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THE CONSTRUCTION OF A NORMATIVE INSTRUMENT FOR THE MEASUREMENT OF MORAL REASONING

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ABSTRACT

The main aim of this study was to construct a normative instrument for the measurement of different levels of moral reasoning. The sample comprised 426 undergraduate students in Industrial Psychology and Personnel Management from two Afrikaans speaking universities. A questionnaire was developed to measure different levels of moral reasoning on a normative scale. A factor analysis on 90 items yielded two factors. These factors were interpreted as principled moral reasoning and prescriptive moral reasoning. The two scales were subjected to an item analysis and yielded reliability coefficients of 0,936 and 0,937. The implications of these findings are discussed.

OPSOMMING

Die hoofdoel van die studie was om 'n normatiewe meetinstrument te konstrueer vir die meting van verskillende vlakke van morele redenering. Die steekproef het uit 426 voorgraadse students in Bedryfsielkunde en Personeelbestuur aan twee Afrikaanstalige universiteite bestaan. 'n Normatiewe skaal is ontwikkel om verskillende vlakke van morele redenering te meet. 'n Faktorontleding van die 90 items in die skaal het twee faktore tot gevolg gehad, naamlik principiële morele redenering en voorskriftelike morele redenering. Die skale is vervolgens aan 'n itemontleding onderwerp en het betroubaarhede van 0,936 en 0,947, onderskeidelik, opgelewer. Die implikasies van die bevindinge word bespreek.

The question is raised, time and again, whether morality should not be the life-artery of good business. Nevertheless, world wide crime, and white collar crime in particular, are the order of the day (Stead, Worrell & Stead, 1990). It appears that morality is considered in theory only. White-collar crime is rife in South Africa and continually afflicts local organisations and institutions. The problems accompanying tax collection, for instance, illustrate the grave lack of morality in South Africa (Rossouw, 1997). The problem has reached such proportions that organisations have found it necessary to launch a project like "Business Against Crime", which among other things focuses on establishing strong moral values within organisations. Furthermore, since 1994, the King report on corporate management has made it compulsory for organisations listed on the Johannesburg Stock Exchange to present an annual report on the state of their ethical codes of conduct and moral culture (Rossouw, 1997).

In addition, there is a tendency for international organisations to introduce flatter structures. This will have far-reaching effects since, until recently, organisational behaviour was regulated by formal, multi-level structures and corresponding modes of authority. This involved attempts to induce moral behaviour by means of policy-making. In the absence of this formal regulation of behaviour, the responsibility for moral behaviour now lies with the individual (Rossouw, 1997).

There will always be moral and ethical questions to deal with, especially where there is conflict between the interests of shareholders and the personal values of employees. In this respect Trevino (1986) points out that managers on all levels tend to subject their personal values to their own advance and success in the organisation. It is a cause for concern that, in spite of all the abovementioned considerations, organisations generally regard business ethics as low on the list of strategic priorities (Robertson, 1996). Research in this area is therefore important.

The study of moral decision-making in organisations is certainly nothing new, and has, for some time, been a focus of study in organisational psychology (Cadbury, 1987; Reilly & Myroslaw, 1990; Stead et al., 1990; Trevino, 1986). There is however still ample scope for research on this subject, and the aim of this study was to make a contribution to organisational psychology through developing a normative instrument for the measurement of moral reasoning.

As Jordaan and Jordaan (1992) explain, moral learning involves the acquisition of ethical codes of behaviour. These codes of behaviour are either universal or are accepted and prescribed by a certain society and culture. In terms of these codes, people judge behaviour as morally justified or unjustified. This 'self-judgement' based on ethical codes of behaviour is related to moral reasoning as described by Derry (1989) who regards moral reasoning as a way of coping with moral conflicts. The process includes a personal definition and framework of the moral conflict, as well as evaluation and resolution of the conflict. So different people experience moral conflict in different ways, even when faced with the same situation.

A moral decision is, of course, made with specific reasons in mind, thus a comprehensive definition of morality should include both behavioural and cognitive factors (Taylor, 1977). Morality therefore involves moral reasoning or the reasons behind moral decisions, as well as the behaviour accompanying these decisions.

The nature of moral development will now be considered from three points of view that have their roots in three of the schools of Psychology. First, morality is approached from the perspective of social learning theory, which adopts many of the concepts employed by learning theory, to explain how people develop and are socialised (Sieber, 1980). In social learning theory, behaviour is seen to be acquired by direct learning, modelling and imitation, and is maintained by positive reinforcement. Moral behaviour is viewed as the result of learned responses conditioned by the social environment (Sieber, 1980). The process of acquiring moral behaviour depends on what is considered right or wrong by the group, and is subject to social sanctioning by the group (Windmiller, 1980). Thus, the group or community determines which behaviours are right or wrong, and a child learns these rules. In this way, a child raised in a cannibalistic society will internalise cannibalism as an acceptable form of behaviour.

A second view of moral development is presented by psychoanalytical theory. This perspective, which is primarily interactionist, considers the influences of interpersonal, familial and socio-cultural factors on individual development including his or her moral development (Tice, 1980). Society is seen to dictate which behaviours are acceptable and which are not

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* *For the purpose of this study no distinction is made between morality and ethics; and these concepts are treated as synonymous (Hugo & Van Vuuren (1995)*

(Jordaan & Jordaan, 1992). Although this approach is seemingly similar to that of social learning theory, Hugo and Van Vuuren (1995) highlight the difference between them. In the psychoanalytic view, learning is regarded as static: but according to social learning theory it is an ongoing process.

Thirdly, moral reasoning is considered from a cognitive point of view. According to this framework, the individual's internal processes are just as important for development as the environmental context (Glassman, 1979). The emphasis no longer falls on the process of social conditioning, but on rational considerations as to what is right or wrong (Penn & Collier, 1985). These rational considerations are seen as successive, clearly distinguishable patterns of reasoning which form a developmental sequence, from concrete and egocentric to abstract and universal.

The cognitive approach has its origins in the work of Piaget (Penn & Collier, 1985). Piaget proposed that cognitive processes form coherent systems that adapt to changing environmental stimuli. Thus, the human mind does not merely absorb discrete data with which it comes into contact, but endeavours to organise it (Piaget, 1950). As a result, individuals develop a need to obtain relevant information from the environment to create a meaningful system that will foster interaction with the world (Penn & Collier, 1985). The type of information an individual obtains from the environment is according to Damon (1980) a function of the individual's current knowledge and abilities. As a result of the individual's continous organisation of changing environmental stimuli, new forms of behaviour emerge.

Piaget never proceeded with his early work on morality and his stage-theory of moral development was later extended by Lawrence Kohlberg. Like other structuralists, Kohlberg (1976) was not interested in moral behaviour, as such, but rather in the way moral decision-making and moral reasoning take place. According to Kohlberg, an individual's level of cognitive development will determine the constraints on his or her progression through the stages of moral development (Kohlberg, 1976; Kohlberg, 1980; Rest, 1986; Rest, 1988; Windmiller, 1980). In the light of the relationship between cognition and morality Windmiller (1980) defines morality as the difference between that which is right and wrong, where 'right' refers to a universal truth. Consequently moral development is not peculiar to a specific culture, but inherent in all cultures (Eysenck, 1994). From this point of view the supposition that moral development constitutes the internalisation of cultural norms is rejected.

By far the most influential theory of the three already mentioned is the cognitive theory of learning or structuralist approach (Jordaan & Jordaan, 1992). According to Turiel (1980), Piaget initially suggested that moral development consists moral development is not peculiar to a specific culture, but inherent in all cultures (Eysenck, 1994). From this point of view the supposition that moral development constitutes the internalisation of cultural norms is rejected.

By far the most influential theory of the three already mentioned is the cognitive theory of learning or structuralist approach (Jordaan & Jordaan, 1992). According to Turiel (1980), Piaget initially suggested that moral development consists lterable physical laws rooted in nature. As the child develops, his or her morality will change from a form of one-sided respect to a morality of co-operation and mutual respect (the autonomous level). Turiel (1980) believes that this level is founded on concepts like reciprocity and equality. Rules are no longer regarded as mysterious or unalterable but rather as the outcome of a mutual agreement supporting the objectives of co-operation and, consequently, as negotiable and adaptable. Central to the above-mentioned, is the development of morality along a continuum, ranging from an external orientation to an internal orientation (Nichols & Day, 1982).

Kohlberg revised Piaget's 'two-stage theory' and extended it to six stages of moral development (Turiel, 1980). An outline of the stages is contained in Table 1.

TABLE 1
LEVELS AND STAGES OF MORAL REASONING ACCORDING TO KOHLBERG

PRECONVENTIONAL LEVEL

At this level the individual is sensitive to cultural rules regarding what is considered right and wrong. The individual will, however, interpret right and wrong in terms of the physical consequences of his or her actions (punishment, reward, exchange of favours) or in terms of the physical power of those who enunciate the rules. This level is divided into two stages:

Stage 1: Heteronomous Morality
This stage is characterised by naïve moral realism, with the moral importance of an action regarded as an inherent feature of the action. At this stage a person regards stealing as wrong because "one is not supposed to steal." There is very little or a complete absence of moral reasoning. Punishment plays an important role at this stage because it is associated with a 'wrong' action rather than the person pragmatically avoiding the negative consequences of his or her actions.

Stage 2: Individualistic, Instrumental Morality
This stage is characterised by a concrete, individualistic perspective, implying that what is regarded as right or wrong is determined by the reward value of the behaviour. Other people's needs do play a role, but only in terms of an exchange; only when a favour has been shown, will it be returned.

CONVENTIONAL LEVEL

At this stage the individual regards it as important to meet the expectations of his or her family, group or community, regardless of the immediate consequences. The attitude is one of conformity and loyalty to the expectations of the social order. The social order is actively maintained, supported and justified by those responsible. This level encompasses two stages.

Stage 3: Interpersonally Normative Morality
Kohlberg believes that this stage represents 'correct' behaviour which pleases people and of which they approve. The emphasis falls on conformity and stereotypical ideas accepted by the majority of people.

Stage 4: Social System Morality
Stage 4 is characterised by doing one's duty, the exercising of authority and the maintenance of the social order as part of society. At this stage the viewpoint is no longer restricted to the individual's own family and the common good plays an important role in moral decisions. Consequently the rules of society are accepted in a fairly uncritical way and observed as instruments of good order.

POSTCONVENTIONAL LEVEL

At this stage a clear effort is made to define the values and principles of a moral society. These values and principles are upheld without necessarily enjoying the approval of the groups or persons who advocate these principles and apart from the individual's own identification with these groups. This level also has two stages.

Stage 5: Human Rights and Social Welfare Morality
Kohlberg believes that, in terms of this stage, right and wrong are determined democratically. They are matters of personal values and opinion based on universal values and rights that any person would want to incorporate into a moral society. The validity of existing laws and social systems can be evaluated in the light of these human rights and values. This can be done because, even though laws and rules guarantee the rights of the individual and society, individual rights at times transcend laws and rules if the laws and rules seem destructive and unjust. Such unenforceable rules and laws should therefore not be obeyed at all costs, but can be changed in a democratic manner.

Stage 6: Morality of Universalisable, Reversible, and Prescriptive General Ethical Principles
Stage 6 describes the ideal relationship between free, autonomous individuals. It involves an impartial consideration of the circumstances or case of each person affected by a moral decision. Justice, impartiality and reciprocity are guaranteed during the decision-making.

(from Daniels, 1984; Jordaan and Jordaan, 1992; Kohlberg and Kramer, 1969; Kohlberg, 1973; Kohlberg, 1976; Kohlberg, 1980; Kohlberg, 1988).

The definite sequence of six stages is characterised by distinct differences in structure, and a hierarchical integration of lower stages into higher stages of reasoning. Stages of moral development are quantifiable, and a few measuring instruments based on Kohlberg's theory will now be discussed.

Instruments designed to measure moral reasoning

In developing his theory of moral reasoning Kohlberg (1980) used a specific research procedure. He presented boys, aged ten to sixteen years, from different cultures, with stories posing moral dilemmas. These boys had to resolve the dilemmas supplying reasons for their decisions and answering certain questions. On the basis of the type of reasoning used by the boys, Kohlberg (1973) postulated his pattern of six qualitatively different stages of moral reasoning. He found that no stage is omitted and that approximately 50% of an individual's moral decisions can be classified in a particular stage, which indicates the individual's current level of moral reasoning (Kohlberg, 1973; McGeorge, 1974). The remaining moral decisions made by the individual fall in the previous and subsequent stages, which indicates that there is a continuous process of moral development (McGeorge, 1974). If, for instance, an individual uses Stage 2 reasoning 70% of the time, and Stage 1 reasoning 30% of the time, his or her level of moral reasoning would be classified as Stage 2. The dominant stage in which an individual's responses are classified, is known as his or her global score. An obvious disadvantage of this procedure is that an individual is confined to one stage of moral reasoning. On account of this restriction Kohlberg expanded his theory so that an individual could function in more than one stage simultaneously (McGeorge, 1974).

A second measuring instrument, designed by McGeorge, is called the "Moral Maturity Scale" (McGeorge, 1974). A system of weights is used in scoring: the ordinal positions of the stages reached are multiplied with the percentage of time the stage is used. The products are then summed to give the final score. According to this method of scoring the individual in the above-mentioned example would obtain a score of 170 if stage two reasoning was used 70% of the time and stage one reasoning 30% of the time (2 x 70 + 1 x 30 = 170). If the individual used stage two reasoning 100% of the time, the score would amount to 200. It is clear that the Moral Maturity Scale yields a score that is more sensitive than Kohlberg's global score.

According to Nichols and Day (1982) the development of the "Defining Issues Test" ("DIT") by Rest (1974) – also based on the work of Kohlberg – constitutes a further milestone in measuring levels of moral reasoning. In the light of the complexity of the criteria used by Kohlberg, the "DIT" was seen as an important breakthrough. Respondents find recognition exercises such as the "DIT" easier to complete than, for example, the production exercises used by Kohlberg (Rest, 1986). The questions are presented in multiple-choice format which rules out the problem of moral reasoning being restricted by an individual's inability to verbalise his or her thoughts.

Rest (1986) explains that the "DIT" requires the respondent to select answers from three given possibilities relating to moral dilemmas. Next the respondent has to select twelve possible reasons for each answer and rank the four most important reasons (Davidson & Robbins, 1978; Nichols & Day, 1982).

A further study undertaken to obtain a more valid representation of an individual's level of moral reasoning was that of Taylor (1977). In an attempt to overcome the shortcomings of Kohlberg's theory Taylor developed a new questionnaire, the Reasons for Actions Questionnaire. It was designed in such a way that moral arguments relating to four stages, (namely Stages 2 5 of Kohlberg's stages of moral reasoning), could be formulated. This meant that an individual could respond to questions relating to any of these four stages with equal ease. Taylor (1977), however, departed from open-ended questions like those used by Kohlberg, because they are unsatisfactory for measuring moral reasoning. Open-ended responses are usually so short and ambiguous that they make evaluation all but impossible. Consequently, Taylor (1977) made use of a fixed response format.

Taylor (1977) refuted the supposition that a fixed response format would lead to respondents arguing on higher levels of moral reasoning. He found that lower levels of moral reasoning elicited the same proportion of responses. However, in Hugo and Van Vuuren's (1995) research, where Taylor's fixed response format was used, a large number of the respondents were categorised in the fifth stage of moral reasoning.

Furthermore, Taylor's instrument is ipsative in nature. It is thus impossible to use the Reasons for Actions Questionnaire to compare different individuals at the same stage of moral reasoning. The reason being that ipsative scores are systematically influenced by other scores and each individual's scores produce the same mean and standard deviation, thus providing no standard against which to compare them. The most important limitation of ipsative measurement is that parametric statistics cannot be used because ipsative measurements are not independent of one another and they lead to a preponderance of negative intercorrelations. Kerlinger (1986) points out that most statistical tests are based on the assumption that the elements used in statistical tests are independent of one another. If this is not the case, as with ipsative measurements, an analysis of correlations, for example factor analysis, could lead to misleading results on account of the spurious negative intercorrelations. In the light of the above-mentioned it must be pointed out that all the available instruments for the measurement of moral reasoning are at least partly ipsative in nature. The aim of this study was therefore to construct a scale of moral reasoning with normative rather than ipsative properties.

In the construction of scales, questions can be used, or positive or negative statements can be made. Likert scales involve statements, and the respondents have to indicate the extent to which they agree or disagree with the statements. According to Schepers (1992) a seven-point scale is less restrictive on the variance of a scale, yet easy to respond to. Consequently, in the construction of the new measuring instrument a seven-point scale was chosen. Every "reason for action" is linked to a seven-point scale varying from "do not agree at all" to "fully agree".

METHOD

Sample

A sample of 426 was drawn from undergraduate students in Industrial Psychology and Personnel Management, at two universities in the Gauteng area. An analysis of the sample indicated that 54% were Afrikaans-speaking and 29% English-speaking, while 13% recorded an African language and 4% another language as their mother tongue. All the students in the relevant classes (apart from those who were absent) were selected in order to ensure the randomness of the sample.

Measuring instruments

The Moral Reasoning Questionnaire (MRQ)

Since only ipsative and semi-ipsative instruments are available for the measurement of moral reasoning, a normative scale was constructed and relevant data collected. In preparation for the construction of the scale the most recent literature was studied in order to evaluate the available measuring instruments and to identify typical behaviour associated with each level of reasoning. Kohlberg's theory was used as the foundation because it is by far the most comprehensive theory of moral reasoning. Each of the six stages as described by Kohlberg was analysed with the intent of identifying concepts associated with each specific stage. The next step involved identifying dilemmas affecting under-graduate students. The dilemmas addressed the following issues: theft, adultery, dishonesty, fraud and integrity. A normative scale was decided upon, after which items were designed and a questionnaire developed. A moral dilemma, for instance a potential theft, was described and six reasons for conduct (based on Kohlberg's six stages of moral

reasoning) were provided. See Table 2 for an example of one of the dilemmas. The respondents were expected to evaluate each of the six reasons on a seven-point scale ranging from "fully agree" to "don't agree at all". As the questionnaire consisted of fifteen moral dilemmas each involving six possible reasons for action it contained a total of 90 items. The dilemmas are described briefly and various reasons (each reflecting a particular stage) are provided to explain why the actor chose not to act improperly. This format was specifically chosen to diminish the likelihood of socially desirable responses.

TABLE 2

SAMPLE ITEM

You work in the marketing section of a large banking group and attend a seminar with other marketing experts. One of the people attending the seminar is the marketing director of your greatest competitor. You overhear him discussing his bank's marketing strategy with his colleagues and notice that he has left his briefcase open in which lies a copy of the marketing strategy. Since his back is turned, you have an opportunity to remove the document that will give you important information about your competitor's marketing strategy. You do not take the copy because:

1. You would not want him to steal your marketing plan and what would everyone think of you, if you did.

1	2	3	4	5	6	7

strongly disagree strongly agree

2. You consider the possible harmful effects of your action on the marketing director and other people in the company concerned and decide for this reason to leave the document untouched.

1	2	3	4	5	6	7

strongly disagree strongly agree

3. If you take the copy there is a very good chance that you will be caught and upset the marketing manager so badly, that it could cost you your career.

1	2	3	4	5	6	7

strongly disagree strongly agree

4. You risk possible prosecution because such behaviour is against the law.

1	2	3	4	5	6	7

strongly disagree strongly agree

5. If the marketing director sees you, he will expose you as a thief.

1	2	3	4	5	6	7

strongly disagree strongly agree

6. You believe that you, as an individual, have no right to take information belonging to another individual or business, without their consent.

1	2	3	4	5	6	7

strongly disagree strongly agree

The questionnaire was then given to three experts with the request that they evaluate the given responses in terms of Kohlberg's (1985) different levels of moral reasoning i.e. they were asked to indicate to what extent they agreed that a specific item actually represented a specific level of moral reasoning. Ten other people were then requested to identify all the items that were difficult to respond to and to assist in editing them.

Social desirability

The newly constructed instrument uses a fixed response format. A disadvantage of this format is that it can lead to the selection of higher-level responses that seem socially desirable rather than truthful (Taylor, 1977; Hugo & Van Vuuren, 1995). To control for the possibility of obtaining socially desirable responses, the "Marlowe-Crowne Social Desirability Scale" was used. This instrument was developed by Crowne and Marlowe, and consists of 33 items, each coupled to a true or false option (Crowne & Marlowe, 1960). The reliability of the instrument is 0,88 and the test-retest reliability is 0,89.

Procedure

The Moral Reasoning Questionnaire and the "Marlowe-Crowne Social Desirability Scale" were administered to 426 undergraduate students. The goal of the study was explained to the students before the questionnaires were handed out. There was no time restriction on the completion of the questionnaires.

RESULTS

Factor analysis

To counteract the effect of differential skewness (of the test items), the following procedure was followed in the factor analysis of the Moral Reasoning Questionnaire (MRQ). First the 90 items of the MRQ were inter-correlated and the matrix of intercorrelations was subjected to a principal factor analysis. The unreduced intercorrelation matrix yielded 19 eigenvalues greater than unity. Accordingly 19 factors were extracted (Kaiser, 1961). Next, the obtained factor matrix was rotated to simple structure with the aid of a Varimax rotation. Following this, subtests were formed, by summing all the scores of items with high loadings on a factor. In this way, 16 subtests were formed. Three of the factors were eliminated because the item loadings were very low. Next the 16 sub-tests were intercorrelated and the matrix of intercorrelations was subjected to a principal factor analysis.

The unreduced intercorrelation matrix of the subtests yielded two eigenvalues greater than unity. Accordingly two factors were extracted. The obtained factor matrix was rotated to simple structure with the aid of a Direct Oblimin rotation. The matrix of intercorrelations is given in Table 3 and the eigenvalues in Table 4. The rotated factor matrix is given in Table 5.

TABLE 3

MATRIX OF INTERCORRELATIONS OF SUBTESTS OF THE MORAL REASONING QUESTIONNAIRE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
SUBTEST 1	1,000																		
SUBTEST 2	0,083	1,000																	
SUBTEST 3	0,321	0,089	1,000																
SUBTEST 4	-0,229	-0,133	-0,087	1,000															
SUBTEST 5	0,229	0,038	0,235	-0,179	1,000														
SUBTEST 6	0,214	0,284	0,173	-0,156	0,181	1,000													
SUBTEST 7	0,234	0,014	0,248	-0,127	0,337	0,222	1,000												
SUBTEST 8	-0,201	-0,143	-0,238	0,121	-0,258	-0,241	-0,265	1,000											
SUBTEST 9	0,139	0,045	0,100	-0,163	0,218	0,141	0,183	-0,246	1,000										
SUBTEST 10	0,237	0,092	0,173	-0,246	0,248	0,143	0,191	-0,221	0,294	1,000									
SUBTEST 11	-0,252	-0,113	-0,198	0,264	-0,269	-0,243	-0,269	0,301	-0,345	-0,345	1,000								
SUBTEST 12	-0,070	-0,179	0,019	0,121	0,075	-0,077	-0,053	0,090	-0,008	-0,018	0,049	1,000							
SUBTEST 13	-0,267	-0,071	-0,201	0,354	-0,255	-0,229	-0,160	0,152	-0,249	-0,274	0,298	-0,016	1,000						
SUBTEST 14	0,188	0,116	0,049	-0,279	0,216	0,170	0,120	-0,179	0,238	0,322	-0,303	-0,005	-0,283	1,000					
SUBTEST 15	0,067	-0,199	0,106	-0,017	0,122	-0,023	0,130	-0,080	0,141	0,102	-0,093	0,099	-0,146	0,008	1,000				
SUBTEST 16	0,103	0,154	0,043	-0,059	0,092	0,134	0,082	-0,086	0,110	0,038	-0,067	0,080	-0,050	0,139	-0,151	1,000			
SUBTEST 17	-0,289	0,117	-0,206	0,192	-0,190	-0,002	-0,144	0,187	-0,126	-0,212	0,255	0,114	0,224	-0,194	-0,182	-0,001	1,000		
SUBTEST 18	-0,158	-0,235	-0,128	0,139	-0,015	-0,162	-0,071	0,192	-0,027	-0,056	0,096	0,198	0,114	-0,035	0,117	-0,114	-0,021	1,000	
SUBTEST 19	0,120	0,276	0,005	-0,18	0,116	0,185	0,111	-0,-58	0,198	0,174	-0,163	-0,043	0,090	0,253	-0,200	0,282	0,036	-0,091	1,000

TABLE 4
EIGENVALUES OF UNREDUCED INTERCORRELATION MATRIX

ROOT	EIGENVALUES
1	*7,340
2	*1,290
3	*0,922
4	*0,815
5	*0,728
6	*0,676
7	*0,565
8	*0,554
9	*0,524
10	*0,482
11	*0,410
12	*0,395
13	*0,387
14	*0,339
15	*0,305
16	*0,270
TRACE	16,000

TABLE 5
ROTATED FACTOR MATRIX (DIRECT OBLIMIN ROTATION)

	ITEMS	FACTOR I	FACTOR II	h^2j
SUBTEST 1	2.4, 4.6,5.1,6.5,7.4,7.5, 8.3, 8.4, 8.5, 9.6, 12.1, 12.2, 12.3 13.5, 14.3, 14.4, 14.6, 15.2, 15.3, 15.6	0,099	0,650	0,518
SUBTEST 2	10.1, 10.2, 10.3, 10.4, 10.5, 10.6	0,118	0,538	0,388
SUBTEST 3	3.1, 3.2, 3.3, 3.4, 3.5, 3.6	0,190	0,420	0,318
SUBTEST 4	8.6, 12.6, 13.1, 13.2, 13.4, 13.6, 15.5	0,759	0,014	0,591
SUBTEST 5	5.2, 5.3, 5.4, 5.5, 5.6	0,602	0,060	0,414
SUBTEST 6	6.1, 6.2, 6.3, 6.4, 6.6	0,422	0,406	0,571
SUBTEST 7	2.1, 2.2, 2.3, 2.5, 2.6	0,719	-0,107	0,426
SUBTEST 8	4.1, 4.2, 4.3, 4.4, 4.5	0,658	-0,012	0,422
SUBTEST 9	9.1, 9.2, 9.3, 9.4, 9.5	0,006	0,800	0,647
SUBTEST 10	11.1, 11.2, 11.4, 11.5, 11.6	0,318	0,466	0,515
SUBTEST 11	7.1, 7.2, 7.3, 7.6	0,243	0,511	0,485
SUBTEST 12	12.4,12.5,15.1,15.4	0,493	0,322	0,558
SUBTEST 13	1.1, 1.2, 1.3, 1.4, 1.5, 1.6	0,420	0,181	0,310
SUBTEST 14	11.3, 13.3	-0,176	0,782	0,459
SUBTEST 15	14.1, 14.2,14.5	0,426	0,374	0,533
SUBTEST 16	8.1, 8.2	0,642	0,037	0,445
Items per factor		42	48	

From an inspection of Table 5 it appears that both factors are well determined, with 42 items loading on Factor I and 48 on Factor II. The inter-correlation between the two factors (r=0,665) is given in Table 6.

TABLE 6
INTERCORRELATIONS OF FACTORS

	FACTOR I	FACTOR II
FACTOR I	1,000	
FACTOR II	0,665	1,000

Item analysis

Next, two scales were formed by assigning all the items with high loadings on Factor I to Scale I and all the items with high loadings on Factor II to Scale II. Following this, the two scales were subjected to item analysis. The NP50 programme of the National Institute for Personnel Research was used for this purpose.

None of the items of Scale I were rejected, and a reliability coefficient of 0,936 was obtained (according to Cronbach's coefficient alpha). The item statistics of Scale I are given in Table 7. The item-means range from 5,118 to 6,568 and the standard deviations of the items from 1,001 to 1,805. The item-test correlations range from 0,355 to 0,645 and the indices of reliability vary from 0,501 to 1,068. A further analysis of the Scale I items reveals that Stages 1, 5 and 6 of Kohlberg's moral-judgement theory each appears ten times in Scale I, and that Stages 2, 3 and 4 appear considerably less frequently (see Table 8). The content of the items thus mainly concern Stages 1, 5 and 6 of moral reasoning. Scale 1 is characterised by principled reasoning (Stages 5 and 6) as well as intuitively principled reactions (principled intuition) (Stage 1), which probably involves very little moral reasoning in comparison with Stages 5 and 6. Decisions concerning correct behaviour in Scale I are arrived at by intuitive knowledge of what is right (Stage 1) and an understanding of the principles of human rights, justice and impartiality (Stages 5 & 6). Consequently, Scale I was identified as Principled Moral Reasoning.

TABLE 7
ITEM STATISTICS IN RESPECT OF SCALE I

Item	Xg	Sg	rgxSg	rgx
Q1.1	5,514	1,693	0,857	0,506
Q1.2	5,355	1,663	0,786	0,472
Q1.3	5,730	1,572	0,616	0,392
Q1.4	5,889	1,436	0,598	0,417
Q1.5	5,686	1,551	0,550	0,355
Q1.6	6,007	1,606	0,808	0,503
Q2.1	5,916	1,383	0,700	0,506
Q2.2	6,200	1,156	0,587	0,508
Q2.3	5,784	1,505	0,837	0,556
Q2.5	6,125	1,318	0,799	0,606
Q2.6	5,425	1,525	0,597	0,391
Q4.1	5,714	1,488	0,632	0,425
Q4.2	5,875	1,298	0,572	0,444
Q4.3	6,025	1,267	0,684	0,540
Q4.4	5,911	1,452	0,792	0,545
Q4.5	6,193	1,230	0,721	0,586
Q5.2	5,536	1,552	0,704	0,545
Q5.3	6,082	1,368	0,780	0,570
Q5.4	5,484	0,655	1,068	0,645
Q5.5	5,118	1,781	0,947	0,532
Q5.6	6,002	1,322	0,796	0,602
Q6.1	5,125	1,698	0,963	0,567
Q6.2	5,464	1,466	0,881	0,601
Q6.3	5,770	1,309	0,738	0,564
Q6.4	5,409	1,559	0,922	0,592
Q6.6	5,711	1,511	0,956	0,633
Q8.1	6,186	1,166	0,691	0,593
Q8.2	5,941	1,440	0,760	0,528
Q8.6	6,227	1,222	0,610	0,499
Q12.4	6,141	1,430	0,818	0,572
Q12.5	6,382	1,190	0,736	0,618
Q12.6	6,509	1,052	0,501	0,476
Q13.1	6,568	1,024	0,586	0,572
Q13.2	6,245	1,466	0,703	0,480
Q13.4	5,916	1,541	0,842	0,547
Q13.6	6,505	1,001	0,554	0,554
Q14.1	5,509	1,604	0,916	0,571
Q14.2	5,716	1,509	0,960	0,636
Q14.5	6,141	1,378	0,872	0,633
Q15.1	5,352	1,805	0,835	0,463
Q15.4	5,970	1,537	0,873	0,568
Q15.5	6,495	1,080	0,662	0,613

rgxSg = Index of reliability of item g
rgx=Correlation of item g with total
Sg= Standard deviation of item g
8g=Mean of item g

TABLE 8
ITEMS OF SCALES I AND II CATEGORISED ACCORDING TO LEVEL OF MORAL REASONING

Level of moral reasoning	Items of Scale I	Items of Scale II
1	10	5
2	1	14
3	5	10
4	6	9
5	10	5
6	10	5
	42	48

None of the Scale II items were rejected during the iteration process, and a reliability coefficient of 0,947 (according to Cronbach's coefficient alpha) was obtained. The item statistics regarding Scale II are given in Table 9. The item-means range from 3,714 to 6,270 and the standard deviations of the items from 1,186 to 2,011. The item-test correlations range from 0,375 to 0,657 and the indices of reliability vary from 0,587 to 1,144. A further analysis of the Scale II items reveals that Stage 2 of Kohlberg's moral-judgement theory appears fourteen times and Stages 3 and 4 ten and nine times respectively, and that Stages 1, 5 and 6 appear five times each (see Table 8). The

content of the items therefore relates mainly to Stages 2, 3 and 4 of moral reasoning. It seems that people who reason on these levels do so in accordance with prescriptions from authority figures, legislation, social expectations or to avoid punishment. Their moral reasoning and associated behaviour are thus regulated and prescribed by external sources; consequently, the scale was identified as Prescriptive Moral Reasoning.

TABLE 9
ITEM STATISTICS IN RESPECT OF SCALE II

Items	Xg	Sg	rgxSg	rgx
Q2.4	5,109	1,661	0,624	0,375
Q3.1	5,045	1,790	0,793	0,443
Q3.2	4,934	1,793	0,802	0,447
Q3.3	5,395	1,691	0,905	0,535
Q3.4	3,714	1,873	1,020	0,544
Q3.5	4,811	1,957	0,860	0,440
Q3.6	5,102	1,890	0,807	0,427
Q4.6	5,491	1,693	0,721	0,426
Q5.1	4,580	1,807	0,784	0,434
Q6.5	5,068	1,719	0,769	0,447
Q7.1	5,011	1,981	1,021	0,516
Q7.2	5,698	1,740	0,841	0,484
Q7.3	5,350	1,700	0,986	0,580
Q7.4	6,014	1,462	0,712	0,487
Q7.5	5,270	1,770	1,039	0,587
Q7.6	5,875	1,488	0,928	0,624
Q8.3	5,409	1,596	0,899	0,563
Q8.4	4,898	1,665	0,988	0,594
Q8.5	5,173	1,636	0,969	0,592
Q9.1	5,650	1,638	0,872	0,532
Q9.2	4,011	1,867	1,144	0,613
Q9.3	4,650	1,785	1,050	0,588
Q9.4	5,123	1,730	1,128	0,652
Q9.5	5,302	1,588	0,909	0,573
Q9.6	5,143	1,772	1,141	0,644
Q10.1	4,573	2,010	0,991	0,493
Q10.2	4,745	2,011	1,033	0,514
Q10.3	5,964	1,595	0,793	0,497
Q10.4	5,773	1,683	0,898	0,534
Q10.5	5,855	1,611	0,998	0,620
Q10.6	6,045	1,475	0,800	0,543
Q11.1	5,345	1,660	0,939	0,566
Q11.2	5,530	1,468	0,723	0,493
Q11.3	4,395	1,847	1,112	0,602
Q11.4	5,359	1,591	0,791	0,497
Q11.5	5,302	1,724	0,892	0,518
Q11.6	6,134	1,186	0,587	0,495
Q12.1	6,077	1,393	0,777	0,558
Q12.2	5,893	1,500	0,986	0,657
Q12.3	5,518	1,761	0,974	0,553
Q13.3	4,898	1,966	1,026	0,522
Q13.5	5,759	1,677	0,856	0,510
Q14.3	4,811	1,802	1,133	0,629
Q14.4	5,905	1,343	0,871	0,648
Q14.6	5,507	1,704	1,066	0,626
Q15.2	5,695	1,653	0,887	0,537
Q15.3	6,270	1,225	0,731	0,597
Q15.6	6,025	1,459	0,791	0,542

rgxSg = Index of reliability of item g
rgx = Correlation of item g with total
Sg = Standard deviation of item g
8g = Mean of item g

The two scales of the Moral Reasoning Questionnaire were furthermore correlated with the scores of the "Marlowe-Crowne Social Desirability Scale". From the matrix in Table 10 it is evident that there are statistically significant positive correlations between Principled Moral Reasoning and the "Marlowe-Crowne Social Desirability Scale". The magnitude of the correlations is, however, small (0,227 to 0,247). Social desirability thus seems to play a minor role in the Moral Reasoning Questionnaire.

TABLE 10
CORRELATIONS OF THE MARLOWE-CROWNE SOCIAL DESIRABILITY SCALE WITH SCALES I AND II OF THE MRQ

(MORAL REASONING QUESTIONNAIRE)

	Scale I	Scale
	5%	6%
MARLOWE-CROWNE	0,227	0,247
	5%	6%

DISCUSSION

The results obtained in the present study yielded two scales of moral reasoning. These have been called Principled Moral Reasoning and Prescriptive Moral Reasoning and conform to Piaget's two-stage theory rather than Kohlberg's six-stage theory of moral reasoning. As has been pointed out, Piaget distinguished between a morality of co-operation and a morality of limitation. A few points of comparison between Piaget's theory and the scales of the Moral reasoning Questionnaire will now be discussed.

Principled Moral Reasoning can be said to represent Stages 1, 5 and 6 of Kohlberg's theory of moral reasoning and also bears resemblance to Piaget's morality of co-operation. Piaget's morality of co-operation is similar to Kohlberg's Stages 5 and 6 in the sense that the concepts of personal values and opinions, justice, impartiality and reciprocity are involved. Of interest, however, is that naive moral realism (Stage 1) forms part of principled moral reasoning, while its description resembles the morality of limitation. (According to the description of Stage 1, the moral foundation of an action is regarded as an inherent, unchangeable and absolute characteristic of the action.) A possible explanation for this deviation from Piaget's theory is that naive moral realism basically involves intuition rather than moral reasoning or following instructions.

Prescriptive moral reasoning (Stages 2, 3 and 4) corresponds to Piaget's morality of limitation, where morality is regulated and dictated by the reward value of an action, the expectations of the family, group or community as well as rules laid down by society. Furthermore, in Piaget's theory, the two stages follow one another but the scope of this study does not allow one to determine whether prescriptive and principled moral reasoning follow a hierarchical course or not.

Principled moral reasoning seems to take place in two ways, namely in a naive-intuitive manner (Stage 1) and a principled, well-reasoned manner (Stages 5 and 6). The question arises whether principled moral reasoning, which rests on certain principles and intuition instead of external instruction, leads to a greater amount of consistency between the individual's public and secret moral behaviour. It can also be asked whether a person whose moral behaviour is dictated by external instruction, such as legislation or group norms, will behave in a consistent way, especially in the absence of instruction. It will require further research to answer questions of this nature. This kind of research would be important in the light of the introductory discussion regarding flatter structures in organisations and the accompanying individual responsibility for moral behaviour in the absence of formal regulation.

Furthermore, the correlation between scores on the Principled Moral Reasoning Scale and the Prescriptive Moral Reasoning Scale is 0,665, making it possible that an individual might attain moderate to high scores on both of the scales. A possible reason for the overlap can be attributed to the fact that respondents are presented with reasons for action associated with all the stages of moral reasoning. Thus, if a respondent reasoned at level five, this does not preclude reasoning at lower levels as well. For example a person may choose not cheat because of reasons of fairness (Stage 5) but would also choose not to violate the rules of the university (Stage 4).

Norms were calculated and made available to determine the position of an individual relative to his or her norm group. The limited scope of the study does not make it possible, however, to determine the hierarchical course of development of the different stages.

Using the Moral Reasoning Questionnaire to determine different levels of moral reasoning of managers in organisations may be regarded as simplistic. In reality, moral behaviour is complex and one must take into account the relative nature thereof (De Klerk, 1991) as well as the fact that people behave in different ways without deliberately being unethical.

This does not imply that a lack of moral behaviour should be accepted without question but that such instances require an attitude of tolerance rather than blind condemnation. In this regard, the Moral Reasoning Questionnaire provides a useful means for exploring the underlying reasons for behaviour so as to promote greater understanding in the work place. For, despite the complex nature of moral behaviour, it is only those who work in organisations who can allow ethical behaviour to amount to more than a message on paper.

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