An Investigation of the Development of the Concept of

Death Using Children's Drawings

by

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Abstract

It was the purpose of this investigation to examine the development of the concept of death in children. The study utilized a technique which could be applied across all of the age levels considered in the investigation. Using 120 children from ages 3 to 11 years, the investigator examined their drawings and answers to a structured interview. Each child was judged as to the objects, themes and processes involved in his conception of death. In addition each subject was assigned a maturity score (M score) according to how he answered the questions about his drawing. The structured interview which yielded the M scores was developed by a review of the relevant literature in which 12 developmental aspects of the concept of death were delineated.

It was found that children of the three age groups examined used different themes in their drawings. The oldest group of children used different objects and processes in their conceptualization of death. Generally, as the children became older, they tended to conceive of death as happening to humans, mostly on account of biological processes. On the other hand, younger children comprehended the concept of death more readily in terms of animals and with more active external causes. The children's maturity scores were influenced by the themes and processes that they inferred in their drawings, but not by the objects they used. A child's age was the most significant determinant of the M score.

As well as the above analyses, the structured interview items were examined as to how well they discriminated between the high and low M subjects within each age group. Most items were significant in de-

lineating the high and low scorers in at least one of the age groups

except for the time and finality of death items. The futurity of death

item was a significant question in each age group.

The results were discussed according to the findings of previous

research and the results were interpreted in the light of child develop-

ment factors. Implications of this study and the direction of future

research were also discussed.

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CHAPTER I

INTRODUCTION

The Importance of Death as a Research Topic

In the past, social scientists have examined almost every aspect of human behavior, yet the most universal and irreversible of life's occurrences -- death, has been largely ignored. It has been described as a neglected area of research (Faunce and Fulton, 1958), as a social problem (Wrenn and Mencke, 1975) and as a taboo area (Feifel, 1959). Kubler-Ross (1969) has noted that as yet our society uses euphemisms to describe death and that most individuals deny the finality and inevitability of death.

One can speculate that this past denial can be attributed to man's inability to come to terms with his own death. Even the medical profession who deals daily with the terminally ill has found it difficult to define death in biological terms (Mant, 1968); so obviously, its psychological and social ramifications are even less easily definable.

Now after a period of generally avoiding death as a research topic, researchers are beginning to respond to the paucity of studies in the area by an ever-increasing focus on grief and bereavement, attitudes toward death and the concept of death itself (Fulton, 1966). Along with this research there is a movement among individuals which recognizes the importance of dealing realistically with the prospect of one's own death. As Feifel (1959, 1974) stressed, one's concept of death can be one of the most significant organizing principles in determining how an individual conducts himself in life. To an individual, death is not simply a biological event, but rather a psycho-

logical and social fact towards which one orients his behavior in life. Similarly, Elam (1969) elucidated this notion when he stated that one's interpretation of death like all other life events is dependent upon one's own life experiences and the developmental level at which one is operating. In other words whether a person sees the most significant part of death as the loss of awareness or feeling, the helplessness, the loneliness, the separation involved or the loss of self control depends on his life orientation. In short, Elam believed that one's approach to death is directly influenced by that which he values in life.

As yet little is known about individuals conceptions of death and what constitutes a "mature" concept. Its origins and the life experiences from which it stems have not been delineated. One way to understand the concept and its formation more fully is by examining the developmental aspects of the concept of death and the significant milestones in this development.

It is the purpose of this study to review previous death research involving children, and to establish a viable method to explore the development of the concept. Hopefully, by tracing the growth of the concept in children, a greater understanding of the concept of death can be achieved.

Death as a Concept

If one can consider death simply as a concept and ignore the attitudinal components, some consistent characteristics can be revealed. Kastenbaum and Aisenberg (1972) have emphasized six ideas in regards to the concept of death. They suggest that the concept of death is

relative to one's developmental level; and should be interpreted within that context. Secondly, they propose that the concept of death is exceedingly complex and cannot be thought of as an internally consistent structure. Thirdly, concepts of death can change within an individual. Fourthly, the "developmental goal" or what constitutes a mature concept is vague and ambiguous. Fifthly, death concepts are influenced by situational contexts. How we conceptualize death at a given moment is likely to be influenced by environmental factors. A certain setting may selectively draw out one type of cognition among the several an individual possesses. Lastly, death concepts influence one's behavior in remote and complex ways.

Furthermore, Kubler-Ross (1969) has proposed that concepts of death have cultural determinants. In a culture where one is insulated from death, one perceives it differently than in a culture where it is treated as a natural occurrence.

Any study which deals with the concept of death then, should be sensitive to the above propositions. Cultural and situational aspects should be controlled, the definition of the "mature" concept of death should not be biased by the researcher's orientation and the measuring tool should be broad enough to encompass the inconsistencies within an individual's conception of death. The developmental level above all should be considered, especially if the study involves children.

The Development of Thought

The cognitive development that occurs in a child cannot be ignored in any developmental study. Piaget (1930, 1932, 1952) has delineated a number of stages that occur in children and the type of

thinking which is characteristic of a child of that age level. It is interesting to consider the kinds of ideas that children could conceive of in these stages.

In the first of Piaget's stages, the sensorimotor period, the child is action oriented and is limited to the pursuit of concrete goals. The child's world is understood by the actions he performs upon it and through his immediate perceptions of it. On account of the young age of children of this stage and their lack of ability to communicate in any measurable way, this age has been omitted from most conceptual studies.

In the second stage of development, the preoperational subperiod, the child can reflect upon his behavior and organize it as it relates to a goal. This stage involves two shorter subperiods, the preconceptual (children two to four years) and the intuitive thinking (children four to seven years). The child is very concrete minded and he cannot conceive of the Piagetian notion of reversibility. That is to say, he is not yet able to take his thinking back to its point of origin. His thought is "egocentric" for he is not yet able to take another's point of view. The child tends to "centre" his attention on one detail of a situation, and he is unable to consider all aspects at the same time. His reasoning is what Piaget terms "transductive". For example, in the child's logic if A is like B in one way, A is like B in all ways. The preoperational child tends to focus on successive stages in a transformation, hence the child finds it difficult to understand a process.

In the concrete operations stage (ages seven to eleven years), the child develops to a point where he can conserve quantity and

number. He realizes the quantitative aspects of objects do not change unless something has been added to them or taken away from them. He also acquires the ability to deal with classes, to seriate and to better understand number.

In the final of Piaget's stages, the formal operational sub-period (eleven to fifteen years) the child can follow the "form" of an arguement and disregard its content. He can also form propositions which become part of his cognitive structure.

Any study which deals with concept development should consider the level of a child's reasoning, his general cognitive abilities and what formulations are of central importance at certain developmental levels. From this brief review of Piaget's work it becomes clear, theoretically at least, that a child can only comprehend certain aspects of the concept of death at certain conceptual stages.

A child's view of death will have a close relationship to his cognitive level. A child's ideas may be greatly influenced by his level of cognitive reasoning and his understanding of constancy of an object (conservation). His transductive reasoning may cause a great deal of misinterpretation of the concept. A child's understanding of animism may be influential in the way a child perceives the death of that object. The role of the concept of time cannot be ignored since it will ultimately determine the child's conception of the finality aspect of death. It may also hold true that if a child is unable to think in terms of transformations but only states, he will have difficulty perceiving death as a process. If a child is egocentric in the Piagetian sense, it is questionable as to whether he can draw substantially from the experience of others in order to con-

ceive of death. All of the above assertions have been considered at least in part in the developmental research on death and some idea of how they can influence the concept can be gained by reviewing the literature.

The Concept of Death in Childhood: A Review

The Psychoanalytic Approach

The psychoanalysts were the first to show any real interest in examining children's ideas about death and although their findings are rather conjectural in nature and drawn from clinical data, they are worthy of consideration in this review. Grollman (1967) has pointed out that between the ages of four to six years, children begin to form unrealistic associations between death and a particular object, place, person or dondition. For example, a child may come to believe that if one does not get run over, very sick, old or go to the hospital one will not die. This can be explained by recognizing that through the child's tranductive reasoning processes, a child comes to the conclusion that death is situation specific.

Yudkin (1968) in his work speculated that a child's understanding of death begins with the experience of separation from its mother. Since the idea of time has not yet been developed, the young child cannot distinguish between short and long term separation. Even in infancy Yudkin claims that a child develops a sense of loss and absence that he likens to a "death experience". Maurer (1968, 1974) goes as far as to suggest that the game of peek-a-boo can exemplify the development of the death concept. Both authors proposed the notion that the idea of separation involved in death would be of importance

to the very young in their ideas about death.

Yudkin (1968) also proposed that the young have a very primitive idea of death and an extremely active fantasy which interact to produce many erroneous assumptions. He speculated that a child may interpret death in a moralistic way. A youngster may entertain the thought that death is committed by God for being bad, or that death is an extreme sort of punishment.

Rochlin (1967) posited that children at a very early age (three to four years) begin to entertain death wishes towards the frustrating objects in their environment. They also begin to feel guilt surrounding any deaths which do occur as if these wishes somehow brought about these deaths.

Generally, the psychoanalysts have emphasized three important ideas in regards to the development of the concept of death. Firstly, they have shown the role of fantasy in understanding children's ideas about death. This type of thinking may lead to moralistic interpretations of death and guilt feelings surrounding its occurrence. Secondly, many associations occur which lead to erroneous ideas about death. Thirdly, they stressed the role of separation in the development of the concept.

The Pioneering Studies

The early studies which dealt with death were exploratory at best, but they have contributed much to recent death research. Anthony (1940, 1971) studied death using four methods. She felt that if the concept of death was to be understood one must examine a child's "knowing", "imaginings", "acting" and "teachings" about death. In order to understand a child's "knowing" she utilized parent records

and a definition task. Anthony collected data from her colleagues concerning their children's verbalizations and reactions to death. This provided a basis for her later discussion of the growth of the death concept, but the results were from a biased sample and were anecdotal and subjective. This method tended to rely on overt verbalizations which were probably very much influenced by the attitude of the parent toward such verbalizations. It takes little account of the fact that many children may be inquiring in an internal fashion with no overt verbal component. The definition tasks she used provided a more precise way of measuring the concept. Anthony placed a child's response to defining death into one of five stages: (A) apparent ignorance of the word "dead", (B) interest in the word "death" but an erroneous concept, (C) definition by reference to an associated phenomenon, (D) correct but limited information and (E) a general, logical definition.

This enabled the author to understand when specific developments occurred and when the "mature" conceptualization of death took place. Anthony noted in her examination of what children "know" of death that only after the age of seven did children describe death as the negation of living. This led to her assertion that the concept of animism was important in the development of its antithesis, death. In her discussion she was of the opinion that the transition that occurred between Stage B and Stage C was marked by the development of causality, since at this time some children were beginning to inquire about the "why" of the process. In Stage C she felt that the ritual concerning death became all-important. Within this stage folklore (Grim Reaper) came into play. Although in this part of her investigation the metho-

dology was more objective, it was heavily dependent upon the child's relationship with the interviewer and the child's ability to express himself verbally. It also could produce a rather threatening situation for some children if it was not introduced by a rapport-building activity.

In order to study the second area, children's imaginings, Anthony used story completion tasks. She found that death in a child's fantasy was seen a sorrow-bringing and fear-bringing phenomenon, grievous because of the separation and frightening because of the malevolence of action. The "acting" of death in children was deemed important in her study as well. She felt that the acting out of ideas and fantasies (mock funerals) helped in the biological conceptualizations of death. This method was advantageous as far as its lack of artificiality but it was subject to the interpretation of the observer. In her discussion of the "teachings" in regards to death, she noted that this is the area where cultural influences arise, but it is also how anxieties are learned.

Anthony had some interesting insights into children's ideas about death and one should not be overly critical of her methods because of the contributory function of her study. The major significance in Anthony's study was the emphasis she placed on the importance of animism and causality and her idea of considering the four areas of cognitions, play, teachings and imaginings about death.

Another pioneer in the field of death and children is Nagy (1948). In her study she employed written compositions, unstructured interviews and illustrations made by the children to investigate death. With the three to six-year-old children she established rapport by telling stories and then asked them to define four words, "death" being

among them. With the seven to ten-year-olds she used written compositions to examine their ideas. She asked the children to write down everything that came into their minds about death. After the completion of the task she asked them to draw a picture of death. By using a variety of techniques one can speculate that she was able to reach most of the children. Probably, they were all comfortable in at least one of the methodologies she used.

Nagy's results suggested that there were three stages in the development of the concept of death. Children between the ages of three and five characteristically denied death as a regular and final process. Death to this age group was a temporary departure, a changeable state. She also found that children extended living characteristics to the dead. Many of the children believed that the dead slept and ate in their coffins. Children tended to perceive of degrees of death. For example, they believed some people were "more dead" than others. In the second stage, between the ages of five and nine years, death became personified. Death was caused, a "death man" made it happen. Generally, death was seen as occurring from the outside, and at this time was not seen as a universal phenomenon. In the third stage death was conceived as a process, a dissolution of life. Children at this level begin to see the inevitability of death.

Although this study is an excellent exploratory one, Nagy varied the methods amongst age groups. The dependent measures of drawing, written compositions and oral definition tasks were not given to each age group. There were no real controls for intelligence or bereavement. Caution must be exercised if one generalizes these results, especially since the study was conducted in Hungary and cultural dif-

ferences may have come into play. Nagy's study did delineate the developmental aspects of death and she showed how many dependent measures can lend themselves to more significant results.

Both the above studies are fraught with methodological weaknesses, but they have contributed immensely to the encouragement of new research in the field. It is interesting to examine the more recent investigations involving children and death, especially since the role of television can be tapped.

Recent Research

Since Feifel (1959) has termed death a taboo topic, researchers have begun to involve themselves more fully with the topic. The developmental studies have taken many forms and have used a variety of techniques. It is difficult to compare the results of the studies since most techniques have not been standardized or validated except in an empirical sense.

1. _Play_ Rochlin (1967) following Anthony's (1940) example, chose to investigate children's ideas about death in a play situation. With a sample size of four and with no statistical analysis, Rochlin claimed that a very early age children develop defenses against death. He explained that a child's "magical thinking" is one example of their defenses against death. His psychoanalytic interpretations are largely subjective and speculative. Unfortunately, the only study involving play was poorly controlled with insufficient subjects.

2. _Death Anxiety_ Another way researchers have examined death is by studying the anxieties children have surrounding it. Wahl (1959) through his clinical experience believed this phenomenon started as early as three years of age. Alexander and Alderstein (1958) using a

word association task showed that children as young as five years showed greater emotional reactions as measured by the galvanic skin response (GSR) to death words. Although this study deals with the affective component of the death concept and not the specific development of the concept itself, it revealed that at this early age children are responding in a differentiating way to death.

3. <u>Projective Techniques</u> Projective techniques, such as the Thematic Apperception Test (TAT) and sentence completion tasks have been used to study death and children. McCully (1963) used ten stimulus cards to examine the differences in fantasy productions of children with fatal illnesses, a progressive crippling disease and a normal group of children. Although the results of this study are not directly related to this investigation, McCully used this projective technique in an objective fashion and was able to prove that statistically significant differences existed among the groups.

Kastenbaum (1959) used a projective technique in his investigation of the idea of time in an adolescent view of death. Adolescents were asked to draw "time lines" in regards to certain life events. The length of the line represented time. It was found that there was a very low tolerance for the acceptance of death-connoting experiences and a rejection of the death-shaped time field. Kastenbaum's interest in the aspect of time and the futurity of death are important since they have implications as to whether children will think about death or consider it as an event so far in the future that they are presently "immune" to because of their age. Kastenbaum and Aisenberg (1972) have stated in their writings that death and its futurity are important considerations in a child's view of death.

Tallmer, Formanek and Tallmer (1974) using an animate-inanimate concept acquisition scale, three TAT cards and a sentence completion task, attempted to show that lower socio-economic status (SES) children would have more adequate concepts of death at each age level than middle SES children, and that parental orientation and actual experience would affect the acquisition of the concept in all classes. Socio-economic status was measured by parental occupations and the residences of the children. Parental orientations were divided into secular or religious according to how the parent explained death. The results indicate that since the concept of death is significantly related to age, that the death concept has a definite cognitive component. Neither parent explanation nor children's experiences with death showed a significant relationship. Socio-economic status was significant; children of a lower SES had a more adequate concept. The authors attributed this to the life experiences of this group and because this group can relate to violent T.V. experiences. The findings of this study are extremely revealing but the interpretations of the authors are rather speculative.

4. <u>Definition Tasks</u> Definition tasks provide a more precise way of measuring the concept of death. These tasks involve an explanation of what death is verbally or written, and the responses are rated according to predetermined criteria. In most studies the criteria are either not defined or delineated so the results are incomparable.

Peck (1966) used a definition task to explore the development of the concept in 134 white male children. She examined the influence of chronological age, mental age as measured by a standardized intelligence test (Stanford-Binet), social class and the specific life experiences of the child (divorce or bereavement). She delineated five stages of con-

ceptual awareness and showed that these levels were associated with significantly different age groups. The child's mental age, as opposed to his chronological age proved to be more important. The concept of death was unmodified by social class (as measured by occupational categories) and death or divorce in the family had no effect on the development.

Bakshis et al. (1974) have been of value in that they have tapped an individual's knowledge about death in a way that is not subject to social approval factors. The Twenty Statements Test (TST) strategy as designed by Bakshis et al. is subject to the influence of vocabulary development and the ability of the subject to express himself in a written form. Since this test requires the subjects to write twenty statements in response to the question "What is death?", it cannot be used with any preschool children.

5. Structured Interviews By far the most popular research approach for examining the concept of death has been the structured interview, again the responses to a series of questions are rated in a predetermined way. Few of the questions asked are worded similarly to those in other studies and at times the questions are subject to social approval factors.

Safier (1964) utilized a structured interview methodology in her study. Using four questions and ten stimulus words which were substituted into the questions, thirty boys ranging in age from four to eleven years were given an animism score and a death score. The authors found a correlation between life and death responses in each age group. Safier showed that these two concepts are parallel in their development and she suggested that similar notions are operating in the attribution

of animism or death to an object. The number of subjects in the study is small, but Safier has shown that the development of the concept of death may be significantly related to the development of animism.

Gartley and Bernasconi (1967) interviewed 60 subjects who ranged in age from five to fourteen years. Using thirteen questions the authors claimed to have found that the concept of death solidifies with age and that children accept death matter-of-factly. They observed no personification of death nor reversibility of the concept. The study had many weaknesses. No statistical tests were run on the data and the authors interpretations were only qualitative. The subjects were all Roman Catholic and enrolled in a religious school, so the sample was a biased one.

Childers and Wimmer (1971) using five questions and 75 children who ranged in age from four to ten years, attempted to show that cognitive awareness of death as universal and irrevocable is independent of age. The results showed that there was definitely a relationship between the understanding of death and age.

Koocher (1973, 1974) used a structured interview with 75 children who ranged in age from six to fifteen. The subjects were all of at least average intelligence (as measured by the Similarities subtest of the Wechsler Intelligence Scale for Children) and each child was tested to determine his primary level of cognitive function. By using a test for conservation of mass, number and volume and a task in hypothesis formation, the authors assigned the children into three levels of cognitive development: preoperational, concrete-operational and formal operational. Four questions were asked of the children. Generally, Koocher found that children's answers were clearly related to their

level of cognitive development, especially those which related to the causes of death. Koocher asserted that a child's egocentrism in the preoperational stage made him rely on "magical thinking" for the answer. No children in the concrete operational or formal operational group believed in the reversibility of death. Not one child gave a personification-type answer when asked about death. Koocher interprets this lack of reference to a "death man" in his American study as a cultural difference when comparing his results to Nagy (1948). In addition, few references to religion were given, but the sample in a sense was biased since it was from a university community. In his discussion Koocher suggests that instead of the personification of death, North American children cope with death by using a specificity of detail. The children in his study went to great lengths in their description of what will happen to them after they die. Koocher feels they use this technique as a means of mastery and hence "control" over death.

Koocher's study is one of the best controlled North American studies of recent years. His discussion of his findings in the light of Piagetian theory leads to insightful interpretations. Koocher's study did not examine the idea of young children where perhaps, he would have seen more of the "magical thinking" involved in children's thoughts about death. He failed to prove that cognitive development had a stronger relationship to mature responses than did age, although he infers this in his discussion. It could be that these results could occur because of age alone and separate from cognitive level.

The structured interview has led to many exciting results in regards to the study of death. This technique lends itself to objective evaluation and statistical analysis. The weaknesses of this approach

that must be accounted for are social approval factors and the relation-
ship between the interviewer and the child. The child's verbal facility
must also be taken into account.

Future Implications for Research

The review of the past studies has many implications as to the
direction new research approaches should take. It has become evident
that a viable methodology involving children and their thoughts about
death should: (1) involve a mode of expression suitable to all age
levels in order that some conclusions can be drawn in regards to the
development of the death concept, (2) include an opportunity for
fantasy expression that can be analysed in an objective fashion, (3) pro-
duce a protocol which can be analysed in a meaningful, integrated way,
and (4) encompass a variety of techniques so as to produce a more repre-
sentative sample of any particular child's ideas about death.

Spinetta (1974) in his review pointed out that present techniques
are severely limited. He felt children had a "preconceptual awareness"
of death that researchers have been unable to measure. He asserted that
most researchers have made the mistake of assuming that if they cannot
measure a child's expressions of death and the anxieties that they have
about it, it does not exist.

As far as the implications this research has for the death concept
itself, it has been clearly shown that: (1) the concept of death is
developmental, (2) the concept is related to intelligence and (3) during
the development of the concept certain aspects of death become of con-
cern to children and the way children consider these aspects accounts
for their overall maturity of the concept. A delineation of twelve
such aspects has been achieved by this review. They are all signifi-

cant in the development of the concept of death and are further defined in the following section.

The Developmental Aspects of the Concept of Death

The following aspects of death are those which have been stressed in the current death literature and those which have been deemed important by various authors in judging the maturity of a child's concept of death. In order to measure whether a child understands death in its entirety all of the following areas are worthy of investigation.

1. _Animism_ Piaget (1954) has shown that a child has real difficulties between the ages of three and five years in distinguishing between the living and the nonliving. A child at this stage may attribute life to anything that moves. The notion that the development of this concept is closely related to the development of the death concept cannot be disregarded. A child may assume that the dead are animate since as yet he is unable to discriminate. This will lead to the erroneous assumption that the dead person eats, sleeps and grows.

Nagy (1948), as previously noted, has deemed this attribution of animism an important aspect when considering the developmental level of a child's concept of death. Safier (1964) expanded this idea more fully when she interpreted a child's understanding of the causes of death (internal or external agents) as being parallel to the acquisition of the concept of animism. In summary, if a child does attribute lifelike characteristics to the dead, his concept would be rated immature as compared with the child who understands that death means the cessation of life.

2. _Causality_ Piaget (1932) has shown that at certain stages

causal reasoning begins to develop in the child. It may be at a some-
what unsophisticated level but a child becomes inquisitive as to the
"why" of an event's occurrence. Death is no exception. In the early
stages of development a child may conceive of death as being caused by
an external agent (a car or gun). His causal reasoning is at a very
concrete level. One can suggest then that a young child will conceive
of most deaths as occurring through accidents or murders. It can also
be hypothesized that as a child matures he may conceive of death as an
internal, biological process with more subtle organismic reasons for
its occurrence (disease or aging).

Nagy (1948) in this regard has noted that a young child confuses
the word "dead" with "murdered" or "killed". She speculated that it is
because a child conceives of death as having an external causality.
Safier (1964) and Koocher (1973, 1974) have shown that as a child ma-
tures the idea of death as an internal process occurs. While at younger
ages, outside agents or external concrete processes are involved.

3. <u>Separation</u> In order to understand death some authors have
suggested that a child must have experienced separation. YYudkin (1968)
and Maurer (1968, 1974) described separation as the first experience
that resembles death. Other authors have described the separation in-
volved in death as the most anxiety producing part of the concept
(Anthony 1971). In this regard it can be speculated that since separa-
tion is of central importance in the early stages of life, a child will
focus upon the "being away" part of death. A child may be aware of
the separation involved and deny its finality.

4. <u>Ritual</u> As a child matures he becomes aware of the ritual sur-
rounding death. The burial, the funeral and the "rules" surrounding

death become significant. Anthony (1971) wrote of mock funerals and burials performed by children of age six and older. What happens after death becomes more important to the child than the death itself. Koocher (1973, 1974) asserted that a child's ideas about what happens after death are his "coping mechanisms" that he develops in order to "master" or "control" his death. One can speculate that this concern with the rituals of death may be an intermediate stage that would occur in the growth of the death concept.

5. <u>Morality</u> In the area of moral development, Piaget (1948) and Kohlberg (1963) contend that moral reasoning occurs in stages. Piaget (1948) has suggested that rules develop in three stages and that their development has many ramifications as to the way a child's ideas of punishment form. Young children believe in "expiatory punishment", that is the transgressor must suffer. Older children conceive of "punishment through reciprocity", that is the notion that punishment should be related to the crime. Young children also conceive of "immanent justice", the concept that misdeeds will be punished by natural acts or occurrences.

Kohlberg (1963) delineated six stages of moral development. In his first stage, punishment and obedience were important; since within this stage the consequences of an action determined the goodness or badness of it.

As Yudkin (1968) has suggested, these immature ideas may result in many strange moralistic interpretations of death. One can speculate that young children may interpret death in a moralistic punitive sense, while older children may believe that death is a phenomenon which is totally unrelated to one's behavior in life.

Koocher (1973, 1974) did not document this notion in his results. He felt that the punitive aspect of death was culturally related and not a belief held by North American children.

6. <u>Location</u> In the early stages of childhood, a child may believe that death occurs only at certain locations (hospitals). Grollman (1967) suggested that these ideas exist and that these beliefs are quite "reasonable" when one considers the cognitive processes at this age. A child may hear of a person being hospitalized who later died and then come to the conclusion that if he stays away from hospitals he will be immortal. Obviously this is another immature belief since as a child learns more about death he will come to the realization that death is not location-specific.

7. <u>Degrees of Death</u> If one supports the notion that death is considered by the young as being externally caused, it follows that the same youngster may measure the "quantity" of death in this way. A child may entertain the notion that something can become "more dead".

Nagy (1948) noted this is her research and she posited that children conceptualized degrees of death. Since a child did not understand that death is the termination of life, he felt that an object's "deathness" was proportional to what had happened to it. For example, in their logic a duck that has been shot once is less dead than a duck that has been shot twice. They also assert that a dog that died two years ago is more dead than one that died yesterday. These are obviously immature notions which are not entertained by older children.

8. <u>Time</u> Children may associate, especially at young ages that death and time are related. They may feel that death happens only at night or the "witching hour" or at dawn. Or because of some incident

that they have experienced, they may believe that it occurs at eight o'clock or some other arbitrary time. Grollman (1967) was the first to suggest that these associations existed in the early childhood years. But as these children mature and draw on the experience of events around them, they will come to realize that death is not time-specific.

9. Futurity Kastenbaum (1959) discussed that being able to see ahead into the future and conceptualize the prospect of one's own death could be a structuring principle of major importance in life. He felt the role of the future and time play an important part in the discovery of death. Koocher (1973, 1974) noted a wide variance in younger subjects when asked: "When do you expect to die?" The idea of future personal death or future death is one that has not been fully examined in children.

In this regard, it is interesting to examine how a young child would answer a question in the future about death. Some children may associate it with the aged or sick. If these associations are prevalent the child's development would be viewed as immature.

10. Process A mature concept of death as described by Nagy (1948) and Anthony (1971) would view the phenomenon as a process occurring over time. This process would not be time-specific, that is it would not always take the same amount of time. When a child comes to terms with the "dying" of death, his concept would be more mature than those who see it as a state occurring instantaneously on account of an external agent, As Piaget has noted, it is difficult for younger children to conceptualize a process since they tend to see things in terms of states.

11. Universality Nagy (1948) pointed out that a child's con-

ception of death is not mature unless he can see that it happens to all living things. In its earliest stages, as shown by Levinson (1967), children can readily identify death as occurring to animals. A pet or animal's death is usually their first experience, and the idea of universality occurs slowly. Once a child understands this inevitability of death, he is said to hold a mature concept of death. But, if he entertains thoughts that certain animate things will live forever, it is clear that his ideas are still in a stage of development.

12. Finality A mature concept of death as described by Nagy (1948) would be one in which the process is seen as final. In the very young, children often see death as a temporary state, from which one has the power to return. Koocher (1973, 1974) and Childers and Wimmer (1971) have all observed the reversibility of the death concept in the young. A child's thoughts about death cannot be deemed mature until this finality aspect is understood. Again, this becomes clearer to children in their later development.

All of the above areas should be tapped in any methodology which deals with the acquisition of the death concept. Since these twelve areas may be of special concern for children at various ages and since these areas are the ones which may be diffficult for children to conceptualize; it is these twelve concerns which may determine the maturity of a child's thoughts about death. Therefore, any valid measurement of the maturity of the concept of death should involve these twelve aspects.

Focus and Purpose of the Present Investigation

It was the purpose of this investigation to examine the concept

of death across three different age groups. This study utilized a

three-fold technique which could be objectively analysed and which could

be applied to all ages of children. The child was required to:

(1) draw a picture of his idea of death, (2) explain all aspects of

the picture to the interviewer and, (3) answer a structured oral

questionnaire.

In the first part of the investigation, drawing was chosen as the

medium since it served as a rapport-building activity, and lessened any

verbal demands on the child in the first part of the interview. By

using this nonverbal mode of expression, it was thought that the act

of drawing would help the young, less verbal child to express his

thoughts. In addition, it served as a base for the entire interview

since the remainder centered upon the objects, themes and processes in-

volved in the picture. This functioned to remove some of the artificial-

ity and not introduce new conceptualizations into the interview. The

validity of using such a technique has been examined by many authors

(Eng. 1957; Harris, 1963; Koppetz, 1963; Di Leo, 1973) and the role of

the image in cognition has been further developed by Piaget and Inhelder

(1966). The effects of motor control would not influence the results

of the study since it is the content of the drawing, not the quality

that is examined. This mode of expression should put the majority of

young subjects at ease in the beginning of the session.

These drawings were examined with regard to the three dimensions

of objects, themes and processes as described in Appendix A. It was of

interest to first examine the objects a child used in his conceptual-

ization of death. One could speculate that the objects used may vary

according to the age of the child. The objects used were classed

into human and nonhuman categories. One could speculate that younger

children may think of death as occurring to animals or nonhuman objects

(Levinson, 1967) while older children (6-11) would personify death or

comprehend it in terms of human death. The themes were also examined

since a child may visualize death through graveyards, accidents or

hospitals. Since younger children concern themselves with the death

event and tend to visualize death in terms of chance happenings, the

notion that they would use themes of accident and murder was examined.

Children from 6 - 11 years on the other hand, may use hospital, grave-

yard and funeral themes more frequently in their drawings since they

tend to be more concerned with the ritual surrounding death (Koocher,

1973) the processes involved in the drawing were also examined. As

cited previously in the work of Nagy (1948) and Safier (1967) young

children use external processes in their explanation of the causality of

death, while the older child interpreted death as an internal process.

Generally, the categories within the three dimensions were used by the

children and would depend on the ages of the children.

In the second part of the study the child was asked to describe

every aspect of his picture. One could speculate that a child may spon-

taneously mention the aspects of death which are meaningful and impor-

tant to him. Children from 3 - 5 years may mention the aspects of

causality, (Safier, 1967), separation (Maurer, 1967) and animism

(Nagy, 1948), since past research has found these areas the ones upon

which younger children tend to focus. Intermediate age children (6 - 8)

tend to concern themselves with causality, ritual (Koocher, 1973),

and morality (1968). One would expect children of 9 - 11 years on the

other hand to focus on the universality (Koocher, 1973) and finality

(Nagy, 1948) of the death process. The study took into account these
spontaneous verbalizations to examine the notion that children at
varying developmental levels express spontaneously the areas which are
of central importance to them.

The inquiry, which involved an oral structured interview, tapped
the twelve developmental aspects of death which have been previously
described. One question tapped each of the areas of animism, separa-
tion, causality, location, time, ritual, morality, futurity, degrees of
death, finality and universality. Answers to these questions could be
rated in a mature - immature direction as described in the preceding
pages and further delineated in Appendix C. The child's drawing
functioned as a base for the structured interview. For example, if the
child drew a dead bird, the interviewer asked: "What is a dead bird
like?" The twelve questions yielded a maturity score (M score) of the
development of the concept of death. The idea that older children
would receive higher M scores than younger children was examined.

This study was designed to introduce a new technique for the in-
vestigation of the concept of death and childhood thoughts about it.
The use of drawing in this investigation allowed the child to con-
ceptualize his ideas about death in an uninhibited manner. The re-
mainder of the study analysed the drawing in a non-threatening way.
The child was given the idea of this being a survey, rather than their
answers being judged in a right-wrong direction. In addition, the
analysis of the drawing could be applied to all of the children included
in the study. Using this methodology, this study purported to examine
the development of the concept of death and to isolate the aspects of
death which are of central importance to each age group. The results

were analysed according to the following hypotheses:

Hypothesis I: (a) Children of Group 1 (three to five years) will tend to use different objects, themes and processes than the other groups. (b) They will tend to draw animals, use themes of murder and accidents and use external processes.

Hypothesis II: Children of Group 2 (six to eight years) and Group 3 (nine to eleven years) will tend to use humans, use themes of graveyard, funeral and hospital and use internal processes.

Hypothesis III: Children will mention spontaneously the aspects of death which are of central importance to each age group. In group 1, separation, animism and causality are important; in Group 2, causality, ritual and morality are significant; and in Group 3, process, finality and universality become most relevant.

Hypothesis IV: Group 3 will have significantly higher maturity scores as measured by the questionnaire than those of Group 1.

Hypothesis V: Group 2 will have the most variable scores on the questionnaire since its scores will reflect the development that is occurring within these children.

CHAPTER II

METHOD

Subjects

The subjects were 120 children from the Winnipeg area. The children were chosen randomly by the interviewer from two schools in the East Kildonan area (Salisbury and Sherwood School) and two Day Cares, one in the central area (Knox Day Care) and one from the Charleswood area (Perimeter Day Care). Forty of the children ranged in age from three to five years with a mean age of 4.61 years (Group 1), another forty ranged in age from six to eight years with a mean age of 7.5 years (Group 2), and another forty ranged in age from nine to eleven years with a mean age of 10.47 years (Group 3).

Group 1 was composed of 21 males and 19 females. Two of the group had had deaths in their immediate family, two had experienced the death of close family friends, nine had lost family pets and 26 of the subjects had had no significant death experience. Group 2 was composed of 19 males and 21 females. Two had lost members of their immediate family, seven had experienced the deaths of family friends, fifteen had lost their pets and sixteen had no real death experiences. Group 3 was composed of 21 females and 19 males. Two had lost members of their immediate family, thirteen had lost distant relatives or friends, three had attended funerals, eight had lost their pets and fourteen had no significant death experience.

The subjects were all attending school or day care centres during the time of the study. All of the parents had been informed of the

child's participation in the study and had been asked various questions about the death experiences of the children. The parents were asked not to "coach" the children for the interview in any way.

Apparatus and Questionnaire

The materials consisted of eight crayons, white paper 8½ by 11 inches and a tape recorder. The questionnaire (Appendix B) consisted of 12 questions which could be rated in a mature-immature way. The questionnaire was tested for interjudge reliability by using Scott's index of reliability (pi) (as in Scott, 1955). The questionnaire was found to have a pi = .97 when the responses of 40 subjects were rated by a male and female judge. On the questionnaire there was also a space provided as to whether the subject answered the question spontaneously during the inquiry phase of the study. Therefore, the questionnaire yielded a maturity score for each child and gave an indication of which questions were answered spontaneously. Spaces were also provided for the subject's age and sex.

Procedure

The interviewer was introduced into each classroom as a person who was doing a survey at the school. In the Grade 1, Kindergarten and Day Care Centres, the teachers introduced the interviewer as a person who was interested in watching children draw pictures. Each child was introduced individually to the interviewer by the teacher, and then the interviewer and the child proceeded to a room where the materials were previously arranged. After a brief introduction reaffirming why the child had been brought to the room, the interviewer set the paper and crayons in front of the child. The interviewer then said: "I'd like

you to draw me a picture of what death means to you." If the child

appeared to not know what the word "death" meant, this was noted and

the word "dead" was substituted. After the child finished the drawing

(no time limit), the child was asked: "Tell me as much as you can

about your picture." The items that were mentioned spontaneously

were checked off on the questionnaire. If the child did not describe

some aspect of the picture the interviewer asked: "And what would this

be then?" The remaining questions were asked if the child had not

answered them in his explanation of the picture. The child was then

given a reward for participating in the study, sugarless gum for school

children; playing with puppets for younger children, and was escorted

back to his room. If the child refused to draw for the interviewer or

had an adverse reaction to the content of the interview, the child was

consoled and taken back to the classroom and the data disregarded.

Data Analysis

Each child's drawing was examined as to the objects, themes and

processes used. The frequency of the use of human and nonhuman ob-

jects was observed across the three age groups examined, as well as the

frequency of the themes and processes. These data were used to test

both Hypothesis I and Hypothesis II.

Hypothesis III was analysed by frequency counts and if a trend

was noted, it was further examined by the use of chi square statistics.

Hypothesis IV was tested by observing the M scores within the three

groups. The differences among the means of each group were examined

as to whether they supported the hypothesis. Hypothesis V was ex-

amined by observing the variance within each of the three groups.

In addition, data were collected regarding each of the 12 question-naire items. Each child's outcome on each question (that is mature, immature) was noted so that the predictive validity of each of the items within each age group could be examined.

CHAPTER III

RESULTS

The Use of Objects Themes and Processes

The frequency of the use of the various objects, themes and pro-cesses was examined across the three age groups in this study in order to ascertain whether Hypothesis I and Hypothesis II were supported. The raw data is shown in Appendix D. The frequencies of the use of human and non human objects in the drawings were converted into per-centages and are shown in Table 1. Group 1 and Group 2 used humans 68% of the time, while in Group 3, 97.5% of the children used humans in their conceptualization of death. In Table 2 the use of the nine themes were analysed in percentages. Group 1, as hypothesized, gen-erally used themes of murder (55%) and accident (32.5%). Group 2 pre-ferred themes of murder (30%), natural causes (25%) and accident (20%). Group 3, as hypothesized, chose grave (30%) and funeral themes (25%) most frequently in their conceptualization of death. War (2.5%) and religion (0.0%) were not popular themes for any of the groups. In Table 3 the use of processes is shown. As hypothesized in Group 1, 92.5% of the children used external processes, but in Group 2, 75%, while in Group 3, only 35% used this type of process.

The results were analysed according to the five hypotheses out-

Table   1

Percentages of Human and Nonhuman Drawings in Group 1,

Group 2 and Group 3

	Human	Nonhuman
Group 1 (3-5 years)	67.5%	32.5%
Group 2 (6-8 years)	67.5%	32.5%
Group 3 (9-11 years)	97.5%	2.5%

Table 2

The Use of Themes in Percentages by Group 1

Group 2 and Group 3

	Group 1 (3-5 years)	Group 2 (6-8 years)	Group 3 (9-11 years)
Religion	0.0%	0.0%	0.0%
Funeral	0000%	0.0%	25.0%
Grave	0.0%	17.5%	30.0%
Accident	32.5%	20.0%	10.0%
Murder	55.0%	30.0%	10.0%
Hospital	2.5%	7.5%	7.5%
War	0.0%	0.0%	2.5%
Afterlife	22.5%	0.0%	10.0%
Natural Causes	7.5%	25.0%	5.0%

Table 3

The Use of Processes by Group 1, Group 2

and Group 3.

	Internal	External
Group 1 (3-5 years)	7.5%	92.5%
Group 2 (6-8 years)	25.0%	75.0%
Group 3 (9-11 years)	65.0%	35.0%

lined in Chapter I. The use of objects, themes and processes was explored across age groups in order to ascertain whether Hypothesis I and Hypothesis II were confirmed.

Hypothesis I stated that children of Group 1 (ages 3-5 years) would tend to use different objects, themes and processes when compared with the other two groups. It asserted that this group would draw more animals, use themes of murder and accident more frequently and use for the most part, external processes when compared with Group 2 and Group 3. This hypothesis was examined by using chi square (x^2) and it was partially supported. Children of Group 1, when compared with children of Group 3, tended to use different objects ($x^2 = 10.48$ df=1 p. .001). When the use of themes were compared across Group 1 and Group 3 again the hypothesis was supported. These children tended to use different themes in their drawings ($x^2 = 43.22$ df=7 p.$<$.001). As far as processes were concerned, when Group 1 and Group 3 were compared again they used processes differently ($x^2 = 26.18$ df=1 p.$<$.001). When Group 1 was compared with Group 2 the objects they used were similar ($x^2 = .05$ df=1 p.$>$.05). When themes were considered Group 1 and Group 2 used themes differently ($x^2 = 16.9$ df=5 p.$<$01). But, when processes were analysed Group 1 and Group 2 failed to use different processes in their drawings ($x^2 = 3.31$ df=1 p. $>$.05). In other words, Hypothesis I was confirmed when Group 1 and Group 3 were compared, but was only partly supported in the case of Group 1 and Group 2.

Hypothesis II stated that Group 2 and Group 3 would tend to use objects, themes and processes in a similar way and that both groups would draw humans, use themes of grave and funeral and use external processes. This was not supported. Group 3 when compared to Group 2

used objects differently (x^2 =10.48 df=1 p.< .001), used themes dif-
ferently (x^2 = 26.98 df=7 p.< .001) and used processes differently
(x^2 = 11.36 df=1 p.< .001). The nine chi square statistics run on
the data comparing the use of objects, themes and processes among the
three groups are shown in Table 4.

The Inquiry

The inquiry phase of the investigation dealt with the spontaneous
expressions of the subjects about their drawings. Hypothesis III
asserted that the subjects would mention spontaneously the aspects of
death which were of central importance to them and that these aspects
would vary across age levels. This was not fully supported. Children
of Group 1 tended to say very little spontaneously, (only 15 rateable
responses) while in Group 2 and Group 3, over 30 responses were given.
In Group 2, causality was first mentioned (that is, the nature of the
cause of death) by 50% of the subjects while in Group 3 "the ritual" or
what happened to the body spirit of the dead was mentioned by 59% of the
subjects. Since the results did not suggest a definite trend and be-
cause of the poor response of Group 1 subjects, no further analysis was
done on the spontaneous descriptions of the drawings. The data is
shown in Appendix E.

The Questionnaire

In order to examine which items differentiated the subjects with-
in each group, phi coefficients ($\emptyset$) were run on each of the 12 items
within each group. This resulted in 36 phi coefficients which are
shown in Appendix F. The significant phi coefficients are shown in

Table 4

Chi Square Statistics Resulting from Comparing the Objects,

Themes and Processes across Groups

	Group 1 vs. 3	Group 1 vs. 2	Group 2 vs. 3
Objects	$\chi^2_1 = 10.48*$	$\chi^2_1 = .05$	$\chi^2_1 = 10.48*$
Themes	$\chi^2_7 = 43.22*$	$\chi^2_7 = 16.9*$	$\chi^2_7 = 26.98*$
Processes	$\chi^2_1 = 26.18*$	$\chi^2_1 = 3.31$	$\chi^2_1 = 11.36*$

$* \ p. < .01$

Table 5. To determine whether a phi coefficient was significant it was transformed into a tetrachoric r. If an item was significant it meant that within that age group that item significantly discrimin-ated the subjects with high maturity scores from those with low M scores. In Group 1 the most powerful questions, that is, the items that best predicted a higher maturity score (M score), were morality, process and futurity. In Group 2 causality, futurity and morality, and in Group 3, degrees of death, futurity and causality were the best predictors. Animism was only discriminating at a significant level in Group 1. Causality was significant in Group 2 and Group 3. Separation only differentiated high and low M scores in Group 2. Ritual was sig-nificant in differentiating high and low M children in Group 2 and Group 3. Morality was a discriminating item in Group 1 and Group 2, but not Group 3. Location was significant in Group 1 only. The degrees of death question was a discriminating item only in Group 1 and Group 3. Time was not significant in any group. Futurity was sig-nificant in all groups. Process was a differentiating item in Group 1 and Group 2. Universality was significant only in Group 1. Finality was not significant in any group.

Appendix G shows how the 40 children within each group handled each of the questionnaire items. As shown, there was an increasing number of correct responses with age.

The Questionnaire and Influences on the Maturity Scores

Hypothesis IV was confirmed fully by the results. In Table 6 there is an analysis of variance showing the effect of Group (age) on M scores. Group had a significant effect (F = 63.39 df=2 p < .001).

Table 5

a

The Most Significant Items as Determined by Phi Coefficients

Within Each Group

ITEM	GROUP 1	GROUP 2	GROUP 3
ANIMISM	ANIMISM (∅=.3556)	b -	-
UNIVERSALITY	UNIVERSALITY (∅=.3886)	-	-
LOCATION	LOCATION (∅=.3029)	-	-
RITUAL	RITUAL (∅=.3676)	RITUAL (∅=.2915)	-
MORALITY	MORALITY (∅=.4163)	MORALITY (∅=.3675)	-
PROCESS	PROCESS (∅=.4114)	PROCESS (∅=.3170)	
DEGREES OF DEATH	DEGREES OF DEATH (∅=.3325)	-	DEGREES OF DEATH (∅=.4714)
FUTURITY	FUTURITY (∅=.4202)	FUTURITY (∅=.4831)	FUTURITY (∅=.2887)
SEPARATION	-	SEPARATION (∅=.3078)	-
CAUSALITY	-	CAUSALITY (∅=.6581)	CAUSALITY (∅=.2886)
TIME	-	-	-
FINALITY	-	-	-

a. transformed into a tetrachoric r   p. < .01
b. p. > .01

When the means of the groups were compared as in Table 7, it was shown that Group 1 had the lowest mean, $\overline{X} = 5.45$, Group 2 was next with a mean of $\overline{X} = 8.55$ and the highest mean was that of Group 3 ($\overline{X} = 10.78$). The t tests comparing these means were all significant as shown in Table 7.

In addition an analysis of variance was run concerning the effects of Objects on the overall maturity scores. The results showed no effect (F = .101 df=1 p. $>$ .05). That is to say, what the children drew did not have a significant influence on their M scores.

The influence of Themes on the children's maturity scores is revealed in Table 8. There was a significant effect in this case (F= 2.737 df=7 p.=.012), and this was further investigated by multiple t tests. The significant comparisons are shown in Table 9. Since there was a number of comparisons conducted, only those with very high significance levels were considered significant. Generally, children who used themes of grave and funeral had higher M scores than those who used themes of accident and murder. Those who used hospital themes also scored higher on the questionnaire than those who used themes of murder. The interaction effect of Group X Themes was not significant.

The effects of Processes were also examined. Process had a significant influence on the M scores (F = 9127 df=1 p. $<$ .01). When a t test was done to determine the direction of this effect, it was found that t = 7.47 df=103 p. $<$ .001. Children whose drawings inferred an internal process scored significantly higher on the maturity questionnaire. Again the interaction effects of Group X Process were not significant.

Hypothesis V asserted that the variance of the scores of Group 2

Table 6

Analysis of Variance of the Maturity Scores Examining

the Effects of Group and Objects

Source	df	MS	F	p
Main Effects				
Group	2	260.334	63.391	<0.001
Objects	1	.416	.101	0.751
2 Way Interaction				
Group X Objects	2	.177	.022	0.979

Table 7

Comparisons among Group Means of Subject's

Maturity Scores

$\overline{X}_1 = 5.45$ (Group 1)

$t_{(\overline{X}_1 - \overline{X}_2)} = -5.99*$ df=78

$\overline{X}_2 = 8.55$ (Group 2)

$t_{(\overline{X}_2 - \overline{X}_3)} = -5.97*$ df=60.90[a]

$\overline{X}_3 = 10.78$ (Group 3)

$t_{(\overline{X}_1 - \overline{X}_3)} = -12.09*$ df=54.16[a]

* $p < .001$

[a] Separate variance estimate

Table 8

Analysis of Variance of the Maturity Scores Examining

the Effects of Groups and Themes

Source	df	MS	F	p
Main Effects				
Group	2	131.633	37.06	$<$.001
Themes	7	9.719	2.737	.012
2 Way Interaction				
Group X Themes	8	4.811	1.355	.221

Table 9

Significant t tests of the Comparisons

of Theme Maturity Means

Means Compared	t value	df	significance
$\overline{X}$ - $\overline{X}$ funeral accident	7.09	32	< .001
$\overline{X}$ - $\overline{X}$ funeral murder	8.69	46	< .001
$\overline{X}$ - $\overline{X}$ grave accident	5.40	38	< .001
$\overline{X}$ - $\overline{X}$ grave murder	5.38	55	< .001
$\overline{X}$ - $\overline{X}$ murder hospital	-4.14	43	< .001

a
 Separate variance estimate for each comparison

would be largest. This was not the case. The variance of the first group was the largest ($s^2 = 6.43$), Group 2 was next at $s^2 = 4.24$ and the third group had the smallest variance ($s^2 = 1.31$). The most variable scores were found in the first group where the scores ranged from 0-10. In Group 2 the scores ranged from 2-12 and in Group 3, the scores ranged from 7-12.

Generally, most of the children responded in a positive way to the investigator and the tasks. One child refused to draw and became quite belligerent and the session was discontinued. Another youngster who was three years of age wanted to go back to his room as soon as he was brought to the interviewing room, so he was escorted back to his area. These subjects were replaced by others and the data were disregarded.

When meeting the parents for permission to involve their children in the study, only two refused the investigator's request. Both children in these two cases were under psychiatric care and their parents felt that their schedules should not be varied in any way.

CHAPTER IV

DISCUSSION

This study investigated hypotheses predicting that children, according to their age, would use different types of objects, themes and processes in their conceptualization of death. These assertions were confirmed in part. It also examined the aspects of death which delineated the age groups, and those which best predicted the maturity level of the concept within certain age groups. Lastly, it concerned itself with the maturity scores themselves and the effects of the way a child conceptualized death on these scores. This study utilized a new technique

Table   10

Analysis of Variance of the Maturity Scores Examining

the Effects of Groups and Processes

Source	df	MS	F	p
Main Effects				
Group	2	163.324	43.385	.000
Processes	1	34.890	9.268	.003
2 Way Interaction				
Group X Process	2	2.358	0.626	.536

which was designed to better delineate the differences amongst child-
ren in their perceptions of death.

The subjects of this investigation and the way in which they
approached the tasks required of them should be mentioned. Koocher
(1974) in his discussion of the ethical concerns of death research,
warned that an investigator must always be able to cope with any un-
pleasant aftereffects. Most children, as noted previously, responded
well to the tasks. When asked about the "survey" they felt that it
was "fun" and the parents that were polled reported no adverse effects.
One parent said they had had a family discussion about death the
evening of their child's interview. Many said that they had found it
helpful in that it had led to conversations about death with their
children.

The Use of Objects, Themes and Processes in the Drawings

The results of the chi square statistics suggested that the old-
est children included in the study used different objects, themes and
processes in their conceptualization of death. Younger children
(those of Group 1 and Group 2) tended to conceive of death 32.5% of
the time, as occurring to nonhumans (mostly animals). In Group 3,
only 2.5% of the children conceived of nonhuman death. This could be
because the younger children have only experienced animal death, and
since their thought is egocentric, they have not been able to con-
ceive of human death. Since they cannot draw from the experience of
others, they have not developed a more personalized understanding of
death. Group 3 on the other hand, can draw on the experiences of
others and therefore, they can comprehend human death more readily.

One can also speculate from these results that as a child matures his drawings would follow a continuum from the concrete (a dead animal) to the abstract or symbolic (a tombstone, heaven).

In regards to themes, the data showed that Group 1 understood death as occurring in an active way through murders and accidents. This supported Nagy's (1948) finding that death was seen as requiring an agent. Rather than God or a death man, the "agent" in this sample was a murderer or a bad driver. Television can be posited as playing a role here (Tallmer, Formanek and Tallmer, 1974) since these experiences have not been witnessed by the subjects except on the screen. The demographic data collected on the subjects about their encounters with death showed that these subjects were relatively inexperienced. In Group 2 the themes of natural causes, murder and accidents were most popular. Again the influence of T.V. may be affecting their perceptions of death as well as their observations of their natural environment. In Group 3 the themes of grave and funeral were prevalent. This group appeared to become concerned with the ritual surrounding death. They viewed death "after-the-fact" when compared to their younger counterparts who still perceived of death as actively occurring. Perhaps social acceptability came into play here; the older children may have felt less comfortable drawing an active death scene as opposed to a "passive" one (grave scene). These results lend support to Koocher's (1973) findings which revealed that older children become concerned with death ritual as if this knowledge would give them some type of mastery over death. This idea makes sense when one considers that these older children may have been envisaging death as happening to themselves (as one can infer from the number of human drawings).

The findings in regards to processes also support past research (Nagy, 1948; Safier, 1964). Children as they mature conceive of an internal causality, rather than an external process when conceptualizing death. As the concept develops, they envisage death as a process occurring inside the body. The development of the concept of death appeared to follow a similar pattern when compared to the development of animism. When something is deemed alive because it propels itself internally, it is classed as dead in the same way (that is, internal, biological causes).

The Questionnaire

The results in regards to the questionnaire have many ramifications as to the acquisition of the death concept. How the 12 items differentiated the children within the three groups as shown by the phi coefficient is one of the most revealing aspects of the results.

The first item, the question that tapped the idea of animism, was significant in differentiating Group 1, but was not so in Group 2 and Group 3. No children attributed animate characteristics to the dead in Group 3. As was suggested previously by Nagy (1948), Safier (1964) and Anthony (1971), the concept of animism is an important consideration in the development of the death concept. These results showed that only in young children (age 3-5 years) is the concept of death and animism so poorly developed that one is not seen as the antithesis of the other. Some children in this group are unable to envisage death as a total culmination of life's biological processes. The concept of animism affected the concept of death in Group 2 and Group 3 in more subtle ways.

The idea of causality and especially the idea of internal-external cause was not significant in early childhood. Most children between the ages of 3 and 5 years conceived of death in a concrete, external way. In intermediate stages, causality became a discriminating item in determining the maturity score of the child. In Group 3 it still was a significant item but less so. It appeared that a child's attribution of causality is in a state of transition in Group 2, since it was within this group that it became of central importance. These children are still developing in the area of internal-external cause; some still feeling that death requires an agent, while others are beginning to conceive of death as an organismic process. It appeared that this issue was beginning to resolve itself in Group 3, although it still seemed to be developing within some children at that age.

Separation was not as significant an item as many researchers had speculated. Rather, this item was only powerful in delineating Group 2. Possibly, at this age level the children could grasp the finality of the separation because their concept of time was better developed. This item was not significant in Group 3 which indicated that the separation aspect of death was acquired at that age (as indicated in Appendix G). One can also speculate that separation may be an important part of death anxiety, but may not be significant in the actual development of the concept as previously thought.

The ritual involved in death has been an aspect deemed important by Koocher (1973) and Anthony (1971). In the youngest age group, ritual became an important notion in differentiating the high and low scorers on the M scale. Around the age of nine, it failed to become a criterion in delineating the group. In the youngest and intermediate

groups "rules" are being established either from the adults in the child's environment or his peers. It would seem logical at this time that the "rules" of death are being understood as well. The same developmental reasons would apply to Group 2. They would often express in their answers an urgency around a person's burial: "Now that he died, this guy needs to be buried right away."

Morality was an important item for both Group 1 and Group 2. Children who felt that death was brought on to an object by its misbehavior on earth, generally scored lower on the M scale. Many children felt "He was bad so he got shot", or "She died because she was silly and careless". They seemed to judge the dead, and speak about them as if they deserved to die. Again this phenomenon can best be explained by looking at the level of moral development of these children. If one contends that these children believe in expiatory punishment and immanent justice, as described by Piaget (1948), the transgressor is given the ultimate punishment. The idea of consequences as noted by Kohlberg (1963) in the preconventional stage of moral development comes into play in a negative way. The children who are developing have strict moral codes. The consequences of an action determines its goodness or badness. If someone dies, they feel he must have done something "bad".

Location was a significant item only for Group 1, but not for the other groups. Approximately 50% of the children in Group 1 felt that death was location-specific. Grollman's (1967) idea of association with place in regards to death was reaffirmed. This did not prevail as a child's reasoning developed. These associations broke down as the child encountered new experiences and drew on the experiences of others.

Degrees of death was a significant item in both Group 1 and Group 3.

Interestingly enough, it did not delineate the intermediate group as was expected. Perhaps at this age, the child is in a state of transition in many ways and is beginning to think in terms of transformations. This helps him in his conceptualization of death as an immeasurable entity, which in turn leads him to the conclusion that degrees of death do not exist. In Group 1 the child is so concrete that he readily measures the death of an object by what has happened to it, while in Group 3, a child's idea of time is so well-developed that children of this group feel a person becomes more dead according to how long he has been buried. Both the above assertions interfere with the development of the idea that "dead" is a state which cannot be quantified.

Time was one of the items that was not significant in any group. The associations of time and death are entertained only by very young children. These associations appeared to resolve themselves around the age of six as indicated in Appendix G. In Group 1, approximately 45% of the children were incorrect, in Group 2, 90% had the item correct.

The idea of future death and the specificity-generality of it was an item that was significant at every age level. Answers ranged from the specific to the general as previously predicted, as the child matured. This aspect of futurity still appeared to be developing even within the older children. In addition, it was the one item which most children seemed to take the greatest time in answering. This latency of response has been posited to relate to the guilt involved in making such a prediction (Rochlin, 1967). Wahl (1959) has suggested in this regard that children feel guilt over any death as if they were the "secret slayer". This guilt may have produced a reluctance to re-

spond or it may have been just a general uncertainty around handling a question in the future about death which should not be interpreted as anxiety.

Process was a significant item in both Group 1 and Group 2. The idea of death as a process appeared to be resolved around age nine years. At this point, with a child's idea of a process occurring over time more fully developed, they are able to envisage death within this framework. Such answers as "It depends: if you're shot you die fast, if you have cancer you die slow," were common among the oldest children.

Universality was denied by the majority of Group 1 and it was a discriminating item in this group. After the age of six years, the universality aspect of death appeared to form in this sample. This finding did not agree with the results of previous studies. Childers and Wimmer (1971) felt that the understanding of universality in relation to humans, did not occur until age nine years. In this study it appeared to be happening in the intermediate age group around age seven or eight years. Universality was measured in this study in relation to what the child drew. This could have accounted for the discrepancies in the results and also show the increased sensitivity that a technique gains when it utilizes a child's own framework.

Finality was not a significant item in any group; that is to say, it did not differentiate the high and low M subjects. Approximately 50% of the children in Group 1 understood the finality of the death concept. Around age seven years it appeared that the majority of children could grasp this notion. This again differed from Childers and Wimmer (1971) who found that this did not occur until ten years. The non-

significant level of this item is very important, especially since it is one of the most frequently used criterion in measuring the maturity of the death concept. Again this finding can be interpreted as occuring on account of the different methodologies. As above, the sensitivity of a technique using a child's own conceptualization is shown.

Along with the aspects which determined the developmental level of the concept of death, the questionnaire revealed the general linear development of the concept. Each group scored significantly differently from the other. The assertion by Kastenbaum and Aisenberg (1972) that the death concept is developmental was substantiated. Group 1 had the most variable scores, probably because their ideas were largely taken from their limited personal experiences with death, so they relied on their fantasy a great deal to supply an answer. As the children became older, they became aware of the experiences of those around them and had probably had more experiences with death.

The examination of the twelve developmental aspects of the concept of death has led to many interesting findings. The scale was validated, in an empirical sense at least, and the general technique appears to be sensitive in tapping the responses of the younger child within his own conceptual level. In addition, the results cast doubt on some of the previous research which investigated the aspect of finality and uni-versality of death. It showed the importance of conducting a more thorough examination of the items which are assumed to be the "criteria" of a "mature" concept of death. These assumptions may be erroneous as shown by the results in the case of finality.

Influences on the Maturity Scores

As mentioned in the above section, the effect of Group (age) was significant at each level since older children had higher M scores. Of interest also are the effects of the objects used to conceptualize death and their influences on the M scores of the subjects. It was found that there was no significant difference between the M scores of those who used humans in their conceptualizations of death and those who used non-humans. How a child conceived of death did not appear to influence the maturity of his overall death concept.

Themes, on the other hand, were significant. Children who inferred active themes (accident or murder) were less mature in their conception of death than those children who inferred passive themes (graves, funerals). It appears that children who are involved with the process of death (the actual event itself), are generally less mature than those who are concerned with death "after-the-fact", or the ritual. One can speculate that the less mature are working out their anxieties over the death process itself, while the more mature are trying to establish a more philosophical interpretation to cope with their own personal mortality.

Processes also had a significant effect. Those children using internal processes scored higher on the questionnaire than those who used external processes. Again, the children with the more mature concept "individualize" death, that is, it becomes a biological event within an individual. Those still working through the death concept preferred to deal with it as an external happening which occurred by chance or with moral overtones. Children who deal with death as a process occurring

within an individual, are beginning to seek out a more meaningful way
to interpret death.

There were no interaction effects within any of the analyses of
variance run on the data. It seemed that the development of the con-
cept of death occurred in distinct stages rather than being influenced
by how a child conceived of death. The effects appeared to be additive,
the Group effect (or age) being the most predominant. This finding
lended support to the idea that death develops in the age groups out-
lined in this study and therefore, as in the cognitive levels as men-
tioned previously.

Future Research

A major criticism that might be made of this study was that it
failed to measure the cognitive level of the children who were in-
volved in the investigation. However, age alone in this case proved
to be significant in accounting for the variance in the M scores. It
would have been interesting to study the relationship of cognitive de-
velopment to the development of the death concept. Other concepts
such as time, causality and morality could also be examined in a
parallel fashion along with the development of the death concept. The
study did lack firm, difinitive controls for socio-economic status,
death experiences, intelligence, and the way in which death has been
explained to the child. However, the subjects were chosen as randomly
as possible from the schools and day care centres so the effect of
socio-economic status and intelligence were randomized. Data on death
experiences were collected and this group's were approximately balanced
for the effect of death experience.

As for the twelve aspects of the death concept, one could further

delineate the amount that each item contributes to an individual's score, and whether the questionnaire would be more valid if certain items were omitted or asked in a different way. In addition, the interdependence of these items should be ascertained to reveal whether each item is measuring aspects which are mutually exclusive from the aspects which the other items are measuring.

Future research should strive to control the above mentioned variables or ascertain their effect on the development of the death concept. This measuring device appeared to be sensitive to the youngsters' ideas, and appears to be a viable approach for studying the concept of death.

Generally, this study has accomplished its goals. It validated a method which encompasses a verbal and nonverbal technique and this method can be applied across age levels with statisfactory results. As an exploratory study, it set forth some new areas of research and delineated some of the variables that need more thorough examination. In addition, it showed the added sensitivity of a technique which utilizes the subjects own cognitive framework of the concept of death.

Conclusions

The major purpose of this study was to combine aspects of previous methodologies which examined the development of the concept of death, and in this way construct a viable technique that could be applied across age levels. It was speculated that this technique would delineate different stages of the acquisition of the concept and that it would reveal which aspects of the concept became significant at different age levels. In line with previous research, it was shown

that the concept of death is developmental. It also showed that although death was conceptualized by the use of various objects, this conceptualization had no effect on the maturity (M Score) of the death concept as measured by the questionnaire. This is a major strength of this technique, since irregardless of what the child draws, he is able to discuss death according to his own framework. The themes and processes involved in the drawings were significant in determining the level of a child's development. Young and intermediate children (ages 3-8) behaved similarly in the inferences that they made about their drawings, while older children (ages 9-11) appeared to use significantly different themes and processes in their drawings.

The development of the concept seems to depend upon the acquisition of certain aspects of death. Probably, the most discriminating items were futurity, causality and the degrees of death aspects. Finality, one of the most widely used criterion of the maturity of the death concept, did not prove to be significant in this investigation. Other aspects appeared to become significant in certain stages and then resolve themselves by others.

Therefore, one can assume that in any explanation of death to children, one must be sensitive to the special difficulties that children have in the understanding of certain aspects of death at various ages. For the bereaved child, it is most important to allow the child to understand death within his own framework and to allow his grief reaction to occur according to his developmental level. Introducing ideas about death which the child is not ready to comprehend will only confuse him; a child must deal with his grief through his own life experiences, and in terms of his own cognitive structures. Through more

extensive research of the twelve developmental aspects outlined in

this research and investigations of the cognitive developments

occurring parallel to them, a child's conception of death will become

more clearly understood.   Once this development is more clearly de-

fined, researchers can then describe techniques which will help a

child to come to terms with his mortality in a more meaningful, inte-

grated way.

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APPENDIX A

Definitions of Objects, Themes and Processes

I.   Objects: This dimension refers to the object which the
child conceptualizes as dead in his drawing.
It has been divided into two categories:
a) human
b) nonhuman

II.   Themes: This dimension refers to the themes a child uses
in his drawing. It usually refers to the lo-
cation or causality of the death. This dimension
has been divided into ten categories:
a) religion: religious symbols, crosses
b) funeral: any depiction of the ceremony, coffin
c) grage: tombstone, graveyard
d) accident: car, drowning
e) murder: guns, knives
f) hospital: nurse, bed, doctor
g) war: bombs, tanks, airplanes
h) afterlife: angels, reincarnation process
i) natural causes: fires, aging, droughts
j) other: any response that does not fit into
      the above

III. Processes: This dimension refers to the causal processes in-
volved in a child's conceptualization of death.
This dimension has been divided into three cate-
gories:
a) internal: refers to any causal process which
               occurs inside of the person: aging,
               disease or heart attack.
b) external: refers to any process which occurs
               from the outside of the victim. The
               process must be initiated by some-
               thing or someone on earth: shooting,
               stabbing, natural disasters.
c) other: any process which cannot be clas-
               sified in the above categories.

APPENDIX   B

Questionnaire

Sex _____
Age _____

	M	S

1. <u>Animism</u>
    What is a dead _____ like?

2. <u>Causality</u>
    What made that _____ die?

3. <u>Separation</u>
    How long is that _____ gone for? Is
    it always gone that long?

4. <u>Ritual</u>
    What will happen to that _____ now?

5. <u>Morality</u>
    Why did this happen to that _____?

6. <u>Location</u>
    Where did that _____ die? Do
    all _____ die there?

7. <u>Degrees of Death</u>
    Can that _____ be more dead than it is
    now?

8. <u>Time</u>
    At what time did that _____ die? Do
    _____ usually die then?

9. <u>Futurity</u>
    You drew a dead _____. What will die
    next?

10. <u>Process</u>
    How long does a _____ take to die?
    Does it usually take _____?

11. <u>Universality</u>
    Does every _____ die?

12. <u>Finality</u>
    Can that _____ come alive again?

APPENDIX   C

Scoring Key

1. Animism:

Any live characteristics named by the child will make the response be rated in an immature way.

2. Causality:

If the child only names external causes to both parts of the question, the answer is rated immature.

3. Separation: 1

If a child describes the length of time in terms of months, weeks or days, the answer is rated as immature. Any answer that implies forever is rated mature.

4. Ritual:

Any answer that explains the burial process, decaying process or afterlife is rated mature.

5. Morality:

Any answer which implies the "badness" of the dead object will be rated as immature. An answer implying circumstances is rated as mature.

6. Location:

Any answer which implies an association with location is rated as immature.

7. Degrees of
        Death:

Any affirmative answer is rated as immature.

8. Time: 1

Any answer that implies an association with a certain time is rated as immature.

9. Futurity:

Any answer that implies a specific person or thing is rated as immature. Any answer that implies that there is no real way of knowing or is nonspecific is rated as mature.

10. Process:

If a child can only give one answer or feels that something cannot die over an extended period of time is given an immature rating.

11. Universality:

Any affirmative answer is rated as immature.

12. Finality:

Any affirmative answer will be rated as immature. If a child says "yes, in heaven", the question is repeated and "on earth" is added.

APPENDIX D

RAW DATA

Group 1

	SEX	AGE yrs.mos.	OBJECT	THEME	PROCESS	M SCORE	DEATH EXPERI- ENCES
1.	F	5-8	animal	nat.cau.	external	6	grandmother
2.	F	5-11	human	murder	external	7	none
3.	F	4-5	human	hospital	internal	9	sister
4.	M	5-1	human	accident	external	5	none
5.	M	5-1	human	accident	external	5	pet
6.	M	5-1	human	murder	external	7	none
7.	F	4-4	human	accident	external	6	pet
8.	M	4-1	human	accident	external	2	pet
9.	F	4-8	animal	accident	external	7	none
10.	M	4-4	human	murder	external	3	none
11.	M	4-11	human	nat.cau.	internal	1	none
12.	M	4-11	human	accident	external	3	none
13.	F	4-8	human	accident	external	3	none
14.	M	4-8	human	accident	external	3	none
15.	F	4-11	animal	accident	external	6	pet
16.	M	3-11	animal	afterlife	external	4	none
17.	F	3-2	human	accident	external	1	none
18.	F	3-6	human	murder	external	2	none
19.	M	3-4	human	accident	external	8	none
20.	M	3-4	human	accident	external	2	pet
21.	F	3-10	human	murder	external	6	none
22.	F	5-11	human	murder	external	6	none
23.	F	3-9	animal	murder	external	6	pet
24.	M	4-3	human	murder	external	6	none
25.	M	5-0	human	murder	external	6	none
26.	F	5-0	vege.	murder	external	9	none
27.	M	5-0	animal	murder	external	6	none
28.	F	5-0	human	nat.cau.	internal	10	none
29.	M	5-11	human	murder	external	6	none
30.	F	5-9	human	accident	external	6	uncle
31.	M	4-11	human	murder	external	6	pet
32.	F	4-2	human	murder	external	5	uncle
33.	F	5-1	animal	murder	external	3	none
34.	M	4-11	human	murder	external	10	none
35.	F	3-2	vege.	murder	external	10	none
36.	M	4-0	animal	murder	external	6	none
37.	M	4-2	human	murder	external	7	grandmother
38.	F	5-2	human	murder	external	8	none
39.	M	4-0	human	murder	external	6	none
40.	M	5-2	human	murder	external	10	father

APPENDIX   D (cont'd)

<u>Group 2</u>

	SEX	AGE yrs.mos.	OBJECT	THEME	PROCESS	M SCORE	DEATH EXPERIENCES
1.	F	6-1	human	accident	external	7	none
2.	M	6-2	animal	nat.cau.	external	5	pet
3.	F	6-3	human	murder	external	2	pet
4.	M	6-4	human	nat.cau.	internal	7	none
5.	M	6-4	human	murder	external	7	none
6.	F	6-4	animal	murder	external	6	none
7.	F	6-6	human	nat.cau.	external	12	none
8.	F	6-9	animal	murder	external	8	pet
9.	F	6-10	human	accident	external	10	none
10.	M	6-6	human	accident	external	8	none
11.	F	6-10	human	accident	external	7	none
12.	F	6-10	human	nat.cau.	internal	11	grandmother
13.	M	7-0	animal	murder	external	8	grandfather
14.	F	7-0	human	murder	external	9	grandparents 2
15.	F	7-2	animal	murder	external	7	pet
16.	M	7-2	human	murder	external	10	none
17.	M	7-2	human	murder	external	8	uncle
18.	M	7-4	human	grave	external	6	funeral home
19.	M	7-5	animal	nat.cau.	external	10	pet
20.	M	7-5	human	murder	external	5	pet
21.	F	7-9	human	grave	internal	8	aunt
22.	F	7-7	human	accident	external	7	pet
23.	M	7-10	vege.	nat.cau.	external	9	pet
24.	F	7-10	human	accident	external	9	pet
25.	M	7-10	human	grave	internal	9	pet
26.	F	7-11	vege.	nat.cau.	external	9	none
27.	M	7-11	human	grave	external	9	grandfather
28.	F	8-0	human	grave	internal	11	pet
29.	F	8-1	human	hosp.	internal	11	none
30.	F	8-3	human	murder	external	9	pet
31.	M	8-4	animal	nat.cau.	internal	10	pet
32.	F	8-5	animal	murder	external	8	none
33.	M	8-5	animal	nat.cau.	external	11	none
34.	M	8-6	human	accident	external	9	none
35.	F	8-7	animal	accident	external	9	none
36.	M	8-9	human	grave	internal	11	none
37.	F	8-9	human	hosp.	internal	12	father
38.	F	8-9m	animal	nat.cau.	external	10	pet
39.	M	8-9	human	murder	external	8	pet
40.	M	8-10	human	hosp.	internal	10	grandmother

APPENDIX D (cont'd)

Group 3

	SEX	AGE yrs.mos.	OBJECT	THEME	PROCESS	M SCORE	DEATH EXPERI- ENCES
1.	F	9-2	human	grave	internal	11	pet
2.	M	9-4	human	grave	internal	12	pet
3.	M	9-4	human	war	external	7	grandmother
4.	F	9-5	animal	nat.cau.	external	11	grandmother
5.	M	9-5	human	hosp.	internal	11	none
6.	M	9-6	human	grave	internal	12	aunt
7.	M	9-7	human	murder	external	8	none
8.	F	9-8	human	funeral	internal	11	family friend
9.	F	9-8	human	grave	internal	11	none
10.	M	9-9	human	funeral	internal	10	aunt
11.	M	9-9	human	grave	external	10	none
12.	M	9-9	human	funeral	internal	10	aunt
13.	F	9-9	human	accident	external	9	pet
14.	M	9-10	human	murder	external	11	brother
15.	F	9-10	human	grave	internal	12	none
16.	F	10-1	human	hosp.	internal	12	none
17.	F	10-1	human	murder	external	11	none
18.	F	10-2	human	grave	internal	11	pet
19.	F	10-4	human	afterlife	internal	12	pet
20.	F	10-4	human	afterlife	external	11	pet
21.	M	10-5	human	nat.cau.	internal	11	friend
22.	F	11-5	human	accident	external	12	pet
23.	M	10-5	human	funeral	external	12	attended fun.
24.	F	10-8	human	funeral	internal	11	cousin
25.	F	10-8	human	grave	internal	11	pet
26.	F	10-10	human	grave	internal	10	none
27.	M	10-10	human	afterlife	internal	11	attended fun.
28.	M	10-11	human	grave	internal	11	grandmother
29.	F	11-1	human	hosp.	internal	11	attended fun.
30.	M	11-0	human	accident	external	9	grandmother
31.	M	11-2	human	funeral	internal	12	none
32.	F	11-3	human	funeral	internal	11	none
33.	F	11-5	human	accident	external	10	grandmother
34.	F	11-6	human	grave	internal	9	none
35.	F	11-6	human	grave	internal	11	none
36.	M	11-8	human	funeral	internal	10	none
37.	F	11-8	human	funeral	internal	12	grandfather
38.	M	11-9	human	murder	external	11	none
39.	M	11-10	human	afterlife	external	11	grandfather
40.	M	11-11	human	grave	internal	12	brother

APPENDIX E

Frequency Counts of the Items Mentioned Spontaneously

ITEM	GROUP 1 (3-5 years)	GROUP 2 (6-8 years)	GROUP 3 (9-11 years)
ANIMISM	1	2	-
CAUSALITY	8	18	9
LOCATION	3	3	4
TIME	1	-	-
RITUAL	2	10	20
DEGREES OF DEATH	-	-	1
TOTAL NUMBER OF RESPONSES	15	33	34

APPENDIX F

Phi Coefficients (∅) on Each Questionnaire Item Within Each Group[a]

ITEM	GROUP 1	GROUP 2	GROUP 3
ANIMISM	∅ =.3556*	∅ =.1111	- [b]
CAUSALITY	∅ =.2600	∅ =.6581*	∅ =.2886*
SEPARATION	∅ =.2456	∅ =.3078*	∅==.2424
RITUAL	∅ =.3676*	∅ =.2915*	∅ =.0924
MORALITY	∅ =.4163*	∅ =.3675*	∅ =.2425
LOCATION	∅ =.3029*	∅ =.1111	∅ =.0924
DEGREES OF DEATH	∅ =.3325*	∅ =.2343	∅ =.4714*
TIME	∅ =.2307	∅ =.1976	- [b]
FUTURITY	∅ =.4202*	∅ =.4831*	∅ =.2887
PROCESS	∅ =.4114*	∅ =.3170*	∅ =.1325
UNIVERSALITY	∅ =.3886*	∅ =.2135	∅ =.1325
FINALITY	∅ =.1990	∅ =.2313	∅ =.1325

*p. < .01

[a] phi coefficient (∅) transformed to a tetrachoric correlation (r = sine (∅ 90°))

[b] no value attained since all of that group scored correctly

APPENDIX G

The Number of Correct/Incorrect Responses on Each Item of the

Questionnaire Across Groups

ITEM	GROUP 1	GROUP 2	GROUP 3
ANIMISM	30 correct 10 incorrect	39 1	40 0
CAUSALITY	1 correct 39 incorrect	13 27	32 8
SEPARATION	25 correct 15 incorrect	29 11	34 6
RITUAL	14 correct 26 incorrect	34 6	39 1
MORALITY	23 correct 17 incorrect	27 13	34 6
LOCATION	23 correct 17 incorrect	39 1	39 1
DEGREES OF DEATH	15 correct 25 incorrect	15 25	24 16
TIME	18 correct 22 incorrect	37 3	40 0
FUTURITY	10 correct 30 incorrect	17 23	32 8
PROCESS	16 correct 24 incorrect	25 15	38 2
UNIVERSALITY	16 correct 24 incorrect	32 8	38 2
FINALITY	16 correct 24 incorrect	32 8	38 2