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WHAT CHILDREN FEAR*

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A. INTRODUCTION

Children do not fear the atomic bomb (1, 11). They do not even fear the things they have been taught to be careful about: street traffic and germs. The strange truth is that they fear an unrealistic source of danger in our urban civilization: wild animals. Almost all 5- and 6-year-olds and more than one-half of 7-to-12-year-olds claim that the things to be afraid of are mammals and reptiles (most frequently): snakes, lions, and tigers. Not until age 12 or more do most children recognize actual sources of danger and, when they do, these dangers are almost always highly personal rather than politically or socially determined (2).

One 12-year-old boy said that the things to be afraid of are "Wild animals, fierce dogs and cats, and snakes." Another of the same age answered "Not being able to get a job." Both boys had earned intelligence scores within the normal range (low 90s) on the Wechsler Intelligence Scale for Children; both had mild learning problems, but there the similarity ended. After an assessment that included achievement tests, the school history, parent interviews, and a study of the family dynamics, a marked difference became apparent. The first boy had been overprotected and lacked opportunity to care for himself and to make decisions. He was the youngest of a large family and had been babied and restricted in experiences. The second boy had been overwhelmed with excessive demands from his parents. His irresponsible father had drifted from one menial job to another and was unemployed at the time of the study. The boy, the eldest of his siblings, had borne the brunt of his father's disgust at the latter's incompetence and had been belittled and criticized to an excessive degree. Compared to that of the first boy, the conversation of the second boy seemed mature.

Did the answers these boys gave to the question about fears reflect in some measure the underlying problem? In the second case, it would seem that it did, yet without knowing the kinds of answers one might expect from normal children, it would be easy to jump to unwarranted conclusions. Was

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the first boy's fear of animals due to some traumatic experience? Had he lived in a primitive area where wild animals actually were a threat to his safety? Or had his father been a pioneer and entertained the boy with tales of the dangers of the woods? And if any of these suppositions had been true (which they were not) did they relate in any way to his learning problem? To answer questions such as these and to determine the etiology of fear in children became the purpose of a year-long study of normal children.

A 5-year-old boy, referred because of excessive aggressiveness, answered the question thus: "Dogs!" He was encouraged to go on. "And what else?" He grimaced and said, "Dog, dog, two dogs!" In the silence that followed he screamed, "*DOGS!*" Again he was asked, "Anything else?" More quietly, but still firmly he said, "Ten dogs." He proved to be a very fearful child, uncertain of the stability of his home and of his place in it. His belligerence in school seemed to stem from a psychological need to defend himself.

Children's fears have been explained by several diverse theories. The first, a folklore, denies that children fear by calling the emotion "stubbornness." The parents of the boy who feared dogs, dogs, ten dogs said, "We've told him that dogs won't hurt him but he won't listen!" The attempted cure had been repeated spankings for this and much else, and spankings again for passing the punishment on to his contemporaries.

The Freudian considers fear as a displacement of the son's fear of the father who, so the child believes, will retaliate for the son's incestuous desire for his mother by castrating the son. The Freudian postulates that, during the oral stage characterized by sucking, the child fears being eaten because he feels guilt about his desire to eat (or bite) his mother's breast (3). Psychoanalytic therapy has consisted of an effort to resolve an oedipal triangle, thus permitting the child to enter the genital phase of his development. The American Academy of Child Psychiatry has re-evaluated this formulation, as have many of the neo-Freudians; but the emphasis remains firmly rooted in the dynamics of the child's emotional involvement with his parents (5, 9).

The behaviorist finds that fears are conditioned responses based upon associational ties with one or another of the fears present at birth. John B. Watson, the earliest behaviorist to apply the theory to child rearing, was certain that the fear of dogs proceeded from a traumatic experience in which the loud barking of a dog had triggered the original fear of loud sounds. His recommended cure consisted of unconditioning the fear by the introduction of a dog or a toy dog at some pleasant time, such as during a meal, and gradually bringing it closer until it could be tolerated on the tray (12). This

theory, too, has undergone considerable modification; but the emphasis remains upon the learning, unlearning, and modification of fear through environmental experiences.

A follower of Jung's early theories (6) would explain a fear of animals as an expression of the collective unconscious. In more primitive times, the boy's ancestors feared the rampaging wolf, the stealthy poisonous snake, and other natural enemies. Although the boy lives in the midst of the trappings of civilization, and the descendants of the wolf have been tamed to family pets; yet deeply submerged is the tribal fear, built in perhaps to the neutral network present but dormant at birth. Thus the child goes through a stage that he outgrows as he matures into succeeding phases of the ontogenetic recapitulation of the history of his race. This theory has been muddied by mysticism and has been neglected in the ongoing debate between the psychoanalysts and the experimentalists. Animal ecologists (7), however, have demonstrated the specificity of fears in animals, notably in the giraffe which animal, though born in captivity and raised on a bottle, nevertheless startles and shies away from the mock-up of a lion, the traditional enemy of his species; but approaches and sniffs at the mock-up of a giraffe. Humans, however, generally are considered to have lost their instincts and to have become dependent upon learning.

Gesell (4) and the maturation theorists have demonstrated the primacy of growth in physical and mental functions, yet for the most part they have omitted similar studies of the maturation of the emotions, especially of fear. It may be that they have thought of fear as an abnormal manifestation or a malfunctioning rather than as an aspect of normal growth.

The eclectic finds it difficult to choose among the theories for they have little in common. Psychoanalysts have been concerned chiefly with the abnormal, and their preemption of the subject of fear has colored general thinking along these lines. The behaviorists have dealt with fear largely as a means to eliminate unwanted responses. Their use of punishment is empirical, with no discussion of fear it arouses since fear is a subjective phenomenon. Yet it should be obvious that a judicious, rational fearfulness is life preservative and therefore an inescapable aspect of the normal child (8). Excessive, irrational fears are widely known to be intimately connected with learning difficulties, delinquency, and withdrawal. Preventive methodology requires more knowledge of the normal fears of normal children thus defining, highlighting, and permitting evaluation of the unique and the aberrant.

Based upon the results of this study, each of the major theories appears

to contain some part of the truth. It also becomes clear that the amount, depth, and kind of fear as well as its objects is ascertainable and definitely of diagnostic value.

B. Method

Over a period of a year, each child who was given the Wechsler Intelligence Scale for Children was asked an additional question. At the conclusion of the comprehension subtest, in the same neutral tone used for other questions, the examiner said, "What are the things to be afraid of?" Each answer was recorded as nearly verbatim as possible, as were all answers for all subtests. Silent approval and recognition that the fears were legitimate was given by a sympathetic nod. When the child stopped speaking he was encouraged to go on. "And what else?" and then, "Anything else?" Four children replied "Nothing." One answered "You shouldn't be afraid of anything." In these cases, to provide the ease of replying by projection, the question was rephrased. "Some children are afraid of some things some of the time, aren't they?" All nodded or said "Yes." The examiner continued: "What are these children sometimes afraid of?" In all cases this brought a satisfactory reply.

The direct question "What are you afraid of?" was not used because children might interpret this as critical and tend to reply defensively. Since the question necessarily came after four failures (except for the brightest who scored very high in comprehension) most of the children seemed relieved by an "easy" one and, with some exceptions, the answers flowed smoothly and without shock. For severely disturbed children, the question was omitted.

C. Subjects

The subjects of the study consisted of 130 children of whom 91 were boys and 39 were girls. In age they ranged from 5 years and 5 months to 14 years and 6 months. All of them were in regular attendance at elementary schools in middle- or lower-middle-class suburbs. Eighteen of them proved to be mentally retarded (nine boys, nine girls), two of them severely (one boy, one girl). Since the study was for the purpose of tabulating the fears of normal children, these 18 were eliminated from all calculations except one. In this one calculation, the attempt was made to determine whether replies conformed to a chronological or mental-age pattern and the retarded were included in the group of their mental-age mates. In all other tabulations and discussions, the subjects are the 112 students whose *IQ*s fell between 80 and 144 (see Tables 1 and 2).

Each of the children had been referred to the school psychologist and to that

extent was perhaps atypical. The reasons for referral covered a wide range. For some, testing was requested to help determine the advisability of retention or double promotion. Some had speech defects or verbal infantilisms. Some had reading problems. A few merely needed glasses. Some were noisy, defiant, failed to do their homework, or to conform in some way to the demands of

TABLE 1
SUBJECTS IN THE STUDY BY AGE AND SEX

Age	Boys	Girls	Total
5 and 6	13	7	20
7 and 8	20	9	29
9 and 10	21	10	31
11 and 12	18	1	19
13 and 14	10	3	13
Total	82	30	112

TABLE 2
SUBJECTS IN THE STUDY BY *IQ* SCORES*

	Intelligence quotient		
Age	Slow 80-89	Average 90-110	Bright 111-144
5 and 6	2	14	4
7 and 8	8	12	9
9 and 10	7	18	6
11 and 12	4	12	3
13 and 14	8	5	0
Total	29	61	22

* The distribution approaches the normal probability of 22, 68, 22 per cent in the three divisions, respectively, closely enough to consider this a fair sample of school children.

teachers. A few were shy and apparently friendless, while others were the center of playground disputes. Some were the entirely normal siblings of disturbed or retarded children. None was so severely disturbed that referral for psychiatric care was deemed mandatory, thus all could be considered within the normal range. If the somewhat unexpected results were a function of atypicality, the study nevertheless is of value because (*a*) the technique proved to be an important diagnostic clue and (*b*) the need for additional studies along this line is clearly indicated.

The number of responses ranged from a single answer followed by "That's all!" to a spontaneous 18 responses, which number was unique in that the next largest number was nine. Boys averaged slightly higher than girls (4.23 *vs.* 4.00), but the difference is not significant. There was very little difference between the age groups perhaps because of the technique used,

and there was no observable tendency for the younger or older children to give more or fewer replies. The more fluent children tended to elaborate or modify their answers or go on to relate personal experiences. The shy children and those with speech difficulties tended to be slower and more patience was required in drawing them out, but they averaged as many responses as the others.

D. Results

Of the 467 responses, 233 or 50 per cent, consisted of a single category: animals. Seventy-two of the 112 children, or 64 per cent, replied solely or partly by naming animals in general or one or more specific animals including: alligator, ape, bat, bear, bee, bird, black widow, bobcat, buffalo, bull, cat, centipede, cow, crocodile, deer, dinosaur, dog, eel, elephant, fox, gorilla, hawk, hippopotamus, horse, insect, leopard, lion, lizard, mosquito, mountain lion, parakeet, pinchbug, rat, reptile, rhinoceros, scorpion, shark, snake, spider, spit-monkey, tarantula, tiger, turtle, wildcat, whale and wolf.

The most unpopular animal is the snake. Thirty-three of the subjects, 23 boys and 10 girls (28 per cent and 33 per cent respectively) mentioned them. Next in order came lions, mentioned 28 times; tigers, 14 times; and bears, nine times.

The most striking fact that emerged from the study, besides the near universality of fear of animals, is that fear of animals decreases sharply with age (from 80 per cent of the 5- and 6-year-olds to 23 per cent of those 13 and 14 years old). The older children also tended to qualify their responses. Rather than simply "Lion, tiger," they said "Wild animals if you are in a jungle without arms," "Dogs with rabies," "A cow that might kick you," or "A parakeet that's infected."

Fear of the dark seems to disappear after age 7, with only two stragglers who admitted to it after that age, both of them qualifying their responses: "Little kids are afraid of the dark," and "Highways at night." Similarly, fears of nonexistent entities, such as monsters, the boogie man, ghosts, witches, and animated skeletons, are left behind after age 10. Thus the questions about the effect of television dramas highlighting horror becomes a matter of age. Fright films would seem to be traumatic before the child thoroughly understands that they are only imaginary; after that age, the possibility of their being therapeutic may enter. Age nine to 10 appears to be the dividing line.

Unique and individual responses rise from zero at 5 and 6 years to 46 per cent as children reach early adolescence. The subject matter becomes more

realistic and more closely tied to learned or experienced objects and situations (see Table 3).

The question arises: Is this maturational trend a function of chronological age or does intelligence play a part? Two severely retarded children, whose replies were not tabulated with the above, gave immature replies. The

TABLE 3
SUBJECT MATTER OF FEARS

Age	Per cent*						
	Animals	People	Dark	Spooks	Natural hazards	Machinery	Miscellaneous
5 and 6	80	20	20	33	0	20	0
7 and 8	73	17	3	17	34	34	14
9 and 10	61	42	3	10	35	35	16
11 and 12	68	42	0	0	26	42	26
13 and 14	23	39	0	0	31	46	46

* In each age group, the per cent of subjects who replied that things to be afraid of were such as to be classifiable under the categories. "People" includes "bad men," "kidnappers," "people who . . . ," "if somebody . . . ," as well as members of the family and playmates mentioned by name. "Spooks" includes "monsters," "ghosts," "witches," "man made of iron," "Frankenstein," etc. "Natural hazards" includes storms, fire, water, waves, flood, volcano, etc. Machinery includes all man-made gadgets and inventions, such as weapons, cars, electricity, trains, etc.

boy (age 14:7, *IQ* 44, *MA* 6:8) said, "Cow, horse, goat, snake." The girl (age 15:6, *IQ* 46, *MA* 7:5) said, "Bears, lions, train if you go in front of it, and alligators." On the other hand, an exceptionally bright boy (age, 9:6, *IQ* 134, *MA* 14:2) answered the same question, "Things you can't overcome." Asked to explain, he added, "Well, if you are afraid of water, for example, you probably will never overcome it." His home life showed an excessive responsibility for his mother who lived under the constant tension of having her husband away from home for long stretches on cruise as a Lieutenant Commander in the Navy.

To determine if these children typified dull and bright intelligences, the replies of all of the children in the study, plus those of the 18 mentally retarded children, were evaluated on the basis of mental age (see Table 4). On this basis, the sharp dropping away of fear of the dark and of spooks is even more marked. The fear of animals maintained a high level through age 12, but only one child with a mental age of 13 or more admitted to it. There were only nine cases in this most mature group, and thus it is difficult to determine whether this is a universal phenomenon. Each of the nine gave a unique answer. One boy (age 13:5, *IQ* 110) said, "Getting killed, parents getting a divorce, falling off a bike. The world is full of fears." Another

TABLE 4
RESPONSES TABULATED BY MENTAL AGE

Mental Age	Per cent*						
	Animals	People	Dark	Spooks	Natural hazards	Machinery	Miscellaneous
4 to 6	75	21	11	39	11	7	3
7 and 8	59	25	7	12	19	12	12
9 and 10	57	30	0	5	27	35	15
11 and 12	54	37	0	0	42	54	17
13 to 15	11	44	0	0	22	11	55

* The figures refer to the per cent of the responses (not per cent of the children) of 130 children, including 112 normals and 18 mentally retarded children. The sharp drop in fear of the dark and of spooks after age 8 and of animals after age 12 is even more marked when mental age rather than chronological age is considered.

(age 13:0, *IQ* 96) shrugged and said, "Trouble, the principal, spankings, going home if you lose money."

But it was also true that the younger children often gave personal clues in their replies. A boy (6:6, *IQ* 104) said, "Spiders, pinchbugs, a big boy beating you up." Thus, *IQ* alone does not tell the whole story. A precocious sense of danger in the specifics of living may be found in nonacademic children. A girl (8:9, *IQ* 84) gasped and rattled off a long story that was caught only in part as "Falling down and getting hurt. You might go to a hospital. . . . If you get stitches in your eye, you might have an operation and you might die." She was a member of a large, dependent family, whose troubles constantly recurred. At the time of the test, her mother was in the hospital but for what purpose could not be determined.

Nor does a high *IQ* necessarily move a 6-year-old to considerations of a realistic assessment of the world of dangers he lives in, perhaps because his home and environment were particularly safe, congenial, and supportive. Such a boy (age 6:5, *IQ* 144, *MA* 9:2) said without concern, "Lion, tiger, rat, buffalo and bull." He read words on the fifth-grade reading list without hesitation; in class he was so bright and well adjusted that his teacher had recommended double promotion. He was tall for his age, handsome, and in excellent health. Nothing about him suggested "immaturity" as that word is used by educators to characterize the egocentric crybaby.

Educators long have been dissatisfied with the *IQ* as the sole index of expected achievement. Motivational and emotional factors, it is generally agreed, play a strong part in determining progress, but attempted measurement of these has fallen short of usefulness. Personality type and preferences have proved less than predictive. It is strongly suggested by this study that the kind and level of fearfulness may act as a brake on usable intelligence,

and that its measurement by a highly polished tool may prove as enlightening as the studies on creativity, which have uncovered another additional dimension.

Fear of fire is the traditional example used to prove that children learn by experience. "A burnt child fears the fire" seems to imply that the unburnt child does not or that only by experience does the child learn to fear or learn what to fear. The folk saying is older than central heating and seems to have little specific pertinence in today's world. Among our 20 children of 5 and 6 years (who gave a total of 91 replies), 54 replies were of animals, only one was fire. Four per cent of the 7- and 8-year-olds, five per cent of the 9- and 10-year-olds, 16 per cent of the 11- and 12-year-olds and nine per cent of the oldest group included fire (forest fire, burning house, etc.) among the things to be feared. In no case, however, could it be ascertained that this response sprang from a personal experience. The one child known to have suffered extensive burns, a girl (age 11:6, *IQ* 60, *MA* 6:9) replied with a standard "Lion, tiger, dog, cat, snakes, rattlers, spiders." Her scars, which extended from neck to buttocks on her back, had been covered with grafts from her thighs. They had come to be her one claim upon her contemporaries for awed attention and upon adults for sympathy. Accordingly, she valued them and was quick to lift her skirts for strangers, a habit that tended to be misinterpreted. Asked directly if she feared fire, she looked puzzled and then smiled happily, "I guess so."

Other natural hazards mentioned by this group of children included storms, deep water, waves, earthquake, volcano, hurricane, tornado, quicksand, sharp rocks, cliffs, a tunnel cave-in, avalanche ("snow falling down from the hill"), poison oak, and the desert. No one of them was mentioned often enough to have any general significance. Individually, some seemed merely to represent the most recent subject of adventure stories read or viewed; others proved to have deep personal significance in the light of subsequent parent interviews. As a group, natural hazards (including fires) supplied one of the responses of the 5- and 6-year-olds, but from one-fourth to one-third of the responses of the 7- to 12-year-olds. The age of adventure thus begins at 7.

Machinery is perhaps an inadequate title for a category that includes cars, trucks, trains, construction, buildings, airplanes, guns, knives, electricity, a trapdoor, explosions, a submarine, helicopter, firecrackers, rusty nails, bicycles, a tractor, a crane, a hatchet, electric chair, gas, falling bricks, trolley car and a stairwell. What was intended was a grouping of those hazards that are man made and that are elements of an industrial civilization. Here

it is obvious that learning has taken place. There is no possibility that a collective unconscious could have suggested to a boy that tractors are dangerous because "you might move the wrong lever and it would start up." The amazing discovery lies in the fact that teaching has had so little effect.

Surely every kindergartener and first grader listens to lengthy lessons about the dangers inherent in highways, traffic, cars, and trucks. Yet when asked what are the things to be afraid of, not one gave evidence of having learned his lesson. Among older children—7 to 14—only 15 per cent of the replies referred in any way to the Number 1 threat to life in America today. Automobile accidents account for more deaths and disabilities among school-age children than any disease and far more than all the dangers that children fear put together. Perhaps this is just as well. We would not want our children to be terrified of crossing a street in the same unreasoning sense that some of them are terrified of dogs. Establishing the habit of stop, look, and listen before you cross is apparently enough; to add warnings of peril is ineffective because, for whatever reason, it is not learned.

Trains, usually qualified, were mentioned 11 times; weapons only seven times. All the others were unique replies. Many of them were qualified or explained. Some children went on to tell of personal experiences that gave important clues to their life style. The boy who replied "Walking down the highway at night you might be hit by a car" had indeed been doing just that. His wanderings in search (it would seem) of a lost father helped to explain his listlessness in school. Another who listed "Big cranes, big trucks, when you're tearing down a house" was describing his father's occupation and admitting inadvertently both his fear of his father and his fear that his father would leave.

The category "people" was also revealing of underlying difficulties. Forty-five replies involved "people who . . . (come with guns, hit you, try to give you trouble," etc.) or specific persons. Alas for learning, only five mentioned "Somebody who tells you to get in his car." All children should have been warned against child enticers; perhaps most had been, but spooks, monsters, and ghosts remained frightening to more children than kidnappers. One boy blurted out "My brother! He comes up behind me in the dark and says, 'Boo!' " Another, a girl, replied "People who might try to make you nervous or give you a heart attack." She was describing, not her own, but her mother's palpitations. Five children said, "If your parents get a divorce." This should perhaps be a separate category since it indicated not a fear of people but a resurgence of the separation anxiety of infancy. In these cases there was little

need to hunt further for the cause of poor school work. A family break up, almost without exception, causes at least a temporary emotional upheaval in the children that is often reflected in an inability to concentrate.

Miscellaneous responses included: war, 5; the atom bomb, 2; punishment, 4; disease, 4; separation ("if you're all alone," "if you get lost," etc.), 4; breaking the moral code, 2; death, 6; unemployment, 1; and Hell, 1. Some of these seemed to be thoughtful assessments of dangers in the abstract. Others were obviously specific to the particular life situation of the child. A few were so strange as to be baffling. One boy replied "My little brother sleeps with me" possibly implying that otherwise he would be afraid of the dark or that there was danger in this arrangement either for the brother or himself. It could not be determined, and was not necessary. The parents, with very little persuasion, agreed to provide bunk beds. Another changed the subject: "We planted some flowers in our garden," and would say no more. There is a farfetched possibility that the "flowers" might have been marijuana and that the girl sensed her parents' concern about being caught or that a body was buried in the garden and camouflaged, but such speculations were considered out of bounds and the matter was not pursued.

E. Conclusions

The question, "What are the things to be afraid of?" asked routinely in the course of the Wechsler test proved to be an important clue to the emotional dynamics of the child being tested.

Eighty per cent of children of 5 and 6 reply to the question by naming one or more wild animals, with snake, lion, tiger, and bear predominating. Sixty per cent or more of children between the ages of 7 and 12 answer similarly but, after mental age 12, it is rare.

One-third of children under 7 admit to fear of imaginary beings (monsters mainly), and a fifth of them fear the dark. Both of these replies drop off sharply after age 7.

The things that children are taught to fear (traffic, germs, and kidnappers) are rarely mentioned. Punishment, war, and the atom bomb are also scarce replies at any age although it is likely that children would answer "yes" if they were asked directly "Do you fear . . . any of these?"

As children mature, the kinds of things they regard as frightening become diverse, unique, and are often tied directly or indirectly to their central concern.

Refusals to answer, replies of "Nothing," long pauses, changes of volume

or pitch of the voice, and facial expressions (while not common) provide clues to the intensity of the fear.

An "immature" reply may characterize the well-protected child and in some cases the mentally retarded. The child who has been burdened with excessive responsibility or hardship is more likely than others to give a unique, "mature" reply, as is also the bright child with a mental age of 12 or more.

Much caution is needed in interpretation, for recent events and the child's mood during the examination may be the fleeting cause of any particular answer.

All four of the major theories of childhood (psychoanalysis, behaviorism, the collective unconscious, and maturation) contribute, albeit incompletely, to an understanding of childhood fears.

A strong maturational factor, partly influenced by intelligence and partly influenced by the amount of responsibility thrust upon the child, seems to be at work upon an archaic instinctual base. The child is born with the capacity to fear, apparently more than is necessary to preserve his life. Although he feels fear, the child does not know with the same certainty as the smaller-brained mammals just what objects or situations are to be feared. Much infant questioning (10), especially that relating to life and death, is prompted by a curiosity about the missing information and by a desire to locate accurately the causative objects of the amorphous sense of possible danger. If archaic instincts to avoid specific hazards are lacking, it may be that the fear of being eaten by wild animals or poisoned by snakes retains a certain ease of arousal. Among the uneducated, the folk habit of enforcing obedience by supplying incorrect information to children for the purpose of controlling them ("The wizard man will eat you if you stray!") is enormously effective, but also, by rousing archaic fears, it may be a limiting factor to the full use of mental powers.

As the child matures, the emotion of fear fastens upon more and more realistic objects depending upon experience learning rather than upon instruction.

The intensity of the child's fear depends for the most part upon the family relationships.

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