SUBJECTIVE AND OBJECTIVE CUES IN MORAL JUDGMENT¹

GIYOO HATANO²

*Dokkyo University*³

A questionnaire, consisting of 6 sets of questions concerning 3 wrongful acts, was constructed using the paradigm for concept learning and was administered to 2nd, 4th and 6th graders and female college students. Older respondents tended to be less consequence-(C-)oriented and more pure motive-(M-)oriented, though the college students became more consequentialistic when required to judge in terms of law-breaking instead of morality. In order to examine flexibility of children in utilizing cues 11 M-oriented and 12 C-oriented 2nd graders were asked to anticipate a hypothetical person's judgment between 2 acts and informed of his "real" answer which was the reverse of their preexperimental tendency. After 6 reinforced items, all M-oriented and 5 C-oriented Ss were able to anticipate correctly.

The present study aimed at investigating developmental changes of cues in moral judgment. What aspects of other persons' acts are relevant to our judgment of "good-bad", "desirable-undesirable", etc.? Does relative significance of these aspects change in the course of development? Piaget's well-known pioneer study of moral judgment (1932), the most popular in this research area, has been criticized frequently, because of methodological shortcomings typical of Piaget's early studies. Stories used by Piaget to describe acts were lengthy and complex. Paired stories had different values not only on the relevant dimension but on other

irrelevant dimensions, which could influence a child's responses. Moreover, Piaget, who was relying on the "methode clinique", did not try to construct stories by definite rules in order to clarify the meaning of a child's responses. Rather, he tried to find "functional" stimuli of a child's judgment of goodness-badness by analysing reasons and answers to supplementary questions.

There have been many attempts to confirm or to deny Piaget's study (see Kohlberg, 1964; Lickona, 1969). However, similar criticisms apply to most of them. It seems most advantageous to construct pairs of stories differing in one aspect at a time and to detect the functional stimulus (relevant aspect) in each child by considering his pattern of judgments to a complete set of pairs. Using the paradigm for concept learning, various aspects of an act can be conceived of as dimensions and characteristics in each aspect as values on a dimension, i.e., cues in moral judgment. So the purposes of the present study are to find criterial cues of moral judgment in children and adults and to clarify substantive and structural differences between them.

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³ Requests for reprints should be sent to Giyoo Hatano, Dokkyo Univ., 600 Sakae-cho, Soka-shi, Saitama-ken, JAPAN.

QUESTIONNAIRE SURVEY

Method

A questionnaire was constructed to clarify relevant aspects of an adverse act in judgment of goodness-badness. An adverse act means an act resulting in material disadvantage (loss of money or goods) to or physical or mental attack on another person. Aspects of the act dealt with in this study were as follows:

- i) motivation—Is the act initiated by egoistic or altruistic motivation? (egoistic, altruistic)
- ii) sincerity—Is the actor sincere or insincere in trying to avoid damaging consequences? (sincere, insincere)
- iii) intention—Does the actor intend to cause disadvantage to the other person? (intentional, accidental)
- iv) consequences—Are the consequences of the act of serious or slight disadvantage to the other person? (serious, slight)

The first three aspects were considered to be Motivistic (or subjective) and the fourth as Consequentialistic (or objective).

Construction of questionnaire. The questionnaire consisted of six items. In each item, three persons' adverse acts were described.

The three persons' names were Ichiro, Jiro and Saburo (all are popular names in Japan). After the three persons' acts were described, they were paired off, Ichiro and Jiro (acts varying on one dimension), Jiro and Saburo (varying on the other), and Ichiro and Saburo (varying on both). Ss were asked to judge which of the two was the worse, "Which person do you think is worse, Ichiro who did such and such things, or Jiro who did such and such things?", etc. Acts of items 1 and 4 differed in terms of seriousness of consequence and motivation, items 2 and 5 consequence and sincerity, and items 3 and 6 consequence and intention. Items are shown in Table 1.

Administration of the survey. The questionnaire was administered in 1968 to 118 second-, 111 fourth- and 76 sixth-graders of a municipal elementary school of Chofu City, and 97 female college students of child education at Kunitachi

Music College. College students answered the questionnaire twice: they were required to judge first in terms of their own standard of morality, then in terms of law-breaking.

Instructions to Ss. The experimenter read the following instructions and items after he had distributed an answer sheet to each subject. "I shall tell you about three persons, each of whom committed a wrongful act. Then, I'll ask you about two of the persons. Is one of them worse, or are both equally wrong? Please write down your own judgment on the answer sheet. Do you follow me? Now we shall turn to the first item. (The experimenter reads the first item shown in Table 1). Ichiro's, Jiro's and Saburo's wrongful acts are described simply on your answer sheet. I'll ask you question (a) of the item. Who do you think is the worse, Ichiro or Jiro? Which person is the worse, Ichiro, who stole 5 pieces of bread for his friend or Jiro who stole one piece of bread for his friend? Please write your answer.—Now I'll ask you question (b). Who do you think is the worse, Jiro or Saburo? Which person is the worse, Jiro, who stole a piece of bread for his friend, or Saburo who stole a piece of bread for himself?—Now I'll ask you question (c). Who do you think is the worse, Ichiro or Saburo? Which person is the worse, Ichiro, who stole 5 pieces of bread for his friend, or Saburo who stole one piece of bread for himself?—Have you finished? We have completed the first item. Now we shall go down to the second item. (The experimenter reads and asks questions of the remaining five items successively.)"

A slightly more simplified version of instructions was used for college students. They were required to judge in terms of their moral standard first. After they had completed all six items, they were required to judge by the criterion of law-breaking, that is, to judge which act should be punished more severely by the law.

Classifications of Ss' responses. Ss were required to make three judgments on each item. There were three alternatives: A is the worse, B is the worse, and they were equally wrong. So, there were 27 possible response patterns in all. Four categories and eleven sub-categories were set up. The four categories were as fol-

TABLE 1
Items of the questionnaire†

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- 1) Ichiro stole 5 pieces of bread from a store in order to help his hungry friend.
Jiro stole one piece of bread from a store in order to help his hungry friend.
Saburo stole one piece of bread from a store in order to satisfy his appetite because he was very hungry.
 - 2) Ichiro went to play for a moment while he was tending a shop. While he was absent a 100-yen priced article was stolen.
The telephone rang while Saburo was tending a shop. While he was on the phone a 500-yen priced article was stolen.
 - 3) Ichiro carelessly dropped some dishes when he was helping his mother, and 5 dishes were broken.
Saburo intentionally dropped some dishes when he was helping his mother, and a dish was broken.
 - 4) Ichiro was hurrying home because it was late. Driving at excessive speed, he hit a pedestrian, injuring him slightly.
Saburo was rushing a neighbor to a hospital. He speeded up excessively and inflicted a serious injury on a pedestrian.
 - 5) Ichiro drove ahead as the light turned green. But he ran over a man who suddenly appeared from the side. The man was injured seriously.
Saburo drove forward before a signal had changed to green. He ran over a man who suddenly appeared from the side. The man was injured slightly.
 - 6) Ichiro shot a man with a pistol. The man was injured slightly.
Saburo discharged a pistol carelessly when he was tampering with it. A man was injured seriously.

† Sentences about Jiro are not shown in this table except in item 1, because his act is obviously the best of the three. He is always equally blameful on one dimension and less blameful on the other. Ss must choose between Ichiro and Saburo whose acts differ in two dimensions.

lows :

- 1) Motive-oriented response pattern—Response patterns were classified into this category when Ss largely took into account the wrongdoer's motivation, sincerity or intention and paid little or no attention to the consequence. (hereafter referred to as M)
- 2) Consequence-oriented—This means Ss judged culpability in terms of the objective consequence of the act and disregarded or deemphasized the actor's motives. (C)
- 3) Equalizing—Ss considered the two aspects of the act, i.e., the consequence and the motive, to be about equally important. (E)
- 4) Inconsistent—Ss made logically inconsistent patterns of judgment. (I)

M category had four sub-categories, C had also four, E had two and I had just one. We

shall explain these sub-categories by concrete examples. In item 2, the following three acts were described :

Ichiro : while playing, lost 100 yen

Jiro : while on the phone, lost 100 yen

Saburo : while on the phone, lost 500 yen

Ichiro's was the worse from the viewpoint of a motivist but less wrong from that of a consequentialist than Saburo's act, and Jiro's act had the less blameful value on both dimensions.

Response patterns belonging to each sub-category were as follows :

Purely motive-oriented (abbreviated PM) : Ichiro, equally, Ichiro. Here Saburo's greater loss (500 yen, as compared with Jiro's losing 100 yen—the "consequential" cue) was disregarded. Acts equal in motivation were considered equal regardless of consequence.

Standard motive-oriented: Ichiro, Saburo, Ichiro. Both cues were taken into consideration, so here Saburo is worse than Jiro for losing the 500 yen. As in PM, Ichiro's inferior motive (playing instead of working) rates him worse than Saburo.

Slightly motive-oriented: Ichiro, equally, equally. Ss were unable to choose where the acts were identical in motive or differed in both motive and consequence, but "other things equal" made a motivist judgment against Ichiro.

Unexpected motive-oriented: Ichiro, *Jiro*, Ichiro; *Jiro*, *Jiro*, Ichiro; equally, *Jiro*, Ichiro; equally, *Jiro*, equally; equally, equally, Ichiro (unexpected responses are italicized). Subjects might unexpectedly rate Jiro "worse" than Ichiro or Saburo or both, yet choose Ichiro (playing) as being worse than Saburo (lost 500 yen).

We accepted such patterns as "Ichiro, equally, equally", "equally, Jiro, Ichiro", etc. as logically consistent because they were possible when the three acts were so similar in badness that S could distinguish between the extreme two but not between the middle and the extreme.

Similarly category C had four sub-categories. They were:

Purely-Consequence-oriented (PC)—equally, Saburo, Saburo

standard C-oriented—Ichiro, Saburo, Saburo

slightly C-oriented—equally, Saburo, equally unexpected C-oriented—*Jiro*, *Jiro*, Saburo;

Jiro, Saburo, Saburo; *Jiro*, equally, Saburo; *Jiro*, equally, equally; equally, equally, Saburo.

Category E had two sub-categories. They were:

Pure and standard E—Ichiro, Saburo, equally; equally, equally, equally

unexpected E—*Jiro*, *Jiro*, equally

These three major categories were logically consistent. They differed only in the outcome of the weighing of two cues, subjective and objective, which was mainly revealed by the "critical" question, "Who was worse, Ichiro or Saburo?" The preceding two questions

were generally auxiliary.

Occasionally, a S made a logically inconsistent pattern of responses which could be found by considering the set of three judgments simultaneously. For example, the following set of responses was illogical and classified as I.

Ichiro was worse than Jiro.

Jiro was worse than Saburo.

Saburo was worse than Ichiro.

The remaining eight response patterns out of 27 belonged to Category I. No answer (NA), which occurred only twice among all Ss, was also included in this category.

Findings

The distribution of judgmental patterns to each item over four categories is shown in Table 2. Here we see that:

1) Second-graders made relatively many C responses. The "M" percentages of the second-graders were about 50 except in items 2 and 3, where they jumped to 77 and 80% respectively. On the other hand, fourth- and sixth-graders and college students made few C responses. M percentages for them were above 70% except on item 1 (62 and 58). While many fourth-graders considered both aspects of the act but gave more weight to the actor's motive, sixth-graders and college students often completely ignored the seriousness of the consequence. In other words, they showed significantly more PM responses.

2) Ss' judgments tended to be more consequence-oriented when the damage was very serious, e.g., when an act resulted in someone's severe injury. Items 1, 2 and 3 dealt with loss of an article: items 4, 5 and 6 with injuring acts. Comparing item 2 with item 5 and item 3 with item 6, the former showed a larger proportion of M responses. But this tendency could not be found in the relation between item 1 and item 4, because the M percentage of item 1 was very low.

Distribution in sub-categories across items is shown in table 3. The figures in this table confirmed finding (1). Standard M-oriented sub-category was

TABLE 2
Distribution of response patterns by category†

Grade	Item	M	C	E	I	M%	PM%	PM/M%
2nd (<i>n</i> =118)	1	52	39	14	13	44.1	3.4	7.7
	2	91	18	3	6	77.1	39.0	50.5
	3	95	7	13	3	80.5	22.9	28.4
	4	53	42	22	1	44.9	7.6	17.0
	5	55	42	11	10	46.6	11.0	23.6
	6	64	24	20	10	54.2	11.9	21.9
4th (<i>n</i> =111)	1	69	11	22	9	62.2	31.6	50.7
	2	95	8	1	7	85.6	67.6	78.9
	3	105	1	2	3	94.5	52.3	55.2
	4	82	9	13	7	73.9	40.5	54.9
	5	81	19	9	2	73.0	40.5	55.6
	6	81	9	16	5	73.0	37.8	51.9
6th (<i>n</i> =76)	1	44	7	20	5	57.9	32.9	56.8
	2	70	2	1	3	92.1	73.7	80.0
	3	69	1	4	2	90.8	76.3	84.1
	4	58	5	8	5	76.3	56.6	74.1
	5	62	7	4	3	81.6	61.8	75.8
	6	61	2	10	3	80.3	61.8	77.0

† Response patterns of college students are shown in Table 4.

most frequent among the younger Ss. PM percentage increased sharply among fourth-graders, surpassing standard M, and showed gradual developmental increment afterwards. C response patterns decreased steadily from their high of over 25% in male second-graders. No PC was found among college students. E was rather stable and I generally decreased. Among the second-graders, girls tended to be considerably more motive-oriented than boys. This sex difference disappeared in older pupils.

When college students were required to judge in terms of law-breaking instead of immorality, they made many more C responses, showed lower PM percentages and PM/M percentages (see Table 4). In other words, they could change their evaluation in the direction of a consequentialist. They were relying on the motivational cue under the "morality" situation, but they seemed to have a latent

C-oriented response pattern.

Though Ss who made M or C responses on one item tended to show the same orientation on another, the correlations were far from perfect. Furthermore, a third of all combinations showed no significant correlation. Table 5 shows the percentages of coincidence of responses between two items, which were calculated by summing up the numbers of coincident responses (M-M, C-C, E-E and I-I) and dividing the sum by the number of Ss. This was done with the second-graders only, because the distribution of the four response categories among them was not so steep. The percentages of the most frequent category were generally a little less than 50. Table 6 shows phi-coefficients calculated from the 2×2 matrices of M and C categories between two items. Out of 15 coefficients, ten were statistically significant. Judging from these findings, we concluded that response patterns were

TABLE 3
Percentage distribution of response patterns to all items by sub-category

Grade	Sex	n	M				C				E		I
			pure	stan.	slit.	unexp.	pure	stan.	slit.	unexp.	stan.	unexp.	
2nd	m	53	10.1	36.5	1.6	3.1	2.5	17.6	0.6	5.7	14.5	0.3	7.5
	f	65	20.8	39.0	2.3	1.3	1.8	13.8	0.5	6.4	9.0	0.3	4.9
4th	m	59	45.5	27.1	4.2	1.1	0.8	4.0	0.6	2.8	10.2	0	3.7
	f	52	44.5	26.3	2.9	2.2	1.3	3.8	0.3	3.5	8.7	0	6.4
6th	m	37	57.2	16.2	3.2	0	0.9	1.8	0.9	1.8	9.9	0	8.1
	f	39	63.7	15.0	3.4	0.9	0	1.3	1.3	2.6	10.3	0.4	1.3
college	f	97	64.4	13.9	1.9	0.5	0	0.7	0.3	1.4	15.6	0	1.2

TABLE 4
Response patterns of college students under criteria of morality and legality

Criterion	Item	M	C	E	I	M%	PM%	PM/M%
Morality	1	30	1	65	1	30.9	22.7	73.3
	2	94	1	1	1	96.9	94.8	97.9
	3	95	0	2	0	97.9	76.3	77.9
	4	73	6	16	2	75.3	53.6	71.2
	5	92	4	1	0	94.8	72.2	76.1
	6	86	2	6	3	88.7	67.0	75.6
Legality	1	24	40	31	2	24.7	10.3	41.7
	2	63	26	6	2	64.9	37.1	57.1
	3	83	11	1	2	85.6	39.2	45.8
	4	46	37	13	1	47.4	7.2	15.2
	5	91	5	1	0	93.8	33.0	35.2
	6	78	13	6	0	80.4	17.5	21.8

(n=97)

TABLE 5
Percentage of coincidence between two items
(over 4 main categories)

Item	2	3	4	5	6
1	42.4	38.1	46.6	46.6	46.6
2		50.8	43.2	43.2	51.7
3			44.1	41.5	44.1
4				40.7	36.4
5					50.0

TABLE 6
Phi coefficient between two items
(M & C categories only)†, ‡

Item	2	3	4	5	6
1	.17	-.01	.38**	.33**	.25*
2		.31**	.24*	.23	.34**
3			.28*	.11	.15
4				.26*	.19
5					.27*

not so stable among the second-graders.

These findings were by no means surprising. As Piaget (1932) put it, "the notion of objective responsibility diminishes as the

† Minus means proportion of coincidence is smaller than expected from marginal distributions.

‡ ** means there was statistically significant association at 1% level and * at 5% level (by chi-square test).

child grows older." (p. 120) This was confirmed by our study. Ss over ten years of age made few C-oriented responses. In fact, we could not find many pure consequentialists even in the youngest group. However, since most of our second-graders were 8-year-olds, we could reasonably expect a small minority of consequentialists. Finally, correlations of responses to different items were not very high. This is consistent with the findings of Durkin (1961), Bandura and McDonald (1963), and others, in that it harmonizes with Piaget's admission that "one and the same child judges sometimes one way, sometimes the other." (p. 119) As a whole, the stricter methodology used in the present study served only to confirm the findings of previous ones.

The finding which should be especially noted is that college students showed

flexibility in their judgments. They made many more C responses when they judged in terms of law-breaking. What implication does this have? It shows that, substantively, they conceive of "law" as more objective and less sensitive to the wrongdoer's motive than morality, and structurally, they are flexible enough in their evaluation to easily change the mode of weighing of different cues.

LEARNING EXPERIMENT

Purpose

The questionnaire survey revealed that college students could change their criterion of judgment when they were required to respond in terms of law-breaking. In other words, though they tended to respond in a motive-oriented manner, they had another standard of evaluation, i.e.,

TABLE 7
Items used in the learning experiment

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1)	Ichiro, passing by a house, mischievously threw a pebble at a window. The window was slightly broken.
Saburo, playing baseball, carelessly missed a ball he should have caught. It hit a large window behind him. The window was broken.
2)	Ichiro accidentally dropped a book from a second-floor window, hitting Mr. Yamada and injuring him seriously.
Saburo mischievously dropped a book from a second-floor window, hitting Mr. Yamada and injuring him slightly.
3)	Ichiro intentionally splashed ink at Akichan and made a small stain on her dress.
Saburo accidentally turned over his ink bottle and made a large stain on Akichan's dress.
4)	Ichiro, in a snowball fight, intentionally threw a snowball at Haruchan who was passing by. It hit her in the face and made her cry.
Saburo, in a snowball fight, accidentally threw a snowball at Haruchan who was passing by. It hit her in the eye. Her eye swelled up and stayed that way for some time.
5)	Ichiro, when he tried to take a book from the shelf, carelessly knocked his brother's record off the table and broke it.
Saburo intentionally knocked his brother's record off the table. It was not broken but was scratched slightly.
6)	Ichiro carelessly pushed Haruchan, who was on a balance beam, from behind. She fell and broke her leg.
Saburo deliberately pushed Haruchan, who was on a balance beam, from behind. She fell and scraped her knee.
7)	See item 3 of the questionnaire.
8)	See item 6.
9)	See item 4.
10)	See item 5.

consequence-oriented response mode which is cognitively a more immature pattern of judgment. But we do not know about the flexibility-inflexibility of children. Are they also able to adjust their standard to the required task? Or are they rigid consequentialists? Piagetian theory of cognitive development strongly suggests that the more cognitively mature *Ss* are, the easier it is for them to change their perspectives of evaluation. In order to examine the last point, we decided to undertake a feedback (learning) experiment. But we didn't try to change *Ss*' own standard of evaluation, because we could not differentiate between stability and rigidity by such an enterprise. Instead, they were asked to anticipate a hypothetical person's judgment between two wrongful acts, and informed of his "real" answer, which was the reverse of their pre-experimental tendency, after their responses.

Method

Eleven M-oriented second-graders, who had made M responses to all six items included in the questionnaire, and 12 C-oriented second-graders, who had made more C responses than M response and had made at least one C response to either of item 3 or 6, served as *Ss* of the experiment. We could identify pure motivists but could not find a sufficient number of pure consequentialists even among the youngest group of our *Ss* of the questionnaire survey.

They were asked to anticipate the judgment in ten different situations (see Table 7). The two acts of the initial eight items differed in terms of the intention of the wrongdoer and the seriousness of the consequence. *Ss* were given feedback of answers which were the reverse of their pre-experimental tendencies about six initial items. In other words, motivists were given the answers of a consequentialist presented as those of the hypothetical person, and consequentialists were given the answers of a motivist. However, they were not told about the hypothetical person's standard verbally. They had to find it by themselves. They were

reinforced after each of the first six items only.

Items 9 and 10 were transfer items. The two acts of these items were different in motivation (item 9) or sincerity (item 10) of the wrongdoer and the seriousness of the consequence.

The actual instructions given to the assembled *Ss* were as follows: "Today I'll ask you questions rather different from the previous ones. Two persons, Ichiro and Saburo, each did something that was wrong. I asked an elementary school teacher which person he thought was the worse. The teacher's name is Mr. Asano. Please guess Asano-sensei's ("Teacher Asano's") answers. I don't want to know what you think. I want to know what you think Asano-sensei thought. After you respond, I'll tell you the real answer made by Asano-sensei."

Reading each item, the experimenter asked *Ss* to anticipate Asano's judgment and to write it down on the answer sheet. Then he gave the "real" answer and required *Ss* to compare it with their own. After the completion of the anticipation at the seventh item, *E* announced that the real answer by Asano would not be given from now on.

Findings

Numbers of respondents who anticipated "correctly" in both groups are shown in Fig. 1. Apparently, the motivists could

FIG. 1. Percentage of "correct" anticipations.

identify Asano-sensei's criterion of judgment but the consequentialists made no improvement in accuracy of anticipations. After six reinforced items, all of the M-oriented and only five out of 12 C-oriented Ss could anticipate Asano's judgments correctly on both the seventh and eighth items.

Furthermore, the two groups of Ss showed different performance on the transfer items. In these items—the ninth and the tenth, without feedback—seven of 11 motivists made C-oriented answers. Three out of 12 consequentialists made M-oriented responses to both items.

These findings are inconsistent with those of Bandura and McDonald (1963), who found no difference between M- and C-oriented Ss in ability to learn new precepts. In their study, i) both consequentialists and motivists, when the adult model they observed was reinforced for responses contrary to their pre-experimental tendency, could reverse their evaluation, but ii) neither C's nor M's changed their evaluation when the model was absent even though their own counter-responses were reinforced. However, these differences were more apparent than real. In their experiment, children's "natural" responses were not given any negative reinforcement. Only counter-responses were positively reinforced. So, children having had strong prior judgmental tendencies had little chance to be reinforced. It was not surprising that neither consequentialists nor motivists could learn without a model. But with an adult model to "prompt" them, Ss could produce the "desired" response without having to find the relevant cue inductively. In other words, their "model and child reinforced" conditions were more favorable for learning than ours.

The findings of the present study seem also dissonant with those by Crowley (1968) and by Jensen and Larm (1970), which showed that even first-grade or younger consequentialists could make more subjec-

tive responses through external reinforcement than control group Ss. However, it should be noted that they used simple pairs of stories in the training session, in which accidental and intentional acts with equal consequence were described. Consequentialists could utilize the motive cue when the objective cue, more dominant for them, was eliminated. In fact, our questionnaire survey revealed most consequentialists could rely upon the motive cue, since there were few PC responses in which Ss did not use motivistic cues at all.

For want of enough pure consequentialists we had to include in the "C" group Ss who had made motive-oriented responses. As a result, the C's showed a considerable number of positively reinforced responses from the start. In other words, the motivist tendencies in our "impure" consequentialists caused them in effect to be given partial reinforcement, whereas the more rigorously selected motivists were almost always given negative reinforcement to their pre-experimentally dominant responses. Though our finding could thus be interpreted in terms of partial reinforcement effect, this seems very unlikely, as most learning experiments in the field of cognitive development have shown that children in the intermediate stage, receiving partial reinforcement, can profit more from experience than more immature subjects whose responses are continuously rejected (see Inhelder & Sinclair, 1969).

In items 1–10 the two dimensions always covaried. The act more serious in consequence had not been done intentionally, and, conversely, the objectively less serious act had been intentional. So, reliance-on-another-cue strategy and reliance-on-familiar-cue-and-guess-opposite strategy could not be differentiated.

During the learning, most Ss, in choosing between acts differing on two dimensions, soon discovered that they could correctly name the hypothetical person's response. But was this because they had discovered

"Asano-sensei's" moral criterion, or were they merely guessing that the opposite of their own belief was correct? A check item should be prepared to identify more accurately Ss' cues during the learning. In this item the two acts must be different at only one dimension, i.e., seriousness for the consequentialists and intention for the motivists.

For example:

For both: Ichiro intentionally dropped a vase and chipped the rim.

For consequentialists: Saburo intentionally dropped a vase and broke it into pieces.

For motivists: Saburo accidentally dropped a vase and chipped the rim.

Suppose I am a consequentialist but have decided Asano-sensei always judges by motive. On the check item, the motive is the same—"intentional". I can respond, "equal" or I can examine the consequences and decide that, obviously, Saburo's act is worse. But I might have decided: Asano-sensei always judges *opposite from the way I do*. On the check item, the consequences of Saburo's act are worse—therefore, Asano-sensei would think Ichiro's act is worse.

Similarly, the motivist having adopted this familiar-cue-and-guess-opposite strategy will be detected when he claims Asano-sensei would judge it worse for Saburo to accidentally drop the vase than for Ichiro to drop it intentionally.

However, these types of check items were not prepared in this study. So, we are not sure about Ss' real strategies.

Another interesting attempt may be the introduction of simpler items. Could consequentialists make stable correct anticipations to Asano-sensei's judgments when pairs of acts differed in one (motivistic) dimension only? The preceding discussions suggest a clearly affirmative answer. Moreover, concerning tasks in areas other than moral judgment, it is well known that even young children can find and utilize an appropriate cue when other more

dominant irrelevant cues are eliminated temporarily. Furthermore, they can continue to rely on the proper cue after the eliminated cues are re-introduced (for example, see Bruner, Olver & Greenfield 1966, chap. 9). So, we can suppose that most C-oriented children can be motivists when the consequentialistic cue is made less dominant. Again, further experiments are needed to answer these possible questions.

GENERAL DISCUSSION

According to Piagetian theory of cognitive development, young children must be consequentialists because they cannot adopt other persons' points of view. However, adults need not be motivists. They can sympathetically understand other persons' motivation, sincerity and intention and yet may make consequence-oriented responses. When a man is faced with a stimulus situation in which two or more cues are available, the selection and weighing of cues depend on their adaptability or utility. Therefore, adults may be either motivists or consequentialists according to the cultural context in which they live.

In this sense, developmental change in cue of moral judgments as such is not a significant phenomenon for the theory of cognitive development. Rather, ease of shifting dominance of cues is the critical variable. It can be hypothesized but has not yet been substantiated that the more cognitively mature Ss are, the easier it is for them to change their standard of evaluation. Cognitively mature Ss are not "centered" to a certain aspect of behavior. They can flexibly adjust their mode of response according to conditions of reinforcement.

Our questionnaire survey confirmed findings of previous studies on moral judgment. Children came to rely more on subjective cues in the course of development. The concept learning scheme used

in this study worked very well to reveal Ss' functional stimuli. It can be used to compare various groups of Ss, e.g., juvenile delinquents. However, considering theoretical implications, the most important findings of the present study were:

1) Female college students could change their criterion of responses when they were asked to judge in terms of law-breaking instead of morality. They could become a little more consequentialistic.

2) In the situation asking Ss to anticipate a hypothetical person's moral judgment, all motivistic second-graders could learn to recognize judgment in terms of seriousness of the consequence, while only half of the consequentialists could make the corresponding shift in orientation.

Further research is needed to examine the teachability of the subjective (motive-oriented) standard to young children at various levels of cognitive development.

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