nomological* character (see note 13 (ii) below) and its *anomalous* character (see note 13 (iii) below). For their reconciliation, he suggested, we should identify the mental event in question with a particular physical event momentaly. According to him, this new type of *identity theory* becomes a relief measure (ibid., p.209). And with the identity theory, he thought, Kant's third is also given a solution.

However, his solotion is not in accord with Kant's intention. First of all, Kant would not accept such an identity theory, because his standpoint was the mind/body dualism (§4). Beseides, Kant would not require the anomalism of the mental. His standpoint is the opposite. As we see ealier (§4), he thought, our mentality is subordinate to the moral law.

Based on this objection, we could put Kantianism in the lower left entry, the same entry as Descartes. And this does match our arguments heretofore.

§6. Davidson's Causal Theory

Davidson slightly failed in his summary. Nevertheless, we shall follow his argument; this is because his argument is still instructive for our interest, traditional philosophy.

Before him, it was Anscombe who presented instructive arguments on traditional philosophy; she brought Aristotele's *practical syllogism* back to life in her pioneering work on

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[13] According to Davidson, Kant's third antinomy presupposes the following three principles (Davidson [1970], p.208):

(i) *The Principle of Causal Interaction*
: It is possible for the mental to cause the physical, especially the action in question.
(ii) *The Principle of the Nomological Character of Causality*
: Events related as cause and effect fall under strict deterministic laws.
(iii) *The Anomalism of the Mental*
: There are no strict deterministic laws on the basis of which mental events can be predicted and explained.

However, what actually drove Kant to the third antinomy was not any of these three principles, but *the principle of causality*: "Every event has its cause" (cf. Kant [1787], B13). Davidson overlooked this point. (Of course, I know, his argument is not directed only to Kantianism.)

action theory (Anscombe [1957], §5)[14]. But the problem was that she persistently refused Kantian causal theory: so-called her *anti-causal theory* (ibid., §12).

Davidson's argument was basically on the same line: he had the picture of practical syllogism in common with Anscombe. However, he drastically revived the causal theory inside it. It is in this respect that we learn from his arguments. Let us trace it.

(7) I wanted to turn on the light. (desire)
I believe that if I flip the switch, then the light goes on. (belief)
∴ I flipped the switch. (action)
(Davidson [1963], pp.4f.)

This is an example of practical syllogism by Davidson. Originally, Anscombe characterized practical syllogism as a device to reveal an order of reasons for the action in question (Anscombe [1957], §§42-43). However, as stated above, she persistently refused a cause concept concerning the reasons. On the contrary, Davidson tried to put it in that order. He says:

(8) …a person can have a reason of an action, and perform the action, and yet this reason not be the reason why he did it. (Davidson [1963], p.9)

Certainly, the agent can have plural reasons for one action. For example,

(9) I wanted to alert a prower. (desire)
I believe that if I flip the switch, then a prower becomes wary. (belief)
∴ I flipped the switch. (action)
(Davidson [1963], pp.4f.)

Here, the preceding desire in (7), i.e. wanting to turn on the light, is replaced with wanting to alert a prower. In this way, plural reasons are imaginable for one action. However, even so, the true reason for the action is presumably only one. In the case above, for example, it is not likely that the agent's intention was to alert a prower even if his action *contingently causes* the wariness of the prower. This is why Davidson considered: in reality, some of the imaginable reasons were useless for the explanation of the action. (This is the meaning of (8) above.) And he said:

(10) The primary reason for an action is its cause. (ibid., p.4)

This is how Davidson revived Kantian causal theory inside Anscombe's practical syllogisms.

§7. Zangwill's Rational Norm

We may also find a creation of a new cause concept in this causal theory of Davidson's. Nick Zangwill has noticed it:

(11) …Donald Davidson famously argued that reasons were causes. But a reason is not any old cause of action— "A reason is a rational cause." (Zangwill [1998], p.182)

[14] In Kaneko [2008a], I have fully dealt with this point.

A reason is certainly a cause for the action; but it is distinguished from any customary (old) concept of cause ruled by a law of nature. Another rule dominates the reason. And the rule finally separates our object, human mentality, from other material objects in natural sciences.

Take a closer look at (7), for example. There, the strangeness of its order may come to the attention. For, if (7) is a logical syllogism at all, its sentences must be ordered in the following way:

(12) I flipped the switch.
If I flip the switch, then the light goes on.
∴ The light goes on.

Sentences here follow the rule called Modus Ponens (p→q, p /∴q). But syllogism (7) is far from this order.

As for this problem, Anscombe admitted that the practical syllogism had no logical validity (Anscombe [1957], §34). On the contrary, Zangwill offered a relief measure: he followed up (7) by the following *rational norm*:

(13) If one desires (wants) to do F and believes that if s/he does G, then F' occurs,[15]
then s/he should do G. (Zangwill [2005], p.3)[16]

[15] "F'" is the paraphrase of action F into an event. For example, when "F" is "turning on the light," "F'" is "the light going on." The paraphrase of this kind is widely accepted since Anscombe dealt with the *redescription* of one and the same action (Anscombe [1957], §§23-26).
[16] Zangwill's original form of this norm is, however, as follows:

(i) If one desires (wants) to do F and believes that if s/he does G, then F' occurs,
then s/he should *desire (want) to* do G.

That is, Zangwill confines the consequence ("s/he should desire to do G") to the mental ("desire to"). This is because he made a distinction between *horizontal norms* and *vertical norms* (Zangwill [1998], p.194).
Vertical norms are the norms regulating the relationship between the mental and the world.

(ii) Beliefs should be true.
(iii) Desires should be satisfied.

These are the examples of vertical norms; *truth* is a vertical norm for belief and *satisfaction* for desire (ibid., p.194). In either case, vertical norms commonly order the mental to *fit with* the world. However, because of this common feature, they cannot make a distinction between desire and belief (ibid., p.194).
This distinction is made just in horizontal norms. To take examples:

(iv) If one desires to do F, then s/he should intend to do F.
(v) If one perceives p, then s/he should believe p.
(vi) If one believes that p and p→q, then s/he should believe q.

This norm supports the order of (7) in its background. In this way, (7) is validated, even if it is logically not valid[17].

§8. Zangwill's Network

Zangwill named his standpoint "normative functionalism" (Zangwill [1998], p.174) or "normative essentialism" (Zangwill [2005], p.1)[18].

(14) Normative Essentialism is the thesis that propositional attitudes have rational essenses. (Zangwill [2005], p.3)

(15) Normative Functionalism is the thesis that mental properties have normative essenses. (Zangwill [1998], p.190)

Take another look at syllogism (7) above; its premises are considered to be "propositional attitudes" in (14). Again, as is understood from the name "normative functionalism," Zangwill owes his picture to what is called *dispositional functionalism*[19], according to which propositional attitudes (or mental properties) are supposed to constitute a "network," and in that network, each propositional attitude plays a role of a "node" (Zangwill [2005], p.185, p.197), and a norm like (13) above is regarded as a "strand" among the nodes (ibid., p.191).

In what follows, we shall put our preceding arguments on Descartes, Kant, and Davidson into this *normative network* of Zangwill's. Thereby, we complete the whole picture of human mentality.

As seen from these examples, each of desire (cf. iv) and belief (cf. v, vi) has its own norms. Based on these peculiar norms, they are distinguished from each other.

In this way, the distinction of vertical norms and horizontal norms takes a siginificant role in Zangwill's system. Nevertheless, in citation (13), I disregarded it. How could it be justified?

My answer is this: it is sufficient to regard (13) as a conjunction of (i) and (iii). Thinking in that way, we can still match (13) with Zangwill's distinction although (13) itself is not classified to a vertical norm nor to a horizontal norm.

[17] This conclusion raises an additional question: Are logical formulas merely norms on beliefs, or still objective rules among propositions?

Taking (vi) in note 16 into consideration, Zangwill will choose the former answer (norms on beliefs). Then, logic becomes a part of psychology. However, philosophers of logic, such as Frege and Carnap, would fiercely refuse this answer, because, for them, logical formulas must express something objective. Within this paper, we shall take a standpoint close to Zangwill (§11). But I wish to leave this matter open up to the next paper.

[18] Normative functionalism is a "strong" version of normative essentialism (Zangwill [2005], p.6).

[19] In detail, see Zangwill [1998], p.185, Zangwill [2005], p.2. Zangwill called his standpoint "normative functionalist network" as well (Zangwill [1998], p.191).

3. MORAL VIEWPOINT

§9. Moral Viepoint

However, in concrete argumentation, we still make use of the previous format, that is, practical syllogism. Between the syllogisms, we shall find the network. To begin with, let us take up the following syllogism.

(16) I want to take a rest. (desire)
I believe that if I stay in this land (owned by another person), then I can take a rest. (
∴ I stay there. (action)

This is, like (7), a Davidson-style syllogism. Davidson has already incorporated Kantian causal theory with his syllogisms (§6). Furthermore, Zangwill grounded their validity on his rational norms (§7). Nevertheless, we still have a reason to reject this syllogism; it is morally defective. This is the problem that we shall deal with in the following.

Firstly, in order to deal with the moral defect, let us return to Kant. Based on his ethics, we introduce a more complex structure of syllogisms, in which the moral criticism of (16) is achieved.

§10. Beck's Example

For this purpose, we can refer to the work by Lewis White Beck (Beck [1960])[20]. He actually put Kantian ethics in the form of practical syllogism.

(17) To avenge a wrong is always my purpose.
To tell this lie would avenge a wrong.
∴ I purpose to tell this lie.
(Beck [1960], p.81)

This is Beck's example; however, it is too naïve and so defective.

Beck's example simply follows the first figure of Aristotelian logic (M-P, S-M /∴S-P), which we can reformulate as follows:

(18) To avenge a wrong is always my purpose.
To tell this lie is to avenge a wrong.
∴ To tell this lie is my purpose.

Aristotelian logic is the logic of subject-predicate form. But this form does not match Kantian ethics, since Kantian ethics requires the decision of a will, which is usually expressed by the form of a propositional attitude, i.e. "I will that…" We must use this form very much in the conclusion part of Beck's example. However, "To tell this lie is my purpose" is far from it. That is why Beck's example needs to be corrected.

[20] The following argument is based on Kaneko [2008b]. I hope that readers allow me to omit its details in order to avoid lengthy arguments.

Beck's analysis is directed to the middle part of the decision process of a will: from a *maxim* to a will. Kant's researchers agree in the point that that Kant's terminology "maxim" is the expression of the major premise in a practical syllogism (Beck [1960], p.81, Paton [1947], p.59). Beck's example follows this view.

Here, we may further refer to Herbert James Paton's analysis that the maxim is a rule ranging over circumstances (Paton [1947], p.60, p.183, p.137, see also Kant [1788], V19). Taking this universal character of the maxim into consideration, we can finally correct Beck's example in the following way:

(19) If I suffer a wrong, then I will avenge the wrong.
I suffer a wrong.

∴ I will avenge the wrong.

§11. The Moral Law

Based on this correction of Beck's example, we may perhaps adopt the following Kantian syllogism as the criticism against (16) above.

(20) If I am in the land owned by another person, then I will not stay there.
I am in the land owned by another person.

∴ I will not stay there.

Compare this conclusion with that of (16). Between them, we can find a conflict, which shows the criticism required.

However, this formulation is not yet sufficient. For, though Kant's ethics is inevitably connected with the moral law[21], we have not found it in (20) yet. Thus, it must be introduced further.

In my opinion, for the introduction to our format, practical syllogisms, Kant's moral law is to be reformulated as follows (cf. Kaneko [2008b], §5):

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[21] As the moral law, I have (5) in mind. But, as is well known, Paton indicated that Kant formulated his moral law at least in five ways (Paton [1947], p.129):

I. *The Formula of Universal Law* (Kant [1785], IV421)
Ia. *The Formula of the Law of Nature* (ibid., IV421)
II. *The Formula of the End in Itself* (ibid., IV429)
III. *The Formula of Autonomy* (ibid., IV434)
IIIa. *The Formula of the Kingdom of Ends* (ibid., IV438)

Among them, my choice (5) corresponds to III (Paton [1947], p.130). In contrast, Kant himself stated that Ia, II, and III were merely three modes of speech on the same thought (Kant [1785], IV436) and chose I as its best formulation (ibid., IV421). Again, he added that Ia, II, and IIIa were merely the complement of I (ibid., IV436-437). Taking this explanation of Kant's seriously, we should probably have chosen I as our formulation of the moral law. However, in my view, III is outstanding in its presentation in *Critique of Practical Reason* (Kant [1788], V30). Furthermore, Paton admitted that I and III were essentially the same and differentiated only in their emphasis.

(21) If maxim "If I am in situation A, I will do B." is valid for everyone, then for anyone, if s/he is in situation A, then s/he should do B.

This means, "If my maxim is considered to be valid for everyone, I can and must observe it as a universal law." I think this reformulation is innocent because it does not add anything to the original wording (=5). But we may perhaps lose some possibilities of its interpretation; so I call it "negative interpretation" (ibid.).

Based on this reformulation, we can finally achieve the formalization of Kantian ethics in the following way[22].

(22) If maxim "If I am in situation A, I will do B." is valid for everyone,
then for anyone, if s/he is in situation A, then s/he should do B.
"If I am in the land owned by another person, I will not stay there"
is valid for everyone.

∴ For anyone, if s/he is in the land owned by another person,
then s/he should not stay there.
I am in the land owned by another person.

∴ I should not stay there.

Omitting the detailed arguments, in this way, we can formalize Kantian ethics by piling the syllogism of the moral law upon the original formulation of Beck's example (=20) [23].

4. THE NORMATIVITY OF THE MENTAL

§12. Tree-shaped Polysyllogism

Such a structure as (22) is called "polysyllogism."[24] It is related further with preceding syllogism (16). Compare the conclusion of (22) with that of (16). There, we find a conflict. This is how we achieve the moral criticism against (16).

On the basis of this result, now we can proceed to depict the whole picture of the agent's mentality (cf. Kaneko [2009]):

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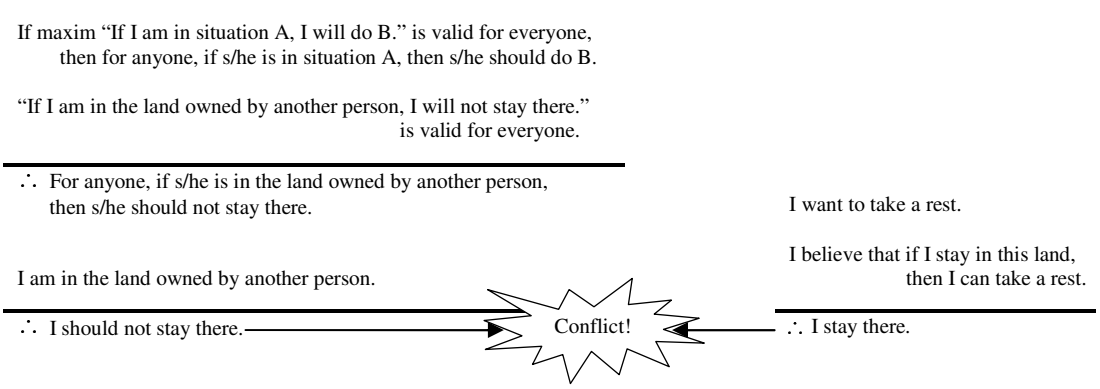
[22] In Kaneko [2008b] and Kaneko [2009], I elaborated on this reformulation. Additionally, I must explain why I took up the property of a land as an example of Kant's ethics. This choice is attributed to Kant's argument in *Die Metaphysik der Sitten*. Therein, Kant grounded his ethics on the notion "der ursprünglicher Gesamtbesitz" of the land (the earth). Cf. Kant [1797], VI262.

[23] According to Beck, Kant used his terminology "will" in two ways (Beck [1960], pp.176-181). The one is *logical ability* to determine an action in accordance with rules. The other is *lawgiving ability* to produce new rules. If we take "rules" in a wider sense (to be concrete, as both a "maxim" and "universal laws"), we can integrate this distinction of Beck's into one formulation. (22) shows the result of this integration. The upper syllogism (from the moral law to the universal law) shows the lawgiving ability of will. The lower syllogism (from the universal law to the obligatory form of will) shows the logical aspect of will.

[24] Remember Kant used this terminology for his argument on the ideal of will (Kant [1787], B386-388, see also Beck [1960], p.81).

(23)



We may say this is the complete picture pursued. Therein, we can find the elaboration of Zangwill's normative network as well (§8). See each sentence in these syllogisms; desire[25], belief[26], decision[27], the judgement of validity[28], the judgement of the circumstance[29], the moral law[30], and the universal law[31]—these are all regarded as "nodes" in Zangwill's network.

Again, the rational norms supporting these syllogisms are regarded as "strands" in Zangwill's network. As for the syllogism on the right side (=16), the strand is (13) above. As for the syllogism on the left side (=22), the strand is Modus Ponens, i.e. $p\rightarrow(q\rightarrow r)$, $p /\therefore q\rightarrow r$, and $q\rightarrow r$, $q /\therefore r$. (We may call them *normative strands*.)

Norms are not restricted to strands. From a moral viewpoint, the moral law and the universal law are also regarded as norms. (We may call them *normative nodes*.)

In this way, our mentality is networked by norms. Its shape is like a tree. Our mentality is a *tree-shaped practical polysyllogism*.

§13. The Normativity of the Mental

In this way, we can complete the whole picture of human mentality. Furthermore, therein, we may find the motif of Descartes and Hintikka again; that is, the dialogue with myself.

Let us see the conflict in (23). In that conflict, the agent presumably asks himself (herself): "Which should I follow, the moral obligation or the desire?" This is a beginning of a dialogue, in which the agent asks himself and answers to himself.

Hintikka indicated that even in this private interaction, the agent must keep certain norms. Desartes' dictum is considered to be the most basic one among such norms. The norms found in

[25] "I want to take a rest." in the syllogism on the right side (=16).
[26] "I believe that if I stay in this land, then I can take a rest." in the syllogism on the right side (=16).
[27] "I stay here." in the syllogism on the right side (=16). "I should not stay here." in the syllogism on the left side (=22).
[28] " 'If I am in the land owned by another person, I will not stay there.' is valid for everyone." in the syllogism on the left side (=22).
[29] "I am in the land owned by another person." in the syllogism on the left side (=22).
[30] "If maxim 'If I am in situation A, I will do B.' is valid for everyone, then for anyone, if s/he is in situation A, then s/he should do B." (=21) in the syllogism on the left side (=22).
[31] "For anyone, if s/he is in the land owned by another person, then s/he should not stay there." in the syllogism on the left side (=22).

(23) (normative strands and normative nodes) are also regarded as such. But there arises a problem: we could not find one decisive answer even if following the norms[32].

This problem is linked with the dialogical character of thinking. Thinking is an activity of dialogue, in which we follow the norms spontaneously. Following norms is not a mechanical process but a spontaneous human activity. We judge the application of a norm and decide how to follow it; so discrepancy often occurs.

This is akin to the case of other social norms, such as legal laws. There is not one decisive answer in a legal dispute. It is possible that two judges give different answers on the same legal law. The same is true of the norm of our mentality.

As for Descartes' dictum, there is scarcely a room for such discrepancy. However, in our present situation (=23), the norms, especially normative nodes like the moral law, allow large rooms[33]. These rooms give rise to the indecisiveness questioned above. And this indecisiveness characterizes the conflict in (23). As a problem, it is left open to each agent. Each agent chooses the answer by himself.

§14. Why Human Mentality Is Not Elucidated by Natural Sciences

The indecisiveness just stated seems to show a negative aspect of human mentality. But it originates from its dialogical character as activity, from which we can drive the conclusion we expected: human mentality is not reduced to any material objects of natural sciences.

Thinking as a dialogue is a kind of social interaction; it is akin to a politicians' address, a scholar's presentation, and so on. We cannot explain nor predict an actual discussion (an interaction as a dialogue) with any mathematical theories. It is true that each speaker follows some objective rules there, but the mode of following them is still subjective. This is why our mentality is not explicable by mathematical theories.

Hopefully, I add to this conlusion the following. Our view is attributed to the form of our mentality, that is, *propositional attitudes*. Let us take up desire. We often feel its *intensity* in our mind; in that case, we may feel its *causal power* as well, and consider it a kind of *sensation*. However, focusing only on this aspect, the desire is not distinguished from that of an animal; furthermore, it is supposedly reduced to *neural processes*.

But, if we keep our eyes on the form of our mentality, propositional attitudes, such reduction is avoidable. For the verbal contents of propositional attitudes are never reducible to units, such as sensations or neurons.

Zangwill noticed this point; so he confined his arguments to propositional attitudes (Zangwill [2005], p.4, see also (14) above)[34]. This is also recognized by Descartes. He said: what distinguishes human mentality from animals' behavior is nothing but its verbal contents (Descartes [1637], AT. VI56-57).

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[32] The following argument is strongly influenced by Kripke's argument of rule-following (Kripke [1982], p.26 note19, p.31 note22, p.37). Zangwill regarded Kripke as one of his forerunners (Zangwill [1998], p.184, Zangwill [2005], p.1, p.2).

[33] Regarding this point, we can refer to Paton's interpretation of Kant's maxims (Paton [1947], p.91).

[34] However, note that our conclusion is already far apart from Zangwill's original. Zangwill admits that animals' mentality is normative (Zangwill [2005], pp.14f.) and that our mentality is eventually reduced to material neural processes (ibid., p.11), as Davidson insisted (Davidson [1963], p.16, p.18). Our conclusion is in opposition to all of these.

Our mentality is not composed of something like *qualia*. The verbal content distinguishes the mental from the physical. And this verbal character is connected with the dialogical character, in which the normativity of the mental is also included. These features of our mentality are not approached by statistical data nor by neural sciences[35].

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[35] I did not treat the question, "Can machines think?" in this paper. It is well known that Alan Turing treated this question in his paper (Turing [1950]). However, in my view, his method called "Turing test" (ibid., pp.433f.) seems to have distorted his original question after all. As for the "machines" Turing had in mind, namely, *Turing machines*, we can check them in Cutland [1980], pp.52f.

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