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Individual and situational determinants of altruism and helping behaviour

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INDIVIDUAL AND SITUATIONAL DETERMINANTS

OF ALTRUISM AND HELPING BEHAVIOUR

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Submitted in partial fulfillment of the requirements
of the degree of Doctor of Philosophy
February, 1978

ACKNOWLEDGEMENTS

I would like to thank Mr. J.M.M. Good and Professor F.V. Smith for their help and encouragement during the completion of this thesis. Thanks are also due to Mr. M. Rolling and Mr. A. Perry for assistance with video equipment; to Dr. A. Slater and Miss S. Weaver for help in producing and analysing the tape recorded emergencies; to Mrs. C. Thompson, Mr. A. White, Dr. C. Dracup, and Dr. D. Wakelin for programming and statistical advice; and to Mr. N. Glossop for frequent displays of altruistic behaviour.

In addition, I wish to express my gratitude to staff members who goodnaturedly endured daily calls for help from an imaginary victim near their offices, and to the many subjects who volunteered to participate in the experiments. Thanks also to Drs. B. Latane, L. Bickman, and R. Cialdini for allowing me to join their postgraduate course on helping behaviour at Ohio State University in Winter, 1974, and inspiring further research.

Finally, I would like to thank my parents for their encouragement and financial assistance during my years of research at the University of Durham.

Abstract

Studies which have attempted to assess the relative
contributions of individual and situational determinants of
helping behaviour and altruism have yielded diverse and
contradictory data. The present investigation attempts to
reconcile some of these inconsistent findings by examining
the interaction of individual factors such as personality
and sex with situational influences such as group size and
task involvement. Explanations of helping behaviour and
empirical studies are critically reviewed and methodological
problems considered. The first four experiments take place
in the laboratory and employ a simulated emergency representing
a person falling off a ladder. Results indicate that individual
factors may be more meaningful predictors of helping behaviour
when examined in light of relevant situational effects.
Differences in the helpfulness of low and high Machiavellians,
as measured by Christie's Mach IV Inventory, seem to emerge
only when face-to-face interaction, latitude for improvisation,
and emotional involvement are possible. In such situations,
groups of low Machs appear more likely than groups of high Machs
to aid a distressed victim. However, when subjects are alone,
not communicating, or in mixed-Mach groups, no differences in
helping are found. The findings also demonstrate that group
size effects on helping may be enhanced when communication
channels are blocked, ambiguous emergencies are employed, and
passive confederates pose as bystanders. The last two

experiments pool previous findings and more naturalistic data to explore the consistency of the helpfulness of individual subjects across several situations. The results cast doubt on the existence of general helping dispositions.

The findings suggest that seemingly irrelevant factors often ignored by researchers may play an important role in studies of helping behaviour. Contradictory results of previous research may be at least partly due to a number of inappropriate assumptions about the strength of single variables, and between-study comparisons may thus be unjustified.

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INTRODUCTION

During the 1960's the mass media publicised a series of
incidents in which large groups of bystanders failed to come to the
aid of people in distress. A vast amount of research has since been
carried out in an attempt to explain the apparent prevalence of
apathy over altruism in society today. A recurrent theme throughout
this work has involved the search for the origins and determinants of
altruistic behaviour and for the relative contribution of individual
and situational factors to helping responses. In pursuing these
interests, some researchers have centred their investigations on
individual variables such as personality, sociocultural and biosocial
factors. Others have argued that altruistic behaviour is situation-
dependent and have therefore examined such variables as temporary mood
of the helper, type of potential recipient, and bystander number.

Man's concern for the welfare of his fellow man has long been
of interest to social scientists. More than two thousand years ago,
the notion of unrewarded helpfulness was a widely debated issue among
the ancient Greek philosophers. Plato (1945) opposed those of his
contemporaries who believed that actions serving others' interest are
in reality either self-destructive or in the service of self-interest.
Plato transcended the distinction between the "self" and the "other,"
arguing that each person is a republic, or a reflection of society
around him. Helping others cannot be said to aid either the self or
the other, for man achieves fulfillment only through positive associa-
tion with other people. It is impossible and inappropriate to
separate self-interest from other-interest. This kind of argument was
also taken up by Spinoza, Dewey, and Hegel in more modern times
(Budd, 1956).

Although ideas regarding helpfulness were of interest as early as 400 B.C., the term "altruism" was only first introduced in the 1850's. The French philosopher Auguste Comte adapted the word from the Latin "alter," or "other," to symbolise virtue in his religion of humanity. The term was soon borrowed by British and American philosophers, particularly Herbert Spencer (1899), who confined its meaning to helpfulness given without expectation of reward. Questions quickly arose pertaining to the nature of this helpfulness - whether it had to involve a certain amount of cost to the helper; whether it could be solicited; and whether it could be rewarded other than extrinsically.

This was only the beginning of a definitional controversy which continues today. Most social scientists agree that altruism involves helping of some kind, but agreement often fails to stretch much further. The type of helping involved, the intentions behind this helping, and the willingness on the part of the helper to sacrifice self-interest have been among the subjects of contemporary debate. The extent of the problem is illustrated in the number of terms which have been introduced to deal with various forms of helping. Prosocial behaviour refers to general positive forms of social behaviour. Other terms denote more specific kinds of helping, such as donating, sharing, intervening, volunteering, and gift-giving. Still others - notably helping behaviour and aiding behaviour - are used interchangeably to describe any act of helping, whether or not it is emitted in the pursuit of reward, performed at a cost to the helper, or directly solicited.

A recent debate concerning an acceptable definition of altruism exemplifies the difficulties in defining the term. Altruism has been defined as "self-sacrifical, other-oriented behaviour" (Krebs, 1970); "regard for the interest of others without concern for one's

self-interest" (Wispé, 1972); and "acts wherein individuals share or sacrifice a presumed positive reinforcer for no apparent social or material gain" (Bryan and Test, 1967). Severy (1974) rejected these definitions and offered "helping motivated by the other person being in need." Although all these definitions recognise the significance of intentions, Severy argued that intention alone is crucial to the definition of altruism and that additional dimensions were inappropriately stressed in the other definitions. He stated that the self-sacrificial component of altruism and the consequences of the act are irrelevant; the essence of altruism is only that the behaviour is intentional, is an end in itself, and is performed in response to another person's needs. Krebs and Wispé (1974) in turn countered that a person who is willing to share in another's pain in the process of helping is more altruistic than a person who is not. They noted that the research of Heider (1958) indicates that the average person would probably agree with none of these conceptions of altruism. For instance, people often interpret an act in terms of its success or consequences. Krebs and Wispé concluded that defining altruism is a thankless task, as no one seems to agree on a solution to the problem.

A statement concerning the definitions to be used herein is therefore in order. Although "altruism" and "helping behaviour" will to a certain extent be used interchangeably, a distinction made by Midlarsky (1968) will be maintained. Helping behaviour will be the more general term referring to all behaviours related to aiding others. Altruism, on the other hand, will be considered a special kind of helping behaviour which incurs some cost to the individual but brings no obvious reward.

Deciding on a definition might facilitate communication, but it does not solve some of the problems which have arisen from the original arguments. Theories about the origins of altruism and helping behaviour

are difficult to evaluate for they often represent attempts to explain different behaviours. Those researchers who define altruism as a form of helping given solely in response to others' needs often emphasise an innate mechanism involving affect and cognition. Genetic and evolutionary explanations stress unlearned mechanisms which motivate altruistic behaviour, even when cost is high and no expectation of reward exists. Learning theorists, on the other hand, necessarily deny the possibility of helping without reward and therefore explain altruism in terms of intrinsic, less obvious forms of reinforcement. Such theoretical orientations are discussed in detail in the first chapter. Four major positions are considered; these include genetic explanations, learning theories, psychoanalytic perspectives, and cognitive developmental orientation. These positions explain the existence of helping behaviour; specific narrow-band theories which explain particular instances of helping are discussed where appropriate.

Both stimulating and stemming from all this theory is a vast amount of empirical research, the bulk of which began only in the late 1960's. Experimenters have studied a multitude of factors in attempting to discover determinants of altruism and helping behaviour. Chapters 2 and 3 review studies which examine individual and situational determinants, respectively. The fourth chapter considers methodological problems with such studies and discusses the methods used in the following three chapters.

The first two of these chapters address the problem of determinants of helping behaviour through a series of laboratory experiments. Effects of specific individual and situational factors on helping during an emergency are investigated, and explanations for group size effects are considered. The seventh chapter represents an attempt to determine the consistency of individual helping responses

across different situations by using a combination of laboratory

and field techniques. In the final chapter, the implications of the

findings are considered and suggestions for further research proposed.

Chapter I

THEORETICAL EXPLANATIONS OF ALTRUISM AND HELPING BEHAVIOUR

Genetic and evolutionary theories

Reports of the existence of altruism have presented a challenge to evolutionary theorists. According to conventional interpretations of Darwin (1859), the principles of natural selection and survival of the fittest imply the existence of an innate egoism, leaving altruism a puzzling, unexplained phenomenon. To accommodate altruistic behaviour, interpretations of Darwin have been considered along two main lines of thinking.

The most frequent conclusion is that altruism can in fact be explained in terms of egoistic, self-serving motives. This idea was discussed by Spencer (1899), who considered altruism an essential component of egoism. The individual who cooperates and perhaps jeopardises his safety for the welfare of the group will ultimately benefit from the preservation of society. Barash (1976) suggested that altruism is an innate drive partly manifested in parental prescriptions for their children. Rules about gambling, drinking, studying, and going to bed early are directly altruistic as well as egoistic. They increase the child's chances of living, serve to prepare him for future altruism, and reduce the necessary time and metabolic expenditure of the parent.

A more recent trend of thought (Holmes, 1945; Montague, 1950) views altruism and egoism as separate conflicting forces. Altruistic motives are seen as important for survival and as likely as selfish motives to be innate. Holmes (1945) gave the examples of reproduction and parental care as being the earliest forms of overt altruism. Campbell (1965) suggested that altruism, whose aim is the survival of

the group, and egoism, whose aim is the survival of the individual, are in constant conflict, offering an optimal evolutionary arrangement. In a later paper, Campbell (1972) viewed altruistic motives as both acquired and innate, derived from sociocultural evolution but with a basis in biological evolution. He stated that altruistic behavioural tendencies cannot increase genetically over selfish, egoistic ones, because inherent in the practice of altruism is the possibility that the altruist will die in the act of helping, leaving fewer or no offspring to carry on his genes. Although altruism may facilitate group survival, there seem to be restraints against its selection genetically. However, the usefulness of this argument is tied to the extent to which debilitating injury or death might be a result of an altruistic act. Trivers (1971) showed mathematically that if an entire population were sooner or later exposed to a danger, it would in the long run benefit all to risk a small chance of death to attempt a rescue. Hamilton (1964) illustrated another way in which altruistic genes could be selected. Parental instincts might lead to a greater likelihood for the altruist to save his own children, facilitating the continuation of altruism. The altruist thus diminishes his own genetic fitness but raises his relatives' to the extent that the shared genes are increased in the next generation.

Two areas of research attempt to offer support for genetic and evolutionary arguments. These involve observation of altruism in other animals, and research on the limbic system.

Krebs (1970) noted that the demonstration of a phylogenetic increase in altruism might indicate the likelihood of innate altruism in man. Unfortunately, attempts to demonstrate the existence of altruism in various animals have been unsystematic, and the evidence is often scanty, anecdotal, and subject to alternative interpretations (Hebb and Thompson, 1968; Hebb, 1971; Krebs, 1971).

Studies of altruism in rats are open to such criticism.
Rice and Gainer (1962) and Rice (1965) found that rats would press a
bar to remove a struggling rat from an unpleasant situation. However,
the attribution of altruism in these cases is questionable, as rats
may simply have attempted to terminate the noxious stimulus of the
screaming rat victim. Lavery and Foley (1963) supported this
contention with their finding that rats would press bars more often
to stop white noise than to stop the squeals of rats. The remaining
studies of rat altruism have shown no indication of helping behaviour
(Mihalick and Bruning, 1967; Rice, 1964; Taylor, 1975).

Research outside the laboratory has shown some evidence of
altruistic behaviour in lower animals. Wilson (1975) discussed
examples of altruistic behaviour in insects, who place themselves in
danger to protect both immediate and distant relatives. Other animals
such as birds, oxen, moose and zebras interpose themselves between
predators and young relatives. Penguins and wild dogs help defend
unrelated young. Kellogg (1961) found reports of porpoises who aided
wounded porpoises and drowning humans by raising them to the surface
for air.

Higher on the phylogenetic scale, evidence for altruism seems
demonstrable in and outside the laboratory. A chimpanzee in the wild
who discovers a new food source will usually call out to others
(Lawick-Goodall, 1968). Wild chimpanzees directly give others food,
at least when the food is solicited (Yerkes and Yerkes, 1935).
Nissen and Crawford (1936) found that a chimpanzee in captivity would
pull a threatened cagemate to safety. Masserman, Wechkin and Terris
(1964) reported that monkeys would avoid pulling a chain which provided
food but simultaneously shocked another monkey. In summary, reports of
altruism in animals higher on the phylogenetic scale seem somewhat more
convincing than those of lower animals, especially when the behaviour

involves sharing.

Research on the limbic system may offer additional support for the evolutionary argument. MacLean (1958; 1967) demonstrated that one part of the limbic system seems to be concerned with behaviour that ensures self-preservation and another part seems to be concerned with affective states conducive to sociability and preservation of the species. He suggested that the neural basis for a primitive altruism was probably present early in man's evolution and continued to evolve into increasingly complex forms as the brain developed. Some of this work has been questioned by Thompson (1967).

Campbell (1975) emphasised the need for psychologists to consider more deeply the role of evolution in explaining behaviour. The research described in this section appears to support this suggestion. Although the relevance of animal studies and the methods of MacLean may be questionable, evolutionary explanations of altruism appear reasonable enough to merit further attention. Appropriate means of establishing the role of genetics in helping behaviour need to be carefully considered in future research efforts.

Learning theories

Evolutionists are not the only theorists who face problems in explaining man's helpfulness to others. Altruism constitutes a paradox for learning theory. By most definitions, altruistic behaviour is a form of helping which involves at least some cost to the benefactor and which is not contingent on reward. How altruism is learned and maintained thus becomes a problem to reinforcement theorists, who see the acquisition and maintenance of behaviour as a function of reinforcement mechanisms. The dilemma has been tackled in two main ways. One involves modifications of the term altruism to accommodate reinforcement theory, and the other concerns modifications of reinforcement principles to accommodate altruistic behaviour.

The first argument has as its basis the claim that behaviour
as defined by most definitions of altruism does not actually exist.
Instead, some theorists note that although specific extrinsic rewards
may not follow altruistic responses, altruistic behaviour is
probably a function of less obvious reinforcers. Such arguments can
often be seen as circular in nature, as their logic is based on the
assumption that reinforcement contingencies must explain all behaviour.
Thus Rosenhan (1972) suggests that since the altruist foregoes his own
rewards while alleviating the distress of others, something of
necessity <u>must</u> replace or be more powerful than the reward for him.

In this context, the specific form which the reinforcement
takes has been the debated issue. Goldiamond (1968) noted a number of
ways in which behaviour may be reinforced in inconspicuous ways.
Reinforcement for help-giving could be considerably delayed. The gains
from a response may ultimately be maximal, even though particular
responses are not rewarded. For instance, the anticipation of reciprocal
altruism and ultimate safety for the organism could lead to helpful
responses. Another alternative is that a reinforcer may be very subtle,
as in the case of masochism. The expenditure of cost and the foregoing
of reward might act as a reward of punishment. Alternatively, behaviour
may endure without extrinsic reinforcement when the original programme
of reinforcement renders it resistant to extinction. Studies by
Masters and Mokros (1974) and Masters and Pisarowicz (1975) suggested
that prior socialisation renders the performance of altruistic acts
intrinsically rewarding so that the acquisition of further reward is
unmotivated.

Other explanations of altruism introduce the idea that modifi-
cations of reinforcement principles are necessary to explain altruism.
Rosenhan (1972) contended that the best explanation of altruistic
behaviour lies in notions of self-reinforcement, but he suggested that

learning theory might need to expand some of its principles to incorporate the mediating roles of affect and cognition. The operation of affective and cognitive components in the eliciting of altruistic responses has been seen as the basis of reward by a number of theorists. Bijou and Baer (1961) suggested that the elimination of an aversive stimulus - the negative affective state triggered by the unhappiness of a victim - may in itself by sufficiently rewarding. Berger (1962) stated that the altruist's mutual experience of pleasure with the recipient of aid may be rewarding enough to bring about a helpful act.

Along these lines, many theorists (Aronfreed, 1970; Rosenhan, 1970) have suggested that the acquisition of altruistic responses requires a history of reinforcement and the development of a self-reward mechanism. In the first part of an experiment by Aronfreed and Paskal (reported by Aronfreed, 1970), young children were exposed to a conditioning paradigm in which an experimenter responded joyfully when a red light appeared. If the experimenter emitted both expressive and affectional cues during this time, the children later tended to choose to produce a response which brought joy for the experimenter instead of candy for themselves. The experimenters suggested that the altruistic behaviour was a consequence of self-reward conditioned through vicarious reinforcement. Midlarsky and Bryan (1967) demonstrated that similar conditioning paradigms remained powerful during subsequent trials even when the experimenter did not display potentially rewarding cues. Finally, Paskal and Aronfreed (reported by Aronfreed, 1970) showed that an empathically conditioned child continued to offer help to another child, even when distress signals were terminated, when the experimenter was absent, and when the help involved the sacrifice of material rewards.

Weiss et al. (1971) concluded that the roots of altruistic behaviour are so deep that people not only help others but find it

rewarding to do so. Their research demonstrated that people will learn a response when the sole reinforcement is that of terminating another human being's suffering. Weiss et al. (1973) showed further that the same patterns of effects found with conventional reinforcers are also found in altruistic reinforcers. Under certain conditions, then, helping another may be reinforcing and harming another noxious, inducing an aversive drive. However, Middlekauf (1970) failed to extinguish a child's empathic distress by repeatedly exposing him to the distress of a victim, indicating that the extinction of empathic arousal does not necessarily occur in the same way that extinction of other responses might.

While reinforcement theories appear to be helpful in explaining the maintenance of helping responses, they cannot always adequately explain the acquisition of altruistic behaviours. A number of theorists have therefore turned to imitation as an explanation of the acquisition of helping responses. Social learning theorists have studied the role of modelling in the belief that children may learn to help others through the observation of adult altruism. Early theorists such as Tarde (1903) considered imitation as instinctive, and controversy over the origins of imitative behaviour continues today. Many social learning theorists have tended to avoid this question and instead explore directly the contribution of imitation to altruism.

Basing his ideas directly on conventional reinforcement principles, Gewirtz (1969) put forward a relatively extreme view of the role of reinforcement on imitation. He viewed imitation as simply a case of instrumental learning and criticised the emphasis which other theorists placed on intervening processes. Miller and Dollard (1941) suggested that imitation can be contingent on reinforcement of the learner by the model if the learner matches the required behaviour. It has been demonstrated that helping increases when reinforced by

models with material reward (Fischer, 1963) or praise (Bryan,
Redfield and Mader, 1971; Midlarsky, Bryan and Brickman, 1973).

While these views may explain certain instances of imitative
helping, they do not offer an all-encompassing explanation. Many
experimental studies have demonstrated that subjects will behave
helpfully after observing an altruistic model even when no one
witnesses the helpfulness, when no obvious reward is possible, and
when further contact with the model and/or experimenter is not
expected. Studies by Hartup and Coates (1967), Rosenhan and White
(1967), White (1967), Rosenhan (1969) and Bryan and Walbek (1970)
met these criteria, casting doubt on the two explanations above.

Other views stress the importance of vicarious reinforcement
through observational learning. Mowrer (1950) and Baer, Peterson and
Sherman (1967) suggested that direct reinforcers need not be in
evidence; instead, becoming similar to the admired model becomes
sufficient reward to increase behaviour which replicates that of the
model. Bandura and Walters (1963) suggested several ways in which
models give children the opportunity to learn new response patterns.
For example, the learner may be reinforced when he observes a model
being rewarded for helping, even if the model simply looks pleased
with his own behaviour. Being helpful then becomes self-reinforcing
in that children can tell themselves that they are "good" for
behaving helpfully.

Experimental evidence provides some support for these views.
If reinforcement is vicarious, then helping should increase the more
reward a model receives. Marston (1965) found that a model's praise
of his own performance increased subsequent imitation. Bandura,
Grusec and Menlove (1967) found the same effect when the experimenter
praised a model's behaviour, and Midlarsky and Bryan (1972) reported
that children were more likely to share after observing a model who

was rewarded for being helpful. Presbie and Coiteux (1971) showed that self-praise or experimenter praise increased the donating behaviour of children when the model donated and decreased it when the model was selfish.

Some experiments have indicated the importance of imitation by showing that children respond differently to behavioural examples of helping than to verbal exhortations preaching helpfulness. Bryan and Walbek (1970) found that children who heard an adult preach greed but practice charity gave more than children who heard an adult preach charity but practice greed. Grusec and Skubiski (1970) and Rushton and Owen (1975) found similar effects. However, Rushton (1975) found that although the behaviour of a model was more effective in the short-term, preaching was more effective in long-turn behaviour.

Few studies have in fact been able to illustrate that the observation of altruistic models leads to long-term helping behaviour. White (1967) showed that helping responses evoked by an altruistic model tended to diminish over time. Harris (1968) indicated that imitation did not lead to long-term charitable behaviour. Nevertheless, a later study by Harris (1971) demonstrated specific and generalised imitations of sharing behaviour.

A few studies have suggested that imitation of a charitable model might often be a function of children's enhanced feelings of well-being following a warm interaction with an adult. Staub (1971a) found that nurturance increased helping independently rather than simply modifying the influence of modelling. Yarrow, Scott and Waxler (1973) demonstrated that nurturance increased helping in realistic encounters but not in symbolic situations, and Weissbrod (1976) showed that a warm model decreased donation but increased rescue effort. Other studies (Rosenhan and White, 1967; Grusec and Skubiski, 1970; Grusec, 1971) failed to show an increase in imitative donating after interaction

with a warm model. It is possible that the type of helping required determines whether or not nurturance will lead to increase helping.

Learning theorists, then, have had difficulty in offering explanations of altruism. Although helping can sometimes be increased by direct reinforcement (Doland and Adelberg, 1967) or decreased by punishment (Clark, 1975), simple conditioning procedures do not always affect helpfulness (Moffatt and Miller, 1971). Certainly conventional reinforcement principles do not appear to provide adequate accounts of the acquisition of altruism. Studies by social learning theorists of observational learning provide interesting possibilities, but more long-term effects are needed to support explanations of the acquisition of helping behaviour. Finally, Rosenhan's (1972) emphasis on empathy stemming from affect and cognition seems reasonable, but the role of reinforcement here is debatable. Hoffman (1975 b) used the same concepts in postulating an innate altruistic drive; reinforcement theory may be compatible with this idea but reinforcement does not necessarily mediate the drive's reduction.

Psychoanalytic perspectives

Psychoanalytic theorists have studied the problem of altruism from two main perspectives. The earlier approach developed directly from orthodox interpretations of Freudian ideas, and the later grew from dissatisfaction with inadequacies of the first.

Freud (1954) approached the question of the acquisition of altruism from the same theoretical framework which dealt with morality. According to this approach, morality develops from early parent-child relationships when rules originally enforced externally become internalised to form the superego. Violation of these rules leads to guilt, and the sense of right and wrong is maintained through fear of castration and subsequent identification with the parent. This type of

identification was considered by Freud to be central to the development of a conscience, especially in males (Hoffman, 1963). Fearful of punishment if he behaves otherwise, the child avoids conflict and gains further parental approval by taking on the viewpoints of the parent. Other theorists (A.Freud, 1936; Sears, Rau and Alpert, 1965) stressed a different type of identification which is based on the child's anxiety over the loss of the parent's love. The child wants to keep his mother constantly available; being unable to have her fully, he substitutes her behaviour for the mother herself. In this way the parent's moral standards and values are incorporated.

Freud contended that children are basically selfish, id-driven animals, and he discussed the specific mechanisms underlying altruistic acts accordingly. He and other psychoanalysts assumed that guilt and anxieties which the individual seeks to control form the basis of his altruism. Underlying forces that interfere with normal mental functioning were thus stressed. Sympathy was considered narcissistic (Freud, 1918). Generosity was seen as having its roots in pregenital fixations and being an attempt at manipulation and control (Lewinsky, 1951). Charity, far from being an expression of love, was instead condescending pity, secret hostility, self-advertisement, or guilt (A.Freud, 1936). General social-mindedness was motivated by exhibitionism and masochism (Sperling, 1955). Altruism not only embodied all this pathology but was almost always considered a mask for self-interest and aggression. Altruistic behaviour was therefore considered, at best, symptomatic of inner conflict.

Reaction developed early to the failure of psychoanalytic theory to acknowledge the existence of positive forms of behaviour in their own right. Wodehouse (1929) expressed dissatisfaction with what he considered a doctrine of natural selfishness. Scheler (1923) distinguished pathological altruism from genuine altruism. He noted that

genuine altruism can result from sympathy and is not a function of over-identification. Later theorists (Hartmann, 1958; Olden, 1958; Maddi, 1968) pointed out the general inability of psychoanalytic theory to explain adaptive, undefensive behaviour. Gradually the emphasis began to shift away from an insistence on natural egoism. New developments tended to stress adaptations of the ego (Murray, 1938; Sullivan, 1953). Erikson (1950) discussed the capacity of the child to feel understood by others and to achieve basic trust. The first struggle between waiting and satisfying one's self was seen as the external organiser of later empathic understanding and altruism. Ekstein (1972) suggested that empathy and sympathy develop from infantile narcissism as the infant grasps that he is being understood. Nurturance provides the child with this information. As he comes to perceive that he is well-regarded, valued and secure, he needs less and less to see his social environment in exclusively self-orientated terms. From then he may feel freer to act kindly and altruistically towards others.

Unfortunately, it appears that no experimental work has been conducted in an attempt to support any of these theories. Eysenck and Wilson (1973) have questioned Freud's assertion that psychoanalytic theory is independent of experimental verification. They suggested that until tests of Freudian theories are attempted, psychoanalytic explanations must remain largely conjecture.

Cognitive developmental explanation

Piaget (1932) and his followers have stressed the role of cognitive development in the formation of altruistic behaviour. Their approach conceives of moral behaviour as a manifestation in social life of the general maturation of intelligence. According to cognitive development theorists, the child's thought processes are qualitatively

different from the adult's. Mature moral judgment develops through an invariant sequence of stages, each of which is a reorganisation of the previous stage. The original investigations by Piaget were not directed toward an understanding of altruism, or, indeed, of actual moral behaviour; instead, the empirical work centred on the moral judgment of the child. Hartshorne and May (1930) were the first researchers to specifically examine altruism within the context of cognitive development. Their controlled experiments showed a relationship between moral cognition and helping behaviour, although this relationship was not strong. Lerner (1937), Kohlberg (1964) and Hoffman (1975b) have since discussed the development of altruistic behaviour as occurring simultaneously with the development of moral judgment. The main concepts involve the child's movement away from egocentrism and toward decentration, a progression which is seen to occur at three successive levels.

The first phase, leading to the attainment of person permanence, pertains to the infant's inability to experience others as separate from himself. In this phase the infant reacts to another's distress as though he and the other were somehow simultaneously in distress. He is unclear as to who is experiencing difficulty and behaves as though what happened to the other person is happening to him. Simner (1971) reported that infants cry intensely at the sound of another infant's cry but not to equally loud non-human sounds. Hoffman (1975b) described an eleven month old baby's distressful response on seeing another child fall and cry.

When the child reaches the person permanence stage, he is able to perceive another's distress as distinct from his own. He knows that the other is a separate entity and thus that the other is the victim. He can sense the other's distress, though he may not know the cause of it. This lack of understanding is revealed in the child's first efforts

to help others, usually consisting of giving that which he himself finds most comforting.

Although the child is soon aware of people's existence as separate entities, it is not until much later that he knows they have inner states of their own. Then egocentrism begins to give way to the recognition that other people have their own perspectives, thoughts and feelings. It is during this preoperational phase (ages 2-7) that the child acquires the role-taking ability. When the child enters this phase, he begins to put himself in the other's place and discern the reason for the distress. With increased role-taking ability, he can use trial and error and respond to feedback to find ways to relieve the other's distress.

The final step in the attainment of decentration involves the development of the cognitive capacity to see others as having their own personal identity. When the child enters this phase (ages 8-11), he is not only aware that others can feel pleasure and pain but that these feelings occur in the context of their larger pattern of life experiences. It is only at this point that the child can respond to more than just an immediate condition and becomes capable of a high level of empathic distress He can act out in his mind the emotions and experiences he perceives, gain an understanding of the circumstances, feel concerned, and show real altruistic responses.

These stages mark the child's shift from egocentrism to decentration. The idea that decentration underlies moral development is supported by empirical evidence (Stuart, 1967; Lee, 1971; Rubin and Schneider, 1973).

Support for the importance of the role of cognitive development in children's acquisition of helping responses centres on two areas of research. The first looks at whether helping responses increase with age, especially during appropriate critical transitional periods. The

second attempts to ascertain whether helping responses coincide
with cognitive changes in other areas. Once a child breaks into a
new level of thinking in one area, his acquisition of this level in
other areas is said to be much facilitated; this is the concept of
horizontal décalage. Therefore, as the child develops moral judgment,
spatial skills, and higher intellectual ability, his altruistic
behaviour should develop as well.

A large number of studies have examined the helping responses
of children of different age groups. A consistent increase with age
has been found. This increase is convincing firstly because of the
many kinds of helping which have been examined. Some experimenters
have used behavioural measures, others have employed paper and pencil
tests of altruism, and still others have analysed children's altruism
in their endings to imaginary stories. In addition, studies carried
out in various countries have yielded similar results.

Most studies have investigated behavioural instances of altruism
and helping behaviour. Handlon and Gross (1959) found age to be a
significant variable in the magnitude of sharing in children. Helping
was not a smoothly increasing function of age, but instead occurred at
marked stages in children's development. The transition between
selfish and altruistic behaviour occurred between ages 9-11 and
levelled off by age 12. Midlarsky and Bryan (1967) found that children
donated more money to charity and made other self-sacrificial responses
between the ages of 8-10 than 6-8. Similar results were found by
Ugurel-Semin (1952) in a study of children in Istanbul and by Bergius
et al. (1975) who studied a German population. Additional support for
a developmental increase in altruism was found in studies by Bryan and
Walbek (1969), Elliott and Vasta (1970), Emler and Rushton (1974), and
Green and Schneider (1974).

An interesting exception was found by Staub (1970), who looked

at children's helping responses during an ambiguous emergency. The results of this study indicated a developmental increase in helping from age 4 up to age 10; however, the helping of subjects aged 11-12 suddenly decreased. The experimenters explained this effect as a function of the increased capacity of older children to recognise the situation as an ambiguous one. As the ambiguity of the emergency was perceived, the children's fear of behaving inappropriately increased and helping was inhibited. Other studies which failed to report an increase in altruistic behaviour with age were those by Rosenhan and White (1967) and White (1967), both of whom only compared children within the range of 9-11 years.

Verbal indications of altruism support the developmental trend suggested by behavioural studies. Harris (1967) classified children as altruistic or not through their responses to incomplete stories. Significantly more children aged 11-12 were classified as altruistic than those aged 8-10. Durkin (1961) asked children to respond to imaginary situations and found more altruism in 11 year olds than 8 year olds. Shure (1968) found that the judgments made by 4-6 year olds of generosity and selfishness differed greatly from those made by 9-10 year olds. McGrath (1923) used questionnaires and found that the altruistic responses of children similarly increased with age.

Murphy (1937) found more sympathy and altruism in older children but also reported that more intelligent children helped more than less intelligent children of the same age. This finding was substantiated by others (Fischer, 1963; Havighurst and Taba, 1949; Hoffman and Saltzstein, 1967; Mussen et al., 1970). Murphy suggested that the less intelligent children she studied had not yet attained the capacity to recognise the situation as one in which helping was appropriate.

The results of these studies indicate that altruism does increase with age. Helping responses of children under the age of 7

are consistently low or nonexistent. Children around the age of 9 tend to be in transition from selfish to generous behaviour. Finally, the altruistic responses of children aged 11-12 tend to increase further and then level off. These findings lend support to the cognitive developmental explanation of altruism, as the transition periods coincide with the phases leading to decentration in the child.

Effects of models on children's helping behaviour have also been discussed by cognitive theorists. As discussed earlier, both the presence of models and increases in age often lead to greater helping responses. However, Midlarsky and Bryan (1967) and Harris (1968) found no increases in altruism with age in conditions using models. Krebs (1970) suggested that models may influence younger children more than older children, thereby countering the effect of a developmental increase in altruism in these two studies. This is consistent with Piaget's (1932) findings which show differences in children's acceptance of adults' rules. The younger, preoperational child's relationship is marked by a unilateral respect in which the child readily accepts adult authority. The relationship of the older child to the adult is more likely to involve mutual respect in which each member has a more equal part of the control. Thus young children should be expected to be more influenced by adult models.

Further compatibility with Piaget's ideas is not so clear. While empirical evidence demonstrates that helping responses are directly related to age, support for a concurrent increase in other cognitive areas is not quite so consistent. Flavell (1968) and Kohlberg (1964) suggested that children who differ in their underlying cognitive level should show systematic and corresponding differences in their intellectual and social behaviour. This has been only partly borne out in experimental studies. Relationships between altruistic behaviour and moral judgment were found by Bryan and London (1970), Rubin and Schneider (1973) and Rubin (1975). Grant, Wiener and Rushton (1976) found that only one

measure of moral judgment related to generosity. Emler and Rushton (1974) showed that moral judgment did relate to children's generosity but found no relationship between generosity and role-taking. Rushton and Wiener (1975) studied the interrelationships between a number of age-related cognitive tasks and behavioural measures of altruism in 7 and 11 year old children. Highly significant age differences were found on all the cognitive tasks as well as the altruistic tests, with 11 year olds more skilled and altruistic than 7 year olds. However, although some generality emerged across altruistic behaviours, no such generalities were found between the cognitive measures (role-taking ability, cognitive complexity, conservation, and egocentricity) themselves or between the cognitive measures and altruism. This lack of relationship casts some doubt on the hypothesis that changes in cognitive development mediate the changes consistently found in altruistic behaviour with age. It is possible that altruism in older children may be primarily due to the increased internalisation of norms.

Notwithstanding, some research has suggested that appropriate changes do correspond with changes in altruism. Helpfulness has been shown to relate to spatial skills (Lee, 1971) and children's concept of time (Bergius et al., 1975).

Support for cognitive developmental explanations of altruism seems relatively substantial. Most studies which have examined the relationship of age and altruism have found increased helping responses with age. The increases tend to occur at appropriate stages of transition. However, support for simultaneous increases in other cognitive areas is contradictory. The findings are difficult to interpret, as altruism was operationalised differently in these studies and behavioural measures not always used. Graham (1972) has noted that situational differences in experimental procedures must be considered before conclusions are drawn.

Discussion

As has been shown, attempts to explain the roots of altruism and helping behaviour have been offered by major grand theories of behaviour. However, theorists have faced different problems in accounting for altruism within the context of the perspectives they support, and they have utilised a wide variety of research strategies to accommodate helping behaviour in their respective theories. No one theory has proved entirely successful in adequately explaining helpfulness.

Evolutionary theorists have had to illustrate how the life-endangering behaviour which often accompanies a helping act, and which on some occasions leads to the helper's death, can be genetically selected in future generations. Such theorists have pursued their search for a meaningful explanation in two main directions. Some have studied animals in attempts to show a phylo-genetic increase in unrewarded helping behaviour, and others have attempted to localise areas in the brain which might be associated with altruistic responses. Learning theorists, with their emphasis on reinforcement contingencies, have had to explain the mechanisms underlying the acquisition and maintenance of costly but apparently unrewarded responses in the individual's behavioural repertoire. These theorists have tended to explore the development of self-reward mechanisms such as those arising from observational learning. Psychoanalytic theorists have had to account for the development of positive social behaviours in the id-driven child, but they have made little attempt to test the place of helping behaviour within the context of Freudian theory.

Helping behaviour is less of a problem to cognitive developmental theorists, who see mature moral behaviour as

developing through a sequence of stages as a child moves from egocentrism to decentration. Nonetheless, these theorists encounter problems in reconciling contradictory research findings. Although evidence which shows an increase in altruism with age is consistent with the expectations of cognitive developmental theory, support for an appropriate concurrent increase in other cognitive areas at appropriate stages is inconsistent. It may be that developmental increases in altruism with age are not due to cognitive factors but instead to the increasing influence of social norms as the child ages.

A number of researchers (Staub, 1972; Schwartz, 1973) have examined whether helping behaviour could in fact be a function of adherence to particular social norms. Behaviours influenced by norms of giving (Leeds, 1963), reciprocity (Gouldner, 1960), and social responsibility (Berkowitz and Daniels, 1963) might be acquired in a number of ways and lead to increased helping in appropriate situations.

The usefulness of general normative explanations has been criticised by Berkowitz (1972) and Latané and Darley (1970), who have suggested that norms may be too vague, general and contradictory to guide behaviour. In addition, Krebs (1970) pointed out that normative explanations are circular in nature; if a particular behaviour predicted from a norm is in evidence, the influence of that norm is stressed, but when the expected behaviour is not in evidence, the explanation is that the norm was simply not activated in the particular situation. Schwartz (1973) suggested that when interactions of individual differences regarding responsibility and the activation of norms are considered, norms become more useful predictors of helping behaviour.

Although normative explanations may be difficult to support, they do point out ways in which grand theories of helping behaviour may be seen as compatible. For example, learning theories, psychoanalytic perspectives, and cognitive developmental explanations all encompass interpretations of the acquisition of norms. Even some evolutionary theorists (i.e., Cohen, 1972; Barash, 1976) have discussed the role of norms in social evolution. If certain norms do go some way toward explaining helping behaviour, grand theories are compatible in their emphasis on these norms.

Weiss et al.(1973)pointed out that various explanations of helping behaviour are compatible. If innate altruistic drives motivate people, there should be altruistic reinforcers and goal responses for these drives. If guilt motivates people, then guilt reduction should be reinforcing. If a person is motivated to adhere to norms, then knowledge of the consequences of successful adherence should reinforce him. Thus a certain amount of compatibility among theories is in evidence, and no one perspective seems better suited to explain helping behaviour than others.

The study of altruism has led psychologists to think more carefully about limitations in the scope of their theories. As described earlier, dissatisfaction with inadequacies of particular explanations has at times resulted in shifts of emphasis within the framework of individual grand theories. A vast number of empirical studies have arisen either directly or indirectly from theoretical controversies, and these studies have in turn influenced further theory building. The following two chapters illustrate the breadth of research which has been conducted in attempts to discover determinants of altruism and helping behaviour.

Chapter II

INDIVIDUAL DETERMINANTS OF HELPING BEHAVIOUR

Much research has been carried out in attempts to gather
information about individual determinants of helping behaviour.
Though it often proves to be a thankless task, many investigators
seem determined to search for characteristics of the altruist.
Most research has tended to concentrate upon finding whether or not
certain kinds of people are consistently more altruistic than others
and whether these people differ from others in particular ways.
Relationships between helping behaviour and personality traits,
sociocultural variables, and biosocial factors have been examined.

Personality

Perhaps the greatest single problem in finding related
personality traits concerns the techniques through which measures of
altruism are obtained. Psychologists have studied both nonbehavioural
measures such as others' ratings and self-reports, and behavioural
measures obtained in the laboratory and in the field.

Nonbehavioural measures

Early investigators relied heavily upon rating systems in
deriving their measures of altruism. Typically, one or more
acquaintance of the subject would rate the extent of the subject's
helping behaviour, either through interviews or written scales. This
procedure made it difficult enough to interpret the data of each study
even in the context of its own procedure; comparisons with other
research efforts proved still more problematic. For example, Turner
(1948) devised his own scale of altruism and asked parents, teachers,
and social workers to rate boys on this scale and several others. He

reported that boys who were rated high in altruism also received high ratings in ethical goodness, emotional maturity, and social adjustment, while those with low altruism scores were rated high in anti-social tendencies. However, the validity of the scale has been questioned by Krebs (1970), who suggested that it actually measures ethical goodness. Cattell and Horowitz (1952) used dormmates' ratings and objective scales and found altruism correlated positively with social extroversion and negatively with paranoid-schizoid tendencies. The ratings are difficult to interpret, since different dormmates rated different people. Neither of these studies controlled for response sets and halo effects. MacDonald (1966) employed a similar procedure and found that university students classified as altruistic by their dormmates scored high on religious values and low on economic and political values. This study may be criticised on the same grounds; in addition, it only used a small sample of female students.

In none of these studies was the definition of altruism made clear, so the term may have been interpreted differently by various raters. It is possible that people rated their friends as altruistic simply because these friends were friendly or pleasant. Support for this possibility is indicated by Friedrichs' (1960) finding that people rated as "most attractive as a friend" were also rated highest in altruism. This study also found altruism positively related to sociability, authoritarianism, theism, and political conservatism, and negatively related to economic involvement.

A few studies did clarify their use of the term altruism for the raters, though they all seem to have used different definitions. Schwartz (1968b) used peer ratings of "helpfulness" and found a relationship with social responsibility. Rutherford and Mussen (1968) asked teachers to rate the generosity of nursery school boys; those

rated generous were also considered less dependent and less hostile than other boys.

Other investigators obtained their measure of altruism from self-reports in the form of pencil and paper tests. The study above by Friedrichs (1960) combined the use of a self-report Likert scale measuring altruism with the ratings of others. The results of the self-reports did not substantiate the ratings of others. Low negative correlations were found between altruism and neuroticism in the former but not in the latter. Ribal (1963) classified subjects as altruistic if their scores on the Edwards Personal Preference Schedule (EPPS) were in the upper quartile of nurturance and the lower quartile of succorance. Altruism was then found to be positively related to needs for endurance in males and needs for affiliation and intraception in females, and negatively to needs for achievement and dominance in both. However, a problem with the definition of altruism is apparent. Since no other researchers have used such a definition, and since no other scales or behavioural measures were employed, the validity of the measure cannot be established. Also, intercorrelations of the EPPS variables as reported by Edwards (1954) reveal that some of Ribal's findings should have been expected by virtue of already-established coefficients. For example, the largest coefficient among all EPPS variables is that of .46, between nurturance and affiliation. The correlation between Ribal's definition of altruism and affiliation is therefore not surprising.

A number of researchers have devised other written scales to measure altruism. Sawyer (1966) developed an altruism questionnaire tapping cooperative interpersonal orientation and occupational aspiration and found no relationship between authoritarianism and altruism. Wrightsman (1964) compiled a "Philosophies of Human Nature" scale and found trustworthiness, independence, and altruism inter-

correlated. Altruism was negatively correlated with Machiavellianism as measured by Christie's Mach IV scale. Fischer (1973) found that tests of dogmatism and authoritarianism correlated inversely with scales of humanitarian factors, including altruism. No relationship was found with social desirability as measured by the Marlow-Crowne Social Desirability scale. This was an unusual finding, as previous researchers found difficulties with social desirability factors. The Social Responsibility Scale was designed by Berkowitz and Daniels (1964) to measure altruism in college students, but scores on the scale were found to strongly correlate with three measures of social desirability (Stone, 1965). Similar problems were faced by Harris (1957) in her scale for children and Gough, McCloskey and Meehl (1952), who studied adolescents' scores on social responsibility. While Berkowitz (1965) suggested that altruistic people may simply be those who behave in a socially desirable way, the predictive validity of the scales is questionable; people scoring high on altruism might simply have been trying to present a favourable image of themselves.

Hogan (1969) designed an empathy scale which has been used as an indicator of altruism. The Allport-Vernon-Lindzey Study of Values scale has also been used to measure altruism (MacDonald, 1966), although Annis (1975) found that the scale did not correlate with behavioural measures of helping. Severy (1975) designed the Helping Disposition Scale, the only questionnaire to consider different aspects of the altruistic act. Scores on relevant subscales correlated with Harvey's (1967) Need to Help People scale, but only weakly with a few behavioural measures.

Although obvious problems are apparent in the use of non-behavioural measures of altruism, many psychologists continue to rely on such methods. One explanation might lie in the ease with which these measures can be obtained. Also, results are immediately rewarding

in that they tend to produce a large number of relationships. Numerous significant positive and negative correlations between altruism and other variables are reported; however, these results are seldom supported by other research. Thus authoritarianism is found to positively correlate (Friedrichs, 1960), negatively correlate (Fischer, 1973), and show no relationship (Sawyer, 1966) with altruism, depending on the many different factors that are left to vary. The only apparent consistency in studies of this kind involves the tendency for altruism to be associated with broad categories of prosocial as opposed to antisocial or negative variables. Subjects high in altruism tend to score high in socially orientated characteristics such as sociability and trustworthiness, while subjects low in altruism tend to be typified by antisocial, competitive behaviour. Even here many exceptions can be found; without explicit definitions of altruism, different raters are likely to consider different kinds of behaviour.

Behavioural measures

Attempts to avoid some of these problems have been made more recently by researchers who examine behavioural measures of altruism. Few personality traits have been studied extensively in this context. One relative exception is the trait of fatalism. Gore and Rotter (1963) distinguished between individuals who believe that events are determined solely by chance or fate and those who believe in their internal capacity to influence the course of events in their lives. It was suggested that the former, who have an external locus of control orientation, should be less likely to help others than the latter. Gore and Rotter found that college students who felt they had internal control over fate were more likely to volunteer to participate in a civil rights project than externals. Strickland (1965) replicated this and found that internal controllers were not only more apt to commit

themselves to social action but were more likely to be active participants in the civil rights movement. The effect of this disposition has been extended to other types of helping. Internals have also been found to be more helpful by receiving shocks for someone else (Midlarsky, 1971) and by intervening in an emergency (Ubbink and Sadava, 1974). A few situational variables have been studied in more detail and reveal interactions with locus of control orientation. Staub (1968) found that internal children shared more after an experience of success but less after an experience of failure; and Lerner and Reavy (1975) found that internals helped more when direct aid was necessary but less when indirect aid was needed.

An explanation for this relatively consistent finding was put forward by Withey (1962), who suggested that feelings of impotence and fatalism result in an inability to manifest effective behaviour during times of crisis. Moreover, a fatalistic outlook may make one believe that the self-sacrifice required by helping will not be worth the effort, since helping will be of no consequence in determining the outcome of events. Indeed, field research by Sorokin (1950) found that neighbours who exhibited helping responses during times of crisis were characterised by an optimistic rather than fatalistic attitude toward the future.

Studies of other personality traits have been more limited. As with nonbehavioural studies, a very general association of helping with positive social traits seems to be apparent, though not always consistently so. The inconsistency can be at least partly attributed to the type of helping studied and the failure of experimenters to consider the intent behind helping. For example, intervening during an emergency is very different from agreeing to help at the request of a persuasive model. Janis (1954) found that the tendency to be persuaded corresponded with feelings of anxiety, personal inadequacy, low self-esteem, and

neuroticism. Crutchfield (1955) reported that conformity was negatively correlated to intellect and leadership. A subject who is persuaded to help or who helps because of pressures to conform might thus be characterised by very different traits than a subject who actively takes the initiative to help in the presence of unresponding bystanders. Both may be regarded as helpers, yet one is helping in the context of conformity and the other in the context of nonconformity. It is not surprising, then, that results are often contradictory when relationships with helping are sought.

Prosocial traits have often been linked to altruism. Members of a voluntary organisation (Smith, 1966) and helpers in an experimental game (Wrightsman, 1966) were found to be more trusting and confident. People in helping professions and voluntary organisations were more dependable, sincere, and empathic (Spilken et al., 1969), more outgoing, happy-go-lucky, and venturesome (Smith and Malaby, 1975), and more socially interested (Crandall and Harris, 1976) than other people. Hartshorne and May (1930) found helpers more honest, though only minimally so, than nonhelpers. Liebhart (1972) reported that bystanders who helped during an emergency were more sympathetically orientated. Fry (1976) found that socially sensitive children shared more pennies than socially insensitive ones, and Long and Lerner (1974) found that children who scored high on delay of gratification shared more unless they thought they deserved the prizes they were asked to share. Burke and Weir (1976) reported that males frequently involved in helping others had greater needs to express affection than males and females who did not help others, and helpful females had a greater need for expressed and wanted inclusion.

A variety of negative social traits have been related to non-helpers. Tipton and Bland (1975) found nonhelpers more maladjusted and antisocial; Wine (1975) and McGovern (1976) more anxious;

Schaefer (1973; 1974) more emotionally disturbed; Wagner et al. (1971) more insolent; and Penner et al. (1976) more concerned with a comfortable life. This trend is not without exception. Rosenhan (1970) found that partial supporters of civil rights were depressed and beset by conflict. A few studies (Smith and Malaby, 1975; Ugurel-Semin, 1952) have found helpers dependent on others. Weissbrod (1976) found helping related to impulsivity, and Denner (1968) reported that people with a low concern for reality were more likely to report a crime. Severy and Davis (1971) found retarded children as altruistic as other children.

As with rating studies, some traits have been seen to be characteristic of both helpers and nonhelpers. The need for approval has been associated with altruistic subjects (Michelini et al., 1975; Satow, 1975), with nonhelpers (Staub and Sherk, 1970), and with both equally (Latané and Darley, 1970). Another inconsistent finding involves social responsibility. Helpers scored higher on tests measuring ascription of responsibility in a series of studies by Schwartz (1968a, 1968b) and in one by Willis and Goethals (1973). However, Condie, Warner and Gillman (1976) found no relationship between social responsibility and blood donating, and Latané and Darley (1970) reported no such relationship with helpers in an emergency. Willis and Goethals (1973) showed that when pressures reach a certain point, people with high responsibility values begin to help less, possibly because the pressure represents a threat to behavioural freedom. Adherence to the moral value of social responsibility may only play a role when the subject feels he alone is making the decision to help.

Krebs (1970) noted that the more unusual the experimental situation is, the less the effect personality variables seem to have. Darley and Latané (1968) found that subjects who helped an epileptic during an ambiguous seizure scored no differently than nonhelpers on

tests of Machiavellianism, anomie, authoritarianism, need for approval, and social responsibility. Korte (1969) reported no differences between helpers and nonhelpers of an asthma victim on deference, autonomy, or submissiveness.

Behavioural measures, then, have been less successful in producing relationships with personality traits than have non-behavioural measures. Those which have been successful tend to be isolated cases, usually yielding low correlations which fail to be replicated in later investigations. A number of explanations for this might be suggested. First, studies of this type are not immune to all of the difficulties faced by studies using nonbehavioural measures, and they have a few difficulties of their own with which to contend. Altruism is defined differently in various studies. It may involve intervening in an emergency; volunteering to participate in an experiment; picking up dropped pencils; donating blood; returning a lost wallet; or any number of helpful acts. Several studies have in fact noted a lack of consistency in the help given by individuals in different situations (Gergen, Gergen and Meter, 1972; Weissbrod, 1976). It is not surprising, then, that few traits are consistently associated with altruism when it is operationalised in so many different ways. The situations examined are usually very specific, and there is no reason to assume that helping in one instance should be related to the same characteristics as helping in another. In addition, variations in subject samples, uncontrolled variables, and interacting independent variables make inter-study comparisons all the more difficult.

The ways in which personality variables are often investigated might also lead to inconsistencies. Experimenters primarily interested in one aspect of helping behaviour will often give their subjects a number of questionnaires and inventories to complete, simply to explore whether any interesting relationships emerge. Usually the investigation

of such relationships is not the main purpose of the research but just an easily administered variable to add to the main findings. The result is that the relationship of personality variables and altruism has not been studied systematically. Several questionnaires might be used in one specific study. If any correlations are significant, the variables might be looked into briefly by other researchers; but usually the same trend is not found, as a different form of helping in a different situation is studied. If correlations are not significant, the variables are often discarded and never explored further.

Sociocultural and biosocial factors

The approach discussed so far centres on attempts to isolate personality variables which might relate to helping behaviour. Other factors have also been studied in the search for individual determinants of helping and altruism. These include sociocultural variables such as social class, occupation and family, and biosocial variables such as sex, age and race.

Social class and education

A number of investigations have indicated that members of middle and upper socioeconomic classes tend to help more in a variety of situations. Upper class adults have been seen to be more likely to donate blood (London and Hemphill, 1965), bone marrow (Schwartz, 1970), and money to help under-developed countries (Galtung, 1968), and to return a letter (Lowe and Ritchey, 1973) or a wallet (Diener et al., 1974). Upper class children shared more with others in a study by Doland and Adelburg (1967). That higher income people should share more simply because they have more to give has been questioned by Sechrest and Flores (1974), who found that a surplus of resources in a prison population had little to do with the percentage of amount shared.

Educational attainment has also been studied. Havighurst and Taba (1949) and Almond and Verba (1963) found generosity correlated with educational level. Since more upper class members are likely to have reached a higher level of education than members of other classes, the effects of each factor are difficult to disentangle. Kohn (1959) suggested that working class parents are more concerned about the immediate consequences of their children's acts than about abstract moral principles.

However, a few exceptions to this trend have been found. Fink et al. (1975) found no differences in the amount of blood donated by lower- and upper-middle class members. In a study in Istanbul, Ugurel-Semin (1952) found that poor children shared more than middle class children. Sawyer (1966) reported that lower-middle classes were more generous than others; however, the sample of lower-middle classes came from YMCA members and the upper-middle class sample was drawn from business and social science students, so other individual orientations might account for the findings. Finally, Littlepage and Whiteside (1976) found that upper, middle and lower class American families gave candy of equal quality at Halloween.

Berkowitz and Friedman (1967) suggested that explanations for these results lie in differences in class norms of social exchange and social responsibility. They investigated the helping responses of middle class boys subdivided into entrepeneurial (self-employed) and bureaucratic (salaried) families. Boys from bureaucratic families tended to work hardest for another, but both they and lower class boys helped similarly whether they had already received help themselves or not. The amount of helping by entrepeneurs was related to the status of the person who needed aid and the amount of prior help given to the boys. Thus the entrepeneurs tended to give only as much as they had to, adhering to norms of social exchange and responsibility. However,

Berkowitz (1966) found different results with an English sample.

Both types of middle class boys helped more than lower class subjects.

Working class boys worked hardest for those who had helped them

previously and even more so when the helper came from a different

social class. Interestingly, the experimenters were unable to

recruit sufficient entrepreneurial boys , even though they were offered

payment to participate in the study. Finally, research by Muir and

Weinstein (1962) indicated that middle class women helped because of

the need for reciprocity, while lower class women gave when they were

able to; and Dreman and Greenbaum (1973) reported that Israeli

middle class boys shared less candy when the recipient would not know

who gave the gift and most when reciprocity was possible.

Family

Aspects of the family situation have been studied. Children

from large families have shown more helping behaviour in a variety of

situations than those from small ones (Ugurell-Semin, 1952; Ribal,

1963; Sawyer, 1966; Schaffer, 1970). Still, neither Friedrichs (1960),

Handlon and Gross (1959) nor Harris (1967) found any difference

between the altruism displayed by children of various sized families,

and Staub (1970) found family size negatively correlated to helping in

emergencies.

Some of these inconsistencies may be explained by differences

in family characteristics. For example, Handlon and Gross (1959) noted

more helping by children from stable families than from broken homes.

Further, helping has been linked to children of parents who are morally

orientated (London, 1970), of parents who stress reparation and apology

and who show affection (Hoffman, 1975a), and of mothers who use praise

and rewards (Mussen et al., 1970). Finally, Staub (1970) found that

children with younger siblings helped more during an emergency than

did others, although Latane and Darley (1970) found no effect for

birth order.

Community

The effect of one's community on his helping behaviour has been investigated, and findings in this area are relatively consistent. Although some studies do provide contradictory evidence, most research indicates that helping is greater by people from small towns and rural areas. Latané and Darley (1970) found that people from small communities were more likely to intervene in an emergency than people from large ones. Merrens (1973) found the same trend when investigating non-emergency helping. Explanation for this was suggested by Hackler and Urquhart-Ross (1974), who found that people raised in smaller communities were more likely to interact with strangers. A better flow of communication probably resulted in a greater willingness to help when a crisis occurred. However, Krupat and Coury (1975) and Annis (1976) found no relationship between home community size and helping in a nonemergency and emergency, respectively.

Gelfand et al. (1973) and McKenna (1976) found helping in rural areas more prevalent than in urban areas. Korte and Kerr (1975) examined various kinds of helping and found greater helpfulness on all measures (helping by making a phone call, correcting overpayment of change, and mailing a lost postcard) in nonurban settings. However, Forbes and Gromoll (1971) found no differences in the returning of lost letters by subjects in large cities, medium cities, and small towns, and Lesk and Zippel (1975) reported that people in large cities were as willing to sign a petition as people from small towns. Schneider and Mockus (1974) and Weiner (1976) found urban-raised people slightly more helpful than those rural-raised.

Reasons for these differences have centred on the role of environmental input. Milgram (1970) suggested that urban environment generates a high number of inputs such as sights, sounds, novel events, and demands, resulting in input overload. People adapt to this by filtering or blocking out some of this input. Support for this

possibility was offered in studies by Bickman et al. (1973), who found
a decrease in helping with increased residential density; Sherrod and
Downs (1974), who reported greater helping by subjects not exposed to
visual and auditory stimuli; and Konecni et al. (1975), who found
that violation of personal space led to less helping. Mathews and
Canon (1975) found that subjects exposed to 85 decibels of white noise
were less likely than those in lower noise conditions to offer assistance
to a bystander in need of aid.

In a study by Korte, Ypma and Toppen (1975), people from Dutch
urban areas which had low input level (measured by sound level, traffic
and pedestrian count, and building number) helped more than people from
urban or nonurban areas with high input levels. The findings indicate
that environmental input and not other aspects of urbanisation might be
the cause of the differences in helping. The results of this study
were consistent with suggestions that noise-produced arousal leads to
a restriction in attention allocation or cue utilisation (Hockey, 1969).
Zimbardo (1969) suggested another possibility: environmental input
overload may lead to a state of deindividuation in which people lose
a sense of self-consciousness, leading to antisocial behaviour marked
by selfishness and greed.

<u>Occupation and competence</u>

The occupation and past experience of a bystander has also been
shown to affect his decision to help. Studies of natural emergencies
involving tornados, hurricanes and fires have been investigated by a
number of researchers. Some occupational groups such as off-duty
policemen and fire squad members tend to be among the aiders in crisis
situations (Wallace, 1956; Chapman, 1962), possibly because of
occupation-linked factors such as motivation and competence. Form and
Nosow (1958) noted that effective helpers during natural disasters were
usually those with the highest degree of technical competence and prior

experience with disastrous occurrences. Guetzkow (1962) and Withey (1962) showed that individuals whose familiar roles were suitable for disaster situations were under less stress and behaved more adaptably than others. Hamilton, Taylor and Rice (1955) reported that the most effective behaviour during a tornado was displayed by a young boy who had experienced four previous tornados. In laboratory studies, Brenner (1973) found that off-duty as well as other policemen were more helpful during an emergency than were seminarians, and Clark and Word (1974) found that subjects with a knowledge of electronic equipment were more likely to help a maintenance man in an emergency than were those with little or no such knowledge.

<u>Group membership</u>

Additional relationships between group membership and altruism have been studied, but the findings are very diverse. An example of the contradictory findings is seen in studies which compare the helping responses of various religious group members and nonbelievers. Helping was related to nonreligious people and Jews as opposed to Protestants and Catholics (Gergen and Gergen, 1970), and to Protestants and Catholics as opposed to nonbelievers and Jews (Rokeach, 1970). Kirk-patrick (1949) found a negative correlation between religion and helping behaviour, and McKenna (1976) discovered that clergymen were no more likely than others to phone a garage on behalf of a stranded motorist. Other studies found no difference between the altruistic responses of believers and nonbelievers (Cline and Richards, 1965) or of atheists, nonreligious people, or "Jesus people" (Smith, Wheeler and Diener, 1975). Thus the findings seem extremely contradictory.

One way of reconciling the different results has been suggested by Allport and Ross (1967). Researchers should separate "believers" into two groups - those who find comfort, entertainment and social benefit from religion, and those who value the religious experience

beyond the more extraneous rewards. Hypocritical and prejudiced responses are likely to typify the first group, while Good Samaritans and the compassionate should be among the latter. However, Darley and Batson (1973) used such a separation through the Allport-Ross religious scales and still found no differences in helpfulness. Seminary students were reported to have literally stepped over a collapsed victim as they hurried on to deliver a speech about the Good Samaritan parable. Annis (1976) obtained various religious measures by having subjects complete several religious scales. Ten days later the subjects had the opportunity to come to the aid of a lady who fell off a ladder. None of the religious measures related to helping behaviour. These findings cast doubt on the relevance of Allport's religious group types in the context of altruism. Darley and Batson's (1973) contention that religious beliefs are independent of helping seems to be supported.

Other types of group membership have also been examined. Political conservatives scored higher on self-report measures of altruism (Friedrichs, 1960) but behaved no more helpfully (Gaertner, 1973). Social service group members were more helpful than fraternity members (Horowitz, 1971), and YMCA members more helpful than business students (Sawyer, 1966). Americans with Anglo surnames were more helpful than those with Spanish surnames (Harris and Klingbeil, 1976), but no difference between Irish and Italian surnames was found (Karpiena and Zippel,1974). Finally, pornographic book store visitors were less likely to help by returning a lost wallet than were visitors of other bookstores (Diener et al., 1974).

Cross-cultural differences

Only a few studies have examined international differences in altruism and helping behaviour. While a number of researchers, mostly anthropologists, have described altruistic behaviour patterns which

appear to differ from those of western cultures, few have systematically studied these differences with any amount of control. Cohen (1972) suggested that societies with affect-orientated parent-child relationships and monogamous marital patterns are more sympathetic and more likely to be altruistic. He described the Kanuri, a north Nigerian tribe characterised by polygynous and unstable family patterns, who regard man as of little value and who devalue altruistic acts. Arnold (1954) noted that some societies place a greater emphasis on altruism in their education system and cited the Society of Brothers in Paraguay, who appear to value altruism and act more helpfully than most other cultures. Krahn et al. (1954) stated that altruistic principles are stressed more in Mennonite life in Canada, resulting in a more helpful society.

Controlled experimental studies are limited. Berkowitz (1966) compared boys in Oxford, England with boys in Madison, Wisconsin, and found them equally likely to help another with a task. Evidence described earlier in this chapter did indicate, though, that the helping of lower class English boys was more affected by norms of reciprocity than was the helping of their American counterparts. In a naturalistic study, Feldman (1968) explored differences in the decision of Bostonians, Athenians and Parisians to help a compatriot or foreigner by mailing a letter for him. Subjects in Boston were most likely to mail an unstamped letter than were those from other countries but were most helpful to fellow countrymen. Athenians helped the least overall, whether letters were stamped or not, but were more willing to help foreigners than compatriots. Finally, foreigners' use of the language of the city led to helpfulness in Paris and Athens but not in Boston.

Gergen, Morse and Bode (1974) found both Italians and Americans less helpful when rewards appeared too high. Gergen et al. (1975) reported no differences in responses to aid in Sweden, Japan, and the U.S.A., each of which represented a different economic philosophy.

Huang and Harris (1974) found Americans from Albuquerque, New Mexico

and Chinese from Taipei, Taiwan equally willing to mail a letter,

although Chinese tended to be less helpful to strangers. However,

fewer Albuquerqueans actually posted the letter, revealing possible

cross-cultural differences in the willingness to actually carry out

a commitment. L'Armand and Pepitone (1975) compared the sharing and

donating behaviour of subjects from Philadelphia with subjects from

Madras, India, and reported that Americans helped more overall,

especially when the cost of helping was low. Nonbrahmin subjects

gave more help to fellow nonbrahmans than to Brahmans, indicating that

the norm of social responsibility can be restricted to ingroup helping.

Smith (1966) noted that the characteristics found to be associated with

Chilean participants in voluntary organisations were consonant with

Maccoby's (1958) findings in the U.S.A.

Difficulties with cross-cultural studies have been discussed by

the experimenters. Appropriate controls are often not utilised.

Nationality is confounded with so many other variables such as economic

status, social norms, and religious beliefs, that the influence of any

one variable is difficult to ascertain. Also, cross-cultural research

is so costly and time-consuming that few research efforts can be

replicated or supported by subsequent work. Finally, few precautions

are taken in choosing representative samples. Subjects from New Mexico,

Madras, or Athens do not necessarily represent the citizens of the

U.S.A., India, or Greece, nor are they always likely to represent fellow

townspeople as a whole.

Sex

Numerous studies have looked at sex as a variable affecting

helping behaviour. Most results have been contradictory, generally

accompanied by ad hoc explanations. More studies conclude that females

are more helpful in a variety of situations, but this could be mainly

because males tend to be more susceptible to certain manipulations such as the dependency and sex of the person in need. It has also been suggested that females only help in certain situations.

Studies which have examined the helping responses of children have revealed no differences between boys and girls (Murphy, 1937; Gewirtz, 1948; Hartup and Keller, 1960; Fischer, 1963; Emler and Rushton, 1974). Research with older children has yielded contradictory data. Males have been more altruistic in their donations to orphans (Rosenhan and White, 1967) and to charity (Bryan and Walbek, 1969), and in sharing candies (Staub and Sherk, 1970). Other studies have found females were helpful (White, 1967; Grusec and Skubiski, 1970; Harris and Siebel, 1975). Lerner and Reavy (1975) suggested that girls help more when they first interact with the person in need of aid. Adolescent girls saw their supervisors as nicer than did boys and said they felt a greater obligation to help them. McGuire and Thomas (1975) suggested another possible reason for contradictory results. Boys may be more easily threatened by others. In their study, boys helped less when the person in need was perceived as more competent, while girls were unaffected by this manipulation. Still, many studies of older boys and girls have found no differences at all in their helping responses (Wright, 1942; Ugurel-Semin, 1952; Handlon and Gross, 1959; Harris, 1967; Shure, 1968; Staub, 1968).

Most studies of adult helping have found no overall differences between male and female helping (Blake, Rosenbaum and Duryea, 1955; Rosenbaum and Blake, 1955; Berkowitz, Klanderman and Harris, 1964; Bryan and Test, 1967; Hornstein et al., 1968; Latané and Darley, 1970; Gruder and Cook, 1971; Thalhofer, 1971; Isen and Levin, 1972; Thayer, 1973). Types of helping studied in these experiments include sharing, donating, intervening during an emergency, and aiding a stranded motorist; and they have occurred in both field and laboratory settings.

A series of experiments with college students (Schopler, 1967;
Schopler and Bateson, 1965; Schopler and Mathews, 1965) suggested that
although overall sex differences in helping may not always be apparent,
the sex of the helper interacts with aspects of the person in need of
help. In these studies, males were more likely to aid a non-dependent
other, while females were more likely to aid a dependent other. A
study by Berkowitz (1967) yielded similar results.

Several reasons for these findings have been suggested. Schopler
(1967) suggested that females appear to adhere more to a norm of social
responsibility, whereas males seem more susceptible to a competing
interest in maximising their own gains. Increasing dependency
instigates cues for males to optimise their own outcomes, while
increasing dependency is a cue for arousing the social responsibility
norm in females. Further evidence that threat may influence the helping
behaviour of males was provided in another series of studies (Midlarsky,
1971; Midlarsky and Midlarsky, 1973), in which adult males were more
helpful when led to believe they were more competent than the person
in need of aid. Unfortunately, females were not included as subjects
in these studies. On the other hand, Leventhal and Lane (1970) found
males more likely to help when their own performance on a task was
perceived as inferior to the recipient's, while the opposite was true
for females.

Bickman (1974) noticed a tendency for males to help females and
for females to help males, though only when not face-to-face. Clark
(1974) also found opposite-sex helping. It was hypothesised that
raising a female's status was not so threatening to a male, but that
females were not so affected. Thalhofer (1971) suggested that females
adhere more to certain social norms, especially to those prescribing
help for the dependent. They find a request from a dependent person
consistent with their sex role and normative prescriptions for nurturant

behaviour, and they are more likely to help a dependent male because his dependency is more striking.

Other studies indicate that the actual kind of helping needed affects male and female aid. Deaux (1972) suggested that sex differences can be understood in terms of the sex-characteristic of the task. Wilson and Kahn (1975) found females more willing to volunteer to stamp envelopes and conduct telephone interviews, and Lombardo et al. (1976) reported that females were more likely to volunteer to counsel others. London and Bower (1968) found that more women engaged in charitable causes and suggested that the social activities associated with such work might have been more rewarding for females.

Males, on the other hand, were more likely to help change a flat tire or pick up a hitchhiker (Pomazal and Clore, 1973), to offer physical help (Moss and Page, 1972), to make a phone call for a stranded motorist (Gaertner and Bickman, 1971), or to donate blood (Fink et al., 1975). Borofsky et al. (1971) found that males were more likely to attempt to stop a fist fight; however, they were more likely to help if the victim was a male, even if the male victim was being assaulted by a female. Piliavin, Rodin and Piliavin (1969) reported that although only 60% of bystanders on a subway were males, 90% of the people who aided a person who collapsed were male. Ehlert, Ehlert and Merrens (1973) found males more likely to turn off someone's car lights. Males were also more likely to help pick up dropped packages (Samerotte and Harris, 1976; Blevins and Murphy (1974), although Lerner and Frank (1974b) found females more likely to help pick up groceries.

Wallach and Kogan (1959) have shown that males and females are more willing to take risks in their own spheres of confidence. It is possible that they may be more willing to risk embarrassment or threat when the helping act is familiar; or they might simply feel more comfortable helping in their perceived role. Supporting this, Schwartz

and Clausen (1970) found women less likely to report an emergency when males were present, although a similar study by Darley and Latané (1968) did not find this effect.

Race

Racial differences in helping have only recently been studied to any great extent, and findings are generally contradictory. Seldom do experiments which have considered both the race of the benefactor and the race of the recipient of help find any overall significant differences. Investigations either report no relationship at all between the race of the person and his helping or note an interaction between his race and the race of the recipient.

Studies which have found no overall relationship between race and helping include those by Schaefer (1973), who looked at children's altruistic endings to imaginary stories; Bickman and Kamzam (1973), who noted that whites and blacks were equally likely to give a small amount of money to a supermarket shopper; Wispé and Freshley (1971), who found equal helping when a shopper dropped her groceries; and Thayer (1973), who found no racial differences in the help given to a deaf person. None of these studies found significant trends for same-race or opposite-race helping. Piliavin, Rodin and Piliavin (1969) also found no differences between helping responses of blacks and whites to a person who collapsed in a subway; however, same-race helping was pronounced when the victim appeared drunk.

Several other studies found an interaction between subject and victim race. A preference for same-race helping by whites but not by blacks was seen in situations involving making a phone call (Gaertner and Bickman; 1971) or picking up a hitchhiker whose car had broken down (Graf and Riddle, 1972). Same-race helping by blacks but not by whites was found in an experiment by Wegner and Crano (1975) in which a person needed assistance after dropping a stack of cards. More whites

than blacks helped whites who were collecting for charity in a field experiment by Bryan and Test (1967), but no condition using black collectors was used. Finally, Katz, Cohen and Glass (1975) reported that both whites and blacks were willing to answer a survey for a black, but only if he said he was a college student.

It is possible that information regarding the environment in which helping is solicited might provide some explanation for the different findings. West, Whitney and Schnedler (1975) found that white and black same-race helping was likely to occur in neighbour-hoods which were predominantly white or black, respectively. This tendency was apparent in all but college campus areas, where opposite-race helping was more likely.

<u>Age</u>

Much experimental work on the relationship of age and helping has been conducted. Except for a few exceptions, most of this work is concerned with changes in the altruistic responses of children as they grow older. These studies were discussed in Chapter I in relation to cognitive developmental changes in helping behaviour. The general trend is that altruistic responses tend to increase in quantity as children grow older.

Only three studies have mentioned age differences in the helping responses of adults. Sorokin (1950) found that people rated their middle-aged neighbours as more helpful than young and old adult neighbours. Galtung (1968) found a similar trend in Norway, although the definition of altruism was unusual. More middle-aged people revealed their altruism by approving aid to underdeveloped countries via the Peace Corps than did people under 30 and over 60. Finally, London and Hemphill (1965) reported that more blood donors seem to be young adults.

Discussion

The main goal of the literature just described has been to attempt to isolate individual factors which might relate to altruism. The popularity of this single-factor approach is demonstrated by numerous studies in other areas such as conformity and persuasibility. Basically, the researcher tries to discover whether people who exhibit one form of behaviour share any other commonalities in personality, sociocultural and biosocial factors.

As illustrated thus far, quite a number of shortcomings can be seen when attempts are made to establish relationships between helpfulness and other variables. Some problems are apparent no matter what form the study takes. Samples are often small. Reported correlations are usually only marginally significant. Little support is found in replications or similar research efforts, and results can be viewed as no more than suggestive.

The method of obtaining a measure of altruism differs from study to study. Sometimes self-reports and others' ratings are used to measure helping behaviour. These methods suffer from validity and reliability problems. Response sets and halo effects are ignored in studies using others' ratings, and social desirability is not controlled in self-report scales. The definition of altruism is not made clear to the rater, so different raters' scores may be based on the assessment of different behaviour patterns. Sometimes, by virtue of the experimenter's definition of altruism, a correlation is almost certain to be found. For example, when altruism is defined as social responsibility, and other tests of social responsibility have already been seen to correlate with particular variables, then altruism is likely to correlate with the same variables.

Behavioural ratings of altruism have their own problems. Most important, altruism is operationalised in so many ways that information

regarding various forms of helping cannot justifiably be pooled.
In laboratory studies, the situation is usually contrived and
artificial. Very specific situations are used, making generalisa-
tions unacceptable. In some cases the situation is so unique that
the subject is not likely to have experienced it before; in others
the situation is very ordinary and familiar. Important variables
are often left uncontrolled, thus masking interactions among various
factors. The studies are not always carried out systematically.
Instead, personality tests are given as a convenient side interest
or data compiled as an afterthought. Finally, the intent behind the
helping is not always taken into account. A helpful response may be
compliantly emitted in response to demands from another, or it may
be a nonconformist act in the presence of passive bystanders.
Although the end product of either might involve helpfulness,
different individual factors should be expected to influence each
activity.

An extensive study by Gergen, Gergen and Meter (1972) usefully
illustrated some of the problems associated with these methods and
stressed the necessity for psychologists to study relationships
using different techniques. In their study, male and female students
completed a battery of personality tests and were later given the
opportunity to help in five different situations. The results revealed
the importance of noting interactions between dispositions and
situations. Little consistency in any of the traits' overall predictive
ability was found. Single traits failed to predict more than one type
of helping activity; in fact, sometimes the same dimension predicted
helping in opposite directions, depending on the kind of helping
required. The experimenters expressed an exchange theory point of
view and suggested that various types of helping activities will motivate
or appeal to people for different reasons; the costs and payoffs differ

from one person to another.

Other points emerged from the findings. If predictors were only studied as single factors, important interactions among them were masked. Overall correlations were reversed in specific subpopulations, and overall zero-order correlations hid highly significant relationships in the subgroups. The implications for effects of sociocultural and biosocial variables in particular were stressed. The authors also stressed that personality scores may be highly susceptible to situational shifts, making any generalisations suspect. It seems likely that until interactions of individual and situational factors are considered, the data accumulated will increase in quantity only, and results will continue to be varied and contradictory.

Chapter III

SITUATIONAL DETERMINANTS OF HELPING BEHAVIOUR

Gergen, Gergen and Meter's (1972) main point is that
researchers have gone about the search for individual factors in an
inefficient and inappropriate way. However, implicit in their
argument is the contention that relatively stable aspects of the
subject may affect whether or not he will behave helpfully, but only
in particular situations. Recent discussions (Argyle and Little,
1972; Bowers, 1973) about the interrelationships between individual
traits and situational variables lend support to this assertion.
Many other psychologists have been so dissatisfied with the search
for individual determinants of helping that they have tended to
abandon the area completely. Their studies have instead examined
situational influences such as temporary states of the helper,
information about the recipient of help and his relationship with the
potential benefactor, and data concerning the effects of bystanders.

The helper

In studying the benefactor of help, experimenters have been
concerned with whether temporary, experimentally induced positive
and negative states might affect the helping behaviour of a subject.
One finding is that people who feel happy, successful, or competent
are more likely to give help in a variety of situations than subjects
who are not given the opportunity to experience such positive states.
However, negative states such as embarrassment and guilt often appear
to lead to increased helping as well. The general trend is for
heightened affective states to produce more helpfulness than neutral
ones.

A number of experimenters have manipulated the mood of the subject to ascertain the effect of affective states on helping. Isen and Levin (1972) found that subjects who received unexpected cookies or who found a dime in a phone box proved more generous in their charity donations than less fortunate control subjects. Harris, Liguori and Stack (1973) also found that receivers of cookies were more likely to volunteer to help in a charity drive. Subjects who found a dime in a phone box were more likely to return a set of keys (Forbes, TeVault and Gromoll, 1972; Forbes and TeVault, 1975) or to mail a letter, even if it was unstamped (Levin and Isen, 1975). Moore, Underwood and Rosenhan (1973) told subjects to think about either happy or sad situations; those who experienced positive states donated more money than controls, and controls helped more than those who experienced a negative state. Rosenhan, Underwood and Moore (1974) asked children to reminisce about happy or sad experiences and found that happy subjects subsequently contributed more than either controls or sad subjects. Hornstein et al. (1975) reported that subjects who heard a radio programme reporting good news were more helpful than those who heard bad news or a neutral report.

Other studies have manipulated the perceived success or competence of subjects to find how other positive states might relate to helping. Isen (1970) and Isen, Horn and Rosenhan (1973) found that children who were told they had performed well on a task were more likely to contribute money to charity. Barnett and Bryan (1974) reported that boys who competed and won were more generous than those who competed and lost, competed and drew, or did not compete at all. Adults informed of their competence also helped more (Berkowitz and Connor, 1966; Harris and Huang, 1973). Studies by Midlarsky (1971) and Midlarsky and Midlarsky (1973) showed that subjects who were told they adapted well to electric shocks were more likely than controls to

volunteer to receive shocks for someone else. Evidence accumulated
by Kazdin and Bryan (1971) revealed that competence did not need to
be related to the kind of help given. Subjects told they were
creative were as likely as those told they were physically fit to
donate blood, and both were more helpful than controls informed of
average competence. Ickes, Kidd and Berkowitz (1976) found that only
subjects who believed they succeeded on a task because of their own
ability and not because of chance were likely to contribute money to a
needy confederate. Finally, Horowitz (1976) found that people who were
told they were high in moral development helped more than others.

Only a few studies have used similar situations and found
different trends. Blevins and Murphy (1974) found no relationship
between finding a dime in a phone box and helping a person pick up
dropped packages. Schellenberg and Blevins (1973) arranged for some
subjects to receive gift certificates for free hamburgers and found
that they were no more likely than nonrecipients to return a postcard
agreeing to participate in a future experiment. Harris and Smith (1975)
found that receiving a free candy bar was not related to increased
helpfulness. However, in all these experiments the time elapsed
between manipulated good mood and the opportunity to help was much
greater than that in previous studies. Isen, Clark and Schwartz (1976)
illustrated that the effect of good mood on helping declines over time;
after 20 minutes, experimental groups helped no more than controls.

A number of experimenters have reported that certain manipulated
negative states are also likely to lead to altruism. Apsler (1975)
studied the effect of embarrassment on subsequent helpfulness. Deriving
his predictions from Goffman's (1959) contention that people seek to
"maintain face" and present a consistent image of themselves to others,
Apsler expected embarrassed individuals to attempt to correct their
damaged image. In his experiment, subjects who had to perform embar-

rassing and foolish acts as part of their participation in an experiment proved more helpful to others later. However, the findings did not fully support Goffman's ideas, as subjects were equally willing to help people who were not aware of the embarrassing acts. Apsler explained the findings in terms of attempts by the embarrassed subjects to increase self-esteem. Also, Filter and Gross (1975) found that subjects led to believe their scores were deviant were more willing to write letters for the experimenter, whether he knew the scores or not. It was suggested that the expected social reinforcement obtained after helping would bolster or restore self-esteem.

Aderman and Berkowitz (1970) used mood tests to check the success of their mood manipulation and found that subjects who felt unpleasant were as likely as those who felt pleasant to help, and both helped more than subjects who felt neutral. Aderman (1972) gave subjects pleasant and unpleasant slides to view and found that subjects in the negative mood condition volunteered to participate in more future experiments than did subjects in the positive mood condition or controls. It was suggested that the negative slides, which depicted poverty-stricken people, induced feelings of guilt, and that guilt was expiated through altruistic behaviour. Donnerstein, Donnerstein and Munger (1975) replicated the study and found similar results. In addition, they obtained a measure of subject guilt feelings and found that those in the negative mood condition did indeed feel significantly more guilty than subjects in the other conditions. In a naturalistic study, Harris, Benson and Hall (1975) looked further into the role of guilt. They found that churchgoers were more likely to donate to charity before confession than afterwards. The authors suggested that confession served to reduce guilt feelings which were maximal before confession.

Many experimenters have studied the relationships between guilt

and transgression and their effect on altruism. These studies typically induce a subject to harm someone and then seek to find whether subsequent helping is affected. Walster and Prestholdt (1966) induced subjects to rate a confederate too harshly and then gave them the opportunity to help the slighted victim. Confederates rated too severely were helped more and also rated more attractive, presumably to compensate for the unfair rating. Darlington and Macker (1966) demonstrated that when failure in a task resulted in harm for a confederate, more help was given to the victim. Berscheid and Walster (1967) found that subjects who deprived a fellow subject of trading stamps in the course of the experimental task were more likely to compensate him in another task.

These helpful acts do not appear to have been emitted as a simple response to the victim's unhappiness. Regan, Williams and Sparling (1972), Harris and Samerotte (1976) and Samerotte and Harris (1976) found that subjects gave more help if they perceived themselves responsible for the victim's suffering than if they thought someone else was responsible. Other experimenters (Krebs and Baer, 1968; Brock, 1969; Konecni, 1972) obtained similar results.

Some work indicates that altruism following transgression is a form of self-punishment administered to relieve guilt. Epstein and Hornstein (1969) found that altruistic behaviour following harmdoing did not increase when the subject was punished by a third party. Regan (1971) reported that subjects who thought they had ruined an experiment offered more help to the experimenter unless they were first given a cathartic interview. McMillan (1971) demonstrated that subjects were more willing to help score tests for an experimenter after cheating during an experiment; however, if they were give false high-esteem scores, cheaters helped no more than non-cheaters. It is possible that these subjects attributed qualities to themselves which were more compatible with high self-esteem than guilt. Rawlings (1968) suggested

that the altruistic behaviour following transgression may be engaged in for its self-punitive aspect.

Some research indicates that guilt may not be the only factor mediating increased helping. Wallace and Sadella (1966) reported that subjects who thought they broke an expensive machine were only more likely to agree to participate in a painful experiment if their transgression was discovered. Silverman (1967) found that children who were caught cheating helped more than non-cheaters or cheaters who were not caught. It is possible that guilty feelings were intensisified by the discovery of transgression, but it also has been suggested that the helping may have been an attempt to raise their prestige in the eyes of the witnesses of transgression.

Walster, Bersheid and Walster (1970) and Walster and Piliavin (1972) have used exchange theory to explain the increased helping as a means of restoring actual and psychological equity. They view social exchange as maintained when all individuals involved are making a profit, and all payments made by individuals eventually balance out. In any given situation an individual who harms another should want to compensate him by helping him. If the transgressor does not or cannot help, he must maintain internal consistency through other means. Thus he may denigrate the victim and conclude that the fate was deserved (Lerner and Matthews, 1967; Lerner and Simmons, 1966), or he may minimise the damage done (Noel, 1973).

Freedman (1970) suggested that guilt and not the need for equity underlies the increased helping after transgression. He noted that such helping is not always directed toward the appropriate person but is instead given to witnesses of the harmful act (i.e., Carlsmith and Gross, 1969; Cialdini, Darby and Vincent, 1973) or even to unrelated third parties (Samerotte and Harris, 1976).

However, Walster, Berscheid and Walster (1970) have extended the

notion of equity to explain wider aspects of helping. A harmdoer
who is responsible for another's suffering, whether intentionally or
accidentally, will probably experience considerable distress and
have strong desires to restore equity to the relationship. Nevertheless,
simply observing a victim's suffering is often enough to imbalance
the relationship and to produce the same distress that leads to acts
which will restore the balance. In the same way, helping a nonvictim
after transgression might serve to change one's own position and thus
bring the original relationship back into balance. It seems apparent
that this extension of equity theory contains a circular element
which cannot really be shown wrong.

Lerner (1970), considering an alternative to the equity explana-
tion, suggested that subjects help or derogate victims in order to
maintain the belief that they live in a just world. This idea was
based on Heider's (1958) contention that people have a strong desire
to live in a world in which good people are rewarded and bad people
punished. Supporting this, Simmons and Lerner (1968) reported that
a potential helper who believed a victim deserved her fate was less
likely to provide her with needed help.

Regardless of the explanation offered, it seems that information
about temporary states of an individual are more successful in predicting
helping behaviour than are more stable factors such as personality,
sociocultural or biosocial variables. In general, heightened affective
states tend to lead to increased helping responses. However, studies
indicate that interactions between temporary affect and individual
factors such as sex (McGuire and Thomas, 1975) and anxiety (McGovern,
1976) might operate to produce different patterns of helping.

The recipient

Another situational influence that has been studied extensively involves the potential recipient of aid. The importance of a helper's perception of a person in need was illustrated in an analysis of contributions to the New York Times 100 Neediest Cases (Bryan and Davenport, 1968). Details about needy people are periodically published in the New York Times, and readers are asked to contribute to people of their choice. It was found that people who were clearly not responsible for their suffering received the largest amount of donations, while those considered blameworthy received the least. For example, moral transgression was negatively associated with the number of contributors, while physical illness was positively related to helping. This is consistent with Lerner's (1970) "just world" notion.

Researchers have attempted to find whether a person in need is more or less likely to be helped if he is dependent, attractive, or well liked; if he is similar to the helper in sex, race, or attitude; or if his relationship to the helper is of a particular nature. Krebs (1970) suggested that this area has been largely ignored because results seem to be predictable by common sense. Indeed, researchers tend to concur in the finding that more help is generally given to people who are dependent and attractive to the helper. However, inconsistencies in the findings have arisen, and interactions with other variables have added interest to this area.

Sex and dependency

Some studies have attempted to find if the sex and the dependency of the person in need will affect whether or not helping occurs. Findings are varied and difficult to interpret, as a number of variables which have been shown to interact with these factors have been largely ignored. Field studies by Simon (1971), Clark (1974),

and Latané and Dabbs (1975) found females more likely to receive help in a variety of situations. However, these studies did not consider the effects of sex of helper or dependency of the victim, both of which were shown in Chapter II to be of importance.

Gruder and Cook (1971) varied the dependency and sex of the recipient and the sex of the benefactor and found no effects due to the latter. However, dependent females received more help than non-dependent females and also more help than males. Dependency made no difference in the help given to males. Unfortunately, so few experimenters have varied all three of these factors in one study that generalisations cannot be made. McGovern, Ditzian and Taylor (1975) varied the sex and dependency of the person in need but used the results of the Gruder and Cook study to justify using only male subjects. Since a number of other studies (Schopler and Bateson, 1965; Schopler and Matthews, 1965; Schopler, 1967) did find the sex of the helper to interact with dependency, this procedure seems to be based on premature conclusions.

A series of studies by Berkowitz and his colleagues (Berkowitz and Daniels, 1963; Daniels and Berkowitz, 1963; Berkowitz and Daniels, 1964; Berkowitz and Connor, 1966) looked specifically at the dependency of the person in need but seldom examined sex interactions. These studies typically involved a subject who could help a supervisor by constructing paper boxes or envelopes. A consistent finding in these studies was that subjects were more helpful when the supervisor was dependent upon them. In one study (Berkowitz, Klanderman and Harris, 1964) the sex of helper and recipient was varied and still only a main effect for dependency was found. Thus, in this type of situation at least, dependency had a general positive effect on helping, regardless of the sex of helper and recipient. Krebs (1970) noted that different manipulations of dependency in the Berkowitz and Schopler studies might explain the discrepant findings. Only in the former could the help be

given only by the subject; in the latter, the recipient could look elsewhere for help.

Increased helping was also associated with dependency when the helping involved signing names to a form (Harris and Meyer, 1973; Lesk and Zippel, 1975); aiding a stranded motorist (Pomazal and Clore, 1973); contributing to a fund to help fly relatives to a dying sailor (Wheeler and Wagner, 1968); and solving problems which encompassed electric shocks (Midlarsky, 1971).

A few researchers have noted an interaction between the dependency of the person in need and the costs of helping him. In a field experiment conducted in shoe stores, Schaps (1972) found that a highly dependent confederate who limped into the store with the heel of her shoe broken received a higher level of service than a non-dependent person, but only if the costs of helping her were low (few people were in the store waiting to be served). Gruder (1974) also found that helping decreased under dependency and high cost when helping involved agreeing to a bargain in a role playing situation.

Interactions between dependency and choice have also been found. Jones (1970) found that subjects who were not free to refuse a request for aid were more likely to work hard for a person in need who was dependent. However, when subjects were free to refuse to help, increasing the dependency of the person resulted in less helping. Berkowitz (1973) and Fraser and Fujitomi (1972) found similar results. Jones suggested that when subjects could choose whether or not to help, increased dependency represented a threat to their behavioural freedom and reactance (Brehm, 1966) was aroused. Thus in some cases dependency might lead to decreased helping.

Interpersonal Attraction

A number of investigators have attempted to assess the relationship between interpersonal attraction and helping, but only a few have

directly manipulated a subject's liking for a potential recipient of help. This is partly because, as mentioned earlier, common sense might predict that people who are liked are more likely to be helped than those who are disliked. However, not all research supports this.

Heider (1958) expressed disagreement with the proposition that people, especially children, are inclined to benefit those they like. For example, Wright (1942) found that school-age children expressed a greater willingness to share a favourite toy with a stranger than with a friend. When children were asked to give reasons for their decision, the most popular answer entailed a desire to reduce or eliminate possible inequalities between the stranger and friend. However, Staub and Sherk (1970) found that children were more likely to share a crayon with a liked partner than a disliked one. The studies were different in that Staub and Sherk measured the difference in sharing of children with friends and with strangers, while Wright's study asked children to choose between sharing with a friend and a stranger. It is possible that only when the possibility of sharing with a stranger is made salient will children make a decision which favours a stranger.

Evidence accumulated from studies with adults is also contradictory. Some studies seem to indicate that liking is not an important variable affecting helping. Berkowitz and Daniels (1963) and Schopler and Matthews (1965) both found that dependent confederates elicited more help than nondependent ones, but in the former such confederates were disliked and in the latter they were liked. Daniels and Berkowitz (1963) told subjects that a questionnaire revealed whether they would like or dislike a dependent supervisor and found more help given to those liked than disliked. Epstein and Hornstein (1969) found that subjects who had previously been punished for selfishness were less selfish with a liked person, while those not so punished were less selfish with a disliked person. In a study by Regan (1971), subjects

overheard a confederate engaged in either polite or rude telephone conversation. Subjects rated the polite confederate as more likable but proved no more likely to help her by buying raffle tickets. Regan suggested afterwards that the polite conversation may have been too inocuous to lead to actual liking and that the differences in the ratings were only relative. Goodstadt (1971) used a stronger manipulation of liking but found only a nonsignificant tendency on the part of subjects to help a liked more than a disliked other.

An even stronger manipulation was used by Gross, Wallston and Piliavin (1975). An experimenter was either polite, friendly and cheerful or irritable, impatient and hostile throughout the course of the experiment. Cues in her office in the form of signs and notes were also used to make the manipulation more effective. A manipulation check revealed that subjects perceived the experimenter in the positive condition as significantly more likable. Subjects were almost twice as likely to agree to complete an optional questionnaire for the liked experimenter than for the disliked one. It is possible, though, to interpret the increased helping as a function of the mood induced by the pleasant experimenter (i.e., Isen and Levin, 1972); no checks on subject mood were made. The experimenters' interpretation may be partly supported by the fact that none of the subjects in the "dislike" condition who did set up an appointment to complete the questionnaire actually kept the appointment. On the other hand, subjects in both conditions who were asked to fill in the questionnaire at home were equally likely to send it back by post, so it is possible that subjects who failed to keep the appointment were merely trying to avoid further contact with the unpleasant experimenter. It was noted that the proportion of subjects agreeing to help the liked versus the disliked experimenter was the same as that found in the Goodstadt (1971) study, but Goodstadt's sample had been too small to yield significant results.

These, then, are the only studies that directly examined
the effects of liking on helping. No unequivocal support seems to
have been found to confirm the proposition that people help those
whom they like the most. Further research may be necessary to clarify
the reason for inconsistencies in these studies.

Physical appearance

A number of other researchers have explored interpersonal
attraction more indirectly by manipulating variables thought to
contribute to attraction. The potential recipient's physical
appearance is one such variable. Unfortunately, only a few studies
have attempted to study the effects of appearance on helping by
manipulating attractiveness without the use of a handicap.

By altering the hair, clothes and make-up of one woman, West
and Brown (1975) were able to use her as a confederate in both
attractive and unattractive conditions. In their field experiment,
male subjects were approached by the woman and asked for money for a
tetanus injection. The attractive woman was given significantly more
money than the unattractive one, but only when her need was obvious
(a "wound" received from a rat bite was visible). When the urgency of
the need was questionable (no wound was visible), attractiveness had
no effect on helping. Benson, Karabenick and Lerner (1976) left
completed application forms in a phone box for unsuspecting subjects
to find. Forms which included a photograph of an attractive applicant
were more likely to be forwarded than those depicting an unattractive
applicant. Finally, Piliavin, Piliavin and Rodin (1975) found that a
person with a large facial birthmark was less likely to be helped
than a person without one. These findings indicate that physical
attractiveness may have yielded an unrecognised effect in some studies
of sex and dependency.

Other manipulations of attractiveness have been attempted through

the use of various handicaps which could have their own help-eliciting features. Doob and Ecker (1970) compared the help given to a person with an eyepatch with that given to a non-handicapped person. Although the former were viewed with more sympathy, there was no difference in the help given in both conditions. It is possible that sympathy arousal might have counteracted any inhibiting effect that the handicap might otherwise have caused.

Some researchers suggested that the handicap in the Doob and Ecker study was not severe enough to affect helping. Pomazal and Clore (1973) found that people with a knee brace and arm sling were helped less often when they had automobile trouble than were other people. The results were interpreted as compatible with Goffman's (1963) suggestion that physical handicap serves as a mark of stigma and reduces attractiveness. Langer et al. (1976) suggested that the avoidance of stigmatised people is a function of a conflict over whether or not to stare at them. In their study, no derogation of physically stigmatised people was found to accompany avoidance, despite Goffman's assumptions that such people arouse feelings of repulsion and disgust.

In the Doob and Ecker (1970) study, the aid given to handicapped people increased if the helping entailed no further interaction. This could suggest an alternative interpretation. It is possible that subjects view the costs of helping a handicapped person as higher than the costs of helping a nonhandicapped person, as the amount of aiding necessary is more unknown. If the full extent of help required is indicated, costs are reduced and helping then increases.

A study by Samerotte and Harris (1976) revealed further possibilities. Significantly more people helped to pick up dropped envelopes for a neutrally handicapped (bandaged) person than a disfigured person. The experimenters suggested that there may be two components of reactions to helping a handicapped person. One is

sympathy, which could tend to increase helping. The other is the
desire to avoid the handicapped individual because of his decreased
level of attractiveness, which could tend to decrease helping.
Thus the degree to which a handicap is disfiguring, disabling,
permanent or rare might all be important factors. A study by Tipton
and Browning (1972) supported this. More help was given to old and
obese people who dropped bags of groceries. In this case, sympathy
might have been more important than attractiveness in eliciting help.

Familiarity

Only a few studies have tried to establish a relationship
between the familiarity of a potential recipient and the helping he
later elicits. Latané and Rodin (1969) found that a lady who fell and
cried out in pain was more likely to be helped by a bystander who had
previously met her, if only briefly, than a complete stranger. In a
naturalistic study by Macauley (1975), a confederate was either
overheard talking pleasantly or unpleasantly or was not overheard at
all. Familiarity in the form of overhearing either conversation led
to significantly more helping than no prior familiarity at all,
although even more help was given to the pleasant person. Liebhart
(1972) suggested that empathy and sympathetic orientation is heightened
with an acquaintance, leading to increased help for a familiar figure.

Similarity

Some researchers have studied whether similarity leads to
increased helping. Sole, Marton and Hornstein (1975) found that
helping was increased when a potential recipient agreed totally with
a subject on matters of high importance, but a single dissenting
opinion was as detrimental as total disagreement to the rate of
helping. Interestingly, though, ratings of interpersonal attraction
showed a smooth, gradual increase with increasing similarity. It
is thus possible that similarity could be a better predictor of helping

than liking. Similarly, Hornstein et al. (1971) found that Jews were more likely to help a person whose views were pro-Israel than one who was pro-Arab, and Harris and Baudin (1973) reported that Spanish-Americans were more likely to help a Spanish-speaking experimenter than one who spoke English. Similarity was also associated with increased helping in studies by Pandley and Griffitt (1974) and Kelley and Byrne (1976).

Sex and race similarities do not always lead to increased helping. As discussed earlier, cross-sex helping has been more the rule (i.e., Bickman, 1974; Clark, 1974). Same race helping has been found in studies where the help required involved a Salvation Army donation (Bryan and Test, 1967); a phone call (Gaertner, 1973; Gaertner and Bickman, 1971); the return of a lost application form (Benson, Karabenick and Lerner, 1976); aid to a drunk traveller (Piliavin, Rodin and Piliavin, 1969); or help on the highway (Penner, Dertke and Achenbach, 1973). Still, Gaertner (1975) found that when no bystanders were nearby, white subjects were equally likely to help blacks; and Wegner and Crano (1975) and West, Whitney and Schnedler (1975) found exceptions in university communities. Other studies have found cross-race helping (Dutton, 1973) or no differences (Wispé and Freshley, 1971; Lerner and Frank, 1974a). The findings are very contradictory.

Other kinds of similarity have also been studied. Similarity of fate led to more helping in a laboratory study by Dovidio and Morris (1975). Simmons (1969) found that a previously betrayed subject was more likely to help a similarly betrayed supervisor than a control. "Hippies" and conventionally dressed "straights" were more likely to help apparent members of their own groups by giving them a dime for a phone call (Emswiller, Deaux and Willits, 1971) or aiding them when they had car difficulties (Graf and Riddle, 1972). Karabenick, Lerner and Beecher (1973) found that voters at election polls were more likely

to aid a campaign worker who was supporting the candidate of their choice, although Karabenick, Lerner and Beecher (1975) found only a nonsignificant tendency for anti- and pro-capital punishment students to help a person with similar attitudes. Finally, political party affiliation as designated by bumper stickers on cars did not result in a greater tendency by similar subjects to turn off car lights (Ehlert, Ehlert and Merrens, 1973).

Thus some types of similarity seem to lead to increased helping while others do not. Hornstein (1972) suggested that empathic relationships provide a basis for the arousal of tension coordinated with another's goal. In order to reduce this tension, people will provide help for the other person. Krebs (1975) provided some support for this by using psychophysiological responses to discover whether empathy with a similar other was greater than that with a dissimilar other. All subjects who believed a confederate received pain exhibited greater physical reactions than those who did not think the confederate was in pain, but the effect was especially marked for those who believed the confederate was similar in personality and values. Subjects similar to the suffering confederate reported feeling worse and identifying more with the confederate. When subjects could help themselves at a cost to the victim or help the victim at a cost to themselves, subjects who had responded empathically were most altruistic. It is possible, then, that increased empathy mediates altruistic responses and that only certain kinds of similarity arouse this empathy.

Type of request

The type of request made by the recipient seems to be an important determinant of whether or not help will be granted. Langer and Abelson (1972) illustrated the effect of subtle semantic variations in the request for help. When a confederate needed help in order to catch a train, an appeal which first drew attention to her plight and

state of need was more effective in securing help than was one which first stressed the duty or responsibility of the potential benefactor to offer assistance, even though the content of both appeals was identical. However, when the need for help was less legitimate (she had to go shopping), the opposite order was more effective.

Kriss, Indenbaum and Tesch (1974) explored the affect-arousing capacity of a request by varying the emotional tone of a help-seeking message. Subjects who received a positive appeal ("If you help me, I'd appreciate it and you'd know you helped someone...") or a simple neutral request helped more than those receiving a negative appeal ("Think how you'd feel if you were in a similar position and you weren't helped..."). However, this effect only occurred when the recipient and helper were of different or ambiguous status. Sechrest, Fay and Flores (1970) showed that people were more likely to volunteer to give blood if the appeal message stressed facts about the surplus of blood in a healthy adult than if the message were based on the dependency of the needy. Harris, Liguori and Stack (1973) found that offering a small bribe to a potential helper could increase his helping in a charity drive.

A subject's commitment to a recipient before a request has been examined. Moriarty (1975) conducted field experiments on a beach and in a cafeteria and found that bystanders were more likely to intervene to stop a theft of belongings if they had already committed themselves to helping the potential victim. Shaffer, Rogel and Hendrick (1975) found the same results in a library.

Prior commitment of a more indirect nature has also been studied in the context of the "foot-in-the door" technique. Freedman and Fraser (1966) illustrated this phenomenon by showing that subjects who agreed to help after an initial small request were also more likely to comply with a second, greater request than were those not initially approached.

This occurred even when the two requests were unrelated. Harris (1972) and Harris, Liguori and Stack (1973) also found that subjects who were asked a trivial initial request showed greater helpfulness following a second larger request. The results have been interpreted in terms of attribution theory (Kelley, 1973) and self-perception theory (Bem, 1967). A person temporarily changes his self-perception after becoming involved in helping. He identifies himself as a helpful person and is thus more likely to help again. Uranowitz (1975) examined this possibility in a field experiment. Bystanders were asked to watch the groceries of a confederate who either explained calmly that he wanted to retrieve a dollar bill he had dropped in a nearby store, or who seemed highly agitated and hurriedly stated that he had lost his money-filled wallet in the store. After the first confederate retrieved his lost item and left the scene, subjects had an opportunity to help a second confederate who dropped some of her purchases. As predicted, those subjects who had helped the calm confederate were more likely to help the second confederate than were either controls or those who had helped the worried man. This was presumably because the former made self-attributions of "helpfulness," while the other subjects attributed their behaviour to external factors.

One implication of these explanations is that helping should also be decreased if a subject has refused to comply with a prior request, as he should then perceive himself as a nonhelper. Although some evidence for this has been found (Snyder and Cunningham, 1975), most research is not so supportive. Cialdini et al. (1975) found that refusal to comply with a large request led to an increase in compliance to a second more moderate request. This only occurred, though, when the same person made both requests. Cialdini and Ascani (1976) also reported that prior rejection of a large request, followed by a second request to donate blood, was more effective than a direct request.

The experimenters argued that this situation brought Gouldner's (1960) norm of reciprocity into effect. When the recipient asked for a lesser favour, he was conceding from his original position to a position more favourable to the other. The potential helper should then have also been willing to make some concession.

Cann, Sherman and Elkes (1975) attempted to find a reason for the discrepant findings in the Snyder and Cunningham (1975) and the Cialdini studies. The former asked for a second favour several days later, while the latter asked immediately after the first was refused. Cann, Sherman and Elkes induced subjects to comply with a small request or to refuse a large initial request. When the small request was first made and complied with, compliance to the second request increased relative to a control group, regardless of the timing of the second request. When the large request was made and not complied with, a second immediate request produced heightened helpfulness but a delayed request produced decreased compliance relative to controls. It is conceivable that the process of self-attribution and the norm of reciprocity might be involved in delay and no-delay conditions, respectively.

Reciprocity

It appears, then, that a person who has already given help to someone will be more likely to help again. Another aspect of the request for help concerns whether or not help will be increased if the potential helper has already received help. Although their explanations vary, a number of researchers have found an increase in helping responses when the person in need showed previous helpfulness to the subject. Studies by Brehm and Cole (1966), Lerner and Lichtman (1966) and Schopler and Thompson (1968) reported that prior helping elicited more aid, but only if viewed by the eventual helper as appropriate. Favours which were seen as inappropriate - that is, those whose intentions were

in doubt - brought about a decrease in helping. Fisher and Nadler (1974) obtained attraction ratings which suggested that the reciprocity effect may be due to increased liking of the first helper. However, it could also be due to increased good mood (i.e., Isen and Levin, 1972) or to the desire to restore equity (i.e., Walster, Berscheid and Walster, 1970). Greenberg and Shapiro (1971) suggested that a state of indebtedness constitutes a threat to a person's freedom, so helpfulness is reciprocated whenever possible.

Cost of helping

The kind of help required by the recipient might affect whether or not he will be successful in receiving aid. Sometimes the cost of helping - personal danger, time lost, embarrassment, disgust, fear of failure - is too high; other times the reward for helping - feelings of competence, praise from bystanders, thanks from the victim, remuneration - is too low. Piliavin et al. (1969) found that bystanders in a subway were less likely to help a collapsed drunkard than a sober man, possibly because the costs of helping the drunkard were higher. Piliavin and Piliavin (1972) found that bystanders were less likely to help an invalid if he was bleeding. Edwards (1975) found that subjects were less likely to pick up an embarrassing object than a neutral one for a shopper. Similarly, the cost for not helping may be high enough to increase helping. Staub and Baer (1974) reported that passersby gave more help to a victim if escape from the situation was difficult, although the costs of helping a man with a bad heart were high enough to stop helping. However, Bloom and Clark (1976) manipulated subjects' perceptions of the costs of helping and not helping a hemophiliac by donating blood. Neither subjects' behaviour nor their subsequent reports of intent related to the costs.

The bystander

The discussion thus far has concerned the two figures who might at first be expected to have the greatest effect on helping. However, the more involvement a person seems to have in a helping situation, the less evidence exists to illustrate his effect. As has been illustrated, researchers have reported few consistent findings in their attempts to discover which traits of the helper, if any, are likely to relate to increased helpfulness. Information about the potential recipient may be marginally more successful in predicting helping behaviour, but it too is subject to unexplained contradictions.

The helping situation often involves one or more additional people who initially might appear to be of only secondary importance. These people are the bystanders. Even when not directly involved in the helping situation, the bystander appears to exert a powerful influence on people's decision to provide aid. He may act as an audience to a potential helper's actions and thus be a subtle source of persuasion or inhibition. He might provide obvious or inconspicuous reward and punishment. Most importantly, he may act as a model, providing guidelines as to how to behave. His own activity or passivity might provide cues about the appropriateness of certain responses. In addition, he may demonstrate the costs and rewards of helping, and he may increase the salience of norms. His presence may act to put the potential helper in a particular affective state or in a specific role.

The influence of models is, of course, not limited to helping situations. Their effect has been demonstrated in situations involving conformity, aggression, perception, performance, and other psychological processes. In helping situations, the general effect of models is to increase or decrease the number and magnitude of

altruistic responses in individuals and groups, depending on whether the models themselves act positively, negatively or neutrally. As will be shown, the influence of a model - whether his presence is visible or implied - appears to be no less important than any other variable discussed thus far.

Simple model effects

Studies investigating simple model effects have shown that models who act in a socially positive way have a marked effect on the helping behaviour of onlooking bystanders. This seems to occur whether the help is directly solicited or only indirectly sought. Schachter and Hall (1952) found that college students who saw a large number of their peers volunteering to participate in an experiment were themselves more likely to volunteer than were students not observing this. However, while the models had an initial effect upon the behaviour of the subjects, the effect did not generalise to a long-term one. Subjects from both groups were equally likely to actually attend the experiment for which they had volunteered. Rosenbaum and Blake (1955) also found that the observation of volunteering increased others' likelihood of volunteering. In this study the confederate model seemingly participated in an experiment before the subject was asked to volunteer, thus providing information about the time required for the experimental session. In this situation, then, the model not only provided guidelines for behaviour but gave information about the costs of helping. Comparable results were obtained by Rosenbaum (1956), even when subjects were not given information about the length of time of the experiment. Blake, Rosenbaum and Duryea (1955) found that the effect of models was apparent even when the models were not physically present. Students donating money toward a gift for a secretary gave an amount similar to that which they were led to believe others had given; a paper which

listed the amounts others had donated influenced the amount they themselves would give. A similar effect was found in a study of petition signing by Blake, Mouton and Hain (1956).

Test and Bryan (1969) demonstrated that subjects who observed a charitable model did more work for an experimenter than did those who were exposed to a selfish model or no model at all. Wagner and Wheeler (1969) found comparable results, although only in their study did selfish models bring about even less helping than did the controls. Finally, Masor, Hornstein and Tobin (1973) reported that although a selfish, exploitative model elicited the expression of disdain in subjects, the same subjects modelled his behaviour with precision.

In a number of studies, subjects have had the choice to initiate helping by going out of their way to be altruistic or to decline to help by merely failing to act. In naturalistic studies conducted by Bryan and Test (1967), motorists were more likely to stop to help a lady repair a flat tire if someone was already helping her, and shoppers were more likely to contribute to a Salvation Army kettle after witnessing another person donate. Macauley (1970) found that subjects donated more to a Santa Claus collecting for charity or to a person collecting money for Biafra if another person had just donated money. Solomon and Grota (1976) found that a helpful model was likely to increase helping responses of other bystanders when a confederate dropped an object, unless the object was an embarrassing one. Ross (1970) suggested that people's responses to models sometimes defy common sense. People proved more likely to help a confederate find a lost contact lens if other people had stopped to help, even though additional help in this case might have been more a hindrance than a help.

Only two studies have found discrepant results. Harris, Liguori and Joniak (1973) and Harris and Samerotte (1975) found that although

an aggressive model increased aggressiveness in bystanders,
altruistic models did not affect subsequent helping. The authors
suggested that differences in the type of requests might have
accounted for these findings.

Only a few researchers have examined effects of characteristics
of the model on helping. Hornstein, Fisch and Holmes (1968) and
Smith, Smythe and Lien (1972) found that a model who was similar to
a subject was more effective in eliciting subsequent helping,
although a later study by Smith, Vanderbilt and Callen (1973) did not
support the similarity effect. Gross (1975) found that the legitimacy
of a model's helping behaviour greatly affected the helpfulness of
onlookers.

Complex model effects

The studies discussed thus far illustrate the tendency for
helpful and selfish models to respectively increase and decrease the
altruistic responses of observers. Recent research has also examined
more complex model effects. Publicity involving a now-famous incident
in a New York City suburb in 1964 played an important role in
stimulating such research (Krupat, 1975). A young woman called
Kitty Genovese, walking home from work during the night, was accosted
by a man who attacked her with a knife. The woman screamed and
managed to escape once, calling out for help. Although the man left
the scene, he soon realised that no one seemed to be coming to the
woman's aid, so he attacked her again and finally murdered her. The
attack lasted over a one half hour period.

Later interviews by newspaper reporters revealed that although
at least 38 neighbours had come to their windows on hearing the woman's
screams, none of these people had provided help for her. One man did
telephone for help after the murder, but only after first telephoning
a friend for advice about further obligation following his report to

the police.

In his book 38 Witnesses, New York Times editor A.M. Rosenthal (1964) reported interviews with social scientists who attempted to explain the failure of bystanders to help. Explanations included the prevalence of apathy, gratification of sadistic impulses, alienation, and confusion of fantasy with reality. Rosenthal also disclosed a revealing comment from a theologian who said that perhaps depersonalising in New York had gone further than he thought and then added, completely unconscious of the irony, "Don't quote me."

Several psychologists were interested in discovering why so large a group of people had failed to contain even one helper. A number of researchers therefore focused their attention on the effect of bystander number on helping behaviour. A series of studies by Latane and Darley simulated some emergency conditions similar to those in the Kitty Genovese case. Darley and Latane (1968) brought college students to a psychological laboratory for an ostensible discussion about personal problems. When a subject arrived, he was taken to a small room from where an intercom system enabled him to communicate with other subjects. The intercom system, it was explained, would preserve subject anonymity. In reality, however, such a system was used to mask the fact that the subject was really alone in the experimental session; the other "subjects" were simply tape recorded voices supposedly coming from nearby rooms. The system allowed only one person to speak at a time, though everyone could hear. After a period of discussion, one subject who had previously mentioned that he was prone to seizures began to undergo an apparently serious attack. The experimenters found that the number of people the subject believed to be present during the experiment had a major effect upon whether or not he made any efforts to help the victim. Subjects who perceived themselves to be alone with him responded significantly more often and

more rapidly than did those who believed other people were present. Indeed, the more people present, the less likely it was that the subject would help and help quickly.

In another study, Latane and Darley (1968) found that the effect of group size extended beyond simple helping situations. Subjects worked on a questionnaire either alone or in groups of three. As they worked, smoke which obscured vision, interfered with breathing, and produced an acrid odour was introduced into the room through a wall vent. Again, significant differences in the responses of subjects alone and in groups were found; those alone were more likely to respond to the smoke by seeking help outside the room. Thus the bystander effect seemed to occur not just when another person was in danger, but also when a person's helping behaviour could affect his own life. This finding cast some doubt on many of the explanations offered by the social scientists interviewed by Rosenthal (1964), particularly those stressing sadism and indifference to others.

Later studies found similar group size effects. Latane and Rodin (1969) reported that subjects alone were significantly more likely than subjects in groups to respond to an injured woman's cries. Harris and Robinson (1973) found that subjects who thought they were alone with a person undergoing an asthma attack reported the emergency more quickly than did subjects who thought three other bystanders were present. Staub (1970) found that the presence of peers resulted in inhibition of helping among children, but only with children over nine years of age.

Other studies yielded similar results in less dramatic, non-emergency situations. Latane and Darley (1970) and Latane and Elman (1970) found that people alone were more likely to report a theft than were people in pairs. Levy et al. (1972) reported that people alone were more likely to respond to the requests of an intruder during an experiment than were people in groups of nonresponding

confederates. Latane and Dabbs (1975) showed that the presence of bystanders decreased the aid given to people who dropped pencils or coins in an elevator; and Freeman et al. (1975) demonstrated a similar effect in regard to customers' tipping of waitresses.

Field experiments have often failed to find bystander size effects. Piliavin, Rodin and Piliavin (1969) conducted a study in a New York subway train and found no effect for group size when a confederate collapsed. Piliavin and Piliavin (1972) also found no group size effect in the help given to a collapsed victim; and Piliavin, Piliavin and Rodin (1976) found similar results, although the size effect did occur in high cost situations. Lerner, Solomon and Brody (1971) found that nonemergency helping at a bus-stop was as likely to occur in groups of four as in groups of two and three.

Tessler and Schwartz (1972) suggested that factors which influence behaviour in public helping situations need closer attention. A major difference between field experiments and other studies is that the former usually permit subjects to witness the emergency firsthand and to see each other's spontaneous responses. Ambiguity and confusion may be considerably greater in the confines of the psychological laboratory, where bystanders are often confederates who are instructed to remain passive when helping is a possible response. The emergency itself is often tape recorded, unclear and subject to misinterpretation.

Studies have indicated that ambiguity serves to decrease helping responses. Yakimovich and Saltz (1971) reported that even when a workman's fall was visible, helping was much greater if he actually called out for help as opposed to just groaning in pain. Clark and Word (1972) found that subjects who heard a maintenance man fall and cry out in pain helped significantly more than subjects who heard the same fall without any verbal references to injury. A later study (Clark and Word, 1974) showed that pairs of

subjects were more affected by increased ambiguity than subjects
alone. It was suggested that only when others were present could
ambiguity lead to a fear of acting inappropriately which inhibited
helping. Milgram and Hollander (1964) suggested that the confusion
and ambiguity surrounding the Kitty Genovese incident might have
resulted in a failure of bystanders to interpret the event as one
requiring help, despite the screams for help. For instance, people
might have decided that the sounds represented a marital conflict
and feared the embarrassment that might have accompanied intervention.

In field studies, verbal and nonverbal communication among
bystanders might serve to decrease the ambiguity and thus lessen the
fear that helping might be an inappropriate response. With this in
mind, experimenters have varied the naiveté of bystanders and the
channels of communication open to subjects during helping situations.
Latané and Darley (1970) found that naive subjects who were able to
exchange cues tended to help more often than subjects paired with non-
responding confederates, and subjects paired with a friend were even
more likely to help. Baron and Sanders (1975) found that the size of
naive groups did not affect the decision to comply, and Michener and
Burt (1975) reported that when all subjects but one were naive, no
group size effects were found. Darley, Lewis and Teger (1973) found
that naive groups who could exchange reactions were as likely as
subjects alone to respond to an emergency. However, groups whose
communications were blocked tended not to respond to the same emergency.
The experimenters suggested that people who witness an ambiguous or
unusual event interact to arrive at an interpretation which guides
their reactions to the event. "Startle responses" and similar
spontaneous reactions emitted during an emergency serve to facilitate
helping. It is for this reason that groups of naive subjects should
be expected to help more than groups composed mainly of passive

confederates, and groups of friends should be expected to help even more than groups of naive subjects, since they are presumably better able than strangers to detect and interpret each others' cues correctly.

Studies which have manipulated the content of communication provide support for this. Smith, Vanderbilt and Callen (1973) found that a confederate's interpretation of an emergency significantly affected the helping behaviour of a subject. When a confederate showed greater concern through facial expression and body movements, a subject was likely to respond to a lady's cries of pain; however, when the confederate appeared unconcerned, helping was greatly inhibited. Bickman (1972) also reported that helping increased the more a confederate indicated that he thought an emergency had occurred.

Other studies, however, have shown that ambiguity and communication may not be the only processes affecting subjects in the presence of bystanders. Korte (1969) manipulated the type of communication from confederates about an apparent asthma attack. No differences were found in the helping of subjects who heard excited voices indicating the attack was serious and those who heard casual remarks suggesting that the situation was under control. In fact, subjects who heard nothing from the confederate helped significantly more often than did those in either communication condition. It was suggested that subjects who heard no communication had no basis for believing that others were aware of the incident. Focused responsibility on the subject may have proved more important than others' opinions in leading the subject to respond. The role of responsibility was additionally supported when subjects who heard the asthma attack while other bystanders were unable to move helped significantly more than those without responsibility focused on them.

A number of other studies have since indicated that focused

responsibility leads to increased helping. Bickman (1971) found that when another bystander was perceived as being unable to help, subjects responded as quickly as did subjects alone; and subjects both alone and in focused responsibility conditions responded sooner than did those who perceived bystanders as able to help. This finding was extended (Bickman, 1972) to situations in which the confederate who was unable to help communicated with the subject. Shaffer, Rogel and Hendrick (1975) reported that increased responsibility had a positive effect on the prevention of a theft. Staub (1969) found that the assignment of responsibility to children enhanced their helping behaviour.

Schwartz (1973) has stressed the importance of norms in explaining helping behaviour. Some studies have indicated that sex role norms of responsibility lead to different responses to emergencies. In a field study, Konecni and Ebbeson (1975) found that a man alone or with a woman helped an injured confederate more often if a child were present, while women were unlikely to help regardless of whom they were with. Staub (1971b) found that adult females helped significantly more when they had either prior permission or no information about entering a room in which children were fighting. Helping decreased when subjects had been given explicit rules about not entering the room; the responsibility of acting was probably lessened or removed by the prohibiting rule. Schwartz and Clausen (1970) replicated Darley and Latane's (1968) seizure study and found that when one of the bystanders was perceived as being medically competent, the speed of helping of female subjects decreased significantly. The effect on females was explained in terms of norms attached to sex roles. Denial of responsibility may be especially likely for females in the presence of males, who are expected to take the initiative in crises. The results of this study differed from those of Darley and Latane, who had failed

to find this effect in a variation of their seizure study. However, the two studies employed different manipulations of medical competence, with the confederate in the Schwartz and Clausen (1970) study giving a stronger indication of his medical experience. Also, in the Darley and Latané (1968) study, the confederate talked about his belief in the importance of helping people. It is possible that a normative expectation was created which caused increased helping even when responsibility was decreased.

A few studies have indicated that increased communication and decreased ambiguity might have a greater effect than increased responsibility on helping. In a study by Ross (1971), two non-responding child confederates waited with a subject when an emergency occurred. Subjects did help more rapidly and more often when children as opposed to adults were the bystanders, but they still responded most rapidly when alone. This effect occurred whether the emergency involved smoke filtering into the room or a workman injuring his leg. Ross interpreted this as reflecting the importance of the exchange of cues during an emergency. Although adults did have the responsibility focused upon them when children were present, these very children, by not responding to the emergency, served as cue sources for the appropriate response.

In a later study, Ross and Braband (1973) removed the possibility of cue exchange from the confederate. Subjects paired with a non-responding blind confederate helped during a threatening invisible emergency (odourless smoke) as frequently and as rapidly as subjects alone. However, subjects paired with the blind person during an audible emergency (screams from an injured workman) responded less often than subjects alone and only as often and slowly as subjects paired with a seeing confederate. In the blind-smoke condition, the blind person could not be a cue source because the only indication of danger

came from sight; his failure to respond could not be interpreted as disinterest in the smoke. In the blind-scream condition, the blind person might not have been able to respond effectively (just as the children might not have been expected to initiate helping in the previous study), but the subject perceived that the blind person was aware of the emergency and not responding to it; so in this case the blind man did serve as a cue source. Thus communication about the emergency proved to be more important that focused responsibility in bringing about helpful behaviour.

Discussion

In general, then, situational variables seem to be better predictors of helping than individual variables. Studies of bystanders, the recipient of help, and temporary states of the helper have generally yielded more consistent results than research on personality, sociocultural and biosocial factors. For example, heightened affective states tend to lead to increased helping; physical attractiveness increases a recipient's chances of eliciting aid; and the presence of passive bystanders often has an inhibiting effect on intervention. However, the predictive ability of situational factors is only relatively stronger than that of individual factors. Numerous contradictory results are found in the literature, and although many explanations for the discrepancies have been offered, few are firmly supported by other research efforts.

One reason for the divergent findings in studies of both individual and situational factors is that they tend to deal with one or two variables at a time. This strategy may be sensible in terms of experimental procedure, but conclusions that are drawn are often premature and unjustified. For instance, studies which find effects for dependency often ignore other key variables which might be

operating to produce results. If in studying dependency an investigator holds the sex of helper constant by, for example, using only male subjects, he cannot simply disregard the sex variable when interpreting his results. Just because the factor is not of immediate interest does not mean that its influence can be ignored. In this case, it is possible that the use of female subjects might have yielded very different data.

The implications of the diverse findings are twofold. First, interrelationships between relevant variables may need to be considered more systematically. A concentration on main, overall effects often masks underlying interactions. This is important for both individual and situational factors; their simultaneous effects on each other need to be carefully examined in order to begin to reconcile the numerous findings.

Second, generalisations from the results of single studies should be considered extremely tentative. A finding derived from a study of a specific situation or trait needs to be viewed in its own limited context. For example, an experimenter who finds that scores on a particular personality test correlate with speed of helping in an emergency should not conclude that the trait relates to helping in general. The characteristics of the helping situation should always be noted, even if the particular situation is not of immediate interest to the investigator.

The studies presented in Chapters 5, 6 and 7 attempt to illustrate the importance of these points.

Chapter IV

METHODOLOGICAL CONSIDERATIONS

The investigation of helping behaviour has brought to light a number of methodological problems, some of which have been previously discussed. Methods of designing and conducting experiments and analysing resulting data differ widely from one research effort to another. As mentioned earlier, this great variety of methods might at least partly explain some of the inconsistent and contradictory findings of various studies. Problems involving subject effects, measures of helping, and methods of analysis all contribute to the divergent findings. It is therefore appropriate to discuss these problems in light of the present investigations. The purpose of this section, then, is to present an overview of such problems and to indicate generally how the present studies deal with them; more specific details are found in the following chapters.

Subject effects

Problems with subject effects might be divided into several categories. The first concerns homogeneity of subjects. The appropriateness of comparing individual studies is questioned by experiments which indicate differences in the helping behaviour of certain groups of subjects, at least in specific situations. Variables such as sex, age, social class, and friendship of group members have all been seen to affect helping in certain instances. The problem of uncontrolled variables goes further than difficulties with between-study comparability; within a single study, such variables might interact with the main independent variables being

examined, making main effects and interactions difficult to interpret. One of the goals of the present investigations was therefore to control as many of the potentially interfering factors as practically possible, while keeping in mind that such a practice could limit the ability to generalise from the findings. In addition, possible effects of controlled variables were always to be considered.

All subjects in the present studies were students from either the University of Durham or the Open University Summer School programme in Durham. The latter group was only used in the first, exploratory experiment. Other groups (postgraduate students and university technicians) were sometimes used as pilot subjects. Those studies examining differences between groups always used same-sex groups. Age differences, particularly within groups, were kept to a minimum. Friendship within groups was also controlled; subjects from the same places of residence or courses of study were never put in groups together, and after each session all subjects were asked to indicate the extent of their acquaintance with fellow group members.

Another major problem in studies of helping behaviour involves the need to recruit large numbers of subjects for experimental sessions. Subjects who have been obtained in different ways might be expected to behave differently when participating in a laboratory experiment. For example, Argyris (1968) suggested that college students who are forced to participate in experiments as a course requirement may react against the experimenter to avoid feeling controlled. On the other hand, Rosenthal and Rosnow (1969) found that volunteers tended to be younger, more intelligent, and more in need of social approval than nonvolunteers. So whether subjects are

coerced into participating or are allowed to volunteer freely, they are unlikely to represent the population as a whole. Differences in commitment to the study might play particularly important roles in studies of helping behaviour in emergencies, which generally call for a subject to leave an ostensible task in order to help a stranger. It is possible that subjects who are paid, for example, might feel a greater responsibility to the experimental task and thus be less likely to disrupt the experiment in order to help.

Subjects in the present investigations were all unpaid volunteers, but several methods of obtaining volunteers were necessary in order to secure the nearly 500 subjects required. Subjects either answered written form letters, signed a notice, or responded to face-to-face soliciting. All of the studies made a point of assessing possible differences in the behaviour of subjects recruited in these ways, and no such differences emerged.

A third major difficulty involves experimental artifacts arising from such problems as demand characteristics, suspicion, and experimenter effects. Orne (1962) and Kelman (1967) have noted that the prevalence of deception in the psychological laboratory is leading to decreased subject naiveté. Effects of experience of deception have been noted by several researchers. Holmes and Applebaum (1970) found that subjects with an experimental history performed better in a number of tasks and were generally more cooperative and conscientious. Page (1967) showed that deceived and debriefed subjects gave greater attention to disguised purposes of an experiment, and Silverman, Shulman and Wiesenthal (1970) found that such subjects were more likely to try to favourably present themselves. However, Brock and Becker (1966) and Fillenbaum and

and Frey (1970) found that deceived and debriefed subjects behaved no differently from others unless the subsequent experimental situation was very similar. Argyris (1968) suggested that such subjects might have seen through the entire deception and behaved as they perceived the experimenter expected them. The problem is a circular one; Holmes and Applebaum (1970) demonstrated that subjects who had experience of psychological experiments were more likely than others to volunteer to participate in future studies.

Not every student has prior experience of a psychology experiment. Bickman and Henchy (1972), however, stressed that reports of psychological investigations in the mass media might nonetheless lead subjects to expect to be deceived. Still, Cook et al. (1970) demonstrated that experiencing deception might have affected the behaviour of subjects in later studies, but mere knowledge of its use did not appear to have the same effect.

Suspicion of deception is a particular problem for studies of helping behaviour, as subjects in such studies must often be deceived twice. First, they must believe that the task on which they are working is of primary interest to the experimenter, and second, they must believe that the emergency they eventually witness is a real one and not a part of the experiment. Assessing suspicion in such studies is therefore of special importance. Stricker (1967) questioned traditional techniques of assessing suspicion in subjects, noting that interviews and questionnaires have at times proved to be inadequate tools of measuring true subject naiveté. Levy (1967) found that only one out of sixteen subjects admitted in a post-experimental interview that a confederate had given them information about an experiment. Lichtenstein (1968) used a more extensive interview to extract such a confession but still found that few

subjects admitted having received prior information. Denner (1967) used a questionnaire as well as an interview and reported similar rates of confession. Golding and Lichtenstein (1970) increased this rate when they stressed "scientific integrity" to subjects.

To further complicate the problem, subjects are often likely to discuss with others their own participation in experiments. Weubben (1967) found that a large proportion of subjects who promised not to discuss an experiment with anyone gave crucial information when pressed by a confederate. However, Aronson (1966) found that after extensive debriefing, none of his nine subjects revealed any information to a confederate.

It seems, then, that detection of suspicion in subjects is difficult and that promises of secrecy are not always upheld. If this is the case, the necessity of guarding against suspicion is of special importance to studies of helping behaviour. The problem of suspicion in such studies was illustrated in experiments by Latané and Darley (1970). They demonstrated that subjects distorted their perceptions of emergency situations in order to believe that an emergency was not real, thus abling themselves to remain "guiltlessly aloof." Only one subject thought that the sounds of children fighting in a nearby room were in fact on tape when subjects were under the impression that someone was there to attend the situation. However, when subjects thought that the attendant was not there, their suspicions suddenly increased dramatically. In addition, the experimenters noticed a discrepancy between subjects' responses to the emergency when the distress sounds began and their later reports of suspicion. These subjects often appeared agitated and very concerned about the sounds during the experiment but only voiced suspicion during debriefing sessions. Moreover, subjects seldom discussed their

suspicions with other bystanders, possibly indicating that suspicion was a later development.

Some experimental artifacts operate through the role a subject adopts when participating in an experiment. Orne (1962) suggested that subjects attempt to discover the purpose of experiments in order to be "good" subjects. They use procedural cues to decide upon the purpose of a study and then comply with their perception of the experimenter's hypothesis. Rosenthal (1966) in fact suggested that an experimenter's expectancy might influence a subject's behaviour; cues, intentional, nonverbal, and otherwise, could reinforce certain responses.

Rosenberg (1969) suggested that subjects are motivated to present themselves as strong and stable. "Evaluation apprehension" leads them to act in such a way as to bring the experimenter to perceive them in a certain way. Sigall, Aronson and Van Hoose (1970) demonstrated the desire of subjects to favourably present themselves even when doing so disconfirmed the experimenter's hypothesis.

Another suggestion (Masling, 1966) is that subjects might adopt a negativistic role. By doing the opposite of what they believe the experimenter expects, subjects show the experimenter that they are not dominated by him or under his control.

Because of such difficulties with studies performed in the laboratory, some investigators have offered alternative methods of studying social behaviour. Kelman (1967), for example, suggested that a role playing approach might be a suitable substitute for studies requiring deception. In such an approach, subjects are asked to behave as though they are in the role of a naive subject in a particular situation. However, the usefulness of this method has been criticised (Kruglanski, 1975). Certainly Milgram's (1974) comparisons

of predictions of behaviour with actual behaviour indicate that in stressful situations perceived as real, people might behave quite differently from the way they would like to think they would behave.

A more useful alternative might involve naturalistic studies in which behaviour is studied in the field. Such studies sidestep many of the difficulties of laboratory experiments, but they have special problems with which to contend. What they gain in realism they can lose in lack of control and unsuccessful manipulation. It is possible that one of their greatest values is to complement laboratory studies instead of replacing them.

Kruglanski (1975) has questioned the importance of subject effects by noting problems with studies which claim to find experimental artifacts. But even with its possible inherent weaknesses, the laboratory experiment offers the increased rigor and control required to investigate many specific aspects of helping behaviour. For this reason, the first four experiments reported herein were conducted within the laboratory. The fifth study encompassed more naturalistic material. The laboratory studies are open to some of the criticisms mentioned earlier, and caution must be exercised in interpreting the results and generalising from the findings. However, precautions were taken to circumvent problems wherever possible. First, as described earlier, extraneous variables which previous studies have shown to be potentially influential were controlled. Also, the experimental procedure guarded against suspicion in several ways. Students studying in any psychology course were never used as subjects after their first term, and first term students had not yet studied social psychology. Other subjects were mostly first year students. Through this procedure it was least likely that subjects would be familiar with psychological

studies or would have served as subjects in other research efforts.
The likelihood that they would have heard of the present series of
studies was also decreased. In addition, each experiment was run
in as short a time period as possible, so that information about
the study would have less chance of spreading. As a further safe-
guard, extensive debriefing sessions after each trial stressed the
importance of secrecy about the experiment and obtained promises of
secrecy from the subjects. Finally, a thorough account of suspicions
was obtained from subjects. Except for the first study, which made
use of an interview to secure the information, this involved a
written questionnaire in which subjects individually answered
questions about their perceptions of the experiment, followed by an
interview to gain further information and expand upon questionnaire
answers. Although these precautions do not claim to solve the
previously discussed problems, they may go some way toward eliminating
certain alternative interpretations of the findings.

Measure of helping

Another methodological problem involves the dependent variable
to be examined. As discussed earlier, helping behaviour has been
operationally defined in a multitude of ways. In nonemergency
situations it may involve picking up dropped packages, donating or
lending money, constructing boxes, returning a lost letter, or
searching for a contact lens. Emergency helping may include helping
an epileptic victim, intervening in a fist fight, reporting a fire,
or assisting a collapsed man. The use of these different helping
situations considerably limits between-study comparability. They
differ in such ways as the time required to help and other costs,
the ambiguity surrounding the event, and the dependency of the victim.
All of these have been shown to play key roles in the eliciting of

helping responses.

The experiments presented herein made use of an emergency similar to that employed by Latane and Rodin (1969). Subjects were led from the experimenter's office to the experimental room (see diagram in Appendix 1). Before entering the room, they had to step around a tall aluminium ladder which reached to a storage loft in the ceiling. Piles of books on the top shelf and some of the rungs of the ladder indicated that some kind of work was in progress. Reference to such work was made offhandedly by the experimenter. Subjects were then given instructions for an ostensible task. At the end of the instructions, the experimenter announced that she would return to her office and would come back when the experimental session neared completion. She then set a timer and left the room, closing the door behind her. The apparatus for the eventual emergency was thus immediately outside the room in which the subjects worked.

After working on the task for either 12 or 18 minutes, a loud crash sounded as someone apparently fell off the ladder outside the room. Unknown to the subjects, the entire emergency was in fact a tape recording turned on as soon as the experimenter left the room. Subjects could respond to the subsequent sounds of distress by leaving the room, or they could fail to help. Subjects who did help found the ladder and books still intact and a tape recorder speaker by the door. In all cases the experimenter soon appeared and assured subjects that everything was under control.

In the first experiment, the person who fell off the ladder was a female. She screamed as she fell and then cried in pain for about twenty seconds. In the following three experiments a different tape recording was employed. Two reasons prompted this change. First, helping responses to the original emergency proved to be

very short and the range of helping times small. Those subjects who did help did so immediately. One goal of the second tape was to spread out the response times by making the emergency less severe initially. The second reason for the change was to improve certain aspects of the recording, particularly the fidelity of the sound and the credibility of the emergency. In the second tape, a male technician apparently fell off the ladder. This emergency began with a loud crash and short scream, followed by 85 seconds of distress sounds culminating with verbal cries for help. The recording successfully spread out the response times.

Both tape recordings were assessed by judges and pilot subjects as credible and life-like. The realism of the sounds was verified when uninformed bystanders working in nearby rooms dashed to the rescue of the apparent victim as the tape was played.

Another methodological problem involves the nature of conditions prior to and during the actual emergency. Experimenters have employed many means of keeping their subjects busy before the helping scenario occurs. These include simply waiting for an experiment to begin, filling in a questionnaire, working on a problem-solving task, and many others. Differences in commitment to and involvement in the task are often overlooked, with between-study comparisons neglecting to consider anything other than the main dependent and independent variables. All of the studies reported herein used tasks assessed by pilot subjects as believable in their own right, and two studies specifically examined the effect of the ostensible task on subsequent helping. Finally, the time at which the experiment was held was controlled so that all sessions were held during evening hours or on weekends. In this way, subjects could be under the impression that few people were in the building at the

time of the emergency, and responsibility for action was uniform.

Ethical issues

The use of deception and emergencies in experiments might be distressing to some subjects. Many researchers, notably Baumrind (1964) and Kelman (1967), have discussed ethical issues associated with studies using potentially upsetting manipulations. Baumrind (1964) noted that adequate measures are not always taken to protect the welfare of participants in experiments. Kelman (1967) suggested that it is the experimenter's responsibility to ensure that subjects do not leave the laboratory with greater anxiety and lower self-esteem than when they arrived. Moreover, Walster et al. (1967) showed that debriefing did not always immediately dispel the effects of experimental manipulations, although Holmes and Bennett (1974) found evidence for successful reduction of stress after subjects were devalued and then debriefed.

Milgram (1974) argued that careful post-experimental treatment should serve to remove subject anxiety if carried out in a dignified fashion. The present investigations took several steps to guard against any possible injurious effects resulting from participation. A lengthy debriefing session held at the end of each experimental session assured subjects of several points. Subjects were shown the tape recorder used to transmit the emergency and were assured that no one had in fact been hurt. The experiment was explained so that each subject could know that his or her response was in no way unique. Both helpers and nonhelpers were told that their behaviour was entirely normal and that other subjects shared similar feelings of conflict during the experimental session. This

explanation was supported by the actual data from past experiments.

Throughout the debriefing session the experimenter probed for any signs of distress which might have resulted from participation in the experiment. The need for deception in the study was explained, but subjects were encouraged to express their feelings about having been deceived and about the use of deception in general. No subject revealed any unhappiness with the deception or dissatisfaction with the experimental procedure. In fact, only one subject exhibited any great distress during the entire investigation, and this occurred during a problem-solving session before the emergency began. On the other hand, the possibility that subjects were simply embarrassed about or otherwise inhibited from admitting their distress cannot be overlooked.

McGuire (1968) and Milgram (1974) have suggested that the pressing need for scientific truth should at times override ethical concerns. The present series of experiments were not conducted in agreement with this principle; it had been previously decided that the investigation would be terminated if injurious effects were indicated by subjects. With this in mind, special efforts to elicit information about distress were made in the debriefing procedure, and subjects in the second, third and fourth experiments were also given the opportunity to comment on a written questionnaire. Only the belief that no major harm was being caused prompted the continuation of the experiments.

Methods of analysis

The investigation of helping behaviour has been complicated by the use of various methods of analysing data. Different methods are used at every level of analysis, making between-study compara-

bility difficult.

One problem concerns the interpretation of the dependent measure. Two basic measures have been emphasised in the helping behaviour literature. The first is whether helping occurs at all, and the second is the speed of helping when it does occur. Some researchers have treated these variables as separate measures, resulting in a simple help/not help dichotomy of responses for the first dimension. In such cases, the most typical method of analysis is the chi square (x^2) test and, to examine interactions of variables, an extension of this test involving the partitioning of chi square (Winer, 1970). Alternative methods have been introduced to allow for parametric testing. For example, Kriss, Indenbaum and Tesch (1974) performed an analysis of variance, with "no help" responses and "help" responses assigned the values of 0 and 1 respectively. Langer and Abelson (1972) transformed the proportions of helping via an arc sine transformation and proceeded with an analysis of variance. Bickman (1974) pointed out that partitioning chi square and transforming proportions yielded the same significance levels with his data.

Other researchers have attempted to extend the help/not help dichotomy by introducing levels of helping. Some have used, for example, the amount of money or time donated as the dependent measure. Others have assigned numbers representing increasing levels of helping. Staub (1974) coded steps of helping as 1) no reaction; 2) responds by looking up; 3) gets up and/or does something but does not go into room; 4) goes into other room. However, a number of researchers have had to abandon this method for a simple dichotomous measure when all helping responses were found to fit into one category.

When any of these methods are used, speed of helping is usually analysed separately. Still other researchers have attempted to combine the speed of helping with actual helping instead of treating the two as separate measures. Darley and Latané (1968) introduced the concept of "speed scores" to do this. A speed score is a transformation of a subject's response time achieved by taking the reciprocal of the response time in seconds and multiplying by 100. For subjects who fail to help at all, a speed score is the reciprocal of the time the experimenter waited before terminating the session, multiplied by 100. Such a procedure de-emphasises differences between longer time scores and reduces the contribution to the results of the arbitrary waiting time on scores.

Two criticisms of this procedure can be made. One is that this method treats "not helping" as simply a long helping response time instead of a clearly different response. The other is that although using reciprocals does reduce the contribution of the arbitrary time limit, it is still true that an experimenter can strengthen his results by simply waiting longer. For these reasons, the notion of speed scores was not used in the present investigations. Instead, helping behaviour was assessed by two main factors. The first factor was whether subjects helped or did not help, with chi square used to analyse data. Second, the speed of helping was determined for those subjects who did help. In this way, response time was considered a separate dependent variable, with appropriate parametric tests used to analyse results. When appropriate, Scheffe's (1953) procedure was employed as an a posteriori comparison of means.

The need to compare different sized groups in studies of helping has brought about a number of difficulties in analysis. For example, a group of four naive subjects has more potential helpers

than a group of three, and both more than a pair. A simple comparison of the helping of larger groups with smaller ones might therefore be viewed as inappropriate. Latane and Darley (1968) suggested that the probable response rates for groups of different sizes may be estimated from the data of subjects tested alone. Their formula is $1 - (1 - p)^n$, where n is the number of group members and p is the probability of a single individual helping. Thus if 50% of subjects alone help, the rate of helping in a triad should be $1 - (1 - .5)^3$, or .87. When necessary, the studies reported herein made use of this formula to compare the helping rates of different sized groups.

A further difficulty arises in determining both the speed of helping and, for analyses of individual differences, the member of a group to be credited with helping. In the present studies, timing of helping responses began at the moment the emergency occurred. As soon as the first person in a group arose, and if he completed the act of helping by leaving the experimental room, the timing stopped. However, if he did not complete the act - for example, if he sat down and helped only later - the timing continued until arising was followed by helping.

Analyses of individual differences in helping is complicated by the fact that once a group member initiates helpful action, other subjects can only follow or remain seated. This has not been a great problem in much recent research, as "groups" of subjects have often consisted of only one real naive subject per trial, with confederates or tape recorded voices posing as fellow subjects. However, groups of naive subjects contain several potential helpers. It is impossible to determine whether a "follower" would have helped

eventually himself, or whether his action was a response to the initiator's helpfulness. For this reason, first reactors were distinguished from other subjects for purposes of individual difference analyses; in other words, people were credited with helping if they initiated helping.

In the following chapters, the procedures suggested by Winer (1970) were followed for two-way analyses of variance with unequal cell frequencies (pages 241-244) and for partitioning of chi square (pages 629-632). All tests were two-tailed unless otherwise stated, and all 2 x 2 chi square tests used Yates's correction.

Chapter V

GROUP STRUCTURE, MACHIAVELLIANISM AND HELPING BEHAVIOUR

As discussed earlier, many researchers have questioned the ability of personality traits and other individual factors to predict helping behaviour. An examination of experiments conducted in the search for related traits does seem to suggest that personality factors are poor predictors of helping. Seldom does any one factor appear to consistently relate to helping. It is possible that the apparent failure of traits to predict helping might be due to deficiences in tests of personality and could be corrected as more sophisticated methods are developed. Or, as some role theorists have suggested, the concept of stable personality traits may be altogether inappropriate and unlikely to predict any kind of social behaviour.

On the other hand, the difficulties could be largely due to the failure of most researchers to consider the role of personality in the context of situation. As shown by Gergen, Gergen and Meter (1972), a trait which might be expected to produce helping in one situation might be the very trait that should inhibit helping in another. Abandoning research on personality, then, might be based on premature conclusions; it is possible that traits can be meaningful predictors of helping, but only when their interaction with situational variables is considered.

One personality trait which has not been studied in this context is that of Machiavellianism. The philosophy of the political theorist Machiavelli, at least as set out in some of his major writings, contends that people are selfish, fallible and gullible

creatures, and that a wise man should take advantage of such weaknesses by manipulating others in order to maximise his own gains. Machiavelli's themes are thus marked by their cynicism about mankind and their advice and praise of manipulative behaviour.

Although the term Machiavellianism has been in use for over 400 years, scales to measure a Machiavellian orientation have only recently been developed (Christie and Geis, 1970). These scales are composed of items based on statements similar to those propounded by Machiavelli in The Prince and The Discourses (1940). The Mach IV Inventory is a seven-point Likert format scale with 36 items, 20 of which are keyed to Machiavellianism. Half the keyed items are scored positively, so that agreement with an item indicates high Machiavellianism; the other ten are scored in the opposite direction, so that disagreement indicates a Machiavellian philosophy. The scores on the keyed items are added together, and a constant of 20 is added so that total scores range from 40 (total disagreement with Machiavelli) to 160 (total agreement), with 100 representing the theoretical neutral point. Details of the scale are in Appendix 2. The Mach V Inventory is a forced choice test using the same keyed items, but since the usefulness of this scale has been criticised (Marks and Lindsay, 1966; Williams, Hazelton and Renshaw, 1975), the Mach IV scale has been used most often in the present experiments.

Machiavellianism as a personality variable might be expected to relate to helping behaviour and altruism in several ways. A number of studies have shown that high "Machs" do indeed appear more cynical (Katz and Denbeaux, 1976), manipulative (Singer, 1964; Blumstein, 1973), dishonest (Harrell and Hartnagel, 1976),

untrusting and expedient (Lamdan and Lorr, 1975) than low Machs.
High Machs have been found to be less empathic (Abramson, 1973),
to value equality and honesty less (Okanes, 1974), to disregard
conventional morality (Shu-Fang Dien, 1974), and to be more aggressive
and rebellious of authority (Russell, 1974). As Latane and Darley
(1970) suggested, a person who adheres to a Machiavellian philosophy
would hardly be expected to sacrifice self-interest to help
someone else. But a low Mach, with his positive view of mankind,
should welcome the opportunity to aid a fellow man.

Notwithstanding, Machiavellianism might relate to helping
on other dimensions. For example, several studies (Rim, 1966;
Geis, 1968; Hacker and Gaitz, 1970; Okanes and Stinson, 1974) have
indicated that high Machs are more likely than lows to fulfill the
role of leader in a group encounter. It is conceivable that while
acting as leader they might be more likely to take the initiative
to act when an unusual situation occurs.

There seem to be, then, reasons to presume that differences
in the helping behaviour of low and high Machs could be found. The
few studies which have examined the relationship between Machiavel-
lianism and helping behaviour have yielded contradictory data.
Wrightsman (1964) gave subjects his Philosophies of Human Nature
scale and found a strong negative correlation between scores on the
Altruism subscale and the Mach IV. However, Latane and Darley (1970)
found no such correlation when they studied behavioural measures of
helping. Subjects who scored high on Christie's Mach IV scale were
no less likely than low scorers to help a victim who apparently
suffered from an epileptic seizure.

Staub (1974) employed an auditory and eventually visual
emergency. Individuals working on a task first heard groans of pain

coming from an adjacent room. Some of the subjects had been given

prior permission to rest during the session and obtain coffee from

this room. Others had been told their task was timed and that they

were not to leave the experimental room. The remaining subjects

were given no rules about the rooms. A very small but significant

negative correlation between actively offering aid to the unseen

victim and Machiavellianism indicated that, overall, low Machs were

more likely than highs to volunteer to help the victim.

In another phase of the experiment, the victim actually

appeared and informed all subjects that he had stomach pains. He

then asked subjects to collect medicine at a pharmacy for him. Low

Machs were no more likely than highs to help the victim in this way

unless prior permission to take a break during the session had been

granted; in this condition, lows helped the victim more than did highs.

Low Machs were significantly more likely to help under conditions of

permission than prohibition, while the behaviour of high Machs was

independent of their condition. Thus low Machs proved more helpful

when helping seemed a permissible behavioural alternative.

It is clear, then, that the results obtained by various

experimenters when exploring the relationship between Machiavel-

lianism and helping differ considerably, and that these differences

might be due to aspects of the specific situations studied. One

situational factor which might relate to Machiavellianism concerns

bystander number. Studies by Latané and Darley (1970), Staub (1970),

and Harris and Robinson (1973) are among those which have found

that large groups are less likely to include a helper than smaller

ones, even though more people are available to do the helping in

the former. Two hypotheses have been put forward to explain this

finding. The diffusion of responsibility hypothesis suggests that

responsibility for helping is divided among group members during an emergency. The more people present when an emergency occurs, the less responsibility will be focused on each person. Thus members of large groups should be less likely to intervene when helping is possible. Providing support for the diffusion of responsibility hypothesis, increased and decreased individual responsibility in various forms has been shown to respectively increase and decrease helping responses (Schwartz and Clausen, 1970; Bickman, 1971; Ross, 1971).

The social influence hypothesis explains the decreased helping of larger groups in a different way. According to this explanation, people in larger groups help less because they are more likely to emit and receive ambiguous cues when an emergency occurs. A state of pluralistic ignorance occurs in which each bystander is misled by the apparent calm of other bystanders and decides that others do not consider the emergency as serious enough to merit further attention. Thus each person concludes that helping is an inappropriate course of action to take, and the likelihood of helping decreases. In support of this hypothesis, studies have shown that people are more likely to help if they can communicate openly with other naive group members (Latané and Darley, 1970; Darley, Lewis and Teger, 1973); if they are in a naturalistic setting which decreases ambiguity (Piliavin, Rodin and Piliavin, 1969; Lerner, Solomon and Brody (1971); or if they receive cues defining the situation as an emergency (Bickman, 1972; Smith, Vanderbilt and Callen, 1973).

If social influence affects the helping behaviour of bystanders during an emergency, relevant situational differences could be expected to play a key role in the helping behaviour of

low and high Machs. Several studies (Exline et al., 1961; Durkin, 1970; Bochner and Bochner, 1972; Bochner, DiSalvo and Jonas, 1975) have indicated that low Machs seem more likely than highs to emit and receive cues, to interact on an emotional level, to act more warmly and less detached, and to be more open and aware of others' needs. Blumstein (1973) found that low Machs were more comfortable than highs when interacting in public. In addition, a few studies (Danelian, 1964; Geis and Leventhal, 1966) have indicated that low Machs may have superior person perception skills. It is conceivable that low Machs should be more likely to exchange appropriate cues when an emergency occurs and thus be less susceptible to social influence effects.

The question arises as to why inconsistent findings emerged in studies of Machiavellianism and helping behaviour described earlier. One reason for the discrepant findings could involve situational differences in experimental settings. In Latané and Darley's (1970) study, for example, "groups" of various sizes were in fact composed of only one real subject per trial; the rest were merely tape recorded voices. No possibility for spontaneous communication among naive subjects was present. Studies of Machiavellianism (Christie and Geis, 1970) have indicated that differences between low and high Machs should be minimised in such situations. Differences are instead most apparent when a situation involves face-to-face interaction, latitude for improvisation and emotional involvement. Situational variations in different studies might therefore affect the helping behaviour of low and high Machiavellians, particularly during ambiguous emergencies.

Two experiments were conducted to examine the effects of Machiavellianism on helping behaviour in light of explanations of

group size effects. The first experiment was an exploratory study designed to look into a number of relevant factors. This study was originally intended as a general inquiry; however, the results of the experiment prompted a second, more directed study in an attempt to replicate the findings and to clarify points raised in the earlier research.

Experiment I

A major purpose of the first study was to attempt to account for the contradictory findings (Wrightsman, 1964; Latane and Darley, 1970; Staub, 1974) regarding Machiavellianism and helping behaviour. Conditions which have been shown (Christie and Geis, 1970) to enhance differences between low and high Mach behaviour were utilised to find if a relationship between Machiavellianism and helping behaviour could be established. To allow for face-to-face interaction and emotional involvement, the procedure called for a concentration on the use of naive subjects as group members. Latitude for improvisation was implemented through the use of a relatively unstructured task which permitted open-ended communication among group members. In addition, the experiment employed same-Mach groups: that is, groups composed of all low, all medium, and all high Machiavellians.

These conditions were also used to facilitate an investigation of group size effects. The social influence hypothesis predicts that when subjects are naive and communication channels are open, the effect of group size should be minimised. Instead of being confronted with passive, nonhelping confederates, groups of naive subjects in an unstructured setting are able to exchange cues about an emergency and perceive that others are, at

the very least, aware of its existence. Support for the social influence hypothesis would be obtained if group size effects on helping were not found with naive subjects. The present study therefore varied the size of groups, using groups of two, three or four naive subjects in most trials.

According to the diffusion of responsibility hypothesis, subjects put in a position of responsibility are more likely to initiate helping than others, while those who are not considered responsible should be less likely to help. Three types of groups were studied in the present experiment. In one, all subjects worked on an ostensible task under initially identical roles. In another, one of the group members was given added responsibility by being assigned the role of leader. Finally, a condition was employed in which a prestigious but nonhelping confederate was leader. Subjects were kept in same-sex groups so that sex role expectations (i.e., Schwartz and Clausen, 1970) would not inter-fere with the responsibility manipulation.

In addition, two personality inventories were given to subjects along with the Mach IV Inventory. Subjects completed Cattell's 16 PF Test, which measures 16 independent personality factors, and Christie's F-Scale, which yields a measure of authoritarianism (see Appendix 3).

Overview

An exploratory study was conducted to examine various aspects of helping behaviour during an emergency. Subjects in same-Mach, same-sex groups of two, three or four attempted to solve problems either alone, with a naive subject as leader, or with a nonresponding confederate as leader. While subjects worked

on the task, sounds of distress came from outside the experimental room as someone apparently fell off a ladder. Whether the subjects responded by helping and the time they took to do so were the main dependent variables. Relationships between helping behaviour and other personality factors were also examined.

Subjects

Subjects were asked to participate in an experiment involving problem solving in groups. 143 people volunteered to be in the study. Twenty (14%) of them failed to come to at least one scheduled session and were either unable to arrange another suitable date or could not be located again. Five of those remaining (3%), who comprised two groups, could not be included in the final analysis. In one case a group was unknowingly formed with a male and a female, contrary to the design of the experiment. In the other, one of the subjects was well acquainted with a similar study of helping behaviour. This left 118 people (83% of the original volunteers) who served as subjects.

Subjects were undergraduate and postgraduate students from a wide range of programmes of study at the University of Durham and the Open University Summer School in Durham. Ages ranged from 19 to 45, with a mean age of 24 and a mode of 21. There were 71 males and 47 females, all British except for one foreign student who spoke fluent English. All subjects were unpaid volunteers.

Procedure

Pre-session

Prior to running the experimental sessions, the experimenter acquired the scores of potential subjects on Christie's Mach IV Inventory. The scores of 92 subjects on Christie's F-Scale and the Cattell 16 PF were also obtained.

The mean Machiavellian score for males was 96.76
(s.d. = 13.8) and for females 93.14 (s.d. = 14.8). Subjects
were classified as medium Machs if their score fell within one half
standard deviation of the mean. Those with scores more than or less
than one half standard deviation from the mean were designated high
and low Machs, respectively. Within each group the range of Mach
scores averaged 4.86 points and was never more than 10 points.
Groups were composed of either males or females, and the range of
ages within the groups was kept as small as possible ($\bar{X}$ = 1.79,
s.d. = 1.82), with differences up to 5 years only in subjects over
25. To control friendship within the groups, subjects with the
same programmes of study and places of residence were never put in
groups together.

Problems with subject dependability led to a change in the
original procedure. Initially, two, three and four individuals
were scheduled to attend each session. However, it soon became
apparent that at least one person per group was likely to fail to
appear; so later four or more subjects were invited to attend each
session, and the number who appeared comprised the N per group.
Five subjects never came at one time.

Session

The group session was held at the University of Durham
Department of Psychology. The room used was located in a self-
contained area and was relatively sonically separated from the rest
of the building. In addition, the room could unobtrusively house
video equipment. All sessions were held either at night or on
weekends so that interference by innocent bystanders in the building
would be minimised.

The experimenter led subjects through a corridor leading to

the experimental room. Outside this room was a large aluminium ladder set up under a storage loft in the ceiling. Books were piled upon the top shelf and some of the rungs of the ladder. The room could be entered from one door only, and the ladder was situated about four feet from this door outside the room (see diagram, Appendix 1). As subjects entered the room they were instructed to sit in chairs surrounding a table. Upon the table were pens, papers turned face down containing problems, sealed envelopes containing hints for the problems, and a timer. After subjects were seated, the experimenter proceeded to read one of three sets of instructions.

In the No Leader condition, no single group member was given added prestige or authority of any kind. The instructions in this condition were:

> Studies have shown that certain types of groups
> work better together than others, and I am
> testing an aspect of this. I have given you
> each a paper containing problems which you are
> to solve as a group. You are all encouraged to
> think out loud and work together. Try to answer
> as many questions as possible in the next 15
> minutes, but do not proceed to a question unless
> you have decided upon an answer to the previous
> one, beginning with Problem 1. If you are stuck
> on a question, you may open the appropriately-
> labelled envelopes containing hints if you
> unanimously agree to do so, but try to solve the
> problems without them. I will leave you to your
> discussion and return in a while to hear your
> conclusions and see which hints you have looked
> at. Are there any questions?

In the Naive Leader condition, one of the group members was arbitrarily chosen to lead the group. The instructions were:

> Studies have shown that certain types of ....
> ..., beginning with Problem 1. I am appointing
> the person who has sat to my left/right as
> leader. He/She is in charge of leading the
> conversation and recording your answers. He/She
> also may decide at which point he/she will open
> these appropriately-labelled envelopes containing

> hints for the group's use, although the rest
> of you may suggest that he/she open them at
> any time. I will leave you to your discussion
> and return in a while to hear your conclusions
> and see how far you've gotten. Are there any
> questions?

In the Confederate Leader condition, the subjects worked under the observation of a same-sex research student. The instructions in this condition were:

> Studies have shown that certain types of ......
> ..., beginning with Problem 1. I am appointing
> the person who has sat to my left/right, a
> research student, as leader and observer. He/
> She is in charge of listening to your conversa-
> tion and recording your answers. If you are
> stuck on a question, you may ask him/her to
> open these appropriately-labelled envelopes
> containing hints if you unanimously agree to do
> so, but try to solve the problems without them.
> I will leave you to your discussion and return
> in a while to hear your conclusions and see
> which hints you have looked at. Are there any
> questions?

Following Latané and Darley's (1970) suggestion, different confederates were used to ensure that results emerging from this condition were not due to idiosyncratic attributes of a specific individual. The confederate leader was instructed beforehand to shrug when the emergency began and resume looking at the paper he was holding. If a subject directed a question to him during the incident, he was to remain as passive as possible and answer only with brief gestures.

Each condition employed the same problems and hints (see Appendix 4). Although subjects were led to believe that the study was concerned with problem solving, the problems actually served several ulterior purposes. They engaged the subjects in a believable task until the emergency occurred. They called for interaction, and they made the need for leaders seem authentic. In addition, they united the groups in each condition uniformly.

The hints gave purpose to the leadership role and also added some ostensible complexity to the experiment so that it might appear more credible.

After any questions were answered, the experimenter opened the door to leave, then turned back to the subjects and said, "By the way, someone's coming to put books away out there, so if you hear any noises I hope they won't disturb you." The timer was then set, the experimenter closed the door behind her, and the session began.

At this point the experimenter placed a tape recorder speaker outside the room and turned on a high-fidelity tape recording. The optimal placement of the speaker and volume of the recording had been established by pre-testing of objective judges and pilot subjects.

After a few minutes, intermittent sounds of shuffling and ladder-climbing began. About twelve minutes after the group session had begun, a loud crash and simultaneous woman's scream sounded. This was followed by 19 seconds of crying and moaning, and then by silence. The tape was assessed by judges and pilot subjects as distressful and credible. It was also agreed that although the distress sounds represented a lady falling off the ladder, the sounds ended ambiguously; by the end of the tape, the lady who had fallen might still have been in danger, or she might have left the scene of the accident.

If a subject responded to the emergency by leaving the room, he immediately saw the ladder and books still intact and the large speaker in the hall. The experimenter then turned off the tape recorder and returned to the experimental room. If no one left the room, the experimenter waited three minutes and then entered the room.

A post-experimental interview was immediately begun. The

experimenter asked each subject for general reactions to the
study. If no one mentioned the sounds, the experimenter asked
if anything unusual had occurred during the session. Subjects
were then asked to describe the sounds they thought they had
heard, their reactions, and their reasons for the course of action
they had taken. If not already volunteered, information about
possible suspicions was then sought. The true purpose of the
experiment was then disclosed, and reasons for deception in the
experimental design were discussed. Finally, the need for secrecy
about the experiment was stressed, and subjects were asked to
refrain from mentioning the procedure to anyone for a period of
time covering the experiment's duration.

Method of analysis

The group sessions were recorded on one half inch video tape
and analysed independently by two judges. Whether a group responded
to the emergency and the time it took to do so were determined. A
group was classified as having reacted if at least one person went
outside the room in response to the distress sounds. Three timings -
two by the experimenter at varying intervals and one by another
judge - were originally made of the amount of time taken by each
group to respond. These timings never differed by more than one
second, and when they did so differ, the mean score was used. The
measure of time began at the time of a sound on the recording which
occurred three seconds before the initial crash and scream sounded.
A group's response time was determined by the time elapsed from this
point to the time the first person stood up to move toward the door
of the room. If a subject began to arise as though about to move
toward the door but subsequently made no appropriate movement, he
was not given a response time. If he again stood and successfully

left the room, his response time was the time elapsed from the beginning of the emergency to the time at which he arose to actually leave the room.

For the purpose of individual difference analyses, the first reactor in each helping group was determined.

RESULTS

Overall response

In all, 26 of the 43 groups (60%) responded to the emergency by leaving the experimental room. Response times ranged from 6 to 24 seconds, with a mean of 12.81 (s.d. = 5.48), a median of 11, and mode of 10 seconds. Of the 26 groups who responded, 6 (23%) did so during the initial scream and clattering; 15 (58%) left the room while the victim was crying and moaning; and 5 (19%) reacted after all sounds of distress had ended (see Figure 1.1).

Machiavellianism

Whether a group was composed of low, medium or high Machs had a major effect upon the helping behaviour exhibited (Figure 1.2). Every low Mach group (N = 9) contained at least one helper (100%), while only 54% of the medium (N = 22) and 42% of the high (N = 12) groups responded to the victim's distress sounds. The difference among groups is significant (x^2 = 7.99, d.f. = 2, p < .02). This difference is due to the helping of low Machs, who helped significantly more than both medium (x^2 = 4.14, p < .05) and high (x^2 = 5.47, p < .02) Machs, the latter of whom did not differ (x^2 = .13, n.s.).

Figure 1.1. Cumulative proportion graph:

Total helping, Experiment 1.

% HELPING

TIME (Seconds)
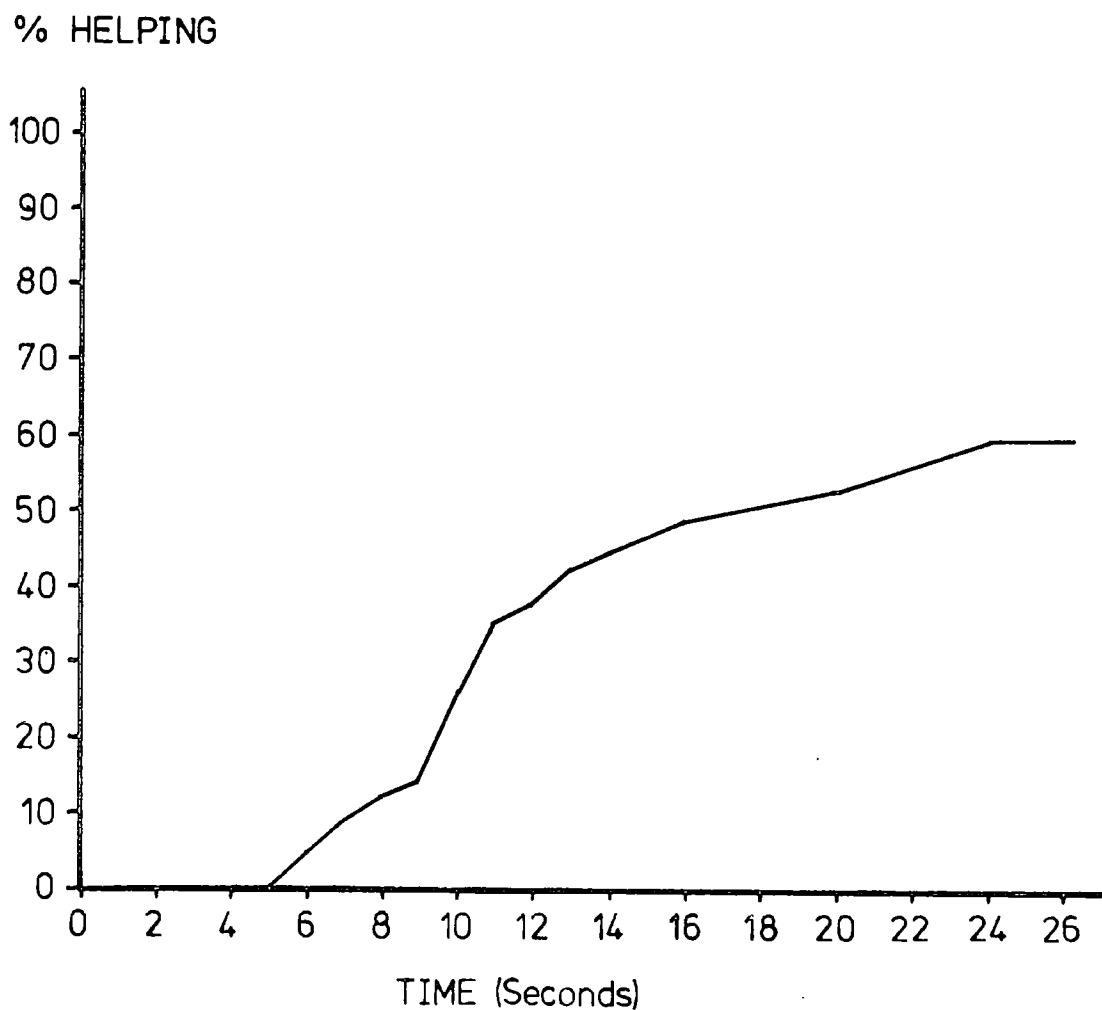
Total N Groups = 43

Figure 1.2. Machiavellianism and helping.

Condition	N Groups	N Groups Helping	Percent Helping	$\bar{X}$ Response Time
Low	9	9	100	15.89
Medium	22	12	54	10.75
High	12	5	42	13.40

Although groups of low Machs responded more often than medium and high Machs, they did not act more quickly. The response time of low Machs averaged 15.89 seconds, while high Machs averaged 13.40 seconds and medium Machs 10.75 seconds (F = 2.06, d.f. = 2,23; n.s.). Response patterns are illustrated in the cumulative proportion graph, Figure 1.3.

Responsibility

The type of leader present when the problem solving and emergency took place had a significant effect on helping. Response time was also affected (see Figures 1.4 and 1.5).

Of the groups in the No Leader condition (N = 14), 11 (78%) went outside the experimental room when the distress sounds were heard. 11 (69%) of the groups in the Naive Leader condition (N = 16) exhibited helping responses. No difference exists between these groups (x^2 = .04, n.s.). However, when the nonresponding confederate leader was present (N = 13), only 4 (31%) of the groups investigated the emergency. Reacting among groups differs significantly (x^2 = 7.18, d.f. = 2, p < .05), with the main effect due to the Confederate Leader condition.

Measures of response times differed in the same direction. Of those groups who did react, No Leader groups averaged 12.18

Figure 1.3. Cumulative proportion graph:

Machiavellianism and helping,

Experiment 1.

% HELPING

TIME (Seconds)

————————— Low Machs (N = 9)

— — — — — Medium Machs (N = 22)

················· High Machs (N = 12)
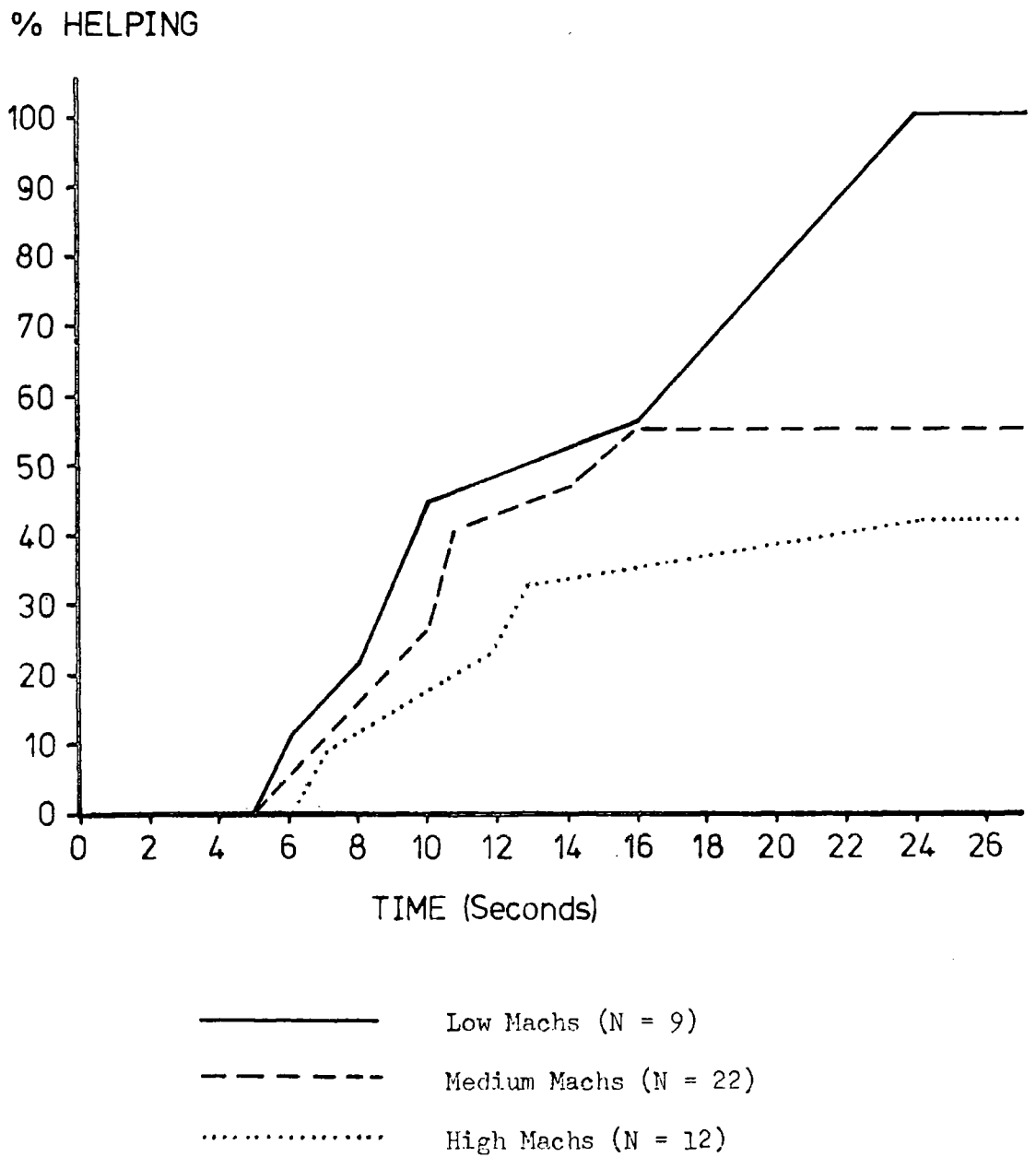
Figure 1.4. Cumulative proportion graph:

Responsibility and helping,

Experiment 1.

% HELPING

No Leader (N = 14)

Naive Leader (N = 16)

Confederate Leader (N = 13)
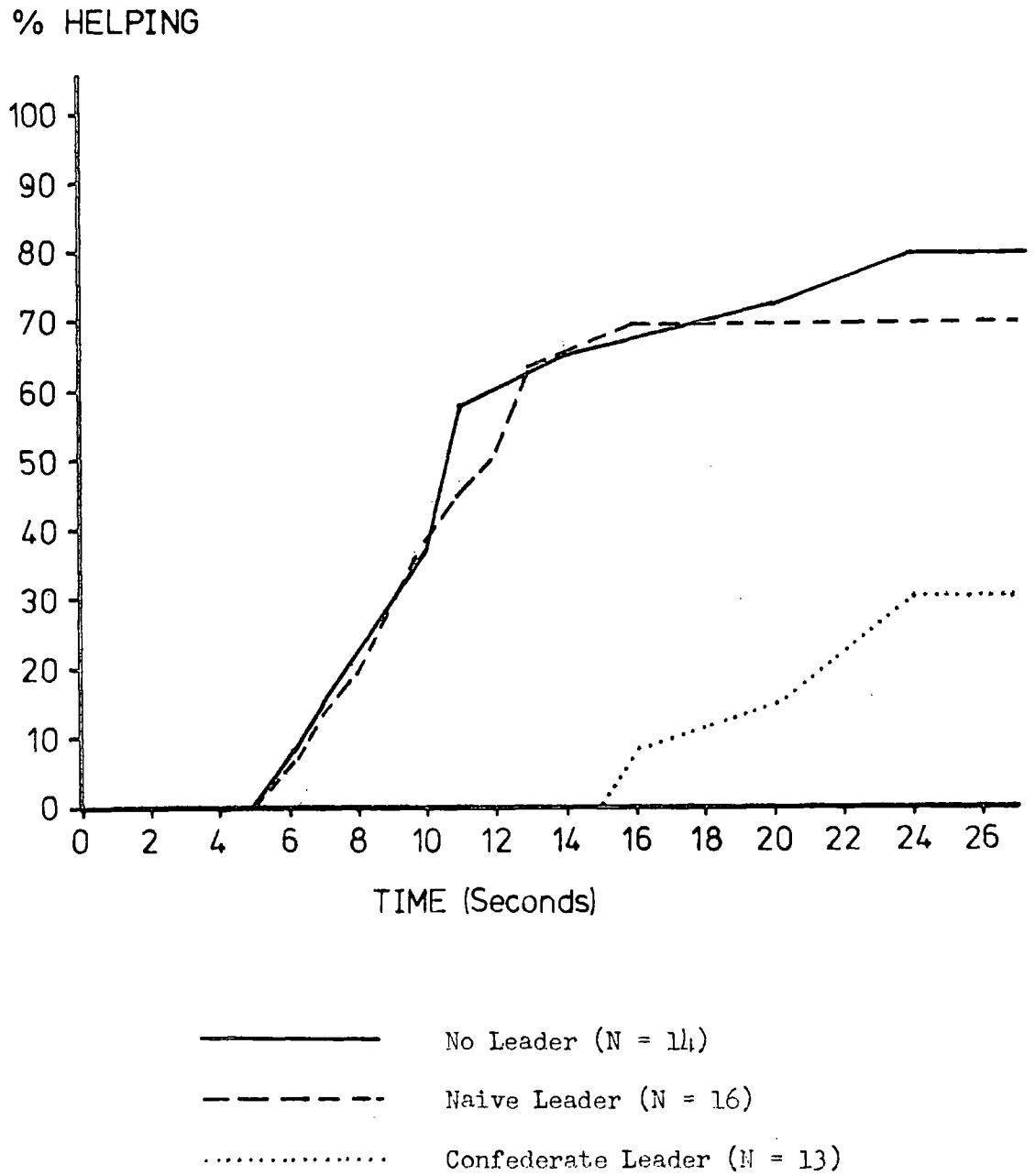
Figure 1.5. Responsibility and helping.

Condition	N Groups	N Groups Helping	Percent Helping	$\bar{X}$ Response Time
No Leader	14	11	78	12.18
Naive Leader	16	11	69	10.45
Confed. Leader	13	4	31	21.00

seconds, Naive Leader groups 10.45 seconds, and Confederate Leader groups 21.00 seconds. The difference is significant (F = 9.17, d.f. = 2,23; $p <$ .01). An a posteriori Scheffe test indicates that the difference is due to the slow responding of Confederate Leader groups (Confederate v No and Naive Leader, F = 17.75, F^1 = 11.32, $p <$ .01).

Group size

No differences were found regarding the number of people per group. Analysis of differences is complicated by the fact that although there were two, three or four potential helpers in each group, an additional bystander was present in the Confederate Leader groups. While this leader never responded to the emergency, he was nonetheless present and affecting group size. However, regardless of the interpretation of his presence, no differences in group size were found. Ignoring the possible effect of his presence, the helping rate was 61% in groups of two (N = 18), 56% in groups of three (N = 18), and 71% in groups of four (N = 7) (x^2 = .53, n.s.). If groups which include a confederate are excluded, the helping rate was 75% in groups of two (N = 12), 64% in groups of three

(N = 14), and 100% in groups of four (N = 4) (x^2 = 2.06, n.s.).
Figure 1.6 summarises these findings.

Figure 1.6. Group size and helping.

Condition	N Groups	N Groups Helping	Percent Helping	$\bar{X}$ Response Time
(All groups)				
Two	18	11	61	14.73
Three	18	10	56	10.50
Four	7	5	71	13.20
(Confederate groups excluded)				
Two	12	9	75	12.67
Three	14	9	64	9.44
Four	4	4	100	12.50

In addition, no response time differences were found (see Figure 1.7). When the confederate leader's presence is ignored, response times were 14.73, 10.50, and 13.20 for groups of two, three and four, respectively (F = 1.65, d.f. = 2,23; n.s.). When the Confederate Leader condition is excluded from analysis, the mean times of response were 12.67, 9.44, and 12.50 (F = 1.51, d.f. = 2,19; n.s.).

Sex

Groups composed of males and females responded similarly both in overall helping and in response times (see Figures 1.8 and 1.9). 60% of the males (N = 25) and 61% of the females (N = 18) helped the victim (x^2 = .06, n.s.), with a mean response time of

Figure 1.7a.   Cumulative proportion graph:

Group size and helping,

Experiment 1.

% HELPING

TIME (Seconds)

———————   Two (N = 18)

— — — — —   Three (N = 18)

················   Four (N = 7)
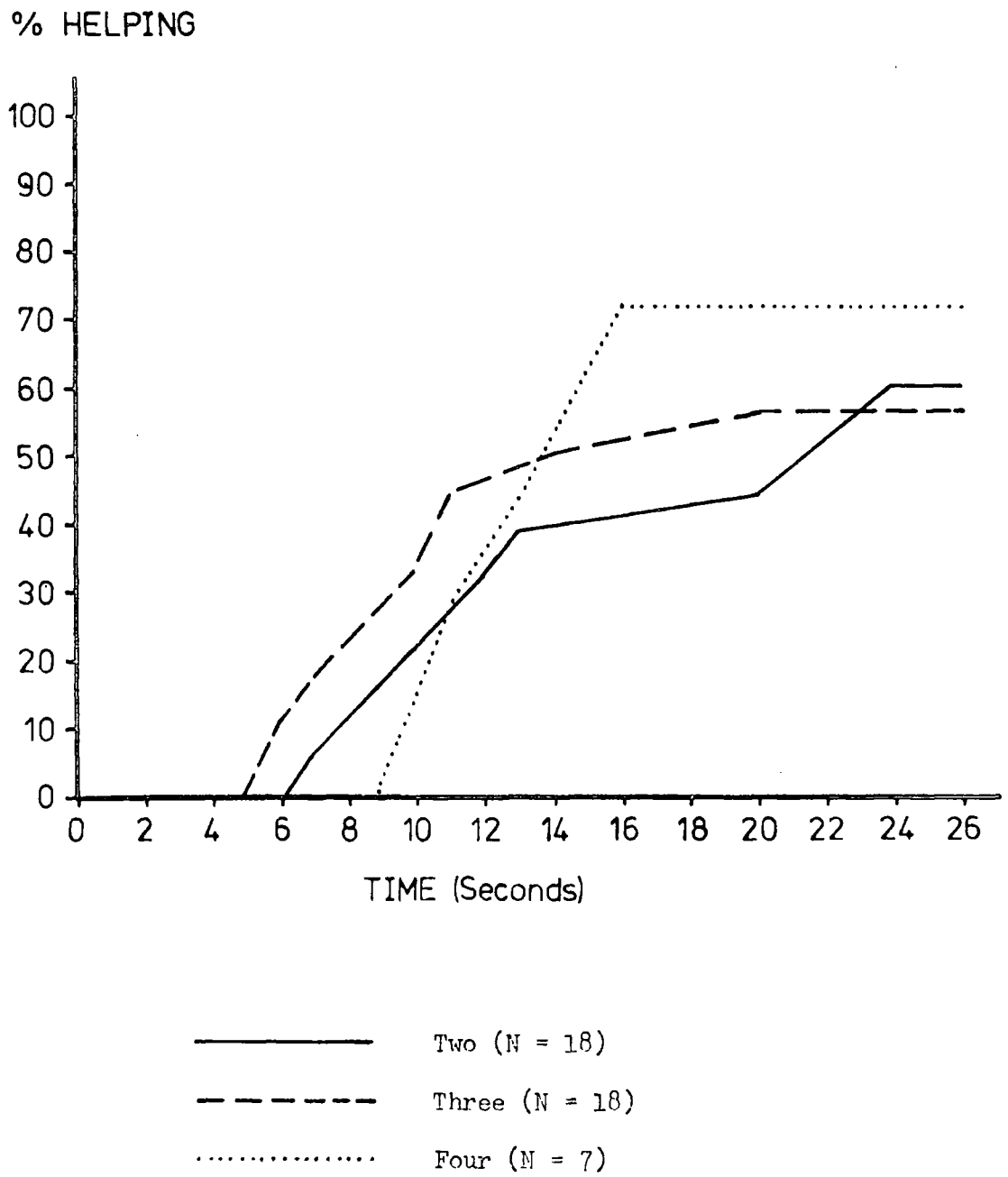
Figure 1.7b. Cumulative proportion graph:

Group size (Confederate Leader condition excluded) and helping,

Experiment 1.

% HELPING

TIME (Seconds)

——————— Two (N = 12)

— — — — — Three (N = 14)

·············· Four (N = 4)
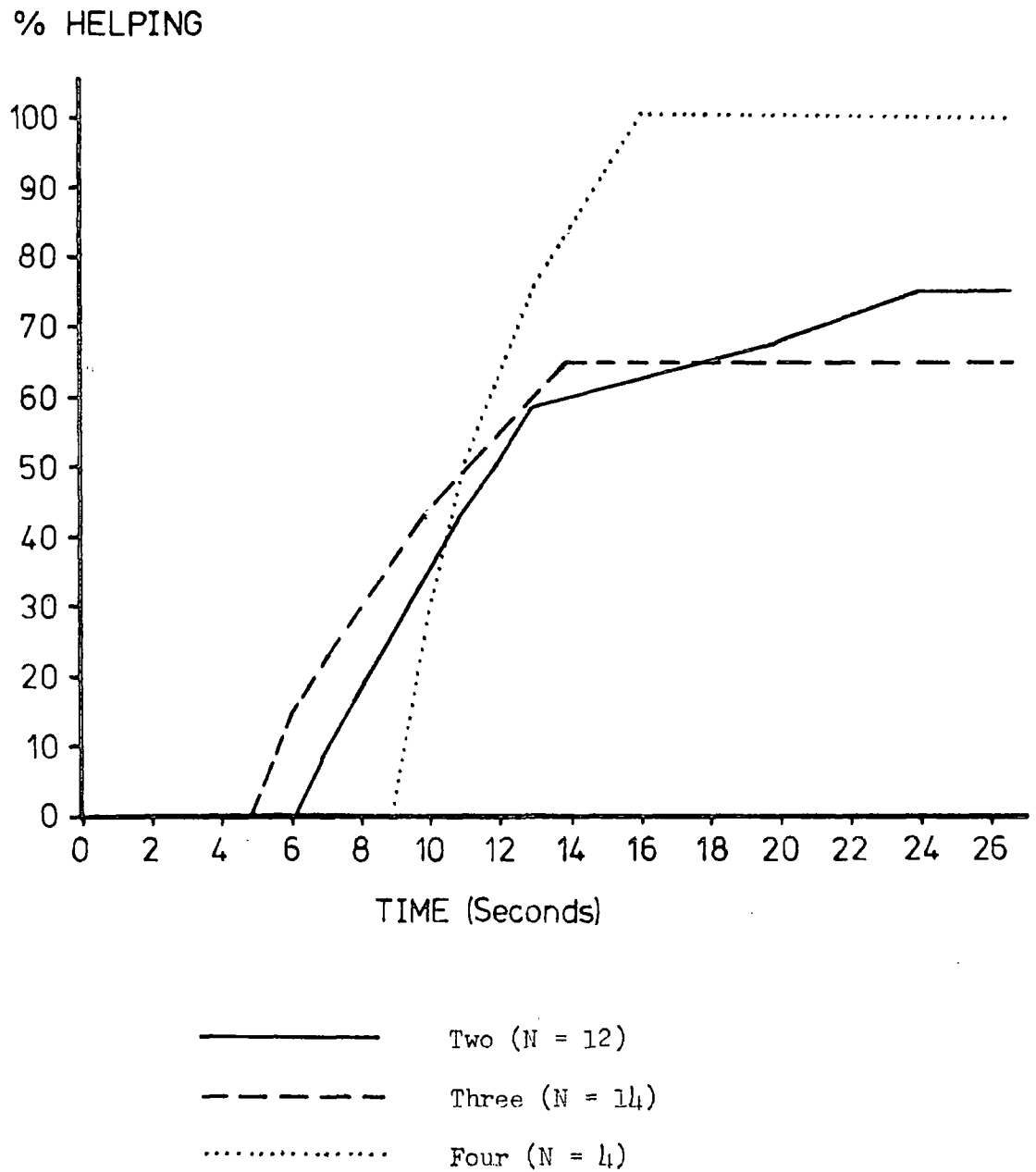
Figure 1.8. Cumulative proportion graph:

Sex and helping,

Experiment 1.

% HELPING

Female (N = 18)

Male (N = 25)
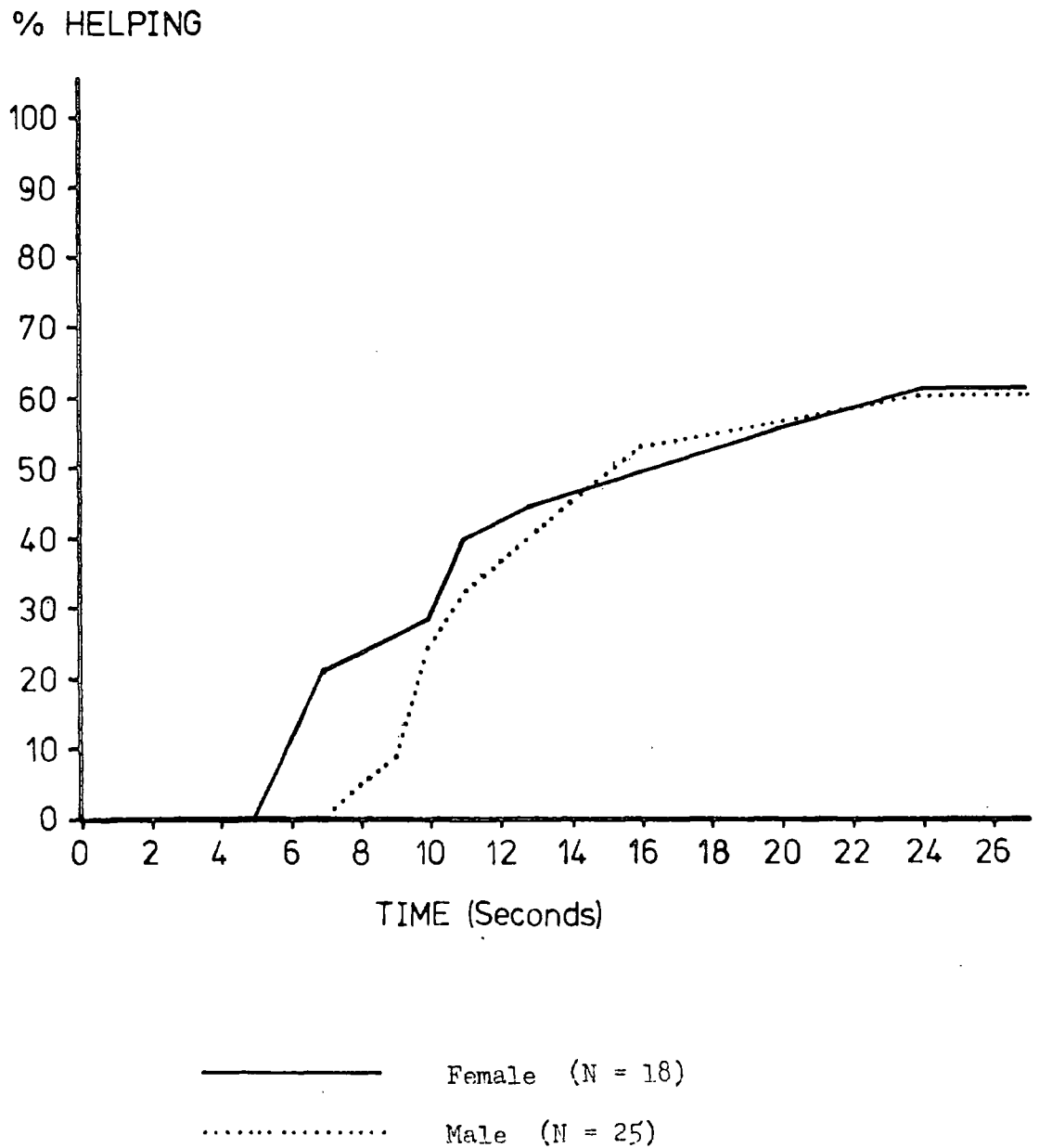
13.20 seconds for males and 12.27 seconds for females (t = .20,
n.s.).

Figure 1.9. Sex and helping.

Condition	N Groups	N Groups Helping	Percent Helping	$\bar{X}$ Response Time
Male	25	15	60	13.20
Female	18	11	61	12.27

Communication of group members

Analyses of the video recordings revealed that every group which engaged in verbal communication about the emergency eventually helped. Of the 17 groups not helping, none actually discussed or referred to the emergency. Seven of these groups continued talking about the problems they were solving, mostly while looking down at their problems. Ten groups worked on in silence. Four groups each contained at least one member who moved perceptibly when the scream and crash were heard but in the end failed to help.

Less direct communication produced varying results. Few individuals who were involved in direct and prolonged eye contact during the emergency failed to make attempts to aid the victim. Although direct eye contact was limited among nonresponders, the videorecordings revealed an interest of subjects to gain information about fellow subjects' reactions. They often glanced quickly at other group members and then returned to their work. Subjects at times appeared agitated and uncomfortable, repeatedly looking at the others and toward the door.

Naive leaders

Subjects who were assigned the title of leader responded no more or less often than other subjects. Of the 11 groups in the Naive Leader condition who did help, 4 (36%) naive leaders were the first reactors and 7 (63%) other subjects helped first. Since 4 out of 11 leaders helped (36%) and 7 out of 28 nonleaders helped (25%), no difference can be established.

In addition, the naive leader's status did not noticeably affect the behaviour of other group members. The percentage of failure to help was 31% in the Naive Leader condition as opposed to 22% in the No Leader condition, a nonsignificant difference ($x^2 = .04$, n.s.).

Personality data

For the purpose of individual difference analyses, the first reactors were determined. In every group but two, the first helper was easily identified. In the remaining two groups, it was determined that two subjects arose and moved toward the door simultaneously. Thus while only 26 groups responded, there were 28 individual helpers. Notwithstanding, once the first person in a group reacted to the emergency, other group members were likely to follow. 34 subjects followed the first helpers outside the room, leaving only 10 group members who failed to respond at all.

The scores of 92 subjects on Christie's F-Scale and the Cattell 16 PF were obtained and analysed. A few significant differences between helpers (N = 19) and others (N = 73) were found. Tests were also run to separate out the sex variable by examining differences between male helpers (N = 11) and nonhelpers (N = 50), and female helpers (N = 8) and nonhelpers (N = 23).

No differences between helpers and nonhelpers were found

on Christie's measure of authoritarianism, the F-Scale. The

mean score of helpers was 81.10, while nonhelpers averaged 84.92,

a nonsignificant difference (t = .98, n.s.).

Two significant differences on scores from Cattell's 16 PF

were found. On Factor C, measuring "Affected by feelings -

Emotionally stable," helpers averaged 16.53 and nonhelpers 14.04

(t = 2.98, p $<$.01). On Factor Q4, measuring "Relaxed - Tense,"

helpers scored 10.05 and nonhelpers 13.73 (t = 2.62, p $<$.02).

The latter effect was mainly due to differences between male

helpers and nonhelpers. Female reactors scored 13.38 and non-

reactors 15.13, a nonsignificant difference (t = .78). Male

reactors scored 7.64 and nonreactors 13.08, a highly significant

difference (t = 3.80, p $<$.001). Thus helpers scored as more

stable and relaxed than did nonhelpers. Details of results are

in Appendix 5.

Other individual data

No relationships were found between helping and programmes

of study, age, or education (University of Durham or Open University

student). Subjects who stated that they were involved in altruistic

organisations or church-related activities were no more likely to

respond to the victim's needs than were others. Finally, ordinal

birth position was not related to helping. 23% of first born

subjects, 24% of middle born subjects, 15% of youngest, and 11%

of only children helped, a nonsignificant difference (x^2 = 1.13).

Post-experimental interview

Interviews held following the group sessions revealed that

the manipulations were successful. Subjects were able to recall instructions regarding the task. No subject thought that personality data had been used to form groups. Finally, except for a number of suspicious subjects discussed below, and 5 who did not recall hearing the emergency at all, subjects believed that a woman had fallen off the ladder outside the room.

Various extents of suspicion were expressed by 18 subjects (15% of all subjects used in the study). Eight (44%) of those suspicious believed that the emergency had been a tape recording or record, and four (22%) thought the emergency was performed by a person actually in the hallway. Some suspicious subjects said the emergency was too dramatic (N = 6) or too loud (N = 2). An additional six (33%) were unsure but said they had a feeling the sounds were not authentic.

Suspicious subjects expressed different explanations for the use of the emergency, with some subjects offering several possibilities. More than half the suspicious subjects (61%) thought the experiment involved a study of whether subjects would help a person in distress. Some (29%) wondered if the study concerned whether or not they would be more interested in solving problems than in helping. Other subjects (17%) believed the sounds had been used to induce stress as they solved problems, and two (11%) thought their ability to work with a noisy background was being tested.

Although helpers and nonhelpers expressed similar suspicions, they gave different reasons for their behaviour. Suspicious helpers were more likely to have decided to "check" outside the room just in case the sounds were real, while suspicious nonhelpers stated that they had seen no point in checking.

Nonhelpers who were not suspicious gave different reasons for

their behaviour. Most believed that the victim was not badly hurt and had probably walked away when the sounds stopped. Others believed that someone else in the area would help or had already helped her. Two subjects said the emergency sounded as though it were far away, and five were not sure they had heard anything. A number of subjects who followed the first helper outside the room believed that they had actually initiated helping in their group.

Six (14%) of subjects in the Confederate Leader condition believed that the leader or other group members had prior knowledge of the emergency. However, this suspicion rate did not differ from that found in No Leader subjects (5%) and Naive Leader subjects (9%) (x^2 = 1.62, n.s.).

As in the procedure of Latané and Darley (1970), the data of groups containing suspicious members were not eliminated from the final analysis. First, an equivalent number of helping and non-helping groups contained members who expressed suspicion during the interviews. Second, suspicions voiced during the interviews were discrepant with responses found in the video analyses. Finally, suspicions were never voiced during the actual emergency; subjects waited until the interview to announce their suspicions. Only one group was not included in the final analysis. In this group, one of the subjects stated straightforwardly to the other group members during the emergency that she was acquainted with a similar experiment which employed an emergency simulation to test helping responses.

A number of subjects admitted to having been influenced by other group members. At least 11 subjects were certain that they had been affected by the responses of other bystanders, and another 15 thought they might have been swayed. Several subjects believed they had been at least somewhat influenced by the confederate leader,

although some stated that they had completely disregarded the prestigious leader's presence.

At the end of the debriefing session, subjects were asked about their feelings regarding the study. Most expressed interest in the topic of helping behaviour and said they were glad to have participated in the experiment. Only two subjects indicated that they felt the deception in the study might have been unjustified, although they themselves did not feel unhappy about having been deceived. Finally, all subjects stated that they had heard nothing about the study from previous subjects.

DISCUSSION

The results are illuminating in light of previous research in this area. Contrary to the experiment by Latané and Darley (1970), which found no relationship between Machiavellianism and helping, the present study revealed a major difference between low and high Machs. Every low Mach group came to the aid of the distressed victim, while less than half the high Mach groups helped.

The discrepant findings might be explained by a number of situational differences in the two investigations. The present experiment studied the helping behaviour of groups of naive subjects who could communicate openly in a relatively unrestrictive setting. The previous research used only one real subject per trial; other bystanders were in fact tape recorded voices coming through an intercom system. Thus the latter situation allowed no opportunity for spontaneous communication of any kind. According to research on Machiavellianism (Christie and Geis, 1970), this kind of situation should mask differences between low and high Machs. Differences are

heightened when face-to-face interaction, latitude for improvisation, and emotional involvement are permitted. In such situations, low Machs have been found to emit and receive cues more often than highs, while high Machs tend to expend more effort working on a task. It is possible that low Machs in the present study were more likely to correctly interpret relevant cues about the emergency from fellow subjects.

An examination of communication during the emergency provides support for this possibility. Arriving at a consensus of opinion concerning an interpretation of the emergency seems to have been an important precedent to helping. Every group which went so far as to discuss the sounds provided help for the victim. Direct and prolonged eye contact was likely to lead to helping, whereas the amount of mutual gaze among nonhelpers was limited. Subjects who did not initiate or maintain eye contact during the emergency sometimes appeared agitated and uncomfortable. They repeatedly glanced quickly at fellow group members and at times looked toward the door of the room.

Thus subjects seemed to attempt to ascertain information about others' interpretations of the distress sounds before responding. This is consistent with the social influence hypothesis, which stresses the importance of communication during an emergency. Once subjects determine that fellow bystanders have defined the situation as one requiring a helpful response, the fear of acting inappropriately decreases and subjects are likely to provide help. If low Machs are indeed more likely to exchange cues, helping should be likely to follow. This interpretation is also compatible with Staub's (1974) finding that low Machs help more when helping is a permissible behavioural alternative. In Latane and Darley's (1970) study,

subjects did not communicate with other naive group members, so low Machs were no more likely than high Machs to conclude that helping was an appropriate response.

The results of this study may have important implications concerning the usefulness of personality traits in predicting helping behaviour. Inconsistent and contradictory findings of previous research efforts have led many experimenters to abandon work on personality after concluding that traits do not relate to helping. However, the present findings indicate that traits may be of use in predicting helping when their interaction with situational factors is considered. When relevant situations are systematically examined, it is possible that meaningful relationships can be found.

The findings also shed some light on explanations of group size effects on helping behaviour. According to the diffusion of responsibility hypothesis, helping should decrease the more bystanders are present, as each individual bears less of the total responsibility to aid the victim in distress. However, the results of this study revealed that groups of four were as likely as groups of two or three to aid the victim, and the length of time required for response was similar in all three groups.

Although the diffusion of responsibility effect did not occur, another explanation of group size effects seems to have been supported. According to the social influence hypothesis, the failure of larger groups to help is caused by pluralistic ignorance and mutual inhibition among group members who misperceive each other's interpretations of ambiguous emergencies. The present experiment's use of naive subjects might explain the lack of group size effect as well as the increased low Mach helping. In most studies of

helping behaviour, bystanders have been confederates or even tape recorded voices. Other studies which have used all naive subjects have separated them during the emergency's duration. In either case, the real subject receives no spontaneous cues from fellow bystanders which might help him to interpret the sounds of distress he witnesses. On the other hand, a subject surrounded by naive bystanders is likely to receive cues, however subtle or indirect, pertaining to the situation. At the least, nonverbal cues such as sudden shifts in posture and gaze are more likely to lead each subject to believe that an incident worthy of further attention is occurring. Once the situation has been defined as one in which helping might be required, the fear of jumping to conclusions or acting otherwise inappropriately decreases and the likelihood of helping should increase.

Passive bystanders might serve to inhibit helping through a conformity framework, with more bystanders simply increasing the pressure to conform to the apparent group consensus. Asch's (1956) interviews with subjects who conformed to an obviously incorrect group consensus revealed a number of social influence effects. Some subjects said that they had actually believed their own responses to be correct. Others felt that the majority had made them question their own judgment and decide that they themselves were wrong. A third group of subjects admitted that they knew they had given incorrect judgments but did not want to feel embarrassed by being the only person to disagree.

The cues given by nonresponding confederates in studies of helping behaviour could have prompted similar responses. For any of the reasons above, subjects might have decided not to help but to go along with the apparent group consensus. That field studies which

use all naive subjects seldom find support for the diffusion of responsibility hypothesis also supports the social influence explanation.

The present experiment also examined another aspect of diffusion of responsibility. Helping decreased considerably in groups which contained a prestigious confederate leader. This finding is compatible with the diffusion of responsibility hypothesis, which would predict less helping when responsibility is focused on someone else. Although the presence of an arbitrarily chosen naive leader did not inhibit helping, it seems likely that the real subjects attributed greater responsibility to the confederate leader, who was labelled a research student. Each individual in the Confederate Leader condition might have felt less responsibility to initiate helping, while in other groups the responsibility was probably focused uniformly on all subjects. This possibility is supported by analysis of the naive leader's effect on helping, which proved no greater than the influence of other group members.

On the other hand, it is possible that the decreased helping in Confederate Leader groups was due to inhibiting passive cues given by the prestigious leader. The confederate responded to the emergency by simply shrugging and paying no further attention to it. He maintained no eye contact with other subjects and instead appeared to attend to the problem solving task. Although analyses of video recordings revealed that subjects attempted to gain information about the confederate's interpretation of the emergency, subjects did not verbally request such information. The confederate had been instructed to respond briefly and noncommittally to any questions about the emergency, but the need to put such a procedure into effect

only occurred once. It is thus possible that the lack of cues from the prestigious confederate intimidated subjects and resulted in a failure to initiate helping. The naive leader, however, responded spontaneously to the emergency and was probably a less inhibiting influence on other subjects.

The problem in explaining the reason for decreased helping in the Confederate Leader condition lies in the experiment's inability to separate the effects of responsibility and communication. The finding thus seems to support both the social influence and diffusion of responsibility hypotheses. It is indeed likely that a combination of increased leader responsibility and decreased communication resulted in the lack of helping responses in the Confederate Leader groups.

Besides Machiavellianism, the present study also examined the effects of various individual factors on helping behaviour. Factors such as sex, size of family, programmes of study, age, and interests did not relate to helping. Nor were many differences between helpers and nonhelpers on various personality traits found. These results are largely compatible with those of Latane and Darley (1970). In keeping with the present interpretations, however, it cannot be concluded that these factors do not relate to helping in general. For example, findings of previous studies by Friedrichs (1960), Sawyer (1966), and Fischer (1973) have found authoritarianism positively, neutrally, and negatively related to helping, respectively. It is possible that in some situations - for example, when the helping act is contingent on conformity to group pressures of altruistic bystanders - authoritarianism might bear some relationship to helping.

Along these lines, helpers in the present study who scored

differently from nonhelpers on two factors of Cattell's 16 PF
would not be expected to help more in other situations.
According to their scores, subjects who responded to the present
emergency were more emotionally stable and relaxed. It is
possible that stable, composed subjects were more likely to view
the emergency calmly and to indicate their interpretation of the
event. In this experiment, such behaviour was likely to lead to
increased helping responses. However, a study by Smith and Malaby
(1975), which also gave subjects the 16 PF, found helping related
to three completely different factors. Helpers, defined as those
people belonging to altruistic organisations as rescue squads and
youth club leaders, were characterised as being more outgoing,
venturesome and happy-go-lucky. This is not surprising in view
of the criteria used to classify people as helpers. The traits
must therefore be viewed as situationally linked to helping.

The results suggest that personality traits can be predictors
of helping, but only when their interaction with specific situational
factors is considered. This interpretation was expanded upon in a
second study which examined more systematically the effects of
Machiavellianism, other individual factors, and group structure on
helping behaviour.

Experiment 2

A second study was designed to follow up the first experiment's
findings concerning Machiavellianism, social influence and helping
behaviour. Contrary to the results of Latane and Darley (1970),
Experiment 1 found that low Machs were significantly more likely to
help a victim in distress than were high Machs. It was suggested

that the use of naive subjects and face-to-face interaction enhanced differences between low and high Machs, with low scorers more likely to exchange relevant cues and thus consider helping an appropriate course of action. This explanation is in keeping with studies of Machiavellianism which have found that low Machs become more involved in socioemotional as opposed to task-oriented interactions (Bochner and Bochner, 1972; Bochner, DiSalvo and Jones, 1975) and behave less competitively (Rubin and Brown, 1975) and aggressively (Touhey, 1973). Low Machs are also more comfortable in public interactions (Blumstein, 1973) and may have superior person perception skills (Danelian, 1964; Geis and Leventhal, 1966). In addition, Budner (1962) found that low Machs are more uncomfortable than highs in ambiguous situations; it is possible that they make efforts to resolve ambiguity whenever they can. Finally, Epstein (1969) indicated that high Machs are only open to persuasion when they are confronted by facts.

The second study proposed to attempt to replicate the previous findings and to provide further support for the explanation offered. If the social influence hypothesis can explain the difference between low and high Mach helping, differences in the ability of subjects to communicate with each other during an emergency should have an effect on the helping behaviour shown. This is compatible with studies (Grofman, 1974; Hackler and Urquhart-Ross, 1974; Misavage and Richardson, 1974) which have indicated that a better flow of communication among strangers leads to a greater willingness on their part to intervene.

Experiment 2 was therefore designed to compare the helping of low and high Machs who were alone, in communicating and in non-communicating groups when an emergency occurred. All group members were to be naive subjects. In addition, the study proposed to examine the communication of group members more extensively, so that the

differences between low and high Machs as well as between helpers

and nonhelpers could be investigated. Measures of verbal and non-

verbal communication during the emergency were to be made.

Two departures from the procedure used in Experiment 1 were

introduced. The emergency continued to involve the same basic

situation in which a person fell off a ladder outside the experimental

room. However, this time the distressed person was a male technician,

and the emergency itself was longer and initially less dramatic.

These changes were introduced to add to the credibility of the

incident, to expose subjects to an increasingly unambiguous

situation, and to spread out response times. The other change

concerned the ostensible purpose of the experiment. Subjects were

asked to work on an open-ended creativity task instead of one involv-

ing problem solving. The new unstructured task was employed to

increase the amount of interaction and the possibilities for

improvisation, and to effect the manipulations.

Two predictions were put forward. First, low Machs were

expected to help more than highs when interaction was permitted, but

not when interaction was not permitted or when subjects were alone

when they heard an emergency. The cool interpersonal responses

associated with high Machs, and their tendency to expend more effort

on a task, were expected to decrease their helping responses in

the interacting situation, while the warmer low Machs would be more

likely to reveal their interpretations of the emergency and thus

define it as one requiring help.

The second prediction involved the use of naive subjects as

opposed to confederates or tape recorded voices. This was expected

to facilitate the exchange of cues during the emergency and thus

decrease the inhibition of helping in groups. It was predicted,

therefore, that groups of three would be no less likely than individuals to help, casting doubt on the diffusion of responsibility hypothesis.

Overview

A 2x3 factorial experiment was conducted to examine situational effects on the helping behaviour of Machiavellians. Low and high Machs worked on a task alone, in communicating triads, and in non-communicating triads. While subjects worked on the task, sounds of distress came from outside the experimental room as someone apparently fell off a ladder. Whether the subjects responded by helping and the time they took to do so were the main dependent variables of the experiment. Relationships between helping behaviour and other individual factors were also explored.

METHOD

Subjects

Students at the University of Durham were asked to participate in a study of imagination and creativity. Those who scored above or below one half standard deviation from the mean on Christie's Mach IV Inventory were used in the experiment. Participants were 168 undergraduates, 79 males and 89 females. All subjects were British, unpaid volunteers, with ages ranging from 18 to 23 ($\bar{X}$ = 18.92).

Procedure

Pre-session

Subjects completed the Mach IV Inventory, the Eysenck Personality Inventory (EPI), and a personal data questionnaire

(Appendix 6). Scores on the Mach IV scale were combined with scores of subjects from Experiment 1 to form an overall mean of 97.50 (s.d. = 15.67) for males and 92.80 (s.d. = 14.00) for females. Appendix 2 illustrates the spread of Mach scores of all subjects who completed the scale. Figure 2.1 shows the mean scores of subjects used in the present experiment.

Figure 2.1. Mach IV scores in Experiment 2.

	Low Machs		High Machs	
	$\bar{X}$	s.d.	$\bar{X}$	s.d.
Males	82.05	7.09	116.05	7.68
Females	77.49	6.20	109.00	7.51

Same-sex subjects thus classified were randomly assigned to the conditions formed by the second part of the 2x3 design. The design called for twelve trials for low and high Machs in each of three conditions. These conditions required subjects to work on a task alone, in communicating triads, or in non-communicating triads. No subjects from the same programme of study or place of residence were put in the same triad together.

Session

The experimental sessions were held during evenings and weekends in the same location as that used in Experiment 1 (see Appendix 1). Subjects first met in the experimenter's office, from where they were taken to the experimental room on the other side of the building. The identical setting for the emergency in Experiment 1 was used (see page 112). On reaching this area the experimenter exclaimed, "Oh, I think the technicians are still

working!" She then led the subjects into the room, where equipment was set up for the ostensible experiment.

The experimenter explained that subjects would be working on a test of imagination and creativity. The task of subjects was to compile stories from Thematic Apperception Test pictures by answering set questions for each card (see Appendix 7).

In the Alone condition, the instructions were:

> In front of you are cards with pictures on them. On top of each picture is a sheet of paper with three spaces for writing. When I say "Go" you will start with the top card in the stack. You will study the picture for a while and then answer the first question on the sheet of paper. This is a test of imagination, so try to be as creative as possible, giving details wherever you can. In the first part you will be talking about who the character or characters are and the circumstances which brought them there. You should take no more than 3 minutes to look at the picture and note down the answer. In the second part you will discuss what is happening at the moment in the picture and what the characters are thinking and feeling. After about 3 minutes again you will go on to the last question and discuss the outcome or results for the people in the picture.
>
> Work quickly. After all 3 parts to the first picture have been finished, put it and the sheet aside and repeat the procedure with the next picture. You will have 30 minutes to work, so you ought to complete more than 3 pictures. Are there any questions?

The Communicating Triad condition members sat facing each other and heard the following instructions:

> In front of you.....in the stack. One of you (we'll start with the person on my right/left) will remove the question sheet and put it on his/her desk. You will all study the picture for a while and then discuss the first question on the sheet of paper. This is a test of imagination.....brought them there. Work as a group. Say what's on your mind as you talk about the picture and try to agree on an answer to the question. Then the person who has the sheet of paper will note down the answer. If you haven't come to a unanimous agreement, this person may choose his/her own answer. Then he/

she will pass the paper on to the person on
his/her right. The procedure will then be
repeated with the second question. In this
picture you will discuss what is happening
at the moment in the picture and what the
characters are thinking and feeling. After
about 3 minutes again the person with the
paper will write down the answer, this time
using his/her own choice if no agreement has
been reached. Then she will pass the sheet
to her right and you will repeat the
procedure, discussing the outcome...........
Are there any questions?

The instructions were similar in the non-communicating
groups, whose members sat back-to-back, so that involvement in the
task could be equivalent to that of communicating groups. Instead
of discussing their answers, however, subjects concurrently wrote
answers to one section of the page and then passed their picture
and response to the subject to their right. The instructions were:

In front of you......in the stack...........
(See instructions in "Alone" condition)
....and note down your answer. Then each of
you will pass the sheet on which you've just
written and the picture that goes with it to
the person on your right. The procedure will
then be repeated with the second question on
the paper you have just received. In the
second part.....thinking and feeling. After
about 3 minutes again you will write down
your answer, pass the sheet to your right,
and repeat the procedure, discussing the
outcome.......Are there any questions?

After giving the instructions, the experimenter announced
that she would go back to her office and return when the time was
up. On leaving the room, she added, "I hope the technicians
don't bother you," and then closed the door behind her. At this
point, a loudspeaker was brought from a nearby room and placed
near the door. The subjects were then observed through a video
system, the camera of which was hidden in the experimental room.

A tape recording played through the loudspeaker was begun

immediately after the experimenter left the room. Several minutes

of silence were followed by a variety of noises consisting mainly

of background sounds of steps and ladder-climbing. Eighteen minutes

after the task had begun, a loud crash accompanied by a short scream

sounded as a male technician apparently fell off the ladder. The

initial crash and clattering lasted 8 seconds. The victim then

cried, "Oh, my leg!" and moaned for 34 seconds. Verbal calls for

help then began and lasted another 43 seconds. These consisted of:

"Is anyone about?......Is anyone about?!?...."(pause, and more

anxiously) "Can somebody help me?.....Help.....Help!" The emergency

in its entirety lasted 85 seconds.

The optimal placement of the speaker and volume of the

recording had been established by pre-testing of judges and pilot

subjects, who also assessed the sounds as distressful and credible.

If subjects helped by leaving the experimental room, they saw

the large loudspeaker in front of the door with the ladder and books

still intact. The experimenter appeared, apologised for the

interruption, and instructed the subjects to continue with the task.

If subjects did not help by the time 3 minutes had passed, the

session was terminated. The experimenter then entered the room and

gave all subjects a questionnaire to complete (Appendix 8). Finally,

a discussion based on subjects' written responses to questions

about the experiment was held, and subjects were then debriefed.

The method of analysis was the same as that used in

Experiment 1 (see page 116).

RESULTS

Overall, subjects in 56 of the 72 trials (78%) responded to

Figure 2.2. Cumulative proportion graph:

Total helping, Experiment 2.

% HELPING
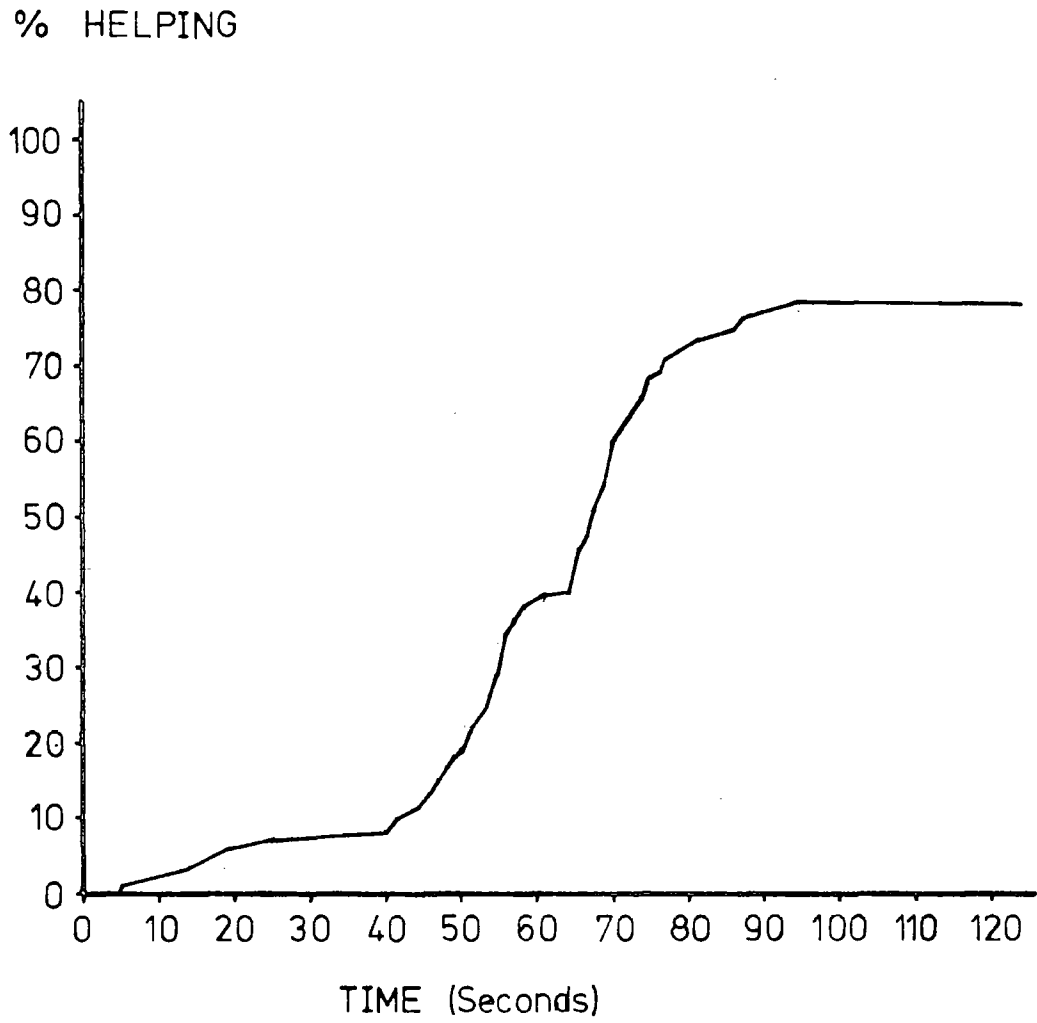
TIME (Seconds)

Total N Groups = 72

the emergency. Helping times ranged from 5 to 95 seconds, with a mean response time of 59.09 seconds (s.d. = 18.32), a median of 58 and a mode of 56 seconds. Of the 56 groups who did respond, 1 (2%) did so during the initial scream and clattering; 6 (11%) during the moaning; 21 (38%) during the verbal calls; 23 (41%) during the actual calls for help; and 5 (9%) after the sounds stopped. Figure 2.2 illustrates the response patterns in a cumulative proportion graph.

The results are summarised in Figure 2.3 below.

Figure 2.3. Summary of helping in Experiment 2: Number, percent and reaction time in seconds out of 12 per cell.

	Low Machs			High Machs			TOTAL		
	N	%	R.T.	N	%	R.T.	N	%	R.T.
Alone	11	92%	54.91	11	92%	55.46	22	92%	55.18
Communicating Triad	9	75%	57.11	4	33%	55.25	13	54%	56.54
Non-communicating Triad	12	100%	67.83	9	75%	60.67	21	88%	64.76
TOTAL	32	89%	60.38	24	67%	57.38	56	78%	59.09

The two main effects were significant. Low Machs were more likely than high Machs to respond to the victim's pleas for help (x^2 = 3.93, d.f. = 1, p < .05). Low and high Mach groups helped in 89% and 67% of the trials, respectively. The structure of the group also affected helping significantly (x^2 = 11.73, d.f. = 2, p < .01). 92% of subjects working alone and 88% of non-communicating groups helped, but only 54% of communicating groups responded to the calls

Figure 2.4. Cumulative proportion graph:

Machiavellianism and helping,

Experiment 2.

% HELPING

———————— Low Machs (N = 36)

.... High Machs (N = 36)
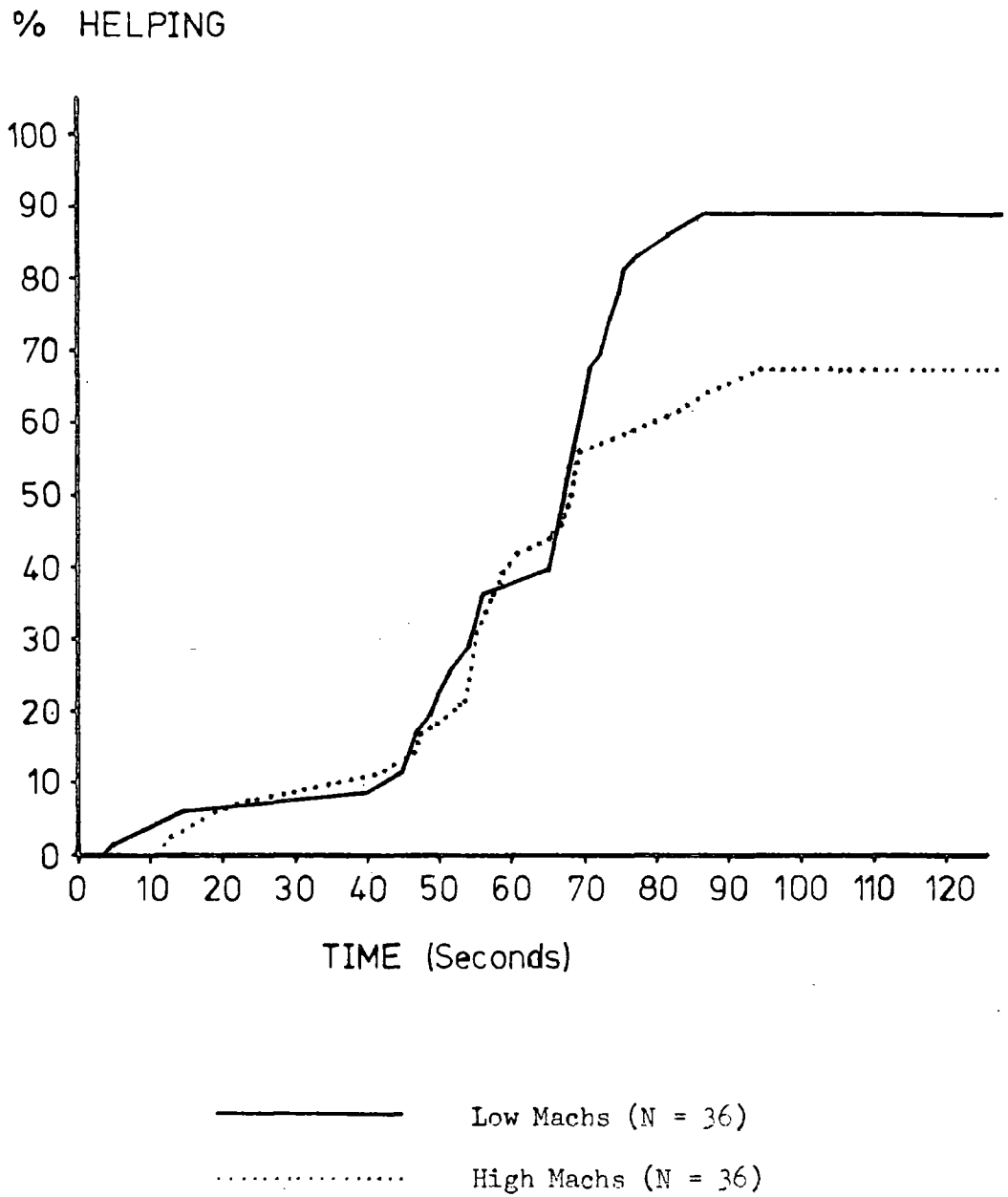
Figure 2.5. Cumulative proportion graph:

Group structure and helping,

Experiment 2.

% HELPING

————————	Alone (N = 24)
················	Communicating Triad (N = 24)
— — — — —	Non-communicating Triad (N = 24)
—o———o———o	Hypothetical Triad: $1 - (1 - p)^n$
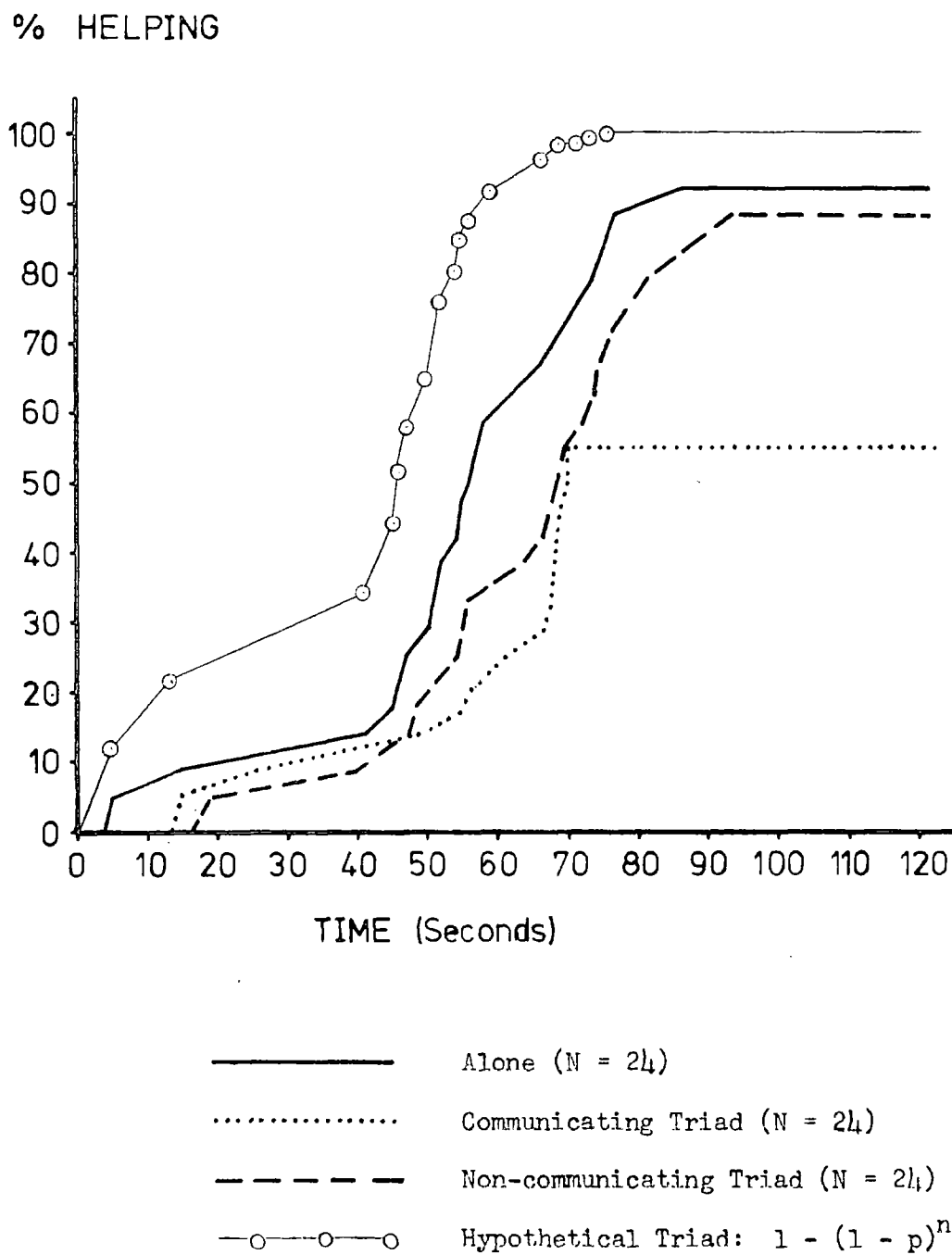
for help.

In those trials in which helping occurred least, subjects who did help took no longer to do so than did others. Figures 2.4 and 2.5 illustrate response patterns, and Figure 2.6 below contains the results of the two-way analysis of variance on reaction times.

Figure 2.6. Analysis of variance: Reaction times, Experiment 2.

Source	SS	DF	MS	F	p <
A (Mach)	98.23	1	98.23	.29	n.s.
B (Structure)	812.63	2	406.32	1.19	n.s.
AB	15.56	2	7.78	.02	n.s.
Within cell	17,104.95	50	342.10		-

An unexpected ceiling effect not suggested in pilot work leads to difficulties in establishing the combined effect of group structure and Machiavellianism. The raw results appear to indicate a difference between the High Mach/Communicating Triad cell and all other cells. Only 33% of the groups in this cell helped, while an average of 87% of those in other cells helped, ranging from 75% to 100%.

In the analysis of separate effects, the expected frequencies were high enough to perform a chi square test. However, the method of partitioning chi square (Winer, 1970) yields an interaction by subtracting these effects from the chi square of total individual cells. In this case the ceiling effect resulted in an expected frequency lower than 5 in the nonhelping groups. The data regarding

the interaction effect in Figure 2.7 must therefore be considered
tentative in light of the low expected frequencies.

Figure 2.7. Chi square analysis: Helping,
Experiment 2.

Source	Chi square	DF	p <
Total	19.90	5	.01
A (Mach)	3.93	1	.05
B (Structure)	11.73	2	.01
AB	4.24	2	.15

Verbal and nonverbal communication was related to helping.
Of groups in the non-communicating condition (N = 24), 19 (79%)
contained members who turned from their assigned back-to-back
seating position to look at other subjects. Of these 19, 18 (95%)
helped the victim. Thus overt movement during the emergency was
likely to lead to helping; the probability associated with x - 1
is p = .001. Of groups in the communication condition (N = 24)
14 (58%) included at least two members who were involved in direct
mutual eye contact during the emergency, and 10 (71%) of these 14
helped (p = .09).

In addition, 10 communicating groups and 7 non-communicating
groups engaged in some sort of verbal discussion about the emergency,
with only one of these groups (in the communication condition) failing
to help. Thus verbal reference to the emergency was as likely in
the Communicating Triad condition as in the Non-communicating Triad
condition, and with only one exception led to helping.

Few of the individual factors related to helping. Sex, age,

order of birth, course of study, and outside interests did not
relate to helping behaviour. On the Extroversion scale of the
EPI, the mean score of helpers was 11.91 and nonhelpers 11.14
(t = 1.27, n.s.). The mean scores of helpers and nonhelpers on
the Neuroticism scale were 11.37 and 10.58, respectively (t = 1.12,
n.s.). A difference was found, however, on the Lie scale of the
EPI; helpers scored significantly lower than did nonhelpers. The
mean score of the former group was 2.19, very similar to the 2.26
standardised mean score published by Eysenck and Eysenck (1964).
Nonhelpers averaged 2.72, a marginal difference (t = 1.84, d.f. = 166,
p $<$ .07).

The post-experimental questionnaire revealed a certain amount
of suspicion on the part of some subjects (see Appendix 8). 11% of
the subjects expressed suspicion about the authenticity of the
emergency, 78% did not mention any such suspicion, and the remaining
11% were either unsure or possibly suspicious. Interpretations of
the emergency varied. 46% of subjects thought the sounds represented
a serious emergency. 33% decided that either the technician's injury
was not very serious, that he was joking with fellow technicians,
or that he was simply calling out for aid in putting the books away.
15% suggested that the emergency was set up for ulterior purposes,
and 6% claimed to have heard nothing. Although low and high Machs
were equally likely to believe the emergency was a fake, more low
(59%) than high Machs (33%) thought the sounds represented a serious
emergency, while high Machs (48%) were more likely than lows (20%)
to believe that the technician had not sustained serious injury
(x^2 = 20.06, p $<$ .001). As well, helpers were significantly more
likely than nonhelpers to believe the emergency was serious
(x^2 = 6.12, p $<$ .02).

Interpretations of the purpose of the experiment also varied. 48% of subjects believed that the study was concerned with some aspect of creativity, and 40% believed it involved personality or group dynamics. The remaining 12% thought the study was interested in helping responses. These interpretations did not differ significantly across conditions or between helpers and nonhelpers.

Finally, 80% of subjects stated that they enjoyed the task, and 57% felt they had had enough time. Again, no differences between subgroups were found.

DISCUSSION

The results appear to be largely compatible with those of Experiment 1. Low Machs were again more likely to provide help for the distressed victim than were high Machs. When working on the task alone, low and high Mach individuals responded equally often to the cries for help, indicating that the lack of high Mach helping was not due to increased self-interest and disregard for the welfare of others. In non-communicating, back-to-back groups, high Machs helped slightly but not significantly less. But when communicating face-to-face, high Machs helped considerably less than did any other kind of group. Thus although high Machs helped less overall, this difference seems to be mainly due to a decrease in the helping of high Mach communicating groups. Communication appears to have inhibited the helping of high Machs but not necessarily the helping of low Machs.

However, the results only partially support the predictions. It had been predicted that low Machs would help more than high Machs

in communicating groups but not in other conditions. The findings
do support this, although a ceiling effect makes the interaction
difficult to establish. But the prediction did not suggest that
helping would occur less often overall in the communicating
condition. If anything, it was suggested that face-to-face
communication would facilitate helping through the free exchange of
cues regarding the emergency. However, it looks as though
communication may have had a general inhibitory effect on helping.
Overall, subjects in communicating groups helped significantly less
than did those in other conditions, and even the helpful low Machs
helped slightly less often in this condition.

This finding might at first be viewed as contradicting the
interpretation suggested previously. According to the social influence
hypothesis, an increase in the helping of face-to-face groups should
be expected, as cues regarding bystanders' interpretation of the
situation are more likely to be exchanged.

Analyses of communication during the emergency and question-
naire responses yield crucial information which might help to reconcile
the findings. These analyses revealed interesting differences between
the cues exchanged by subjects in communicating as opposed to non-
communicating groups. Because the latter worked on the task by
writing their answers and sitting back-to-back, their responses to
the emergency marked an obvious departure from the instructed
procedure. Such subjects often stopped writing, raised their heads,
and looked at other subjects as soon as they heard the sounds of
distress. In doing so they had to actually turn around from their
prescribed seating positions. Obvious cues were thus exchanged early
in the emergency, and subjects were able to perceive that fellow
bystanders were at least aware of and possibly concerned about the

emergency.

However, different responses were noted in the nonverbal communication of communicating groups, who were already looking at each other and talking when the sounds occurred. Because of their face-to-face orientation, their responses to the sounds were not as overt, so each subject may have remained unclear as to the perception of others regarding the emergency. The initial stages of the emergency, seemingly ignored by subjects, might have led each person to infer that each fellow bystander did not define the sounds as an emergency or as serious enough to merit further attention.

This interpretation is supported in more detailed analysis of the communication of group members during the emergency. As in Experiment 1, subjects who were engaged in mutual eye contact, "startle responses," and verbal discussion regarding the emergency were likely to eventually help the victim. Subjects in the Communicating Triad condition were no more likely to discuss the distress sounds than were those in the Non-communicating Triad condition. In addition, post-experimental questionnaires and interviews revealed that interpretations of the sounds varied with the condition; low Machs were more likely to conclude that a serious emergency had indeed occurred, and the belief that the technician had been greatly injured led to increased helping.

The cumulative proportion graphs show related differences in the helping patterns. Subjects in the communicating condition who did respond to the emergency did so relatively early. If no one helped by the middle of the victim's verbal pleas for help, the groups were likely to continue with the task, having committed themselves to an interpretation of the sounds. However, subjects in other conditions, having decided the situation was worthy of

further attention, might have eventually defined the sounds as representing a serious emergency and thus continued helping when the situation became less ambiguous.

The results thus seem compatible with research on Machiavellianism and with the findings of the previous study. The greater tendency of low Machs to interact warmly and attend to others' feelings might have served to facilitate the exchange of cues about the emergency, even when such cues were not obvious. On the other hand, the cool interpersonal responses associated with high Machs were likely to lead to a state of mutual inhibition in which each subject's apparent calm decreased others' helping behaviour.

The data again suggest that situational effects on personality need to be systematically examined. The lack of findings with regard to other individual factors studied is fitting in this interpretation. Although helpers were no more likely to be high in extroversion or stability in this study, other situations might arise (i.e., Schaefer, 1974; Tipton and Bland, 1975) in which such factors would affect helping. The differences in the lie scores of helpers and nonhelpers is a possible case in point. Eysenck's lie score is a check on the need for subjects to appear socially desirable by "faking good." Kirton (1977) found that high lie scorers were characterised by inflexibility and conservatism. It is possible that nonhelpers, who scored significantly higher on the Lie scale, were more likely to fear social embarrassment for responding inappropriately during the emergency. In another situation - for example, one in which helping involved conformity - a high lie score might be expected to relate positively to altruistic behaviour. The results continue to indicate that personality traits might be useful predictors of helping behaviour when their interaction with specific situational variables is taken

into account.

As predicted, the diffusion of responsibility hypothesis was not supported. Non-communicating triads were as likely as individuals alone to help during the emergency. The data suggest that the use of all naive subjects instead of confederates or tape recorded voices might at times decrease the effect of inhibition in studies of helping behaviour. When confederates are present during an emergency, appropriate cues are not exchanged and subjects are likely to conclude that other bystanders believe no emergency is occurring.

Although instructions for the task in communicating and non-communicating groups were made as similar as possible, the chance that differences in involvement in the task affected helping cannot be overlooked. It is conceivable, for instance, that communicating groups felt more commitment to the task (although they enjoyed it no more than subjects in other conditions) and were therefore less likely to abandon it, if only momentarily, to investigate the calls for help coming from outside their room. This possibility was pursued in the following experiments.

Chapter VI

GROUP STRUCTURE, TASK INVOLVEMENT AND HELPING BEHAVIOUR

As has been seen, researchers have examined numerous individual and situational factors which seem to affect helping behaviour. Generalisations about the effects of such variables as personality, number of bystanders, and communication among subjects have all been attempted, but seldom do trends remain consistent.

Experiments 1 and 2 indicated the importance of considering the interaction of situational variables with other factors. One potentially crucial variable that has been largely ignored in the literature is the "fake" or "irrelevant" task in which subjects are engaged until an emergency occurs. Such tasks are often only a means to an end in research efforts. They are vehicles through which the experimenter may keep his subjects busy and convince them they are participating for another purpose, or through which independent variables may be introduced. Thus subjects have been involved in discussing personal problems (Darley and Latané, 1968); working on ESP projects (Bickman, 1971); filling in questionnaires (Latané and Darley, 1968; Smith, Smythe and Lien, 1972); completing a mathematics test (Levy, et al., 1972); drawing sketches (Darley, Lewis and Teger, 1973); and solving various problems (Ross, 1971; Ross and Braband, 1973). These are only a few of the tasks which have been used to engage subjects before helping is solicited. However, few researchers have considered the overall effect of the task when attempting to compare results with those of other studies.

The task itself might exert a great influence on a subject's

decision to help, particularly in situations in which diffusion
of responsibility may be operative. A subject's perceived
responsibility toward helping a person in need has been shown to be
affected by his role at the moment of a crisis (Ross, 1971; Bickman,
1972). It is conceivable that a person who is engaged in an
activity to which he attaches considerable importance may be less
likely to abandon it to help a victim when an emergency occurs than
a subject who is simply passing time. The former's role as an
experimental subject may take precedent over other possible concurrent
and conflicting roles. Evaluation apprehension, discussed in
Chapter 4, may bring a subject working on a difficult task to devote
all his effort toward doing well on the task in order to prove his
worth to an experimenter.

With this in mind, it is not surprising that field studies
have tended to find greater helping than have laboratory experiments
(Lerner, Solomon and Brody, 1971; Piliavin and Piliavin, 1972).
Subjects going about their daily routine might be expected to help
more than subjects perceiving their task at hand to be crucial to the
outcome of an experiment.

In addition, a subject who feels a part of a group effort in
performing a task may feel more responsibility toward the group
than toward a stranger in distress. Conflicting demands might lead
him to deny his responsibility toward the victim and instead remain
with the group to fulfill his duties. In all such cases, the
involvement inherent in the task might have an important effect on
the subject's decision to continue working on it or leave it to help
another.

Along these lines, different tasks might interact with main
independent variables, making interpretations of results difficult.

For example, groups of subjects working together on a difficult problem-solving task might be less likely to help an outsider than would individuals working on the same task who feel no responsibility to other subjects. On the other hand, groups may be more likely to help if the task involves an easily dealt with task; one member could leave the room without worrying about disrupting the entire experiment.

It is also likely that such situational influences would interact with personality variables, particularly those related to responsibility. Schwartz and Clausen (1970) found that subjects who scored high on ascribing responsibility toward themselves as opposed to away from themselves were more likely to help a victim. In this study, subjects believed they were simply involved in an open-ended discussion of personal problems. It is possible that in cases in which task responsibilities were emphasised, subjects high in responsibility would be more likely to stay with the task instead of helping the person in distress.

Machiavellianism might be particularly relevant here. Numerous studies (Hacker and Gaitz, 1970; Bochner and Bochner, 1972; Bochner, DiSalvo and Jones, 1975) have shown that high Machs are excessively task-oriented while low Machs are more concerned with socioemotional relationships. In addition, Christie and Geis (1970) noted that during the course of many experiments on Machiavellianism, high Machs were consistently more likely to fulfill their commitment to the experimenter by actually attending their scheduled session. It is possible that differences between low and high Mach helping as found in the previous experiments could be partially attributed to differences in perceived responsibility to the task, with high Machs failing to help because of their commitment to the experimental

session. This interpretation, however, is not completely supported by the results of Experiment 2, as high Machs were only less likely to help when they communicated face-to-face with other group members as they worked on the task. It is possible that their attention devoted to the task led them to exchange few relevant cues regarding their interpretation of the emergency. A lack of obvious cues would have been especially marked if subjects were already looking at each other and would probably have resulted in increased pluralistic ignorance and decreased helping.

Another relevant personality factor might be that measured by the Lie Scale on the EPI. Eysenck and Eysenck (1964) have suggested that although this scale was developed as a check on high need for social desirability, it measures a trait that is important in its own right. In Experiment 2, subjects with high lie scores proved less likely to help in an emergency. It is possible that this effect would be especially marked during important tasks, where the risks of behaving inappropriately in front of fellow group members would be increased.

The following two studies were designed to deal with some of these points by varying the nature of the task in which subjects were to be engaged during an emergency. The instructions and procedure of two tasks were to be manipulated so that the task conditions would be similar except for the involvement required as subjects participated in the experiment. In addition, subjects were to be studied as individuals and in pairs, so that effects for diffusion of responsibility and social influence might be further examined.

The setting, timing and emergency were to be identical to that used in Experiment 2. However, a departure was introduced to

extend the investigation of Machiavellianism. Instead of
being grouped in same-Mach pairs, subjects were to be randomly
assigned to conditions regardless of their Mach scores. This
procedure was introduced so that differences in the interaction
and helping of mixed and same-Mach groups could be examined, and
so that the investigation of responsibility effects could be
facilitated. If differences in high and low Mach helping are
at all a function of differences in responsibility toward a task,
a helping member of a mixed-Mach pair during an involving task
should be a low Mach.

Experiment 3

This experiment was designed to investigate the helping
behaviour of subjects who worked alone or in pairs on a task that
was either demanding and involving or not. It was predicted that
subjects who worked on a demanding task when an emergency occurred
would help less often, and take longer to help, than would those
engaged in a non-demanding task. In addition, this effect was
expected to be more pronounced with subjects in pairs, whose
responsibility toward each other would increase inhibition, thus
leading to decreased helping responses.

Overview

A 2 x 2 factorial experiment was conducted to examine the
effects of an "irrelevant" task on helping behaviour. Subjects
alone or in communicating pairs worked on either a demanding or
non-demanding task. While subjects worked, sounds of distress came
from outside the experimental room as someone apparently fell off a
ladder. Whether the subjects responded by helping and the time they

took to do so were the main dependent variables of the experiment. Relationships between helping behaviour and scores on the Mach IV Inventory and the EPI were also explored.

METHOD

Pilot study

A pilot study was first conducted to test the effectiveness of the proposed task manipulation. Subjects were 24 Open University students attending a summer school session held at Warwick University. Four trials were run in each of the four cells formed by the design of the experiment. Each subject or pair of subjects performed either the demanding or non-demanding task described in the procedure below, and each then filled in a questionnaire (see Appendix 9) to rate the task.

Analysis of the results revealed several relevant differences in the tasks. The proposed demanding task was considered more difficult, involving, stressful and demanding, although no more interesting, enjoyable or unpleasant. In addition, there was a tendency for subjects in the demanding task condition to feel more nervous about their performance on the task.

Subjects

University of Durham students were asked to participate in a study involving problem solving. 25 males and 41 females agreed to participate in the experiment. All subjects were British, unpaid volunteers, aged 17 to 22 ($\bar{X}$ = 18.97, s.d. = .92).

Procedure

Subjects completed the Mach IV Inventory, the EPI, and a

personal data questionnaire (Appendix 6) at least six weeks
before participating in the experiment. Same-sex subjects were
randomly assigned to the conditions formed by the 2 x 2 design.
No members of a pair were from the same programme of study or
place of residence.

The same apparatus used in Experiment 2 (see diagram in
Appendix 1) was employed, with all sessions taking place during
evenings or weekends. Subjects were led from the experimenter's
office to the experimental room, where they saw a ladder and stacks
of books indicating that work was in progress. The experimenter
explained that technicians were apparently still working outside
the experimental room. Details of this procedure are discussed
on pages 112-113.

Subjects were then led to the room where equipment was
set up for the experiment. Depending on the condition, one or
two chairs and desks were situated across the room from a white
projection screen, and a 35mm slide projector was on a table next
to the desk(s). The experimenter repeated that subjects would be
working on a problem solving task. The task of subjects was to
solve anagrams which were to be projected through slides onto the
screen in the room. All subjects were shown the same slides and
used the same answer sheet (Appendix 10). The difficulty of the
anagrams increased as the experiment progressed, so that by the time
the emergency was heard, subjects in the Demanding condition were
working on extremely difficult problems and were likely to have
already missed several. According to studies of the anagrams,
it was highly unlikely for any subject or pair of subjects to
correctly solve most of the final third of the problems, and this

proved, without exception, to be true.

All subjects heard the following instructions:

> This study involves a test of problem solving.
> In this experiment you will be solving anagrams,
> or words whose letters have been rearranged.
> You will be shown groups of 5 letters and will
> try to figure out what real word can be formed
> from the letters. For example, if you were
> shown the letters KINTH, the solution would be
> THINK. All of the problems can be solved. The
> letters are on slides, and

From this point, the manipulations were introduced. In the

Demanding Task conditions, subjects were instructed to solve as

many anagrams as possible as they were automatically projected
for 50 seconds each.
The instructions stressed the importance of working quickly

and continued as such:

> letters are on slides, and will be projected
> automatically on the screen in front of you. You
> are encouraged to work (together) as quickly as
> possible as you solve the anagrams, paying close
> attention to each slide. Once a slide is shown,
> it will not appear again. Most people solve most
> of the anagrams.

In the Non-Demanding Task conditions, subjects were able to project

the slides manually, and they were told to take their time in

solving the anagrams. The instructions continued:

> letters are on slides, and you may use this switch
> to project them as you wish.....You are encouraged
> to work (together) at a leisurely pace as you solve
> the anagrams. Few people ever finish all the slides,
> so don't worry if you can't do some of them. Some
> people find they work best if they take a short rest
> from the task now and then. You may go back to any
> slide if you wish.

Both Demanding and Non-Demanding condition subjects then heard the following:

> When you solve an anagram, write it in the
> space provided on the sheet on your desk.
> Put an X in the space of any that you do not
> answer. I will leave you with the task and
> return when your time is up.
> Are there any questions?

After giving the instructions, the experimenter left the room, closing the door behind her. From this point the procedure was identical to that employed in Experiment 2. After about 20 minutes, subjects heard the male technician fall from the ladder and emit increasingly dramatic pleas for help. If subjects left the room to help, the experimenter appeared and apologised for the interruption. If they did not help within 3 minutes, the session was terminated. The experimenter then entered the room and gave subjects a questionnaire (Appendix 9) to complete. A discussion based on subjects' written responses to questions about the experiment was held, and subjects were then debriefed.

The same methods of analysis used previously were employed.

RESULTS

Overall, subjects in 18 of the 44 trials (41%) responded to the emergency by leaving the experimental room. Helping times ranged from 46 to 106 seconds, with a mean response time of 77.67 seconds (s.d. = 13.82). Of those groups who did respond, none helped during the initial scream and clattering or subsequent moaning. Three (17%) did so during the first verbal calls, 7 (39%) during the actual cries for help, and 8 (44%) after all sounds had ceased.

Figure 3.1. Cumulative proportion graph:

Total helping, Experiment 3.

% HELPING
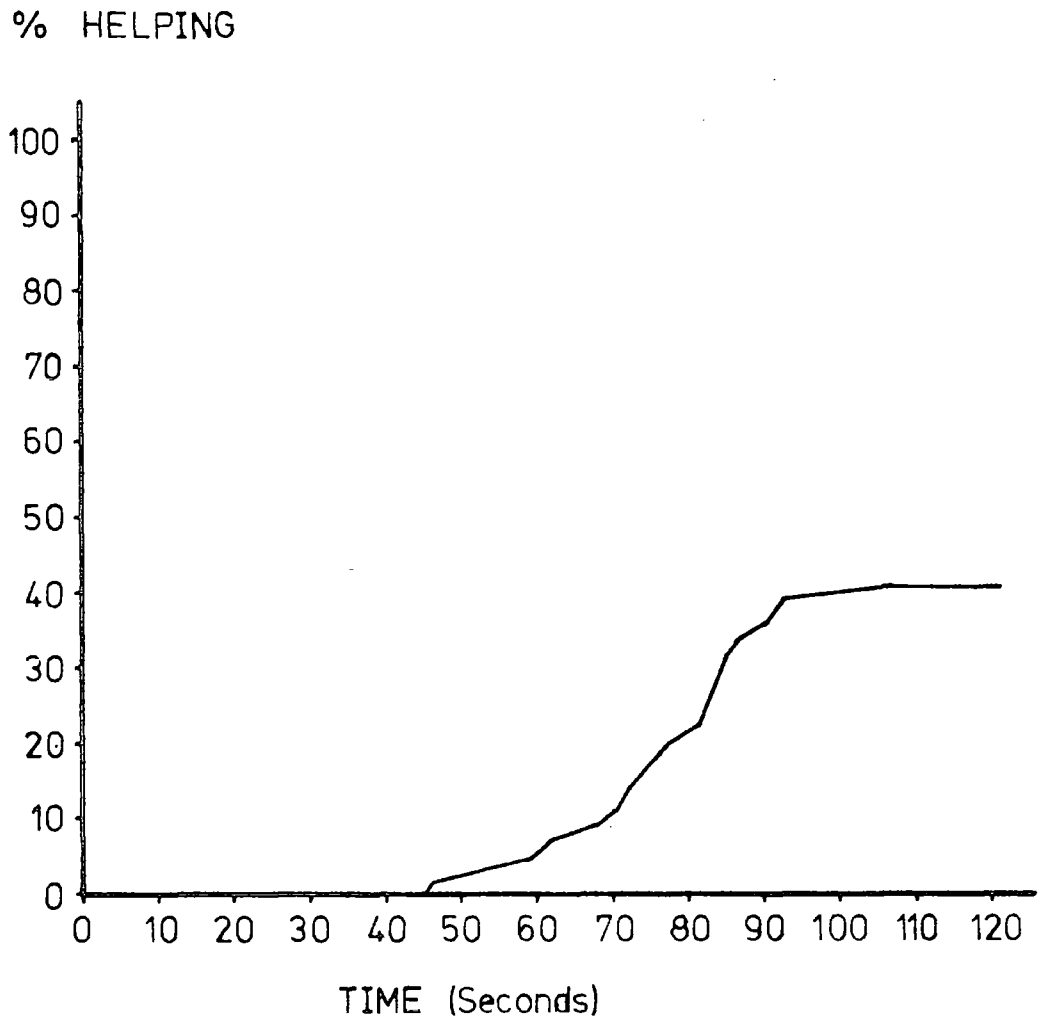
TIME (Seconds)

Total N Groups = 44

Figure 3.1 illustrates the overall response patterns in a cumulative proportion graph.

The results are summarised in Figure 3.2 below.

Figure 3.2. Summary of helping in Experiment 3: Number, percent and reaction time in seconds out of 11 per cell.

	Demanding Task			Non-demanding Task			TOTAL		
	N	%	R.T.	N	%	R.T.	N	%	R.T.
Alone	6	54%	84.33	7	64%	68.43	13	59%	75.77
Pairs	3	27%	79.67	2	18%	87.00	5	23%	82.60
TOTAL	9	41%	82.78	9	41%	72.56	18	41%	77.70

Subjects working alone when the emergency occurred were significantly more likely to help the victim than were subjects in pairs (x^2 = 4.61, d.f. = 1, p $<$ .05). This difference represents an underestimation, as it does not consider the probability of two subjects as opposed to one helping. According to Latané and Darley's (1968) $1 - (1 - p)^n$ formula, 83% of subjects in pairs should have helped.

The differences in the task had no apparent effect on helping. An equal number of subjects working on the demanding and the non-demanding task responded helpfully. In addition, no interaction between task and group structure was found (see Figure 3.3).

Figure 3.3. Chi square analysis: Helping, Experiment 3.

Source	Chi square	DF	p $<$
Total	6.40	3	.10
A (Task)	0	1	n.s.
B (Structure)	4.61	1	.05
AB	1.89	1	n.s.

Figure 3.4. Cumulative proportion graph:

Task involvement and helping,

Experiment 3.

% HELPING

——————— Demanding Task (N = 22)

.... Non-demanding Task (N = 22)
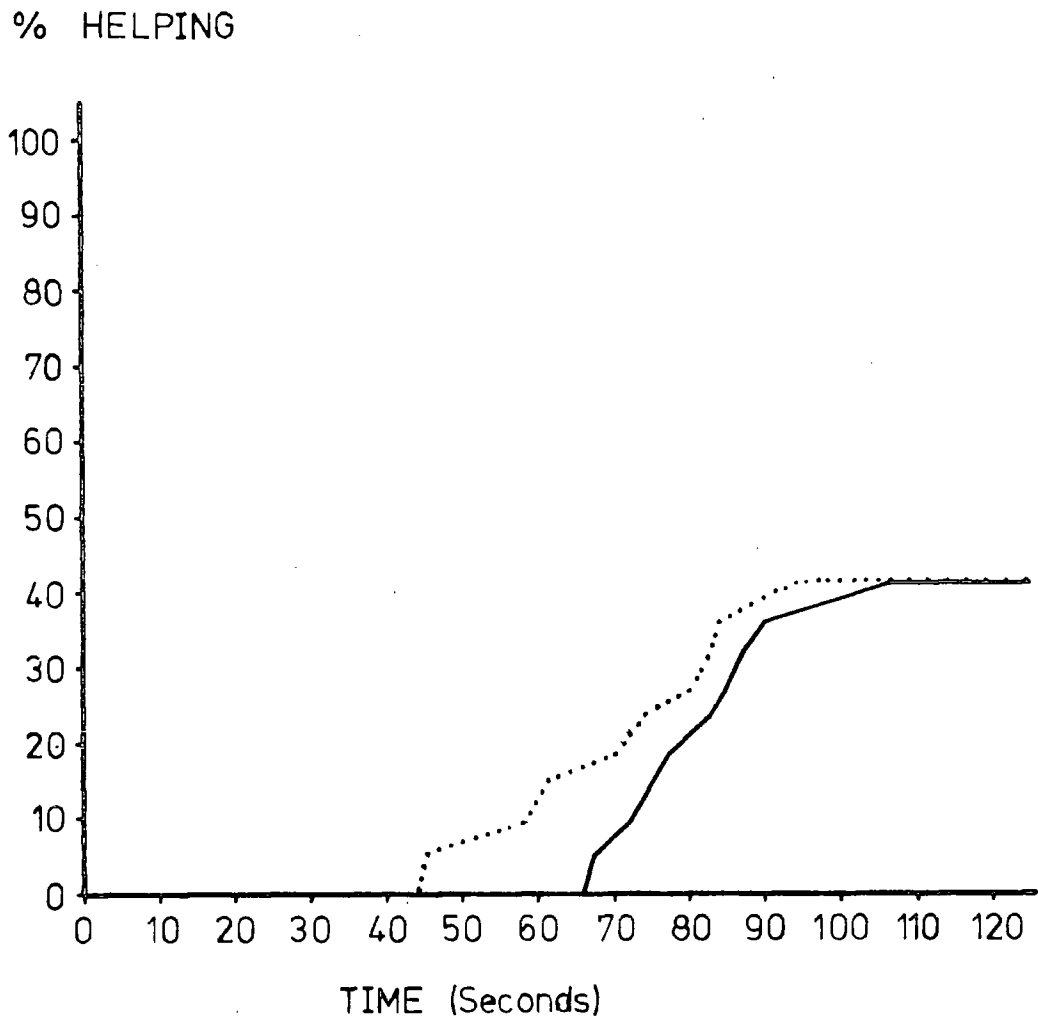
Figure 3.5. Cumulative proportion graph:

Group structure and helping,

Experiment 3.

% HELPING

————————— Alone (N = 22)

················· Pairs (N = 22)

—o——o——o— Hypothetical pairs: $1 - (1 - p)^n$
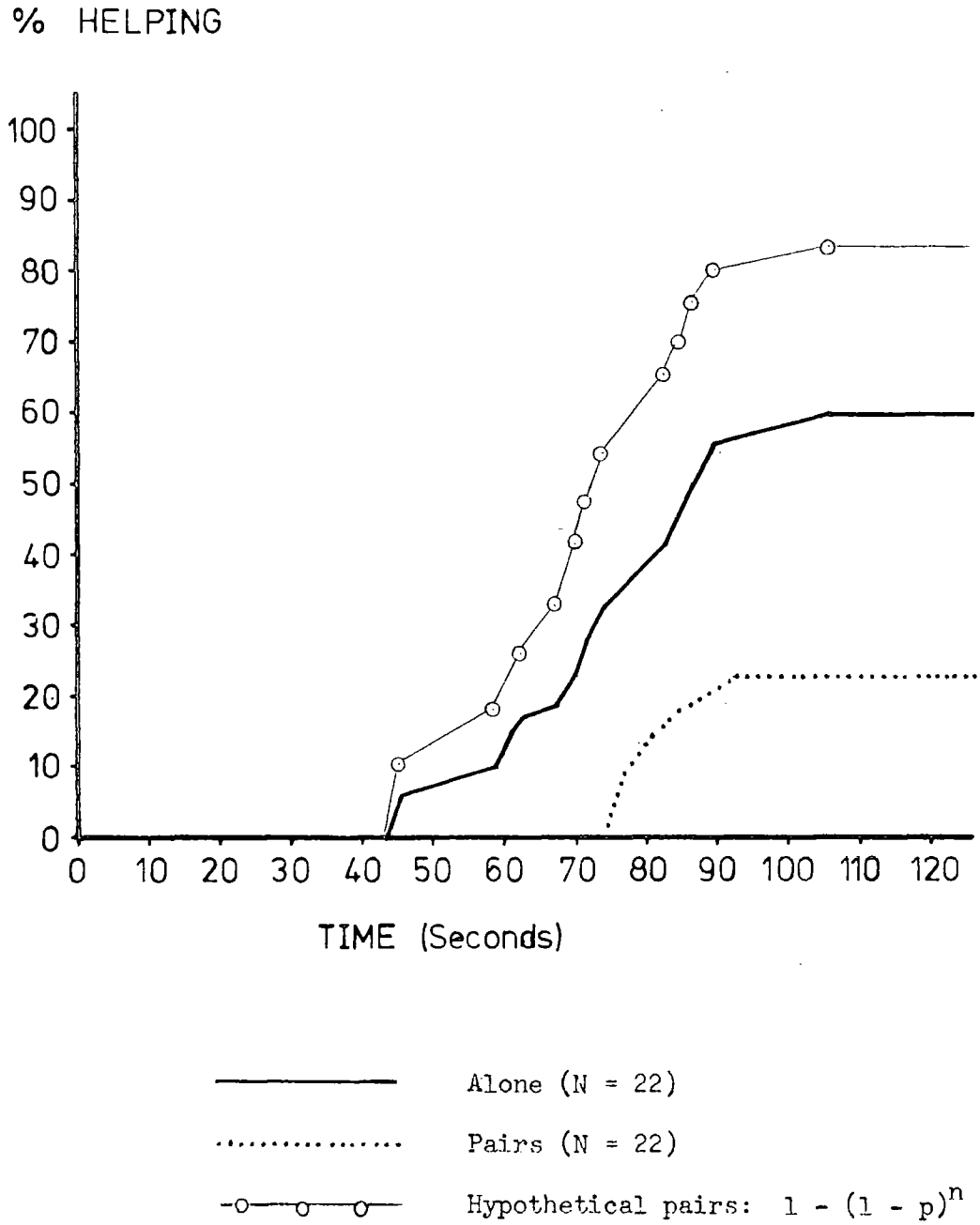
No differences in response times were found. The mean time of helping by subjects alone was 75.77 seconds, while those in pairs averaged 82.60 seconds. Subjects working on the demanding task took 82.78 seconds to help; those in the non-demanding task took 72.56 seconds. As indicated in Figure 3.6 below, none of these differences reached significance. A very slight, non-significant interaction indicated a trend for subjects alone to help more quickly in the non-demanding task than in the demanding task, while pairs helped more quickly in the demanding task than in the non-demanding task.

Figure 3.6. Analysis of variance: Reaction times, Experiment 3.

Source	SS	DF	MS	F	p <
A (Task)	64.44	1	64.44	.41	n.s.
B (Structure)	169.81	1	169.81	1.08	n.s.
AB	473.50	1	473.50	3.02	.15
Within cells	2,197.71	14	156.98		

The personality data revealed no significant differences between helpers and nonhelpers. Scores of helpers on the Mach IV Inventory averaged 95.22 and nonhelpers 93.10 (t = .87, n.s.). In addition, no differences in subgroups were found, and the helper in each pair was no more likely to be a lower Mach. On the Extroversion scale of the EPI, helpers obtained a mean score of 10.78 and nonhelpers 11.81 (t = .92, n.s.). On the Neuroticism scale, helpers and nonhelpers averaged 12.61 and 11.31, respectively (t = 1.22, n.s.).

Finally, Lie scale scores were 2.17 for helpers and 2.36 for nonhelpers (t = .54, n.s.). The number of helpers in pairs was too small to allow an analysis of variance, but helpers who worked alone in the non-demanding task had a tendency to score lower on the Lie scale ($\bar{X}$ = 1.71) than did nonhelpers in the same condition ($\bar{X}$ = 3.25), a marginal difference (t = 1.83, p < .10). No other differences in subgroups were found.

None of the personal data related to helping. No effects for sex, age, birth order, programme of study, or non-academic interests were found.

Success on the anagram task was not significantly related to helping. Helpers completed an average of 14.11 anagrams by the time the emergency occurred, while nonhelpers completed 16.15. This difference is simply due to the fact that more helpers were subjects who had worked in the Alone condition, and, as expected, pairs solved more anagrams than individuals. No differences emerged within groups in the same conditions.

Analysis of questionnaire responses indicated that the manipulations may not have been successful (see Appendix 9). Although the Open University sample had rated the demanding and non-demanding task as significantly different on relevant dimensions, the University of Durham sample did not find the tasks so different. The demanding task was rated as only marginally more difficult (t = 1.89, d.f. = 64, p < .10) and demanding (t = 1.95, d.f. = 64, p < .10), but no more involving or stressful. The only significant difference emerging from the post-experimental questionnaire was that pairs of subjects said they talked more in the non-demanding than the demanding task (t = 2.25, d.f. = 64, p < .05).

DISCUSSION

The group size effect found in Experiment 2 was replicated in the present study. Again, individuals were more likely to come to the aid of a victim than were communicating subjects, regardless of the task on which they worked. The addition of only one subject thus had an inhibitory effect on helping behaviour.

Contrary to predictions, however, subjects working on the non-demanding task were no more likely than those in the Demanding Task condition to help. This finding is difficult to interpret in light of questionnaire results. University of Durham students apparently did not perceive the tasks in the same way as did Open University students. Only the latter group rated the tasks as significantly different in difficulty and other relevant factors.

Several explanations might account for this unanticipated difference. Although both groups of subjects rated the tasks immediately after participating in the group session, the Durham students had also heard the emergency by the time they completed the post-experimental questionnaire. It is possible that impressions of the tasks were affected by the emergency's intrusion. The overall importance of the tasks might have decreased, minimising perceived differences between the two types of task. On the other hand, individual differences between the Open University and Durham students might also account for the discrepant ratings. The former were on the whole older and less educated. It is conceivable that they were more susceptible to the instructions and thus more likely to be affected by the manipulation. For example, they might have been more influenced by the experimenter's apparent evaluation of the tasks' difficulty.

In any case, subjects perceived the supposedly demanding task as only marginally more difficult and demanding as the task meant to be non-demanding. The results are therefore difficult to interpret. It is possible that the manipulations were simply too weak to bring about the predicted interaction between task and group structure. A non-demanding task had been expected to allow for a decrease of mutual inhibition during the emergency, as subjects would have been more likely to momentarily abandon their work to investigate the calls for help. But since both tasks tended to be rated as difficult and demanding, all subjects might have feared leaving their work. Their concern with the task could have led to their failure to visibly respond to the sounds of distress, resulting in increased pluralistic ignorance and less helping.

Notwithstanding, evidence for a general task effect may be found in a comparison of the results of the present study with those of Experiment 2. Both experiments used the identical room, the same emergency recording and timing, and similar subjects. Both took place at the same times of day with the same emergency cues set up in the hallway outside the experimental room. The main difference between the two experiments was the task in which subjects were engaged when the emergency occurred. In Experiment 2, subjects worked on an open-ended task of creativity in which they were assured there were no right or wrong answers. In Experiment 3, however, subjects worked on a problem-solving task in which they had to solve anagrams. Although the instructions of the non-demanding condition in the latter experiment told subjects to work at their leisure, the task was nonetheless one in which correct answers could be found. Students may have felt more strongly about successfully completing the task which required intelligence and which could obviously be assessed.

Although only the tasks differed, the helping responses in
the two experiments proved to be very different. Overall, 78% of
the trials in Experiment 2 contained helpers, as opposed to only
41% in Experiment 3 (x^2 = 14.52, p < .001). This finding may be
somewhat misleading in that a greater proportion of trials in the
earlier experiment included non-communicating subjects, who were
seen to help similarly to subjects alone. However, even a comparison
of subjects alone reveals a significant difference; 92% helped in
Experiment 2, while only 59% helped in the next study (x^2 = 5.02,
p < .05). Helping times also differed significantly. In Experi-
ment 2, subjects averaged 59.09 seconds to help, as opposed to
77.70 seconds in Experiment 3 (t = 4.56, d.f. = 114, p < .001).
These differences are upheld in analyses of subjects alone and in
communicating groups (see Appendix 18).

It thus seems that situational factors in the form of task
differences may influence the helping behaviour of subjects.
Engaged in an open-ended, leisurely task, subjects in Experiment 2
were more likely to leave the experimental room than were subjects
in the present study who attempted to solve anagrams.

None of the individual factors showed any significant
relationship to helping. First, the helping of low and high Machs
was similar. This finding lends support to the original explanation
of Machiavellian helping differences in Experiments 1 and 2. When
together, the respective interaction styles of low and high Machs
might enable the former to transmit and receive relevant cues more
often than the latter. When subjects are alone or in mixed-Mach
groups, however, these mutual cues are not exchanged, so low Machs
are no more likely than highs to come to a decision to help. If their
cynicism and indifference to the welfare of others were the reasons

for their failure to help, high Machs would be less likely to aid the victim even when not grouped together. This suggestion is compatible with Latané and Darley's (1970) failure to find an effect for Machiavellianism in their seizure simulation. In their study, only one real subject participated in each trial; the others were simply tape recorded voices. Differences in the helping behaviour of low and high Machs, as seen in Experiments 1 and 2, thus seem to be a function of differences in styles of interaction.

The failure to find a relationship between scores on the EPI and helping is difficult to explain. In the previous study, helpers were more likely to score low on the Lie scale, indicating that a high need for social desirability might have inhibited helping responses when behavioural alternatives were unclear. However, in the present study this trend only emerged in one sub-group, and then only marginally so. _Pairs of subjects who helped the victim while working on the non-demanding task tended to have lower social desirability scores than nonhelpers. It is conceivable that behavioural alternatives in the Demanding Task condition were more straightforward, with both low and high lie scorers equally affected by the dilemma confronting them. For instance, subjects knew that if they left the experimental room to investigate the emergency, they would miss some of the slides which were being automatically projected during their absence.

As in the previous studies, effects for sex, age, family data, and interests did not relate to helping behaviour.

The experiment left unanswered a number of important questions. The task effect might have failed to emerge as a result of the weak manipulation, but other explanations might just as well account for the findings. The sound of the slide projector in the anagram task

might have produced a restriction of cue utilisation (i.e.,
Korte, Ypma and Toppen, 1975), leading to less overall helping
than that found in the former creativity task. The possibility
that the task has indeed been an irrelevant factor in studies of
helping behaviour cannot be overlooked. Further attempts to
investigate these problems thus seemed appropriate.

Experiment 4

A fourth experiment was designed to pursue some of the
questions raised in the previous studies. Again, the same setting,
timing and emergency were to be employed. However, another attempt
to vary the subject's involvement in a task was made. This time
the choice of task manipulation was preceded by a more extensive
pilot study, with Durham students serving as subjects. It was
predicted that an overall effect for task involvement would emerge,
with decreased helping by subjects working on a demanding task.
This effect was expected to be especially pronounced in pairs of
subjects.

Experiment 4 also proposed to encompass a further examination
of social influence and diffusion of responsibility explanations of
group size effects. A detailed analysis of verbal and nonverbal
communication, based on a modified form of Bales' interaction process
analysis method (Bales, 1950), was planned. Proportions of activity
in Bales' four main categories of interaction were to be found for
subjects in different conditions. In keeping with the social
influence hypothesis, it was predicted that increased helping would
be preceded by greater amounts of positive socioemotional activity

as opposed to negative socioemotional activity or giving/responding task activity. So that effects for social influence and diffusion of responsibility could be separated, subjects were to be studied alone, in communicating pairs, and in non-communicating pairs.

A number of individual factors were also to be examined. The study of Machiavellianism and helping behaviour was continued, with subjects again randomly assigned to pairs regardless of their Mach scores. A comparison of low and high Mach communication through the Bales analysis was proposed. As has been discussed, many studies (i.e., Bochner and Bochner, 1972) have found that low Machs engage in more socioemotional activity, while high Machs are more task-oriented. Other studies (i.e., Darley, Lewis and Teger, 1973) have illustrated the importance of cue exchange as a precedent to helping behaviour. It was hoped that the interaction analysis could shed light on the interrelationships between Machiavellianism, communication, and helping behaviour.

In addition, an adaptation of the Edwards Personal Preference Schedule (EPPS) was used to study five factors whose relevance to communication and helping during emergencies seemed especially marked. These factors were deference, autonomy, affiliation, intraception and dominance. Measurement of Machiavellianism was also obtained with this forced-choice scale. Items of the Mach V, Christie's forced-choice version of the Mach IV (Christie and Geis, 1970), were incorporated into the adapted EPPS scale; this procedure was used successfully by Guterman (1970) in his studies of Machiavellianism. Details of the final questionnaire are in Appendix 11.

Finally, relationships between other individual factors, such as sex and age, and helping behaviour were analysed.

Overview

A 2 x 3 factorial experiment was conducted to again examine the effects of task involvement and group structure on helping. Subjects worked on either a demanding or non-demanding task, either alone, in communicating pairs, or in non-communicating pairs. While subjects worked, sounds of distress came from outside the experimental room as someone apparently fell off a ladder. Whether subjects responded by helping and the time they took to do so were the main dependent variables. Relationships between helping behaviour, Machiavellianism, and other individual factors were also investigated.

METHOD

Pilot study

24 University of Durham students participated in a pilot study to test the effectiveness of the proposed manipulation. Subjects alone and in pairs performed a demanding or non-demanding task (described below) and then completed a questionnaire which asked various questions about the task.

Relevant differences between the proposed demanding and nondemanding tasks were found (see Appendix 9). Pilot subjects rated the demanding task as more difficult, involving, demanding, and requiring more time than did those in the non-demanding task.

Subjects

Subjects were 120 University of Durham students who agreed to act as unpaid volunteers by answering letters or signing notices around the university. 58 females and 62 males participated. Ages

ranged from 17 to 26, with a mean age of 19.01 (s.d. = 1.55).
Subjects were from a wide range of programmes of study and places
of residence.

Procedure

Subjects arrived at the experimenter's office and were
given a questionnaire to complete. The questionnaire was adapted
from that used by Guterman (1970) and included measures of
Machiavellianism, deference, autonomy, affiliation, intraception,
and dominance (see Appendix 11).

Following completion of the questionnaire, subjects were
taken to the experimental room. In this room were two small tables
with chairs placed so that subjects sat either face-to-face (in the
Communicating Pair condition) or back-to-back (in the Non-communi-
cating Pair condition). In the Alone condition, only one chair
was provided. In the Alone and the Communicating Pair conditions,
a small stand on the tables held a stack of $4\frac{1}{2}$ x 6 inch cards,
each containing five letters; in the Non-Communicating Pair
condition, each subject had his own stack of cards. All stacks
contained the same cards in the same order (see Appendix 12).
Writing paper and pens were also provided. In the Demanding Task
condition, 35 cards were in the stack, while only the first 20 of
these were used in the Non-demanding Task.

The path taken to the experimental room, the apparatus
staging the eventual emergency, and verbal comments made by the
experimenter regarding the technicians' presence were identical
to that of Experiments 2 and 3 (see Appendix 1 and pages 142-143.

The instructions for the task provided the task involvement
manipulation. In the Demanding condition, subjects were led to

believe that most people could finish the task if they worked

quickly and that the task could reveal information about subjects'

abilities. Subjects in the Non-demanding Task condition were

informed that most people could not finish the task and that they

should take their time as they worked.

The instructions for the various conditions were:

(All conditions):

> In front of you are cards with 5 letters on each
> of them. In this experiment you will be composing
> sentences with the use of the groups of letters.
> For each card, you are to compose a 5-word
> sentence, with each of the words in the sentence
> beginning with the appropriate letter in
> consecutive order. For example, for this sample
> card the letters ABCDE could be used to form the
> sentence "All Bad Children Desire Everything."

(Communicating Pairs):

> You are to work together and compose the
> sentences jointly.

(Non-communicating Pairs):

> You are to work separately with your own cards.

(Demanding Task):

> Success on this task is highly related to
> intelligence and creativity. Work as quickly as
> possible, and try to get through as many cards as
> you can. Keep in mind that your creativity is
> also being measured. Then write your sentence on
> the paper provided.

(Non-demanding Task):

> You are encouraged to work at a leisurely pace
> as you compose the sentences. Try to use your
> imagination. Some people find they work best if
> they take a short rest from the task now and
> then. Write your sentences on the paper provided.

(Communicating Pairs):

> You must work together on this task.

(Non-communicating Pairs):

You must not talk to each other during this task.

(All conditions):

Your sentences must not include foreign words or proper nouns such as names, and they must make sense. When I say "Go" you will start with the card after the sample card, and you will have about a half hour to work.

(Demanding Task):

Then I'll come back into the room and discuss how you did on the task. Most people get through most of the cards in the stack if they work quickly and efficiently. Are there any questions?

(Non-demanding Task):

Then I'll come back into the room and discuss the task with you. Few people get through all of the cards in the stack, so don't worry if you can't do some of them. Are there any questions?

After the instructions were given, the procedure was identical to that used in the previous two experiments.

RESULTS

Overall, subjects in 52 of the 72 trials (72%) responded to the emergency. Helping times ranged from 30 to 96 seconds, with a mean response time of 61.33 seconds (s.d. = 12.62). Of those groups who did respond, none did so during the initial crash, and only two (4%) helped while the victim moaned. 25 (48%) responded during his calls, 23 (44%) during the actual cries for help, and 2 (4%) after all sounds had stopped. Figure 4.1 illustrates the response patterns in a cumulative proportion graph.

The overall results are summarised in Figure 4.2.

Figure 4.1.   Cumulative proportion graph:

Total helping, Experiment 4.

% HELPING
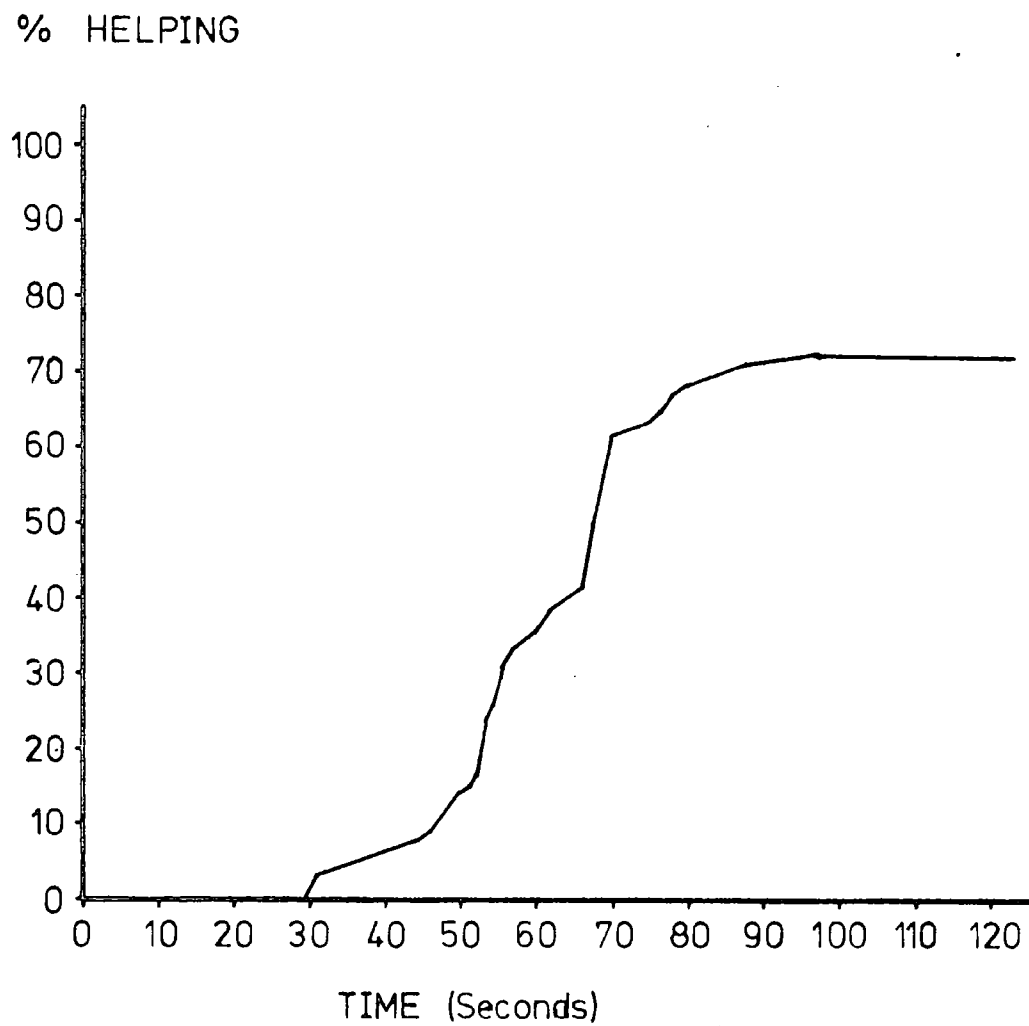
TIME (Seconds)

Total N Groups = 72

Figure 4.2. Summary of helping in Experiment 4:
Number, percent and reaction time in seconds
out of 12 per cell.

	Demanding Task			Non-demanding Task			TOTAL		
	N	%	R.T.	N	%	R.T.	N	%	R.T.
Alone	11	92%	60.09	11	92%	53.73	22	92%	56.91
Communicating Pair	5	42%	71.40	4	33%	72.00	9	38%	71.67
Non-communicating Pair	11	92%	69.18	10	83%	53.10	21	88%	61.52
TOTAL	27	75%	65.89	25	69%	56.40	52	72%	61.33

Figure 4.3 shows that helping differed significantly according to the group structure (x^2 = 21.73, d.f. = 2, p < .001). This difference was due to decreased helping by communicating pairs, who helped less often than did subjects in either of the other two conditions. 88% of subjects alone and 92% of those in non-communicating pairs helped, while subjects who sat face-to-face helped in only 38% of the trials.

Figure 4.3. Chi square analysis: Helping,
Experiment 4.

Source	Chi square	DF	p <
Total	22.17	5	.001
A (Task)	.07	1	n.s.
B (Structure)	21.73	2	.001
AB	.37	2	n.s.

Figure 4.4. Cumulative proportion graph:

Task involvement and helping,

Experiment 4.

% HELPING

TIME (Seconds)

————————————— Demanding Task (N = 36)

················ Non-demanding Task (N = 36)
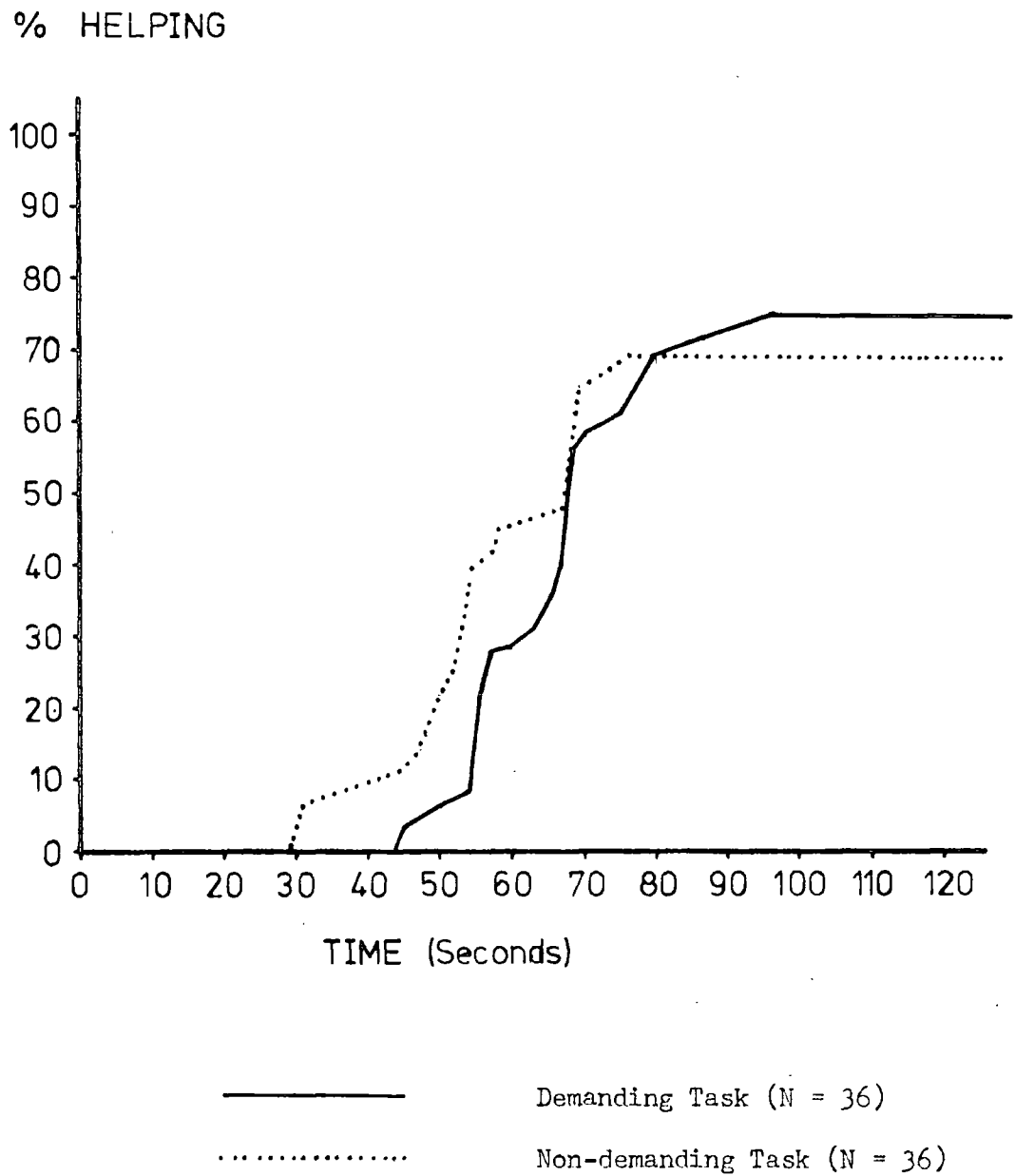
Figure 4.5. Cumulative proportion graph:

Group structure and helping,

Experiment 4.

% HELPING

TIME (Seconds)
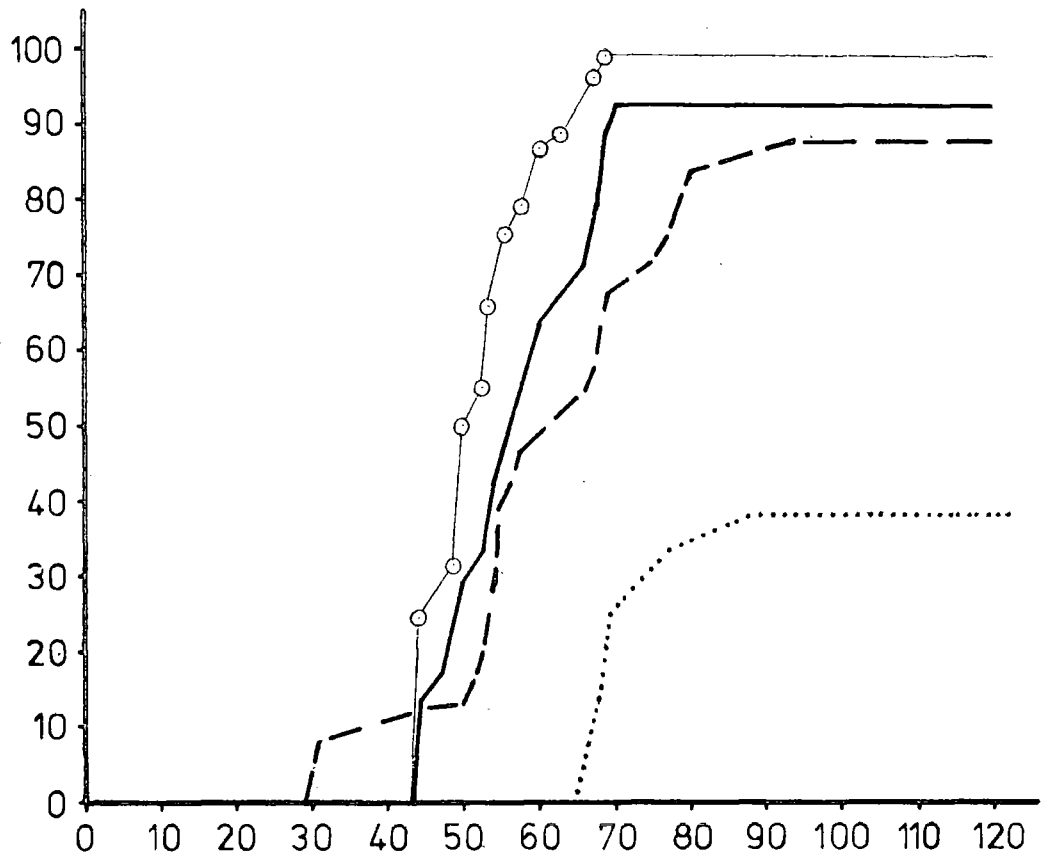
————————	Alone (N = 24)
··················	Communicating Pairs (N = 24)
— — — — —	Non-communicating Pairs (N = 24)
—o—o—o—	Hypothetical pairs: $1 - (1 - p)^n$

The same trend occurred with response latencies (Tables

4.4, 4.5 and 4.6). Subjects were significantly more likely to

take longer to help in the Communicating Pair condition ($\bar{X}$ = 71.67

seconds) than in the Alone ($\bar{X}$ = 56.91) or Non-communicating Pair

($\bar{X}$ = 61.52) conditions (F = 7.57, d.f. = 2,46; p < .01). A Scheffè

test indicated that this difference was due to differences between

the communicating subjects and subjects in the other two conditions.

Findings regarding the task were not so clearcut. Overall,

subjects working on the non-demanding task were no more likely than

those in the Demanding Task condition to help. The former helped

69% of the time and the latter 75% (x^2 = .07, ns). However,

significant differences in helping times were found. Subjects in

the Demanding Task condition helped more slowly ($\bar{X}$ = 65.89 seconds)

than did those in the Non-demanding Task condition ($\bar{X}$ = 56.40 seconds)

(F = 5.19, d.f. = 1,46; p < .05).

Figure 4.6. Analysis of variance: Reaction times,
Experiment 4.

Source	SS	DF	MS	F	p <
A (Task)	581.87	1	581.87	5.19	.05
B (Structure)	1,698.97	2	849.49	7.57	.01
AB	513.79	2	256.90	2.29	n.s.
Within cells	5,158.83	46	112.15		

As shown in Figures 4.3 and 4.6, no significant interactions

were found.

Various individual and situational factors did not relate to

helping behaviour. No differences in helping due to seating position,

day of week, success on the task, college, sex, age, or programme of study were found. Nor did personality data reveal significant relationships with helping. Neither deference, autonomy, affiliation, intraception, nor dominance related to responding to the emergency, whether the analysis included all helpers and non-helpers in the experiment or only those in the Communicating Pair condition (see Appendix 13).

Machiavellianism showed no relationship to helping behaviour. The mean Mach score of helpers was 11.13 and nonhelpers 11.45, a nonsignificant difference (t = .63, ns). The random assignment of Machs to pairs regardless of their scores resulted in such diverse groupings that meaningful statistical analysis was not possible. However, a subject in any given pair proved no more likely to help if his Mach score was lower or higher than that of his partner. In 14 pairs the helper had a lower Mach score and in 12 a higher; in the remaining helping pairs, scores were the same or both subjects helped simultaneously.

Analysis of verbal and nonverbal interaction of pairs revealed that discussions of the emergency, eye contact when the sounds occurred, and overt shows of concern were all positively related to helping (see Figure 4.7). All of the 20 groups who made mention of the emergency while the sounds occurred eventually helped, while of the 28 who ignored the sounds, only 10 (36%) provided help. Conversely, 67% of the helpers discussed the emergency while none of the 18 nonhelpers talked about the sounds, a highly significant difference (x^2 = 17.92, d.f. = 1, p <.0001). Of the 35 groups who maintained mutual eye contact, 30 (86%) helped, while none of the 13 groups who did not have eye contact helped (x^2 = 26.17, d.f. = 1, p <.0001). Finally, showing visible responses to the emergency was

Figure 4.7. Communication and helping,
Experiment 4.

a. Discussion of emergency.

	Discussed Emergency	Did Not Discuss Emergency	Total
Helpers	20	10	30
Nonhelpers	0	18	18
Total	20	28	48

b. Eye contact.

	Maintained Eye contact	Did Not Maintain Eye contact	Total
Helpers	30	0	30
Nonhelpers	5	13	18
Total	38	13	48

c. Visible concern.

	Showed Concern	Did Not Show Concern	Total
Helpers	28	0	28
Nonhelpers	12	8	20
Total	40	8	48

also related, with 81% of the subjects who showed visible concern helping (x^2 = 10.71, d.f. = 1, p < .01).

The Bales analysis revealed equally striking data, as shown in Figure 4.8. Helpers engaged in significantly higher proportions of positive socioemotional activity in the five minutes preceding the emergency (F = 11.27, d.f. = 1,44; p <.01). Helpers also tended to be involved in higher proportions of negative socioemotional activity (F = 3.92, d.f. = 1,44; p <.10). Nonhelpers were engaged in significantly higher proportions of "giving" task responses (F = 5.28, d.f. = 1,44; p <.05). No differences in "asking" task responses were found. Subjects in the demanding and non-demanding tasks did not differ in proportions of activity.

Figure 4.8. Bales interaction analysis of Communicating Pairs: Proportions of activity.

(The numbers of subjects per cell in the following tables are:)

	Demanding Task	Non-demanding Task	Total
Helpers	10	8	18
Nonhelpers	14	16	30
Total	24	24	48

a. Positive socioemotional areas.

	Demanding Task	Non-demanding Task	Total
Helpers	22%	26%	24%
Nonhelpers	19%	16%	18%
Total	21%	20%	20%

Source	SS	DF	MS	F	p <
A (Help)	396.63	1	396.63	11.27	.01
B (Task)	.11	1	.11	0	n.s.
AB	9.88	1	9.88	.28	n.s.
Within cell	1,549.70	44	35.20		

b. Negative socioemotional areas.

	Demanding Task	Non-demanding Task	Total
Helpers	19%	19%	19%
Nonhelpers	17%	18%	17%
Total	18%	18%	18%

Source	SS	DF	MS	F	p <
A (Help)	28.00	1	28.00	3.92	.10
B (Task)	5.89	1	5.89	.82	n.s.
AB	0	1	0	0	n.s.
Within cell	214.34	44	7.14		

c. "Giving" task areas.

	Demanding Task	Non-demanding Task	Total
Helpers	51%	44%	48%
Nonhelpers	53%	56%	55%
Total	52%	52%	52%

Source	SS	DF	MS	F	p <
A (Help)	557.72	1	557.72	5.28	.05
B (Task)	31.22	1	31.22	.30	n.s.
AB	28.55	1	28.55	.27	n.s.
Within cell	4,648.42	44	105.65		

d. "Asking" task areas.

	Demanding Task	Non-demanding Task	Total
Helpers	8%	11%	9%
Nonhelpers	11%	9%	10%
Total	10%	10%	10%

Source	SS	DF	MS	F	p <
A (Help)	.60	1	.60	.02	n.s.
B (Task)	4.22	1	4.22	.13	n.s.
AB	52.11	1	52.11	1.62	n.s.
Within cell	1,413.71	44	32.13		

Although helping was related to differences in socioemotional and task activity while task involvement was not, the opposite was true for differences in overall amount of responding. Helping was not affected by amount of activity, but subjects working on the demanding task emitted more responses than did those in the Non-demanding Task condition. Figure 4.9 shows the amount of activity in the five minutes preceding the emergency.

Figure 4.9. Bales interaction analysis of Communicating Pairs: Mean number of responses.

	Demanding Task	Non-demanding Task	Total
Helpers	37.20	27.75	33.00
Nonhelpers	35.14	30.56	32.70
Total	35.14	29.63	32.81

Source	SS	DF	MS	F	p <
A (Help)	1.56	1	1.56	.06	n.s.
B (Task)	546.72	1	546.72	20.58	.001
AB	65.77	1	65.77	2.48	n.s.
Within cell	1,168.75	44	26.56		

Finally, Machiavellianism was highly related to interaction patterns. Machiavellianism correlated negatively with both positive socioemotional activity ($r = -.57$, $p < .001$) and "asking" task activity ($r = -.35$, $p < .02$) and positively with "giving" task activity ($r = .54$, $p < .001$).

Details of the Bales analyses are in Appendix 14.

Data regarding suspicion, reasons for subjects' behaviour, and manipulation effectiveness were obtained from post-experimental questionnaires (Appendix 9) and interviews. Of those 55 subjects who initiated helping, 40 (73%) did so because they thought someone was seriously hurt. 11 (20%) believed someone needed non-emergency aid such as in carrying packages or opening doors, and 4 (7%) thought someone wanted information such as directions to another part of the building. Five (9%) of these helpers stated that they had been suspicious but had looked outside the room just in case someone was indeed in trouble. One other subject said he was very suspicious and only left the room to inspect the apparatus.

Nonhelpers' explanations for their behaviour were varied, with many subjects giving several reasons. The most common (37%) reason offered by the 65 nonhelpers involved the belief that the sounds had not represented a serious emergency. One subject suggested that the technicians had been joking with each other. 6 believed that someone else had helped or would help the victim;

4 thought that they should not leave the experimental session; 8 did not help because the partner helped. 12 subjects thought the emergency was contrived. Of these 12, 4 thought the sounds were taped and 8 thought an actor was enacting the emergency. 7 subjects said they had been only vaguely aware of the sounds, and 3 people could not recall hearing anything unusual. An additional 14 subjects considered themselves helpers even though they had followed the first reactor outside the room.

Suspicion about the emergency did not relate to helping. 6 out of 55 helpers (11%) were suspicious, and 12 out of 65 non-helpers (18%) were suspicious, a nonsignificant difference (x^2 = .89, n.s.). However, suspicion about the task's true purpose did relate to helping. The mean suspicion rating for helpers was 3.24 and for nonhelpers 4.20, a significant difference (t = 2.40, d.f. = 118, p $<$ .02).

When asked to discuss the purpose of the task, 27 (23%) of subjects said they had no idea. Of the remaining 93 subjects, many suggested several purposes. Despite suspicions mentioned above, only 13 of all subjects (11%) mentioned helping, and 11 of these thought that helping was possibly one of several interests in the study. Other subjects thought the study concerned creativity (38%); leadership or cooperation (23%); personality (18%); vocabulary or work usage (18%); stress, concentration and external influences (18%); intelligence (13%); and reaction time (12%). Helpers were not overrepresented in any of these categories.

Ratings on the written questionnaire indicated that the manipulation was successful (see Appendix 9). Subjects in the Demanding Task condition rated the task as significantly more difficult, involving, demanding, and requiring more time.

DISCUSSION

This experiment again replicated the group structure effect found in Experiments 2 and 3. Subjects working in face-to-face communicating pairs were significantly less likely to provide help for the victim than were subjects working as individuals or in back-to-back non-communicating pairs. The overall results are strikingly similar to those obtained in Experiment 2, where low and high Machs worked alone, in communicating triads, and in non-communicating triads. In this earlier study, an overall main effect also revealed that subjects in communicating triads were less likely to help than were those in the other two conditions. Although the tasks on which subjects worked during the emergency differed, the amount of helping was 78% in the early study and 72% in the later, and the mean helping times were 59.09 and 61.33 seconds, respectively. The same trend thus seems to occur with dyads and triads working on different tasks.

Both studies found no differences in the helping behaviour of subjects alone and in non-communicating groups. This finding fails to provide support for the diffusion of responsibility hypothesis, which suggests that subjects in groups should help less than those alone since their perceived responsibility for helping is divided proportionally among bystanders.

Instead, analysis of communication during the emergency appears to support the social influence hypothesis. Any form of verbal or nonverbal recognition of the emergency proved likely to result in helping. Sudden departures from the familiar procedure such as discussions of the sounds, changes of posture, and eye contact all tended to be followed by helping responses. Conversely,

few pairs who ignored the sounds made attempts to help.

Departures from the procedure were considerably more overt and noticeable in non-communicating pairs. Since they sat back-to-back when the emergency began, subjects had to abruptly alter their posture and turn around if they wanted to gauge the reactions of each other. In the communicating pairs, however, subjects were already facing each other. They could, and did, glance quickly at each other, but they probably gained little information from each other in this way. In fact, they often appeared to want to conceal their interest in the sounds, conceivably through fear of overreacting. Video recordings indicated that a number of subjects may have attempted to assess their partner's interpretation of the emergency by looking up quickly and immediately averting their glance. In this way each subject may have been mutually inhibited from responding to the emergency. On the other hand, subjects in the non-communicating condition, having already indicated their awareness of and concern about the emergency, were more likely to eventually decide that a helping response was an appropriate course of action to take. Noting each other's "startle responses" might have lead them to decide that, at the very least, an unusual event was occurring and that further investigation should follow.

The modified Bales interaction analysis yielded further support for this interpretation. Subjects who helped appeared to have been engaged in more positive socioemotional activity and less task activity than subjects who did not help. It is possible that an increased amount of interpersonal communication might have facilitated the exchange of cues when the emergency occurred.

These findings lend support to a social influence explanation

of helping behaviour, which sees the exchange of cues as
important precedents to helping in groups of subjects. Without
such an exchange, subjects are likely to misinterpret each other's
behaviour and refrain from helping. It follows, then, that the
more obvious the cues exchanged, the more likely becomes the chance
that subjects will correctly perceive other bystanders' reactions
and decide that helping is appropriate.

The relevance of the task as an influence on helping is
difficult to establish, particularly in the context of the social
influence hypothesis. In Experiment 3, no differences in the
helping of subjects working on a demanding or non-demanding task
were reported, possibly because the manipulation was unsuccessful.
The effect of the task in the present study was more evident, although
still difficult to interpret. In this study, subjects perceived the
demanding task as more difficult, involving, and demanding than the
non-demanding task. Overall helping rates were not affected by the
task manipulation; in fact, similar percentages of helping were found
in the demanding and non-demanding conditions. However, the time
taken to help was significantly affected by the task, with those
subjects in the demanding condition taking an average of ten seconds
longer to help. It is possible that subjects in both conditions
were equally likely to interpret the sounds as representing an
emergency, but that those in the Demanding Task condition needed more
convincing evidence that help was needed by the victim. Such
evidence might have been found toward the end of the emergency, when
verbal calls for help from the victim decreased the ambiguity of
the event.

Interestingly, the task manipulation did not affect the
communicating pairs at all, but instead had the greatest effect on

the helping of non-communicating subjects. Susceptibility of non-communicating pairs and subjects alone to the task manipulation was consistent with the original prediction; the demanding condition was expected to yield an inhibitory effect on helping responses. But, if anything, the task involvement was expected to have a greater effect on subjects working together.

The resistance of communicating subjects to the task manipulation might be related to an overall ceiling effect on helping time in this condition. During the course of the experiment, subjects in all conditions who did not help within a few seconds after the tape recording ended were unlikely to help at all. This could account for the absence of a task involvement effect on communicating pairs, who were unlikely to help until toward the end of the tape regardless of the task on which they worked.

The personality data failed to distinguish helpers from nonhelpers. As expected, Machiavellianism did not relate to helping in the present experiment. This finding facilitates a comparison of the relative merits of two varied explanations put forward to account for differences in the helping behaviour of low and high Machs in Experiments 1 and 2. In these studies, groups consisting of all low Machs helped more than groups of all medium or all high Machs. One explanation concerned differences in the interaction styles of low and high Machs. Low Machs have been found to interact more warmly and on a more interpersonal level than high Machs (Christie and Geis, 1970). This difference was in fact supported by the Bales analysis in the present study; individual scores of Machiavellianism were positively correlated with higher rates of task activity and negatively with positive socioemotional activity.

Low Machs' emphasis on socioemotional interaction could have served to facilitate the exchange of cues, leading each low Mach subject to decide that other subjects perceived the distress sounds as an emergency requiring help. High Machs, on the other hand, might have been more likely to misinterpret the cool behaviour of fellow bystanders and assume that no one considered the emergency worthy of attention.

The other explanation concerned particular differences in attitudes toward mankind. High Machs profess to hold cynical beliefs about humanity and apparently concur with Machiavelli's regard for manipulative and exploitative behaviour. They might be expected to help less as a function of their indifference to the difficulties of others. A further reason may involve high Machs' concern with task activity, as revealed in the Bales analysis, and their greater likelihood to fulfill commitments to an experimenter (Christie and Geis, 1970). High Machs might disregard cries for help not only because they are indifferent but because they maintain a greater interest in a task than in people. Having committed themselves to participating in an experiment, they could feel that they should ignore extraneous influences and concentrate on the task at hand.

The results of the present experiment cast doubt on the latter explanation. If high Machs help less often as a result of their philosophical orientation, low Machs should help more often regardless of whom they are with, or even if they are alone, when an emergency occurs. This, however, has not proved to be the case. In Latané and Darley's (1970) experiment, no relationship was found between helping and Machiavellianism when individual low and high Machs "talked" to tape recorded voices. And in the two studies

reported in this chapter, no relationship was found when subjects were either alone or not communicating, or when they were randomly distributed to groups regardless of their Mach scores. The difference in the helping behaviour of low and high Machs only seems to remain consistent when naive, same-Mach, face-to-face groups are confronted with an emergency. In such cases it seems likely that the interaction style of low Machs facilitates an interpretation of distress sounds which leads to increased helping. At the same time, high Machs' cool, aloof behaviour might serve to inhibit the helping responses of each subject.

A comparison of the findings of Experiments 2 and 4 sheds further light on this explanation. In both triads and pairs, helping always tended to decrease when subjects sat face-to-face during the task. The only exception to this occurred with groups of all low Machs, who were relatively unaffected by the group structure manipulation. It appears that the particularly warm encounter styles of low Machs may immunise them from the mutual inhibition otherwise experienced by other groups. Low Machs rather than high Machs, then, might be the individuals who differ from other people. This is supported by data from Experiment 1 which revealed no significant differences between medium and high Machs but considerably more help from low Machs.

Scales measuring deference, autonomy, affiliation, intraception and dominance proved no more successful in predicting helping behaviour. No significant differences between helpers and nonhelpers on any of these measures or on any personal history data were found. However, some of the same personality factors have been found to be predictors of helping in past research efforts (i.e., Smith, 1966; Ribal, 1963) which have examined other kinds of helping

situations. As discussed previously, it appears that a combination of individual factors and situational variables should be considered if traits are to be useful predictors of prosocial behaviour. Helping behaviour has been operationalised in so many different ways that it seems unjustifiable to attempt to generalise about the relationship of particular individual factors and altruism without carefully considering situational influences.

Chapter VII

THE CONSISTENCY OF INDIVIDUAL AND SITUATIONAL EFFECTS

ON HELPING BEHAVIOUR

The studies in this chapter were designed to extend the findings which emerged in previous sections. The separate and combined effects of the individual and the situation on helping behaviour were again to be explored, but through a different paradigm than that employed in the first four experiments. In those studies, subjects were designated as helpers if they responded to a person's cries for help during an experimental session. If specific individual factors are the main determinants of helping behaviour, these "altruists" might be expected to be more likely than those who ignored the victim's calls to aid in other situations as well. On the other hand, if situational contributions are the key factors, helping in the emergency situation might not relate to helping in a different setting.

An alternative approach recognises that there may be different kinds of helping behaviour and allows for individual differences with regard to the various types of helping. This approach stresses the importance of the interaction of individual and situational factors. Consistent with such a view is the suggestion that some people may be more helpful in particular situations but not necessarily in all.

The possibility of generalising from behaviour in one helping situation to another has not been studied much in the helping behaviour literature. One extensive study by Gergen, Gergen and Meter (1972) found little consistency in the traits that successfully predicted helping behaviour in specific situations. Not only did

single traits fail to predict more than one type of helping activity, but in some cases the dimensions predicted in the opposite directions. This casts doubt on the practicality and justifiability of generalising about helping in one situation to helping in another. Severy (1975) suggested that various types of helping dispositions might relate to aiding behaviour in particular situations and designed the Helping Disposition Scale (HDS) to examine different orientations to helping. The scale measures 14 indicators of predispositions to help, tapping different dimensions which might relate to various helping situations. The scale is the only one which recognises and tests for different aspects of helping, although its validity has thus far proved difficult to establish.

Clearly, information regarding individual helping responses in different situations is necessary before the separate and combined contributions of individual and situational factors can be analysed. An attempt to gather such information was made in the series of studies presented herein. As a vehicle for investigating this topic, and as an area of interest in its own right, sex differences in helping behaviour were examined in two studies which constituted the first part of a series of experiments. These studies were employed partly because they represented a methodological departure from the experiments which comprise the bulk of the present research. The studies used a non-emergency helping situation and took place away from the confines of the psychological laboratory.

The area of sex differences in helping behaviour was pursued largely because of its importance in pointing out interactions of individual and situational effects on helping. Chapters II and III discussed numerous research efforts which have yielded inconsistent and contradictory data about sex and helping. Some studies have

found females more helpful (Wilson and Kahn, 1975; Lombardo et al.,
1976), while others have reported more helping by males (Moss and
Page, 1972; Pomazal and Clore, 1973; Fink et al., 1975). Still
others have found no differences (Hornstein et al., 1968; Thalhofer,
1971; Isen and Levin, 1972; Thayer, 1973).

Recent investigations have attempted to reconcile these
findings. Deaux (1972) suggested that some sex differences in
helping can be understood in terms of the sex role attributes of
the helping task. Females have been found more helpful in
secretarial and counseling situations, for example, while males
offer more physical help as in fist fights and automobile difficulties.
While this explanation may be reasonable in a limited number of
cases, it fails to explain why sex differences in helping in more
neutral situations (sharing, donating, and volunteering to be in an
experiment, for example) are sometimes found.

Other researchers have suggested additional situational
factors which might interact with individual factors. Schopler (1967),
Gruder and Cook (1971), and Bickman (1974) are among those who have
studied the possibility that some inconsistent findings may be
explained in terms of interactions between the sex of a helper and
the sex and dependency of the potential recipient of help. Some
combinations of these factors appear to lead to increased helping
and others decreased helping. Unfortunately, few studies have
simultaneously varied the sex of both the helper and recipient and
the dependency of the recipient. As discussed earlier, some have
varied the sex of the subject and dependency of the victim (Schopler,
1967; Schopler and Bateson, 1965; Lesk and Zippel, 1975); others
the sex of recipient and helper (Bickman, 1974); and still others
the sex and dependency of the recipient (Schopler and Matthews, 1965;

McGovern, Ditzian and Taylor, 1975). Thus most studies fail to vary at least one of the three important variables. This is complicated by the use of different kinds of helping and different manipulations of dependency. It is not surprising that contradictory main effects have emerged, revealing both males and females more likely to help and to be helped, and both dependent and non-dependent people to be helped more.

A somewhat clearer picture begins to emerge when two-way interactions from various studies are examined together, but the missing crucial variables make conclusions difficult to draw. For example, Schloper (1967) found that females were more likely than males to respond to a dependent individual; however, the potential recipient was always a male in this study. McGovern, Ditzian and Taylor (1975) reported that dependent females were helped more than dependent males, but only male subjects were studied. Bickman (1974) found that males helped females more than males and females helped males more than females, but the dependency of the recipient was not considered.

Gruder and Cook (1971), who did vary all three variables, found interactions between dependency and sex of the recipient but no effect for sex of helper. This finding, however, has not been replicated or investigated further, and it does not explain why interactions such as opposite-sex helping emerge in other research efforts. The need to again systematically vary the three factors to explain the discrepant main effects which have been found, and to examine whether important interactions might be masked in studies which have only looked at two factors, is apparent.

The following two studies used a paradigm similar to that employed by Bickman (1974). The channel through which subjects were

to be contacted was that of written correspondance, and the help
requested involved participation in a psychology experiment for a
postgraduate student. Predictions based on a synthesis of findings
of previous studies were made. For male subjects, dependency was
expected to increase the help given to females and decrease that
given to males. For female subjects, dependency was expected to
increase helping generally. The first study also encompassed a
modelling manipulation. It was predicted that subjects would be
more likely to help if they were told that other students had already
agreed to volunteer.

Experiment 5a

METHODOLOGY

Subjects

Subjects were 240 male and 240 female students listed in the
University of Durham student directory. First and second year students
who lived in colleges within walking distance of the Psychology
Department were alphabetically selected and randomly assigned to
conditions.

Procedure

The design of the experiment was a 2 x 2 x 2 x 2 factorial
in which the sex of the helper, the sex and dependency of the
recipient, and modelling were varied. Male and female subjects were
sent a letter from a postgraduate student containing a request for
help. The help required was participation in an experiment. The
letter was signed by either a male or a female, with the manipulations

introduced as follows.

The dependent letter began:

Dear Student,

I am a research student in Psychology at the University of Durham. This term I am seeking volunteers for an experiment, and I wonder if you might be able to help. Subjects are often difficult to find, and as a large number of students is essential to the success of the study, your help will be deeply appreciated.

The non-dependent letter began:

Dear Student,

I am a research student in Psychology at the University of Durham. This term I am seeking volunteers for an experiment, and I wonder if you would be interested in being a part of the study. Your participation would be deeply appreciated.

The letters with modelling continued:

More than 100 subjects from the academic community have already volunteered, and over 100 more are needed

Those without modelling stated:

More than 100 subjects from the academic community are needed.

The remainder of each letter was the same (see Appendix 15), except for the sex of experimenter manipulation; letters were signed by either Miss S.L. Wolfson or Mr. S.L. Wolfson.

Subjects were asked to complete an attached form indicating agreement to help and to return the form in the enclosed self-addressed envelope. Forms returned indicating a "no" response were to be counted as refusals to help, as were forms not returned at all. If subjects agreed to participate, their names were put in a subject pool and they were contacted within a month; this procedure will be discussed later.

RESULTS

The raw results are presented in Figure 5.1 and the chi square analysis in Figure 5.2.

Figure 5.1. Summary of helping in Experiment 5a: Number and percent volunteering out of 30 per cell.

	Female Subjects		Male Subjects		Total	
Dependent/Modelling From Female	16	53%	10	33%	26	43%
Dependent/No Modelling From Female	15	50%	13	43%	28	47%
Dependent/Modelling From Male	16	53%	4	13%	20	33%
Dependent/No Modelling From Male	10	33%	7	23%	17	28%
Not Dependent/Modelling From Female	12	40%	9	30%	21	35%
Not Dependent/No Modelling From Female	12	40%	8	27%	20	33%
Not Dependent/Modelling From Male	8	27%	10	33%	18	30%
Not Dependent/No Modelling From Male	13	43%	11	37%	24	40%
Total	102	43%	72	30%	174	36%

Overall, 174 of the 480 subjects (36%) agreed to participate in the experiment. 102 (43%) of the females agreed to help, while only 72 (30%) of the males did so, a significant difference (x^2 = 7.58, d.f. = 1, p < .01).

None of the other main effects reached significance. 40% of the letters from a female experimenter and 33% from a male elicited

helping responses. Letters with modelling information brought about no more help (35%) than did those without (37%), and letters sent by a dependent experimenter brought no more replies (38%) than did those by a non-dependent experimenter (35%).

Table 5.2. Chi square analysis: Helping,
Experiment 5a.

Source	x^2	With Yates Correction	D.F.
Total	24.04*		15
A (Subject sex)	8.12	7.58**	1
B (Experimenter sex)	2.32	2.03	1
C (Dependency)	.56	.44	1
D (Modelling)	.16	.08	1
AB	0		1
AC	2.32		1
AD	.54		1
BC	2.91*		1
BD	.01		1
CD	.32		1
ABC	1.75		1
ABD	.07		1
ACD	2.97*		1
BCD	1.33		1
ABCD	.66		1

*p < .10
**p < .01

No strong interaction effects were found, although a few marginally significant trends emerged. The dependency manipulation interacted with the sex of the sender of the letter. The female experimenter elicited more help if she sounded dependent, while the male received more help if he did not sound dependent (x^2 = 2.91, d.f. = 1, p < .10). In addition, a slight 3-way interaction (x^2 = 2.97, d.f. = 1, p < .10) indicated that modelling in a letter

from a dependent experimenter had a positive effect on the helping of females and a negative effect on the helping of males. This effect did not occur with non-dependent letters. No other interactions approached significance.

DISCUSSION

The data revealed only one strong result, an overall trend for females to help more than males. This kind of result has been reported by a number of researchers; however, other experiments have yielded opposite effects or no differences at all. It is difficult to reconcile the discrepant findings. Certainly the present findings are not consistent with those of Bickman (1974), who used a very similar design and found an effect for opposite-sex helping. No such effect emerged in the present study.

The weaker, marginally significant interactions were more in keeping with previous research. Dependency led to more help for females and less for males, an effect replicating that found by McGovern, Ditzian and Taylor (1975), who only studied male subjects. Role expectation explanations might help to explain these findings. Dependency has traditionally been associated with and acceptable in females and could serve as a cue invoking helping. The other interaction and the marginal difference between cells also appear consistent with normative explanations of helping. Only 13% of male subjects agreed to aid a dependent male when the letter mentioned that other people had already agreed to do so, while 53% of females were willing to respond positively to the same letter. It is possible that for females, whose role may be more that of supporter and nurturer of others, modelling increased the salience

of the norm of helping dependent people. With males, the combination
of dependency and modelling might have resulted in reactance (Brehm
and Cole, 1966) against a perceived threat to behavioural freedom,
resulting in decreased helping. Or, as Schopler (1967) suggested,
males may be more susceptible to a competing interest in maximising
their own gains, especially when other males are involved.

One difference between previously published studies and the
present one is that the latter have tended to be conducted in the
United States. The possibility of cross-cultural differences
cannot be ruled out. Therefore, another study was designed to
test the consistency of the findings. In addition, it was
considered conceivable that the manipulation of dependency was not
strong enough in the present experiment. An attempt was made to
concentrate on the sex and dependency factors by strengthening the
dependency manipulation and abandoning the modelling factor. A
manipulation check was introduced to test the strength of the
dependency variable. Finally, the experiment attempted to discover
whether subjects would actually fulfill their written agreement to
help.

Experiment 5b

METHODOLOGY

Subjects

Subjects were 120 male and 120 female University of Durham
students who lived in colleges within walking distance of the
Psychology Department. First year students were alphabetically
selected and randomly assigned to conditions.

Procedure

The design of the experiment was a 2 x 2 x 2 factorial in which the sex of the helper and the sex and dependency of the recipient were varied. Subjects received a letter which requested help in the form of volunteering to participate in an experiment. The manipulations were introduced as follows:

The dependent letter began:

> Dear Student,
>
> I am a research student in Psychology. This term I am seeking volunteers for an experiment and wonder if you might be able to help. A large number of students is essential to the success of the study, so your help will be deeply appreciated. More than 100 subjects from the academic community have already offered to help, but over 100 more are still needed to complete the study.

The non-dependent letter began:

> Dear Student,
>
> I am a research student in Psychology. This term I am seeking volunteers for an experiment and wonder if you might be interested. A large number of students will be used in the study. More than 100 subjects from the academic community have decided to take part, and over 100 more will be used in completing the study.

The remainder of each letter was the same except in two instances in which the need for help was stressed in the Dependent Letter condition. The dependent letter included the phrase, "If you are interested in helping out by being a subject in the experiment..." instead of "If you are interested in being a subject in the experiment..." as in the non-dependent letter. The dependent letter also stated, "Please let me know if you have any friends who would also be willing to help," instead of "Please let me know if you have any friends who might be interested."

The sex of experimenter manipulation was implemented by a "Miss" or "Mr." signature at the end of the letters.

RESULTS

The results are summarised in Figures 5.3 and 5.4.

Figure 5.3. Summary of helping in Experiment 5b:
Number and percent volunteering
out of 30 per cell.

	Female Subjects		Male Subjects		Total	
Dependent From Female	9	30%	15	50%	24	40%
Dependent From Male	12	40%	6	20%	18	30%
Not Dependent From Female	11	37%	11	37%	22	37%
Not Dependent From Male	5	17%	8	27%	13	22%
Total	37	31%	40	33%	77	32%

Overall, 77 of the 240 subjects (32%) agreed to participate in the experiment. This helping rate did not differ from the 36% rate found in the previous study (x^2 = 1.05, n.s.).

No strong main effects were found. 46 letters from females (38%) and 31 from males (26%) elicited help, a marginal difference (x^2 = 3.75, d.f. = 1, p <.10). The sex of the potential helper had no effect, with 37 females (31%) and 40 males (33%) helping. Nor did the dependency of the experimenter have an overall significant effect; 42 (35%) of the dependent letters and 35 (29%) of the non-dependent letters brought about helping responses.

A significant 3-way interaction (x^2 = 4.20, d.f. = 1, p < .05) indicated that dependent females were helped more by males

than females, while dependent males were helped more by females
than by males. Males helped the female experimenter more than the
male experimenter when the letter sounded dependent, and females
helped the female experimenter more when the letter did not sound
dependent.

Figure 5.4. Chi square analysis: Helping,
Experiment 5b.

Source	x^2	With Yates Correction	D.F.
Total	11.61		7
A (Subject sex)	.17	.08	1
B (Experimenter sex)	4.30	3.75*	1
C (Dependency)	.94	.69	1
AB	1.55		1
AC	.28		1
BC	.17		1
ABC	4.20**		1

*p < .10
**p < .05

Volunteering and behaviour

All 77 helpers were later contacted to participate in
at least one experiment. Of these, 64 (83%) actually participated;
7 (9%) could not come because of timing difficulties, health
problems, or other such reasons; and 6 (8%) failed to keep their
appointment after scheduling. Thus agreement to participate in the
study was likely to be followed by the appropriate behaviour.

Differences in behaviour due to receiving a particular
letter did not emerge during experimental participation.

Manipulation check

In a pilot study, subjects rated the dependency of the experimenter on a 5-point scale. Those subjects who read the letter containing the dependency manipulation (N = 10) rated the letter as more dependent ($\bar{X}$ = 4.20) than did those (N = 10) without the dependency factor ($\bar{X}$ = 3.10), a significant difference (t = 2.59, d.f. = 18, p < .02).

Some subjects who responded to the letter were later asked to fill in a questionnaire (Appendix 16) when they participated in an experiment. Only those who came to the experiment within two weeks of returning the letter were asked to complete the form. The questionnaire was used to check the effectiveness of the manipulation. Those who had received the dependent letter remembered it as being slightly more dependent ($\bar{X}$ = 3.48, N = 29) than did those who had received the non-dependent letter ($\bar{X}$ = 3.00, N = 31), a marginally significant difference (t = 1.88, p < .065). In addition, no subjects noticed differences between letters they had received and those received by other people.

DISCUSSION

The results of this study do not clarify the questions raised in the earlier investigation. While in Experiment 5a female subjects were more likely to help than males, females and males were equally likely to provide aid in Experiment 5b. Instead, the later study found that the sex of the potential recipient of help was a more important determinant of helping behaviour, with females receiving more help than males. This finding was a nonsignificant trend in the earlier experiment and is consistent with several other studies

(i.e., Gruder and Cook, 1971). Again, Bickman's (1974) opposite-sex effect failed to occur.

The only strong effect was the 3-way interaction of sex of helper, sex of recipient, and dependency of recipient. This finding partially supports the original prediction. Male subjects gave the most help to dependent females and the least to dependent males. However, females were not affected overall by the dependency manipulation, as had been predicted. Non-dependent males were helped considerably less often by females than were either dependent males or non-dependent females. Schopler and Bateson (1965) suggested that among females dependency is a cue to social responsibility norms and consequently leads to increased helping. The role of female as nurturer and supporter of others might explain why females tended to respond more to dependency cues in males, whose goals and achievements she is supposed to support (Bickman, 1974). On the other hand, as suggested earlier, dependency cues in males might point out status differences to potential male helpers, leading to decreased helping.

The findings offer no explanation as to why different results have been reported in similar studies. Indeed, the two very similar experiments presented herein themselves yield inconsistent data. It is possible that differences in the dependency manipulations affected the helping elicited. Differences in manipulations of dependency, expectation of further encounter, and type of helping solicited might all contribute to the contradictory findings of various research efforts. In any case, the results point out all the more the inappropriateness in generalising about the helpfulness of general groups of people, in this case, males and females. Various main effects have emerged from studies such as these, but it is clear that

a multitude of variables must be explored before such generalisa-
tions can be considered. Until then, results will probably continue
to appear inconsistent and contradictory.

Experiment 6

This study used data from the previous experiments in an
attempt to discover whether a person who helped a researcher by
volunteering to be a part of an experiment would also help in a
different situation.

Many of the subjects who agreed to participate in an
experiment after receiving a letter later became subjects in a
study of bystander intervention. Subjects participated in either
Experiment 2, 3 or 4, and while working on the ostensible task
had the opportunity to respond to a person's cries for help as he
apparently fell off a ladder. The results of these studies were
used to classify subjects for further investigation.

METHOD

Subjects

Subjects were 200 University of Durham students in their
first or second year of study. 103 females and 97 males were
contacted.

Fifty subjects each were randomly selected from samples of:
1) subjects who answered the original letter, came to the bystander-
intervention experiment, and helped during the emergency;
2) subjects who also answered the original letter, came to the
bystander-intervention experiment, but who did not help during the

emergency;

3) subjects who failed to respond to the letter; and

4) subjects who had never been contacted before.

Procedure

At least a year after receiving the original correspondence or participating in the experiment, subjects were sent another letter (Appendix 17). This letter asked subjects to complete a questionnaire for a cross-cultural study being carried out by the Anthropology Department. This questionnaire was in fact Severy's Helping Disposition Scale (HDS) which, as discussed earlier, represents an attempt to measure different dispositions to helping. Subjects were asked to complete the test and to send it back to the Anthropology Department in an attached self-addressed envelope. With the cooperation of this department, the returned tests were retrieved and scores on the HDS computed for later analysis.

The independent variable was the group from which the subject was selected. The dependent variables were whether or not the test was returned and, if so, the subject's scores on the HDS.

RESULTS

75 subjects (38%) returned the questionnaires completed. Significant differences in the helping rate of subjects from the four groups were found. 24 subjects (48%) from the group who had answered the first letter and helped during the emergency returned the questionnaire, and an identical number of subjects from the group who had answered the first letter but failed to help during the emergency completed the test. However, only 10 subjects (20%) who

did not answer the original letter and 17 subjects (34%) who had not been contacted previously returned the completed scale. The difference between groups is significant (x^2 = 11.49, d.f. = 3, p < .01).

Differences were not so marked in subjects' scores on Severy's HDS. Of the 14 subscales, in only one did differences among the four groups emerge. This was the "recognition" scale, which taps whether a person recognises when he should help others. Subjects who had helped in the emergency averaged 26.8; those who had not helped in the emergency but had responded to the original letter obtained a mean score of 31.5; subjects who had not even answered the first letter scored 30.7; and control subjects averaged 32.3, a significant difference (F = 3.22, d.f. = 3,71; p < .05). However, the results indicate that it was the two-time helpers who scored lowest on the scale.

Details of the HDS data are in Appendix 17.

DISCUSSION

The results point out some of the limitations of attempting to predict helping behaviour in one situation from information about helping in another. The present experiment examined the behaviour of subjects in several situations in which helping was possible. These data, together with data from Severy's HDS, suggest that general dispositions toward aiding may be very elusive.

Those subjects who came to the aid of a person in distress during an emergency proved no more likely than subjects who did not to aid an experimenter conducting a cross-cultural study. However, those who had originally agreed to help a researcher by volunteering

to participate in an experiment were more likely than either those who had originally refused or controls to complete the cross-cultural questionnaire. Helping in an emergency was thus unrelated to helping in a non-emergency, but helping in the two non-emergencies was related. Therefore, a certain amount of consistency was found. In both non-emergencies, the subject was required to return a letter which either indicated agreement to participate in a future experiment or contained a completed questionnaire. The emergency, on the other hand, required a different form of helping. Subjects had to call an ongoing experiment to a halt in order to investigate a person's cries for help.

It is thus possible to see the non-emergency requests for help as involving conformity and compliance. Subjects who agreed to help in these cases were complying with a request for aid. On the other hand, helping in the emergency required a certain amount of non-conformist behaviour. Subjects had to disregard not only the experimenter's instructions to work on a task but also the possibly misleading cues of bystanders to ignore the victim. It is not inconsistent, then, that helping the distressed victim did not relate to agreeing to help an experimenter.

The failure of Severy's test to meaningfully predict any type of helping behaviour might be explained in two different ways. First, the test could be too weak and ineffective to tap helping behaviour. Indeed, the scale's predictive validity has proved difficult to establish. Severy (1975) reported low validity coefficients when relationships between scores and various behavioural measures of helping were tested, especially when bystander intervention was involved. It is very possible, then, that the test needs further attention before it can be usefully employed, and that this

accounts for the absence of meaningful relationships found in the present experiment.

However, it might also be argued that designing any scale to measure helping dispositions is a futile task. As has been emphasised throughout the present studies, helping behaviour appears to be affected by numerous extraneous variables which are often ignored by researchers. Few personality traits have been able to consistently show a relationship to altruistic behaviour. It is possible that helping behaviour is so situationally linked that a scale could only hope to measure a specific kind of helping in a particular situation. This, at least, seems to be the conclusion which must be suggested when data from the studies in the present collection of experiments are examined.

Chapter VIII

DISCUSSION AND CONCLUSIONS

As has been discussed, a multitude of studies have been conducted in the hopes of establishing determinants of helping behaviour. Many of these studies have sought to discover factors which constitute "the altruistic personality." In pursuing this goal, investigators have attempted to determine whether some characteristics are more likely than others to relate to helping. These studies have typically concentrated on single individual factors such as specific personality variables, sociocultural factors such as class and occupation, and biosocial factors such as sex, age and race. However, although a great number of studies have searched for meaningful relationships between these variables and altruism, very few findings have proved to be consistent and replicable. As far as personality goes, few personality traits have been found to relate to helping in more than a few studies without being contradicted in others. Traits such as authoritarianism, stability, responsibility, and needs for social desirability and autonomy have often been positively related to helping, at times not related at all, and sometimes even negatively related. As for biosocial variables, no particular race or sex has been shown to be consistently more likely to help than another. Some studies yield results indicating that females are more helpful than males, but others reveal opposite results; some studies find white people more altruistic than black people, while others find the reverse to be true. A trend for age differences in helping does seem to indicate a simple increase in altruism with age in children, but studies of adolescents and adults

seldom yield consistent results. Experiments of sociocultural

factors are no more productive. A person from one social class or

occupation is no more likely to be helpful than another. Perhaps

the only finding that approaches consistency is that people from

small towns appear to be more helpful than those from large cities,

although even here contradictions are found. In summary, then,

individual factors have shown little success in consistently

predicting helping behaviour.

Other experimenters have tried a different approach in

attempting to shed light on determinants of helping behaviour. Many

of them have attempted to demonstrate that individual factors have

little to do with altruistic behaviour. Along these lines,

investigators have tried to examine the effects of situational

variables on helping. These variables include temporary states of

an individual, aspects of the potential recipient of help and

the bystanders present, and conditions surrounding the helping act

such as ambiguity and urgency. However, investigations of these

variables have been little more productive than have studies of

individual factors. Manipulated states of mood, success, competence

and embarrassment do not appear to consistently affect helping

behaviour, although trends indicate that both positive and negative

affective states are generally more likely than neutral ones to

lead to helping responses. Information about the potential recipient

of aid seldom predicts the success of a person in actually obtaining

aid. Overall, members of one race or sex seem no more likely than

others to secure aid. Dependency seems to increase helping in some

cases, decrease it in others, and have no effect in still others.

Data from studies of other recipient characteristics have been

difficult to interpret; physical attractiveness, likability and

generosity lead to increased helping in many instances but certainly not in all. Information about conditions of the helping situation has been marginally more successful in predicting aiding. Many studies have demonstrated that increases in bystander number and ambiguity lead to decreases in helping, and vice versa. However, more recent studies have yielded results which contradict this general finding; in field studies, for example, bystander number tends to have no effect on altruistic responses. In summary, situational variables have probably been more successful than individual factors in predicting helping behaviour, but numerous contradictions which have yet to be explained can be found in the literature.

In general, then, the results of studies of helping behaviour when viewed as a whole have been disappointing. Findings which have seemed sound have later been contradicted. Relationships are often weak and inconsistent. In short, the determinants of helping behaviour seem extremely elusive.

One of the main objectives of the present investigations has been to explore reasons for the discrepant findings. A detailed review of theories and empirical studies indicates that a reasonable place to begin may be in an analysis of methods and assumptions of researchers. As discussed earlier, most investigators have aimed to establish general laws to explain altruism. One pervasive problem stands out after an examination of their methods and also must be concluded from the present studies. This problem is that many investigators, in their zeal to describe the altruistic personality, seem to have expected too much from their data. Paradoxically, their awareness of all the variables which may be relevant in affecting helping behaviour has led experimenters to approach the study of

altruism in a very fragmentary fashion. Variables considered
extraneous are carefully controlled and only a few factors are
left to vary in any one study. This procedure appears valid, for
to obtain data regarding the effect of a variable it seems both
logical and necessary to study one factor at a time. Indeed, the
experimental method is based on the rigorous control of factors
which are not of immediate interest. So individual investigators
have limited their studies to explorations of particular determinants
of helping behaviour to the exclusion of other important factors.

This procedure would be acceptable if the controlled factors
themselves were carefully considered when conclusions are drawn.
But a widespread practice is to ignore the controlled variables
as though their effect is irrelevant, and to attempt to make generali-
sations about the effects of the variables which have been the object
of study. This results in several problems. The helping situation
is never considered in its entirety. Only scattered effects are
studied at any one time. Immense problems in allowing for between-
study comparability occur. And, most importantly, an overview of
factors which affect helping behaviour is never obtained.

Investigators thus appear to hold inappropriate assumptions
about the strength of the variables they manipulate. The experimenter
who studies the effect of a personality trait on helping by holding
all factors constant is expecting quite a bit from the personality
measure. If he ignores the mode of helping required, the presence
and characteristics of other bystanders, the urgency of the request
for help and the ambiguity of the situation, and the behaviour
the subject is engaged in at the time, he cannot hope to conclude
that the trait does or does not have general predictive power. Nor
can he make a valid comparison of his results with the findings of

other investigations. To increase the usefulness of his findings, he should emphasise that <u>in the particular situation studied</u> subjects scoring in a particular way on a personality test might or might not be likely to help. Unfortunately, this is seldom done; and confusion arises when a later study using a different situation fails to confirm the original findings.

Research on sex and dependency is a case in point. A number of experimenters have been puzzled by the discrepant findings about the helpfulness of males and females toward dependent and non-dependent males and females. A major problem here is that three variables - sex of helper and sex and dependency of recipient - seem to combine to produce differences in helping, but few investigators vary all three factors when studying helpfulness. Experiment 5b yielded a three-way interaction among the variables, illustrating that studies which concentrate on single main effects may be masking important underlying interactions.

Another inappropriate assumption can be found in the helping behaviour literature. In searching for the altruistic personality, psychologists have expected single acts to be adequate expressions of altruistic tendencies. Thus helping in one situation is often equated with helping in another setting. This expectation has led to considerable confusion which arises when researchers try to review findings of particular studies so that generalisations might be drawn. Helping has been operationalised in so many ways that interactions of the particular helping act and other variables must surely be carefully considered. As discussed earlier, helping a distressed victim during an ambiguous emergency in the presence of passive bystanders is very different from helping a researcher by volunteering to participate in an experiment after finding that others

have previously helped. A person who scores high on a test of authoritarianism or low on a test of autonomy might be expected to help in the latter situation but not in the former.

Experiment 6 pooled data from the earlier studies to demonstrate that certain people might be more likely to help in some situations but not in others. In this study, subjects who agreed to comply with a request to participate in a psychology experiment were also more likely to complete a questionnaire for an anthropology research project than were subjects who had refused to participate in the experiment. However, subjects who came to the aid of a victim in distress during an ambiguous emergency proved no more likely than subjects who ignored the cries for help to agree to complete the questionnaire. Agreeing to complete a questionnaire and attend an experiment may have represented similar kinds of compliant behaviour, or perhaps have simply reflected an interest in the social sciences. Helping a person in distress was a very different kind of behaviour which called for a certain amount of initiative in the presence of seemingly passive bystanders. This study thus illustrates the importance of carefully considering the entire helping situation when attempting to compare different studies.

The expectations which experimenters hold for single acts of helping have probably played an important role in the inconsistent findings regarding Machiavellianism. The experiments described herein shed some light on the confusing relationship between Machiavellianism and altruism. As described earlier, some studies have found Machiavellianism negatively related to helping while others have found no such relationship. However, in making broad statements about these relationships, researchers have neglected to consider how different measures of altruism and different situational factors might

have created the confusion.

Christie and Geis (1970) have stressed the importance of situational factors and their interaction with Machiavellianism. Differences between low and high Machs seem to be greatest in particular situations and nonexistent in others. When face-to-face interaction, latitude for improvisation, and irrelevant affect are possible, low and high Machs differ on a number of behavioural dimensions. Unfortunately, none of the studies which have tried to relate Machiavellianism and helping behaviour have recognised these situational influences. Wrightsman (1964) used only a self-report measure of altruism. Staub (1974) used a confederate with a well rehearsed script who interacted as similarly as possible with all subjects regardless of their respective comments. Latane and Darley (1970) also studied a situation in which no opportunity for interaction or improvisation existed. Their failure to find a relationship between Machiavellianism and helping is not surprising in view of the conditions surrounding the emergency. Only one real subject was run in each trial; the other "bystanders" were really only tape recorded voices whose responses were the same regardless of the subject's behaviour.

The experiments presented in Chapters 5 and 6 examined differences between low and high Machs in view of Christie and Geis's findings. In the first exploratory study, subjects were put into communicating groups composed of all naive subjects except for one condition which employed one confederate. Subjects then worked on an open-ended task, during which there was occasion for improvisation, spontaneity, and socioemotional as opposed to only task activity. When subjects were given the opportunity to respond to a victim's cries for help, groups of low Machs were significantly more likely

to aid the distressed person than were groups of medium or high Machs. It seems, then, that differences in the helping of low and high Machs emerge when the appropriate situational criteria are met.

The second experiment replicated this finding and found further support for the importance of situational variables. In this study, some groups interacted vocally and worked face-to-face, while others sat back-to-back and communicated through restrictive written channels. Additional subjects worked alone. The results again demonstrated the importance of interaction and improvisation possibilities. No differences emerged in the helping behaviour of low and high Mach subjects who worked as individuals or in non-communicating groups. However, overall differences between low and high Mach groups emerged as a result of differences in the communicating groups. In this latter condition differences between low and high Machs were heightened, with high Machs helping considerably less often than low Machs.

Finally, when mixed-Mach groups were studied in Experiments 3 and 4, differences in helping behaviour did not arise. This was possibly because particular mutual styles of interaction were necessary to affect inhibition in groups.

It is puzzling that such situational variables have been neglected, especially when explanations of group size effects on helping are examined. As discussed earlier, many studies have found that helping responses decrease the more bystanders are present. This has been found to occur during both emergencies and non-emergencies, and when the presence of others is visible or implied. Two major hypotheses have been put forward to explain this trend, and a major goal of Experiments 1-4 was to evaluate these explana-

tions.

The diffusion of responsibility hypothesis suggests that the responsibility for providing help in a given situation is divided proportionally among those in a position to help. If only one person is present when an emergency occurs, this person holds total responsibility for helping. However, the more people present, the more diffused is this responsibility and the less likely it is that any individual will decide that he should act.

The other explanation is the social influence hypothesis, which suggests a different reason for groups of bystanders to be less helpful than individuals. Subjects in groups are mutually affected by each other's inactivity. If a person sees other people seemingly ignoring sounds of distress, he may decide that the others believe a helpful response is unnecessary. A fear of jumping to conclusions or otherwise acting inappropriately inhibits each bystander from helping. Thus a state of pluralistic ignorance arises in which each person is misled by the apparent calm of each other person and subsequently decides not to help. A person alone must define the situation for himself, and he has no one around from whom to misperceive cues.

Since the social influence explanation lays great stress on the communication of subjects, and low and high Machs are supposed to differ most when communication of a certain type is permitted, it seems surprising that experimenters should have neglected to consider relevant situational factors when comparing the helping of low and high Machiavellians. Low Machs are known for being "encounter prone" and high Machs "encounter blind." The former emit and receive cues more often, are less likely to misinterpret other people's behaviour, and in general communicate on a more personal and

emotional level than others. High Machs, however, appear more cool and detached, are more skeptical about the competence and intentions of others, and seem more concerned with solving a task than engaging in interpersonal relations. If the social influence hypothesis holds, then the conditions of particular experimental settings are of crucial importance to the behaviour of low and high Machs when helping is possible. If permitted to interact, low Machs should be more likely to exchange relevant cues pertaining to the emergency. They should be more likely to be open about their own interpretations of the situation, and they should be less affected by mutual inhibition. High Machs, with their detached demeanor, should be more likely to withhold cues and to appear cool and unconcerned to each other. Their mutual inhibition should be increased when they are confronted with each other's aloofness.

Inappropriate assumptions about single behaviours as expressions of general dispositions thus seem to be a major cause of much of the confusion about helping behaviour and personality. The present experiments demonstrated that in some conditions a personality trait might relate to helping behaviour, but that in other cases no differences can be expected.

Another inappropriate expectation has caused further difficulties. This involves the tendency for researchers to examine only one aspect of an individual factor and expect this aspect to be a sole determinant of behaviour. For example, experimenters seem to have expected Machiavellianism to be negatively related to helping as a result of the supposed underlying cynical and manipulative nature of the high Machiavellian. Latané and Darley (1970) wondered whether a person who had a denigrating image of mankind and who would presumably only help others when he himself would benefit

would be at all inclined to aid a stranger in distress. When the experimenters failed to find a negative relationship between Machiavellianism and altruism, they suggested that this supported the argument that helping behaviour may be mainly situationally determined. However, they might have considered other aspects of a Machiavellian orientation, notably the findings related to differences in interaction styles.

In the present studies, high Machs do not seem to have failed to help as a result of any lack of concern on their part, but probably because their detached manner led each subject to misinterpret the conclusions of other group members. If the decrease in their helping were a function of their cynical and selfish outlook, they would also have helped less often when alone or in non-communicating groups, as in Experiment 2, or in mixed-Mach groups, as in Experiments 3 and 4. Again, researchers seem to base their conclusions on inappropriate expectations of their variables. Interest in single aspects of a trait might explain why investigators have neglected to consider important situational influences in the study of Machiavellianism and helping behaviour.

In addition, the study of individual traits often ignores the possibility that other individual factors might have simultaneous effects on behaviour. Gergen, Gergen and Meter (1972) noted that combined factors might often be left undiscovered in studies of helping behaviour. This could be relevant when relationships between Machiavellianism and helping behaviour are examined. Christie and Geis (1970) showed that Machiavellianism seems to be a relatively unitary trait. Although high Machs often win in various bargaining games, they score as no more intelligent,

creative, well educated, or stable than low Machs. Thus other
individual traits of low and high Machs might affect the helping
elicited from them in particular situations. It is probable that
in Experiment 2 the few high Machs who did help while in
communicating groups differed on other important, yet untapped,
individual traits.

As discussed earlier, experimenters often give their subjects
various batteries of tests to discover whether any interesting
relationships between personality and helping behaviour emerge.
Sometimes one of several traits is found to relate to helping, and a
claim is made that this factor helps to describe the altruistic
personality. Such a claim is usually premature, as is found when
later studies fail to find effects for the same variable. The studies
reported herein looked at a number of factors which might be expected
to relate to helping. Of the 16 factors on Cattell's 16 PF, the 3
factors on Eysenck's Personality Inventory, the 5 factors from the
adapted Edwards Personal Preference Schedule, and the trait of
authoritarianism as measured by Christie's F-Scale, only three
showed any relationship to helping in the conditions studied.
Interestingly, these three do not seem to apply to a subject's
attitude toward helping others. Instead, they apply to a subject's
behaviour in group situations and probably relate more to his
interaction with fellow subjects than to his beliefs about helping
people in distress. In Experiment 1, subjects were more likely to
help if they scored as emotionally stable and relaxed. Subjects
who remained calm, tranquil and composed during the distress sounds
may have been more likely to act appropriately, even in the presence
of passive bystanders. These very factors, though, cannot be

described as basic indicators of the altruistic personality. In a different situation - for example, one in which helping requires compliance to group pressures - these same factors might be expected to bear no relationship to helping or perhaps even lead to decreased helping.

Single factors, then, are unlikely to consistently relate to different forms of helping. Even Severy's (1975) HDS, designed specifically to measure helping orientations, appears unable to predict helping behaviour. Experiment 6 examined scores on this scale and their relationship to different kinds of helping. Scores of subjects who helped in an emergency were no different from those who failed to help in the same situation, who refused to participate in an experiment at all but agreed to complete a questionnaire, or who had not been approached previously.

As mentioned earlier, differences in low and high Mach helping might be at least partially explained in terms of the social influence hypothesis. The present experiments have consistently supported this hypothesis and have found little support for the diffusion of responsibility explanation. Overall differences in the helping behaviour of various sized groups were not found in any of the four present studies of bystander intervention. In Experiment 1, groups of two, three and four were equally likely to respond to a victim's cries for help. In the other three experiments, groups of two or three were as likely as individuals to help. The only exception to this emerged when the groups interacted with each other. In all three of these studies, helping decreased significantly when the groups worked face-to-face and interacted vocally. However, this provides no support for the diffusion of responsibility hypothesis, as groups of the same size who worked back-to-back and were not permitted to speak

to each other were as likely as subjects working alone to help.

This finding might at first seem to counter the social influence explanation. After all, according to this explanation subjects who have access to other people's spontaneous reactions to an ambiguous emergency should be more likely to decide that helping is appropriate. In the present experiments, though, face-to-face interaction consistently led to decreased helping.

However, an examination of data regarding the interaction of communicating groups indicates that face-to-face interaction did not serve to increase the cues exchanged by subjects. In fact, the opposite seems to be the case. Group members who were back-to-back when the emergency occurred responded with more obvious gross movements. They often sat up suddenly and turned around as though to see how the other subjects were responding. Their behaviour marked a sudden departure from the procedure. At the very least, this enabled each subject to conclude that others were aware of some event outside the room. Then, having defined the event as an incident worthy of attention, they may have been more likely to decide that something was amiss. Since such a recognition of the sounds usually preceded more dramatic and less ambiguous cues from the victim, further sounds probably reinforced an interpretation of the situation as an emergency. From then, each individual subject simply had to decide whether he should provide help for the victim.

A different series of events tended to occur with communicating groups. These groups included subjects who were already facing each other and talking when the sounds occurred. Any recognition of the sounds was unlikely to be obviously noticeable. Often subjects were in the middle of a sentence when the distress sounds began. Just the act of finishing the sentence was likely to indicate that the

sounds were not really worthy of attention. Each subject may have been led by the apparent calm of the others to assume that no one was concerned about the sounds of distress.

This interpretation is supported by analyses of the verbal and nonverbal interaction of subjects during the emergency. Increased exchange of cues in the form of mutual eye contact and startle responses led to increased helping behaviour. Groups which included a member who verbally commented about the sounds eventually helped. In general, the more sudden and overt a response to the sounds was, the greater was the likelihood that someone in the group would help. In addition, the Bales interaction analysis of subjects in communicating dyads revealed that helpers were more likely to have been engaged in socioemotional activity, while nonhelpers were more involved in task activity. The increased socioemotional activity of helpers does not imply that they were simply more pleasant and accommodating people, as both positive and negative socioemotional responses were involved. It is possible that an interest and participation in interpersonal relations was more likely to facilitate the exchange of cues when the emergency began.

The question arises, then, as to why so many other studies have found effects for diffusion of responsibility in the form of group size effects. The answer might closely relate to the same problems in studies of Machiavellianism and helping. A majority of the studies which have examined helping behaviour have attempted to control as many variables as possible while pursuing their predictions. To control "extraneous" factors, experimenters have made wide use of confederates, tape recorded voices, and the implied presence of others, so that only one naive subject is present in any given trial of an experiment. While this practice might be useful in disentangling

seemingly irrelevant factors from those of immediate interest, it also results in immense difficulties in interpreting results, generalising from data, and applying findings to real life. As suggested earlier, anything that serves to decrease the confusion and ambiguity surrounding an emergency seems to increase the likelihood of a helpful response. Studies which employ confederates may be setting up a situation in which the confusion is multiplied. Confederates are usually well instructed to show no response to an emergency and to respond noncommitally, if at all, to comments made by the real subjects. The naive subject is suddenly confronted by an unusual situation of which he probably has little experience. He might wonder what is happening and perhaps consider investigating the matter. However, he quickly notices that no one else seems in the least concerned, even when he attempts to draw their attention to the sounds. It is very likely that the subject's interpretation of the emergency quickly alters as a result of the lack of cues received from others. Even if the subject maintains his original interpreta-tion, the passivity of fellow bystanders might inhibit his actual helping behaviour.

This situation might be viewed from a conformity framework similar to that discussed in Asch's (1956) studies. The subject forms an opinion as a result of the information - or in this case, lack of it - which he receives from others. Increasing the number of unconcerned bystanders could serve to simply increase the pressure to conform to the behaviour of the others, thus leading to decreased helping when more bystanders are present.

Latane and Darley (1968) attempted to control the effect of social influence by separating the naive subject from the other ostensible bystanders and using tape recorded voices to signify their

presence. This procedure still yielded a group size effect, even though verbal and nonverbal cues could not be exchanged. However, this finding does not necessarily imply that subjects who thought other people were present felt less responsibility toward helping. It is possible that subjects were immobilised by the confusion resulting from increased bystander number. It is also conceivable that group size effects are due to the unique environment of the psychological laboratory, where leaving an ongoing experiment could be detrimental to an entire study. Subjects might be more willing to risk eventual embarrassment in front of one person than in front of four others. Latané and Darley (1968) noted that subjects were not unconcerned about the emergency they heard; instead, they seemed anxious and worried about the sounds, even though they failed to help. The fear of ruining an experiment involving a large number of people by jumping to conclusions and acting inappropriately might very well have made helping a less enticing prospect for subjects in larger groups.

This possibility is supported by studies using unambiguous emergencies, particularly field studies, which usually fail to find group size effects. The trend is for less ambiguous emergencies to decrease group size effects, indicating that responsibility is not diffused but that the fear of acting inappropriately is lessened. In the laboratory, the prospect of ruining an important research project because a person may be in difficulty seems likely to lead to decreased helping.

This points out the importance of considering the behaviour in which a bystander is engaged when an emergency occurs. The amount of help provided by bystanders engaged in riding an underground train, shopping, or waiting for a bus is usually greater and less affected by

group size than that given by subjects in an experimental setting. As just suggested, this may be at least partly a function of the greater amount of information available about an emergency occurring in a naturalistic setting. In real life, a bystander is more likely to be confronted with cues about an emergency and is less likely to fear misinterpreting the event. Subjects in an experiment not only have more ambiguous cues to interpret, but they also have the added difficulty of being involved in an experiment. This experiment usually involves a task, often timed, and an experimenter who has presumably put much time and effort into studying the way people perform on the task. In addition, the subject no doubt has his own reasons for wanting to perform adequately on the task. As discussed in Chapter 4, demand characteristics and evaluation apprehension might operate to emphasise a subject's role in an experiment. In attempting to be a good and competent subject, a person might increase his concern for his performance to such an extent that he fears the time and concentration loss that would surely occur if he helped a bystander in distress. Indeed, the subject working on an important, demanding, timed task might be so concerned about his performance that he fails to concentrate on the extraneous sounds of the emergency.

The experiments presented in Chapter 6 may lend some support to this. The first investigation of task involvement and helping failed to find a difference between the helping responses of subjects working on a demanding and a non-demanding task. However, a post-experimental questionnaire indicated that the manipulation of task involvement may not have been successful. The second experiment did find an effect, although only in the amount of time taken before subjects helped. Those engaged in the demanding task took significantly longer to respond to the cries for help.

It is possible that subjects were more torn in their decision to help or not as a result of the instructions for the demanding task. In this condition, subjects were informed that their performance would indicate their competence and that other subjects had performed well under similar conditions. Those in the non-demanding condition were told to take their time as they worked and to take a break from the task when they wanted to rest. They were also told that other people did not normally finish the task. Thus subjects in the demanding condition might have been so concerned about their performance that they waited until they were certain that a helping response was appropriate before actually helping. Or, they might have simply taken longer to attend to the sounds as a result of increased concentration. Alternatively, the behavioural alternatives for subjects in the non-demanding condition may have been increased; they did not need to fear that momentarily abandoning the task might ruin the entire experiment.

Whatever the reason, the results illustrate that seemingly irrelevant variables may be of great importance in affecting helping behaviour. Investigations have employed a multitude of tasks with which to keep subjects busy until an emergency is simulated. Yet when various studies are compared, the involvement of subjects during the time they witnessed the emergency is seldom considered. It is not surprising that consistent findings have failed to emerge. Nor is it surprising that studies searching for the altruistic personality appear unproductive, especially since the interaction of individual factors with other variables is so seldom considered. The poor predictive power of personality tests might not be due simply to unsophisticated testing instruments or to problems inherent in the

overall concept of personality. It may be at least partly due to the failure of researchers to consider the interaction of personality traits with situational factors.

These conclusions lead to suggestions regarding several areas which might be usefully pursued in future research efforts. First, experimenters might attempt more investigations of helping behaviour using all naive subjects. Despite obvious disadvantages in limiting control, this procedure would enable experimenters to relate their results to life outside the laboratory. In addition, further light might be shed on explanations of group size effects and on reasons for apparent apathy of witnesses of emergencies. For these same reasons, more field experiments should probably be conducted in conjunction with laboratory studies. Although experiments conducted in a naturalistic setting are difficult to arrange and decrease control capability, they sidestep problems of demand characteristics and evaluation apprehension and may lead to more valid inferences about everyday helping behaviour.

Studies of individual determinants of helping seem to need further attention, but not in the fragmented fashion of previous work. It might help if experimenters tried to view a helping situation holistically, thereby placing due emphasis on various situational factors and their interaction with personality, sociocultural and biosocial factors. In doing so, investigators could expect less from their individual studies and view their findings in light of factors which may not be of immediate interest. This would facilitate between-study comparisons and lead to less fragmentary research efforts. Until the helping situation is viewed in its

entirety, and until interactions are carefully considered, it is likely that individual variables will continue to be poor predictors of helping behaviour and that experimental results will appear weak, diverse, and contradictory.

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APPENDICES

1. Diagram of apparatus

PART I

INSTRUCTIONS

Listed below are a number of statements. Each represents a commonly held opinion and there are no right or wrong answers. You will probably disagree with some items and agree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by circling the corresponding alternative on your answer sheet. The number alternatives and their meanings are:

If you disagree strongly	mark	1
If you disagree somewhat	mark	2
If you disagree slightly	mark	3
If you are neutral	mark	4
If you agree slightly	mark	5
If you agree somewhat	mark	6
If you agree strongly	mark	7

First impressions are usually best in such matters. Read each statement, decide if you agree or disagree and the strength of your opinion, and then mark the appropriate alternatives on your answer sheet. Mark only one alternative for each item on your answer sheet. Read each item carefully, but work as rapidly as you can. Give your opinion on every statement.

If you find that the numbers to be used in answering do not adequately indicate your own opinion, use the one which is closest to the way you feel.

---

1. If you try hard enough, you can usually get what you want.

2. Never tell anyone the real reason you did something unless it is useful to do so.

3. It is essential for learning or effective work that our teachers or bosses outline in detail what is to be done and how to do it.

4. The best way to handle people is to tell them what they want to hear.

5. One should take action only when sure it is morally right.

6. Most people will go out of their way to help someone else.

7. Most people are basically good and kind.

8. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.

9. Honesty is the best policy in all cases.

10. Most people don't realize how much our lives are controlled by plots hatched in secret places.

11. No sane, normal, decent person could ever think of hurting a close friend or relative.

12. Human nature being what it is, there will always be war or conflict.

13. There is no excuse for lying to someone else.

14. If it weren't for the rebellious ideas of youth there would be less progress in the world.

15. The biggest difference between most criminals and other people is that the criminals are stupid enough to get caught.

If you disagree strongly   mark   1
If you disagree somewhat   mark   2
If you disagree slightly   mark   3
If you are neutral   mark   4
If you agree slightly   mark   5
If you agree somewhat   mark   6
If you agree strongly   mark   7

16. Nowadays a person has to live pretty much for today and let tomorrow take care of itself.

17. Generally speaking, men won't work hard unless they're forced to.

18. All in all, it is better to be humble and honest than to be important and dishonest.

19. You sometimes can't help wondering whether anything is worthwhile anymore.

20. When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which carry more weight.

21. Most honest people admit to themselves that they have sometimes hated their parents.

22. Most people who get ahead in the world lead clean, moral lives.

23. Anyone who completely trusts anyone else is asking for trouble.

24. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.

25. Every person should have complete faith in a supernatural power whose decisions he obeys without question.

26. Most men are brave.

27. Most people in government are not really interested in the problems of the average man.

28. It is wise to flatter important people.

29. It is possible to be good in all respects.

30. The findings of science may some day show that many of our most cherished beliefs are wrong.

31. It is wrong to say that there's a sucker born every minute.

32. The average man is probably better off today than he ever was.

33. It is hard to get ahead without cutting corners here and there.

34. Even today, the way that you make money is more important than how much you make.

35. People suffering from incurable diseases should have the choice of being put painlessly to death.

36. Most men forget more easily the death of their father than the loss of their property.

2b. Distribution of Mach IV scores: obtained during
present research (N = 409)

$$\bar{X} = 95.25, \text{ s.d. } = 14.52$$

Scores on Mach IV
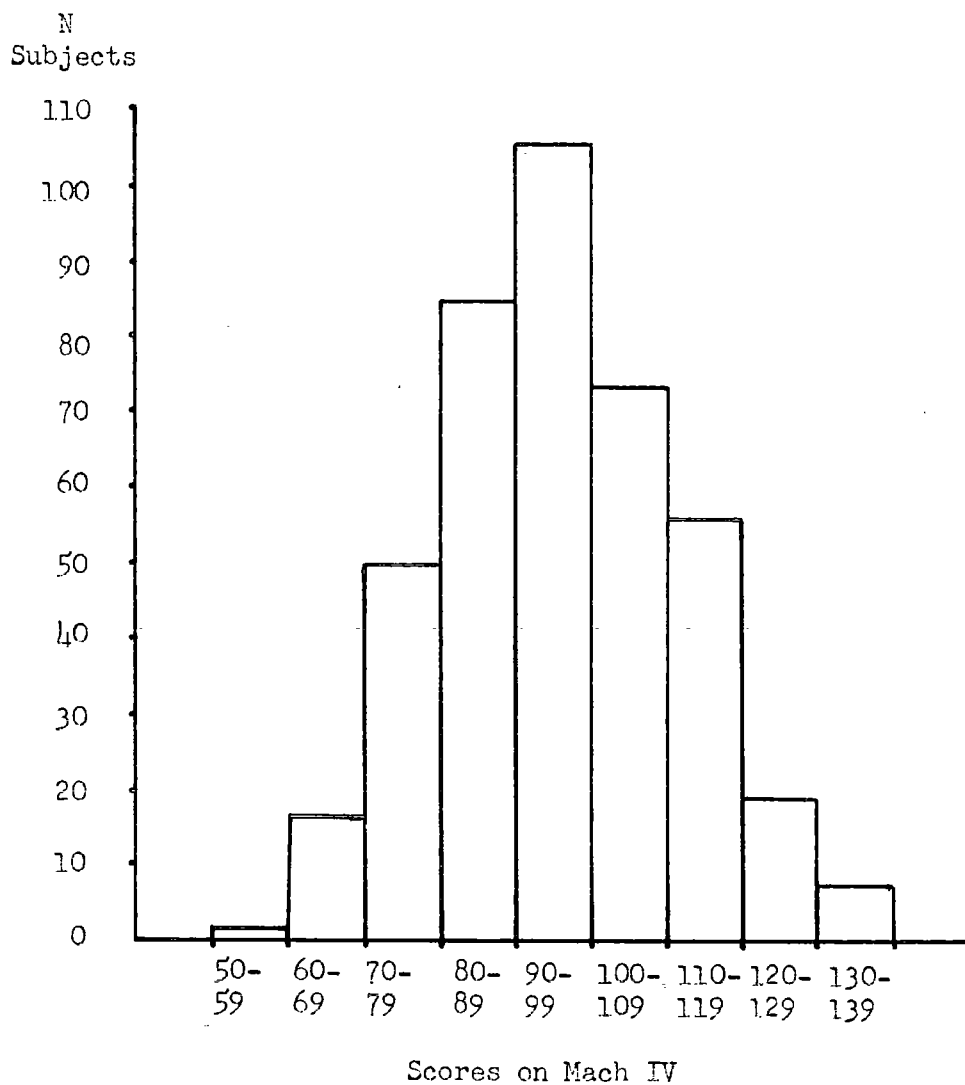
2c. Distribution of male and female Mach IV scores.

N Males = 200 $\bar{X}$ = 97.94, s.d. = 15.94

N Females = 209 $\bar{X}$ = 92.68, s.d. = 14.57

Scores on Mach IV

————————   Distribution of scores of females

················   Distribution of scores of males

PART II

INSTRUCTIONS

Listed below are a number of statements. Each represents a commonly held opinion and there are no right or wrong answers. You will probably disagree with some items and agree with others. We are interested in the extent to which you agree or disagree with such matters of opinion.

Read each statement carefully. Then indicate the extent to which you agree or disagree by circling the corresponding alternative on your answer sheet. The number alternatives and their meanings are:

If you disagree strongly	mark	1
If you disagree somewhat	mark	2
If you disagree slightly	mark	3
If you agree slightly	mark	4
If you agree somewhat	mark	5
If you agree strongly	mark	6

First impressions are usually best in such matters. Read each statement, decide if you agree or disagree and the strength of your opinion, and then mark the appropriate alternatives on your answer sheet. Mark only one alternative for each item on your answer sheet. Read each item carefully, but work as rapidly as you can. Give your opinion on every statement.

If you find that the numbers to be used in answering do not adequately indicate your own opinion, use the one which is closest to the way you feel.

---

1. No person who could ever think of hurting his parents should be permitted in the society of normal decent people.

2. The facts on crime and sex immorality suggest that we still have to crack down harder on some people if we are going to save our moral standards.

3. It is only natural and right for each person to think that his family is better than any other.

4. An insult to our honour should always be punished.

5. The minds of today's youth are being hopelessly corrupted by the wrong kind of literature.

6. A world government with effective military strength is one way in which world peace might be achieved.

7. It is the duty of a citizen to criticize or censure his country whenever he considers it to be wrong.

8. Most censorship of books or films is a violation of free speech and should be abolished.

9. What a youth needs most is the flexibility to work and fight for what he considers right personally even though it might not be best for his family and country.

10. The church has outgrown its usefulness and should be radically reformed or done away with.

11. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped or worse.

12. It usually helps the child in later years if he is forced to conform to his parents' ideas.

13. Army life is a good influence on most men.

14. There is a divine purpose in the operations of the universe.

If you disagree strongly   mark   1
If you disagree somewhat   mark   2
If you disagree slightly   mark   3
If you agree slightly   mark   4
If you agree somewhat   mark   5
If you agree strongly   mark   6

15. Unless something drastic is done, the world is going to be destroyed one of these days by nuclear explosion or fallout.

16. Science declines when it confines itself to the solution of immediate practical problems.

17. As young people grow up, they ought to try to carry out some of their rebellious ideas and not be content to get over them and settle down.

18. Disobedience to the government is sometimes justified.

19. Honesty, hard work, and trust in God do not guarantee material rewards.

20. Few weaknesses or difficulties can hold us back if we have enough will power.

21. The poor will always be with us.

22. The worst danger to our country during the last 50 years has come from foreign ideas and agitators.

23. We should be grateful for leaders who tell us exactly what to do and how to do it.

24. In the final analysis parents generally turn out to be right about things.

25. Divorce or annulment is practically never justified.

26. Members of religious sects who refuse to salute the flat or bear arms should be treated with tolerance and understanding.

27. One of the greatest threats to our way of life is for us to resort to the use of force.

28. One way to reduce the expression of prejudice is through more forceful legislation.

4. Task material, Experiment 1

PROBLEM I.

If 3 hens lay 3 eggs in 3 days, how many hens will it take
to lay 100 eggs in 100 days?

PROBLEM II.

There are ten different letters in the words below. Each
letter represents a different figure (or digit), so that
the ten letters stand for 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.
If a letter appears more than once it stands, of course,
for the same figure each time.
(There are four E's, for instance, so that one figure
appears four times).

It's a subtraction sum and this is how it goes:

S E V E N

F O U R
_____

T H R E E

PROBLEM III.

Solve this:

If the B m t put:

If the B. putting:

PROBLEM IV.

"The chances," said Smith (who is very fond of tossing for
money), "are that you'll win as often as you lose, and if
you do that, you can't lose money!" But he learnt a lesson
the other night.
His friend Jones said: "Look, you start with £1 and you
toss me for half of what you've got."
They did so, and then went on, Smith each time wagering
half of what he'd then got in his possession.
Six times they tossed, Smith winning three times and
losing three times.

How much did Smith have at the end?

HINTS

Experiment 1

Problem 2:   Hint 1.

> F must be greater than E because there
> has been a "borrow"; otherwise S, in
> the top line, would show in the bottom
> line as the same figure; so S must be
> one greater than T.

Problem 2:   Hint 2.

> When U is taken away from E, the remainder
> is E - which fixes U pretty well.

Problem 3:   Hint 1.

> "Big" (?) B.

Problem 3:   Hint 2.

> Punctuation.

5. Personality test results, Experiment 1.   Mean scores and t-test results.

LOW SCORE DESCRIPTION	TOTAL			FEMALES			MALES			HIGH SCORE DESCRIPTION
	Helpers (N=19)	Nonhelpers (N=73)	t	Helpers (N=8)	Nonhelpers (N=23)	t	Helpers (N=11)	Nonhelpers (N=50)	t	
A. Reserved, rigid, detached, aloof	9.16	9.30	.41	9.25	10.52	1.19	9.09	8.74	.29	A. Outgoing, participating, adaptable
B. Less intelligent, quitting	9.95	9.89	.11	10.75	10.48	.41	9.36	9.62	.36	B. More intelligent, conscientious
C. Affected by feelings, less stable	16.53	14.04	2.98**	16.50	13.61	2.72**	16.54	14.24	1.80*	C. Emotionally stable, calm, faces reality
E. Humble, mild, conforming	12.84	12.25	.57	11.50	10.43	.70	13.82	13.08	.52	E. Assertive, aggressive, independent
F. Sober, silent, serious, taciturn	15.00	14.86	.10	17.87	14.61	1.49	12.91	14.98	1.45	F. Happy-go-lucky, talkative, frank
G. Expedient, disregards rules	9.68	9.70	.02	8.38	9.65	1.33	10.64	9.72	.71	G. Conscientious, persevering
H. Shy, timid, threat-sensitive	13.58	11.52	1.19	12.88	10.83	.81	14.09	11.84	.91	H. Venturesome, spontaneous, responsive
I. Tough-minded, realistic, hard	11.89	12.64	.64	14.50	14.17	.24	10.00	11.94	1.25	I. Tender-minded, subjective
L. Trusting, adaptable, relaxed	7.37	8.34	1.29	7.50	7.43	.05	7.27	8.76	1.50	L. Suspicious, self-opinionated
M. Practical, conventional, proper	14.89	14.75	.15	15.38	14.35	.73	14.54	14.94	.28	M. Imaginative, self-absorbed, creative

(Personality test results, Experiment 1, continued)

LOW SCORE DESCRIPTION	TOTAL			FEMALES			MALES			HIGH SCORE DESCRIPTION
	Helpers (N=19)	Nonhelpers (N=73)	t	Helpers (N=8)	Nonhelpers (N=23)	t	Helpers (N=11)	Nonhelpers (N=50)	t	
N. Forthright, un-pretentious	8.53	8.79	.39	9.25	9.13	.12	8.00	8.64	.64	N. Shrewd, worldly, calculating
O. Self-assured, confident	9.32	10.96	1.65	10.50	12.09	1.30	8.45	10.44	1.37	O. Apprehensive, in-secure, timid
Q1. Conservative, traditional	10.32	9.36	.91	8.62	8.04	.39	11.54	9.96	1.15	Q1. Experimenting, free-thinking
Q2. Group-dependent, sound follower	11.58	11.56	.02	10.25	11.04	.53	12.54	11.80	.78	Q2. Self-sufficient, makes own decisions
Q3. Undisciplined, self-conflict	9.74	9.95	.23	7.75	9.35	1.13	11.18	10.22	.94	Q3. Controlled, socially precise
Q4. Relaxed, tranquil, composed	10.05	13.73	2.62**	13.38	15.13	.78	7.64	13.08	3.80***	Q4. Tense, frustrated, overwrought
Christie's F-Scale Low authoritarianism	81.10	84.92	.98	81.50	86.52	1.32	80.82	84.18	.54	Christie's F-Scale High authoritarianism

*p < .10   **p < .02

**p < .02   ***p < .001

6. Personal data questionnaire, Experiment 2.

PERSONAL HISTORY

Please complete the form below:

Year at university:_____

Course of study:_____

Age:_____   Sex:_____

How many older brothers and sisters do you have?_____

How many younger brothers and sisters do you have?_____

Please write a precise one or two sentence description
of your father's most recent occupation:

_____

_____

In what societies or organisations are you most active?

_____

_____

Who are the characters in the picture and what are the
circumstances which brought them there?

What is happening at the moment and what are the
characters thinking and feeling?

What is the outcome or the results for the people in
the picture?

THEMATIC APPERCEPTION TEST (TAT) CARDS

Used in Experiment 2

Card Number	Description
2	Country scene: in the foreground is a young woman with books in her hand; in the background a man is working in the fields and an older woman is looking on.
3 GF	A young woman is standing with downcast head, her face covered with her right hand. Her left arm is stretched forward against a wooden door.
4	A woman is clutching the shoulders of a man whose face is averted as if he were trying to pull away from her.
5	A middle-aged woman is standing on the threshold of a half-opened door looking into a room.
6 BM	A short elderly woman stands with her back turned to a tall young man. The latter is looking downward with a perplexed expression.
7 BM	A gray-haired man is looking at a younger man who is sullenly staring into space.
10	A young woman's head against a man's shoulder.
12 M	A young man is lying on a couch with his eyes closed. Leaning over him is the gaunt form of an elderly man, his hand stretched out above the face of the reclining figure.
12 F	The portrait of a young woman. A weird old woman with a shawl over her head is grimacing in the background.
13 MF	A young man is standing with downcast head buried in his arm. Behind him is the figure of a woman lying in bed.
14	The silhouette of a man or woman against a bright window. The rest of the picture is totally black.
17 GF	A bridge over water. A female figure leans over the railing. In the background are tall buildings and small figures of men.

From Murray, H.A. (1943): Thematic Apperception Test Manual, Harvard College.

Name_____

1. Which part of this experiment was most difficult and which was least difficult
    for you:
                describing the people in the pictures?_____
                describing what was happening?_____
                describing the consequences?_____

2. Were you inhibited by the thought of the experimenter reading your descriptions?

3. Would you rather have spoken your responses?

4. Did you have enough time for each part?

5. Did you find the task enjoyable?

6. What did you think this experiment was about?

7. Were you affected by anything during the experiment (lighting, room size,
    sounds, etc.)?

8. Did anything unusual happen during the experiment?

9. Did you hear any outside noises?

10. If so, what did you think was happening?

11. How did you respond to the sounds?

12. Did anything influence your response to the sounds?

13. Were you suspicious about anything before you heard the sounds? Please describe.

Name_____

1. Which part of this experiment was most difficult and which was least difficult for you:

        describing the people in the pictures?_____

        describing what was happening?_____

        describing the consequences?_____

2. Were you inhibited by the presence of other group members?

3. To what extent were your responses to the pictures influenced by the presence of the other group members?

4. Would you rather have written your responses?

5. Did you notice if one of you did the most talking - you, the person on your left, or the person on your right?

6. Did one of you act as leader? Who?

7. Did you have enough time for each part?

8. Did you find the task enjoyable?

9. What did you think this experiment was about?

10. Were you affected by anything besides the other group members (lighting, room size, sounds, etc.)?

11. Did anything unusual happen during the experiment?

12. Did you hear any outside noises?

13. If so, what did you think was happening?

14. How did you respond to the sounds?

15. What did the other group members do?

16. Were you influenced by the other group members?

17. Did you discuss the noises?

18. Were you suspicious about anything before you heard the sounds? Please describe.

NAME _____

1. Which part of this experiment was most difficult and which was least difficult for you:

   describing the people in the pictures? _____

   describing what was happening? _____

   describing the consequences? _____

2. Were you inhibited by the presence of other group members?

3. To what extent were your responses to the pictures influenced by the explanations of other group members?

4. Would you rather have spoken your responses?

5. Did you have enough time for each part?

6. Did you find the task enjoyable?

7. What did you think this experiment was about?

8. Were you affected by anything besides the other group members (lighting, room size, sounds, etc.)?

9. Did anything unusual happen during the experiment?

10. Did you hear any outside noises?

11. If so, what did you think was happening?

12. How did you respond to the sounds?

13. What did the other group members do?

14. Were you influenced by the other group members?

15. Did you discuss the sounds?

16. Were you suspicious about anything before you heard the sounds? Please describe.

QUESTIONNAIRE

9a. Post-experimental questionnaire, Open University sample, Experiment 3   301.

Please answer the following questions. Most of the questions are followed by the numbers 1 to 7. These numbers refer to a range of responses from "No" to "Yes," the strongest responses being at each end of the scale and the more neutral ones in the middle. You are to mark the appropriate alternative by ringing whichever number matches your opinion. The following should be used as a guideline:

1	2	3	4	5	6	7
No Definitely	No Somewhat	No Slightly	Neutral	Yes Slightly	Yes Somewhat	Yes Definitely

1. Did you find this experiment interesting? 1 2 3 4 5 6 7

2. Were you nervous about your performance on the task? 1 2 3 4 5 6 7

3. Were you affected by the presence of the other subject? 1 2 3 4 5 6 7

4. Did you have enough time? 1 2 3 4 5 6 7

5. Did you think the task was difficult? 1 2 3 4 5 6 7

6. Were you very involved in the task? 1 2 3 4 5 6 7

7. Were you suspicious that the instructions of the task were perhaps deceptive? 1 2 3 4 5 6 7

8. Did you find the task fun? 1 2 3 4 5 6 7

9. Did you talk much with the other subject? 1 2 3 4 5 6 7

10. Were you bored? 1 2 3 4 5 6 7

11. Did the presence of the other person bother you? 1 2 3 4 5 6 7

12. Would you like to participate in other experiments? 1 2 3 4 5 6 7

13. Did you enjoy doing the task? 1 2 3 4 5 6 7

14. Did you worry about how well you were doing in comparison with other subjects? 1 2 3 4 5 6 7

15. Did you feel stressed? 1 2 3 4 5 6 7

16. Do you think the other person doing the experiment with you is really a subject? 1 2 3 4 5 6 7

17. Did you find the experiment demanding? 1 2 3 4 5 6 7

18. Did you find the experiment unpleasant? 1 2 3 4 5 6 7

19. Have you ever been in a psychology experiment before?   Yes_____   No_____

20. Do you have any thoughts about what the experiment might have been about? What do you think was being measured?

Name or Initials_____

Age_____   Sex_____

Please describe highest educational level reached before Open University:

Any additional comments:

>THANK YOU FOR YOUR HELP<

Please answer the following questions. Most of the questions are followed by the numbers 1 to 7. These numbers refer to a range of responses from "No" to "Yes", the strongest responses being at each end of the scale and the more neutral ones in the middle. You are to make the appropriate alternative by ringing whichever number matches your opinion. The following should be used as a guideline:

1	2	3	4	5	6	7
No	No	No	Neutral	Yes	Yes	Yes
Definitely	Somewhat	Slightly		Slightly	Somewhat	Definitely

If you want to comment on or qualify any of your answers, please do so on the back, specifying the question number

---

1.	Did you find this task interesting?	1	2	3	4	5	6	7
2.	Were you nervous about your performance on the task?	1	2	3	4	5	6	7
3.	Were you affected by the presence of the other subject?	1	2	3	4	5	6	7
4.	Did you have enough time?	1	2	3	4	5	6	7
5.	Did you think the task was difficult?	1	2	3	4	5	6	7
6.	Were you very involved in the task?	1	2	3	4	5	6	7
7.	Were you suspicious that the instructions of the task were perhaps deceptive?	1	2	3	4	5	6	7
8.	Did you find the task fun?	1	2	3	4	5	6	7
9.	Did you talk much with the other subject?	1	2	3	4	5	6	7
10.	Were you bored?	1	2	3	4	5	6	7
11.	Did the presence of the other person bother you?	1	2	3	4	5	6	7
12.	Would you like to participate in other experiments?	1	2	3	4	5	6	7
13.	Did you enjoy doing the task?	1	2	3	4	5	6	7
14.	Did you worry about how well you were doing in comparison with other subjects?	1	2	3	4	5	6	7
15.	Did you feel stressed?	1	2	3	4	5	6	7
16.	Do you think the other person doing the experiment with you is really a subject?	1	2	3	4	5	6	7
17.	Did you find the task demanding?	1	2	3	4	5	6	7
18.	Were you influenced by anything external (lighting, room size, noise, etc.)?	1	2	3	4	5	6	7
19.	Did you find the task unpleasant?	1	2	3	4	5	6	7
20.	Did you like the other subject?	1	2	3	4	5	6	7

21. Was one of you acting as leader? No.......... Yes, myself.......... Yes, the other subject ....

22. Have you ever been in a psychology experiment before?   Yes....... No........

23. Do you have any thoughts on what the experiment might have been about? What do you think was being measured?

Name or initials........................ Age............. Sex............

Any additional comments:

9c. Post-experimental questionnaire results:

Pilot study (Experiment 3) and Experiment 3.

| Question | PILOT STUDY | | | EXPERIMENT 3 | | |
	Demanding Task	Non-demanding Task	t	Demanding Task	Non-demanding Task	t
1. Interesting?	6.08	5.92	.37	5.58	6.15	1.90*
2. Nervous?	5.33	4.42	1.82*	6.09	5.82	.75
3. Affected by other S?	4.83	4.33	.90	3.00	2.82	.45
4. Enough time?	2.33	3.00	1.09	1.67	1.30	.40
5. Difficult?	6.33	5.08	2.72***	6.30	5.42	1.89*
6. Involved?	6.33	4.92	2.94****	5.45	5.06	.98
7. Suspicious?	4.83	4.67	.29	1.82	2.06	.75
8. Fun?	5.33	6.25	1.96*	6.12	6.55	.69
9. Talk much?	4.33	5.00	1.24	4.50	5.18	2.25**
10. Bored?	1.83	1.25	1.41	1.30	1.27	.09
11. Bothered by other S?	2.83	2.83	0	1.59	1.36	.11
12. Like to be in other exp's?	5.75	5.50	.48	6.24	6.27	.12
13. Enjoy?	5.92	6.08	.36	5.58	5.88	.83
14. Worry about comparison?	4.50	4.58	.14	4.73	4.97	.60
15. Stressed?	5.58	4.17	3.00****	5.12	5.09	.07
16. Think other really a S?	5.83	6.33	.79	4.05	4.14	.23
17. Demanding?	6.67	5.25	3.23****	6.15	5.58	1.95*
19. Unpleasant?	1.83	1.33	.78	1.42	1.67	.61
(N per condition):	N=6 (Qs. 3, 9, 11, 16) N=12 all other Qs.			N=22 (Qs. 3, 9, 11, 16) N=33 all other Qs.		

*p < .10   **p < .05   ***p < .02   ****p < .01

| Question | PILOT STUDY | | | EXPERIMENT 4 | | |
	Demanding Task	Non-demanding Task	t	Demanding Task	Non-demanding Task	t
1. Interesting?	6.17	5.75	.70	5.78	5.52	1.05
2. Nervous?	3.83	3.00	1.22	4.20	3.95	.69
3. Affected by other S?	2.00	2.25	.21	4.00	4.75	1.96*
4. Enough time?	1.50	3.75	3.46****	1.58	4.07	7.11*****
5. Difficult?	4.25	2.67	2.67***	5.37	4.72	2.15**
6. Involved?	6.33	5.25	2.15**	5.73	5.14	2.10**
7. Suspicious?	3.00	2.25	.88	3.65	3.87	.53
8. Fun?	5.83	5.00	1.73*	5.53	5.30	.77
9. Talk much?	5.63	5.75	.09	3.96	4.04	.17
10. Bored?	1.17	1.75	.60	1.92	2.28	1.24
11. Bothered by other S?	2.13	1.25	2.02*	2.62	2.69	.16
12. Like to be in other exp's?	5.83	5.50	.03	5.78	6.03	1.06
13. Enjoy?	6.17	4.75	1.89*	5.68	5.48	.72
14. Worry about comparison?	3.00	2.50	1.01	3.82	4.14	.79
15. Stressed?	2.75	3.33	1.17	4.18	3.63	1.66*
16. Think other really a S?	4.00	4.50	.83	6.29	6.49	.78
17. Demanding?	5.00	3.75	3.13****	5.48	4.83	2.24**
19. Unpleasant?	1.83	2.33	1.39	1.78	1.90	.46
(N per condition):	N=8 (Qs. 3, 9, 11, 16) N=12 all other Qs.			N=96 (Qs. 3, 9, 11, 16) N=120 all other Qs.		

$*p < .10$ $**p < .05$ $***p < .02$ $****p < .01$ $*****p < .0001$

NAME _____

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The following anagrams were presented on 35mm slides. Subjects used this answer sheet to record their answers.

Practice: GHARP

1. NSHMY
2. COITX
3. CLEEX
4. RECKL
5. NUTTA
6. ACOHV
7. PNCIA
8. VECRO
9. MOGEN
10. SMYES
11. SUIVR
12. NICCY
13. OLMDE
14. SLOKY
15. TANBO
16. DATIR
17. LOTHY
18. GATON
19. NEHAY
20. SPEUA
21. LAHAP
22. SSOIA
23. OAPNR
24. DTUAI
25. PMUOI
26. TINGA
27. UFIGN
28. PLEIM
29. NTIPE
30. GLAEI

WRITE ONLY ON THE ACCOMPANYING ANSWER SHEET   11.   EPPS/Mach scale,
                                                          Experiment 4.

                                                          306

1. A   I like to find out what great men have thought about various problems in which
       I am interested.
   B   I would like to accomplish something of great significance.

2. A   I like to conform to custom and to avoid doing things that people I respect might
       consider unconventional.
   B   I like to talk about my achievements.

3. A   I like to be able to come and go as I want to.
   B   I like to be able to say that I have done a difficult job well.

4. A   I like to be independent of others in deciding what I want to do.
   B   I like to keep my things neat and orderly on my desk or workspace.

5. A   I like to be loyal to my friends.
   B   I like to do my very best in whatever I undertake.

6. A   I like to do things for my friends.
   B   When planning something, I like to get suggestions from other people whose opinions
       I respect.

7. A   I like to observe how another individual feels in a given situation.
   B   I like to be able to say that I have done a difficult job well.

8. A   I like to put myself in someone else's place and to imagine how I would feel in the
       same situation.
   B   I like to tell my superiors that they have done a good job on something, when I
       think they have.

9. A   I like to be one of the leaders in the organisations and groups to which I belong.
   B   I like to be able to do things better than other people can.

10. A   When serving on a committee, I like to be appointed or elected chairman.
    B   When I am in a group, I like to accept the leadership of someone else in deciding
        what the group is going to do.

11. A   Most men forget more easily the death of their father than the loss of their property.
    B   It takes more imagination to be a successful criminal that a successful business man.

12. A   People suffering from incurable diseases should have the choice of being put
        painlessly to death.
    B   Men are more concerned with the car they drive than with the clothes their wives wear.

13. A   Never tell anyone the real reason you did something unless it is useful to do so.
    B   Since most people don't know what they want, it is only reasonable for ambitious
        people to talk them into doing things.

14. A   I like to find out what great men have thought about various problems in which I am
        interested.
    B   If I have to take a trip, I like to have things planned in advance.

15. A   I like to praise someone I admire.
    B   I like to feel free to do what I want to do.

16. A   I like to avoid situations where I am expected to do things in a conventional way.
    B   I like to read about the lives of great men.

17. A   I like to criticize people who are in a position of authority.
    B   I like to use words which other people often do not know the meaning of.

18. A I like to share things with my friends.
    B I like to make a plan before starting in to do something difficult.

19. A I like to have strong attachments with my friends.
    B I like to say things that are regarded as witty and clever by other people.

20. A I like to understand how my friends feel about various problems they have to face.
    B If I have to take a trip, I like to have things planned in advance.

21. A I like to think about the personalities of my friends and to try to figure out what makes them as they are.
    B I sometimes like to do things just to see what effect it will have on others.

22. A I like to be regarded by others as a leader.
    B I like to keep my letters, bills, and other papers neatly arranged and filed according to some system.

23. A I like to tell other people how to do their jobs.
    B I like to be the center of attention in a group.

24. A The best way to handle people is to tell them what they want to hear.
    B People are getting so lazy and self-indulgent that it is bad for our country.

25. A The best criteria for a wife or husband is compatibility -- other characteristics are nice but not essential.
    B Most people are basically good and kind.

26. A People would be better off if they were concerned less with how to do things and more with what to do.
    B Most people who get ahead in the world lead clean, moral lives.

27. A I like to follow instructions and to do what is expected of me.
    B I like to have strong attachments with my friends.

28. A I like to accept the leadership of people I admire.
    B I like to understand how my friends feel about various problems they have to face.

29. A I like to be able to come and go as I want to.
    B I like to share things with my friends.

30. A I like to feel free to do what I want to do.
    B I like to observe how another individual feels in a given situation.

31. A I like to do things with my friends rather than by myself.
    B I like to say what I think about things.

32. A I like to share things with my friends.
    B I like to analyze my own motives and feelings.

33. A I like to study and to analyze the behaviour of others.
    B I like to do things that other people regard as unconventional.

34. A I like to analyze my own motives and feelings.
    B I like to make as many friends as I can.

35. A I like to supervise and to direct the actions of other people whenever I can.
    B I like to do things in my own way without regard to what others may think.

36. A I like to argue for my point of view when it is attacked by others.
    B I like to write letters to my friends.

37. A A good teacher is one who points out unanswered questions rather than gives explicit answers.
    B When you ask someone to do something, it is best to give the real reasons for wanting it rather than giving reasons which might carry more weight.

38. A Once a way of handling problems has been worked out it is best to stick to it.
    B One should take action only when sure it is morally right.

39. A It is wise to flatter important people.
    B Once a decision has been made, it is best to keep changing it as new circumstances arise.

40. A When planning something, I like to get suggestions from other people whose opinions I respect.
    B I like my friends to treat me kindly.

41. A When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
    B I like to supervise and to direct the actions of other people whenever I can.

42. A I like to avoid situations where I am expected to do things in a conventional way.
    B I like my friends to sympathize with me and to cheer me up when I am depressed.

43. A I like to avoid responsibilities and obligations.
    B I like to be called upon to settle arguments and disputes between others.

44. A I like to form new friendships.
    B I like my friends to help me when I am in trouble.

45. A I like to do things with my friends rather than by myself.
    B I like to argue for my point of view when it is attacked by others.

46. A I like to judge people by why they do something - not by what they actually do.
    B I like my friends to show a great deal of affection toward me.

47. A I like to think about the personalities of my friends and to try to figure out what makes them as they are.
    B I like to be able to persuade and influence others to do what I want to do.

48. A When with a group of people, I like to make the decisions about what we are going to do.
    B I like to predict how my friends will act in various situations.

49. A I like to be called upon to settle arguments and disputes between others.
    B I like my friends to do many small favours for me cheerfully.

50. A The biggest difference between most criminals and other people is that criminals are stupid enough to get caught.
    B It is a good policy to act as if you are doing the things you do because you have no other choice.

51. A A man who is able and willing to work hard has a good chance of succeeding in whatever he wants to do.
    B All in all, it is better to be humble and honest than to be important and dishonest.

52. A Too many criminals are not punished for their crimes.
    B There is no excuse for lying to someone else.

53. A I like to read about the lives of great men.
    B I feel that I should confess the things that I have done that I regard as wrong.

54. A I like to find out what great men have thought about various problems in which I am interested.
    B I like to be generous with my friends.

55. A I like to criticize people who are in a position of authority.
    B I feel timid in the presence of other people I regard as my superiors.

56. A I like to say what I think about things.
    B I like to forgive my friends who may sometimes hurt me.

57. A I like to participate in groups in which the members have warm and friendly
       feelings toward one another.
    B I feel guilty whenever I have done something I know is wrong.

58. A I like to do things with my friends rather than by myself.
    B I like to experiment and to try new things.

59. A I like to analyze the feelings and motives of others.
    B I feel depressed by my own inability to handle various situations.

60. A I like to think about the personalities of my friends and to try to figure out
       what makes them as they are.
    B I like to try new and different jobs - rather than to continue doing the same old thing.

61. A I like to be able to persuade and influence others to do what I want.
    B I feel depressed by my own inability to handle various situations.

62. A I like to be one of the leaders in the organizations and groups to which I belong.
    B I like to sympathize with my friends when they are hurt or sick.

63. A Generally speaking, men won't work hard unless they are forced to do so.
    B People who can't make up their minds are not worth bothering about.

64. A It's best to pick friends that are intellectually stimulating rather than ones
       it is a comfort to be around.
    B Most men are brave.

65. A It is hard to get ahead without cutting corners here and there.
    B A capable person motivated for his own gain is more useful to society than a
       well-meaning but ineffective one.

66. A I like to conform to custom and to avoid doing things that people I respect might
       think unconventional.
    B I like to participate in new fads and fashions.

67. A I like to tell my superiors that they have done a good job on something, when I
       think they have.
    B I like to complete a single job or task at a time before taking on others.

68. A I like to be independent of others in deciding what I want to do.
    B I like to do new and different things.

69. A I like to do things that other people regard as unconventional.
    B I like to put in long hours of work without being distracted.

70. A I like to participate in groups in which the members have warm and friendly feelings
       toward one another.
    B I like to help my friends when they are in trouble.

71. A I like to do things for my friends.
    B When I have some assignment to do, I like to start in and keep working on it until
       it is completed.

72. A I like to analyse my own motives and feelings.
    B I like to sympathize with my friends when they are hurt or sick.

73. A I like to predict how my friends will act in various situations.
    B I like to participate in discussions about sex and sexual activities.

74. A I like to argue for my point of view when it is attacked by others.
    B I like to experience novelty and change in my daily routine.

75. A I like to be regarded by others as a leader.
    B I like to put in long hours of work without being distracted.

76. A It is a good working policy to keep on good terms with everyone.
    B Honesty is the best policy in all cases.

77. A War and threats of war are unchangeable facts of human life.
    B It is possible to be good in all respects.

78. A Barnum was probably right when he said that there's at least one sucker born every minute.
    B Most people would be better off if they control their emotions.

79. A I like to praise someone I admire.
    B I like to be regarded as physically attractive by those of the opposite sex.

80. A When I am in a group, I like to accept the leadership of someone else in deciding what the group is going to do.
    B I feel like criticizing someone publicly if he deserves it.

81. A I like to do things in my own way and without regard to what others may think.
    B I like to read books and plays in which sex plays a major part.

82. A I like to avoid responsibilities and obligations.
    B I feel like making fun of people who do things that I regard as stupid.

83. A I like to be loyal to my friends.
    B I like to go out with attractive persons of the opposite sex.

84. A I like to write letters to my friends.
    B I like to read newspapers accounts of murders and other forms of violence.

85. A I like to analyse the feelings and motives of others.
    B I like to avoid being interrupted while at my work.

86. A I like to predict how my friends will act in various situations.
    B I like to attack points of view that are contrary to mine.

87. A When with a group of people, I like to make the decisions about what we are going to do.
    B I like to engage in social activities with persons of the opposite sex.

88. A I like to tell other people how to do their jobs.
    B I feel like getting revenge when someone has insulted me.

89. A It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
    B The ideal society is one where everybody knows his place and accepts it.

90. A Anyone who completely trusts anyone else is asking for trouble.
    B People who talk about abstract problems usually don't know what they are talking about.

and

ANSWER SHEET

This survey consists of a number of pairs of statements about things that you may or may not like and about ways in which you may or may not feel. For each pair of statements, you are to ring the letter (A or B) accompanying the statement which is more characteristic of what you like or the way you feel. You may like or agree with both A and B. In this case, you must choose between the two and circle the one you like better. If you dislike or disagree with both A and B, you should choose the one that you dislike or disagree with less. Your choice, in each instance, should be in terms of what you like or feel. This is not a test. There are no right or wrong answers. Your choices should be a description of your own personal likes and feelings. Make a choice for every pair of statements; do not skip any.

IMPORTANT! Work quickly. Do not ponder over each statement -- write down your first reaction.

WRITE ONLY ON THIS ANSWER SHEET

1. A B	14. A B	27. A B	40. A B	53. A B	66. A B	79. A B	DEF
2. A B	15. A B	28. A B	41. A B	54. A B	67. A B	80. A B	_____
3. A B	16. A B	29. A B	42. A B	55. A B	68. A B	81. A B	AUT
4. A B	17. A B	30. A B	43. A B	56. A B	69. A B	82. A B	_____
5. A B	18. A B	31. A B	44. A B	57. A B	70. A B	83. A B	AFF
6. A B	19. A B	32. A B	45. A B	58. A B	71. A B	84. A B	_____
7. A B	20. A B	33. A B	46. A B	59. A B	72. A B	85. A B	INT
8. A B	21. A B	34. A B	47. A B	60. A B	73. A B	86. A B	_____
9. A B	22. A B	35. A B	48. A B	61. A B	74. A B	87. A B	DOM
10. A B	23. A B	36. A B	49. A B	62. A B	75. A B	88. A B	_____
11. A B	24. A B	37. A B	50. A B	63. A B	76. A B	89. A B	MCH
12. A B	25. A B	38. A B	51. A B	64. A B	77. A B	90. A B	
13. A B	26. A B	39. A B	52. A B	65. A B	78. A B		_____

NAME: _____

The following groups of letters were printed on $4\frac{1}{2}$ x 6 inch cards and formed the basis of the task in Experiment 4. The 15 groups of letters in the second column below were omitted in the Non-demanding Task condition.

(ABCDE) - practice

AGLND	BRMHT
EEHMO	VIVZY
ROVER	YFAED
DAWTR	MRURE
SHIQQ	SECAF
IGFLN	YNIAR
GKNPP	FDBGE
EGBDF	PPNKG
RAINY	NLFGI
SSSSS	QQIHS
FACES	RTWAD
ERURM	REVOR
YSQVA	OHMEE
DLRCZ	DDUMN
AEIOU	UOIEA
NNUDD	
DEAFY	
YZVIV	
UPOMY	
THRMB	

13. Personality test results, Experiment 4.

Mean scores and t-test results.

	TOTAL			COMMUNICATING PAIRS		
	Helpers (N=55)	Nonhelpers (N=65)	t	Helpers (N=9)	Nonhelpers (N=39)	t
Deference	5.16	5.62	1.25	5.44	5.44	0
Autonomy	7.74	7.39	.85	7.56	7.23	.40
Affiliation	8.05	7.68	.89	7.78	7.59	.22
Intraception	8.69	8.25	.99	8.44	8.46	.02
Dominance	6.00	6.18	.39	6.00	6.28	.29
Machiavellianism	11.13	11.45	.63	11.11	11.82	.67

Trait descriptions (Edwards, 1954)

Deference: Get suggestions from others; find what others think; follow instructions; do what's expected; accept leadership of others; let others make decisions.

Autonomy: Come and go as please; say what think about things; be independent in making decisions; feel free to do what want; avoid situations where expected to conform.

Affiliation: Participate in friendly groups; make as many friends as possible; do things with friends, rather than alone; form strong attachments; do things for friends.

Intraception: Analyse motives and feelings; observe others; understand how people feel about things; analyse self; predict behaviour of others.

Dominance: Argue point of view; be a leader in groups; make decisions; persuade and influence others; tell others how to do things.

Condition	Sex	Mach Score	SOCIOEMOTIONAL ACTIVITY		TASK ACTIVITY	
			Positive	Negative	Gives	Asks
DEMANDING TASK NONHELPERS	F	8	10	4	21	4
	F	11	8	9	17	6
	F	14	7	3	24	0
	F	15	8	9	19	2
	M	12	8	8	19	6
	M	12	5	6	17	4
	M	12	6	0	19	2
	M	13	6	6	20	4
	M	14	6	8	25	3
	M	14	5	3	23	3
	M	11	4	6	13	5
	M	12	6	8	9	4
	M	11	9	6	18	3
	M	12	8	8	14	8
	TOTAL		96	84	258	54
DEMANDING TASK HELPERS	F	12	6	9	24	6
	F	17	5	3	23	3
	F	12	7	6	18	5
	F	14	8	10	20	2
	F	10	10	6	12	2
	F	8	12	8	16	4
	M	13	9	9	19	1
	M	17	6	8	24	0
	M	12	11	6	15	2
	M	10	8	5	19	5
	TOTAL		82	70	190	30
NON-DEMANDING TASK NONHELPERS	F	12	5	2	18	5
	F	14	4	3	17	3
	F	13	4	5	22	4
	F	13	5	6	17	4
	M	9	8	6	19	3
	M	14	5	8	24	1
	M	9	7	6	14	4
	M	13	3	4	19	0
	M	14	6	10	21	2
	M	16	4	8	24	3
	M	8	4	3	14	3
	M	8	7	7	10	0
	M	7	6	6	13	5
	M	12	3	5	16	3
	M	12	7	8	11	5
	M	13	2	2	15	1
	TOTAL		80	89	274	46
NON-DEMANDING TASK HELPERS	F	9	7	1	9	4
	F	10	9	2	10	6
	F	13	4	10	15	1
	F	5	10	7	9	2
	M	14	6	6	15	1
	M	14	7	7	12	2
	M	8	5	4	10	3
	M	5	8	8	18	4
	TOTAL		56	45	98	23

Name _____

1. Why did you volunteer to participate in this experiment?

2. Do you remember who sent you the original letter asking you to be in the experiment? If so, who?

3. Did the sender of the letter sound dependent on you?

            _____Yes, very much so.

            _____Yes, somewhat.

            _____Neutral.

            _____No, not too.

            _____No, not at all.

4. Did your volunteering have anything to do with helping out the person who wrote the letter?

            _____Yes, very much so.

            _____Yes, somewhat.

            _____Neutral.

            _____No, not too.

            _____No, not at all.

5. Do you remember if any mention was made in the letter about other people having volunteered?

6. If so, do you think this influenced your response? Please explain.

            _____Yes, very much so.

            _____Yes, somewhat.

            _____Neutral.

            _____No, not too.

            _____No, not at all.

7. Did any of your friends get a similar letter?

8. If so, did their response influence yours? Please explain.

            _____Yes, very much so.

            _____Yes, somewhat.

            _____Neutral.

            _____No, not too.

            _____No, not at all.

9. Did you notice any differences between your letter and the letters of others?

10. What was the sex of the person who originally sent you a letter?

Dear University Student,

We are conducting a cross-cultural study and would like to request your help. In order to conclude this study, we need to have several hundred people complete the attached survey. This should take less than 15 minutes of your time. We'd greatly appreciate your helping out.

If you are willing to help, please read the instructions below carefully and fill in your answers on this sheet only. Then send both sheets back to us in the enclosed envelope. We need to have these by the end of term, but the sooner you can send them in, the better.

Thank you very much.

INSTRUCTIONS

Listed on the accompanying survey are a number of statements regarding the way you behave, feel or act. We are interested in the extent to which you agree or disagree with these statements. Try to decide on an answer, referring to the following code:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Then ring the appropriate answer on this page. Work quickly, and don't spend too much time over any statement. There are no right or wrong answers.

1. 1 2 3 4 5	21. 1 2 3 4 5	41. 1 2 3 4 5
2. 1 2 3 4 5	22. 1 2 3 4 5	42. 1 2 3 4 5
3. 1 2 3 4 5	23. 1 2 3 4 5	43. 1 2 3 4 5
4. 1 2 3 4 5	24. 1 2 3 4 5	44. 1 2 3 4 5
5. 1 2 3 4 5	25. 1 2 3 4 5	45. 1 2 3 4 5
6. 1 2 3 4 5	26. 1 2 3 4 5	46. 1 2 3 4 5
7. 1 2 3 4 5	27. 1 2 3 4 5	47. 1 2 3 4 5
8. 1 2 4 5	28. 1 2 3 4 5	48. 1 2 3 4 5
9. 1 2 3 4 5	29. 1 2 3 4 5	49. 1 2 3 4 5
10. 1 2 3 4 5	30. 1 2 3 4 5	50. 1 2 3 4 5
11. 1 2 3 4 5	31. 1 2 3 4 5	51. 1 2 3 4 5
12. 1 2 3 4 5	32. 1 2 3 4 5	52. 1 2 3 4 5
13. 1 2 3 4 5	33. 1 2 3 4 5	53. 1 2 3 4 5
14. 1 2 3 4 5	34. 1 2 3 4 5	54. 1 2 3 4 5
15. 1 2 3 4 5	35. 1 2 3 4 5	55. 1 2 3 4 5
16. 1 2 3 4 5	36. 1 2 3 4 5	Optional Information:
17. 1 2 3 4 5	37. 1 2 3 4 5	Name:
18. 1 2 3 4 5	38. 1 2 3 4 5	_____
19. 1 2 3 4 5	39. 1 2 3 4 5	Nationality:
20. 1 2 3 4 5	40. 1 2 3 4 5	_____

Years in Britain:_____

Age_____ Sex:_____

1. I would offer help to someone who was having trouble, even though no one else around thought it necessary.

2. I think I am effective at helping people who are upset.

3. I am not good at cheering up people who feel depressed.

4. I can always perceive when a friend of mine needs help with some job.

5. People make me feel uncomfortable when they want to talk about personal problems.

6. I would not know what to do after a tragedy.

7. When there are many other people around, I don't feel so much like offering my aid when someone needs help.

8. When my friends discuss their trouble with me, it doesn't seem to do them a lot of good.

9. Helping my friends with their jobs always makes me feel very good.

10. It is difficult to know when a person is experiencing problems he would like to discuss.

11. Friends know me as a real task helper.

12. I've always been able to recognise when another individual needs my help with an emotional problem.

13. I really am a very competent individual and have no trouble helping other individuals with their tasks when they have trouble.

14. I always seem to have a reason for not helping people when they have emotional problems.

15. I think there are many reasons why you should not offer your aid to a friend when he's having trouble with his work.

16. I don't like to get involved in listening to another person's troubles.

17. I am not usually very motivated to help my friends with their tasks.

18. I don't think that I help people with their emotional problems.

19. I don't care what the task is; if a friend of mine needs help I'll give it.

20. It's hard to perceive when others need your help with their personal problems.

21. It is always quite clear to me when I should help someone with his tasks.

22. In group settings where someone obviously needs some emotional support I am quite skillful in providing that support.

23. I am quite capable in many areas and therefore offer my help quite frequently when others need it on their own work.

24. I feel a great need to help my friends when they have emotional problems.

25. I am quite able to recognise when a member of a group is having an emotional problem and needs my help.

6. If a person is having trouble, he should be helped.

7. I would not feel helpful in groups that work with emotional people.

8. I have often helped groups with their tasks.

9. Offering sympathy to people when there are many people present is a waste of time.

0. I am not really very skillful when it comes to helping an individual in a group with his job.

1. I would not want to participate in work with emotionally troubled youth.

2. I would not offer assistance to another when people were around, as I would feel uneasy.

3. I have actually been able to help another, in the midst of a group, who was psychologically distressed.

4. I don't like being unable to do things, and therefore, when others need assistance, I help them.

5. It is hard in a group setting to know when another person needs comforting or reassurance.

6. You could say that I'm not a very helpful person when it comes to assisting groups with their tasks.

7. I am really very good at comforting and reassuring people when they need it.

8. I can't always realise when there is a task that needs to be done when there are many people around.

9. When there are people around I seem to have a reason for not helping others with their emotional problems.

0. I'm a very capable individual and able to help with tasks even though there may be many people present.

1. I do not know how to comfort another if I am in a group situation.

2. I can't think of a good reason not to help somebody with a task when he's in a large group and is in trouble.

3. When there are many people around, I find it hard to offer comfort and reassurance to someone who may need it.

4. I would be willing to help organise a fund drive in my town.

5. Just seeing another suffer is reason to help.

6. When there is a group present, I find it hard to be able to help another with his tasks.

7. I would enjoy going with a group which visits the sick.

8. I really like pitching in and helping groups accomplish their tasks.

9. I have not often comforted another when he needed it while other people were standing around.

0. I feel uneasy trying to help when there are others around.

1. If other people are around, I find it hard to know when someone is uncomfortable.

2. Even though there may be a lot of people around, it is always very clear when someone needs help with his job.

3. Seeing another person uncomfortable reminds me of times I've felt uneasy, and therefore, I need to help.

4. I never know what to say to someone who has had a relative die.

5. Even though there may be many people around, I need to offer comfort and reassurance when needed.

17c. Results of Severy's HDS.

Group (50 per condition)	Helping		FACTORS														
	N	%	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Volunteered to be in experiment and helped in emergency	24	48	163.5	31.6	26.8	33.0	48.0	28.0	67.5	93.3	84.5	79.0	48.0	31.0	45.3	39.2
Volunteered to be in experiment but did not help in emergency	24	48	168.0	31.0	31.5	33.7	47.1	27.2	68.4	96.2	85.2	82.8	50.2	32.5	46.0	39.2
Did not volunteer to be in experiment	10	20	164.2	31.7	30.7	32.5	46.7	27.4	66.4	94.8	81.8	82.4	50.2	32.2	44.6	37.2
Controls – never contacted before	17	34	166.8	32.4	32.3	34.1	45.4	27.6	65.8	97.9	84.3	82.5	51.4	31.2	46.5	37.8

FACTORS:

1. Total
2. Achievement
3. Recognition
4. Ability
5. Motivation
6. Reasons for not helping
7. Task
8. Psychological
9. Group
10. Individual
11. Psychological-Individual
12. Task-Individual
13. Psychological-Group
14. Task-Group

Comparison of Helping Behaviour

In Three Experiments Using

The Same Emergency

TOTAL HELPING

% HELPING
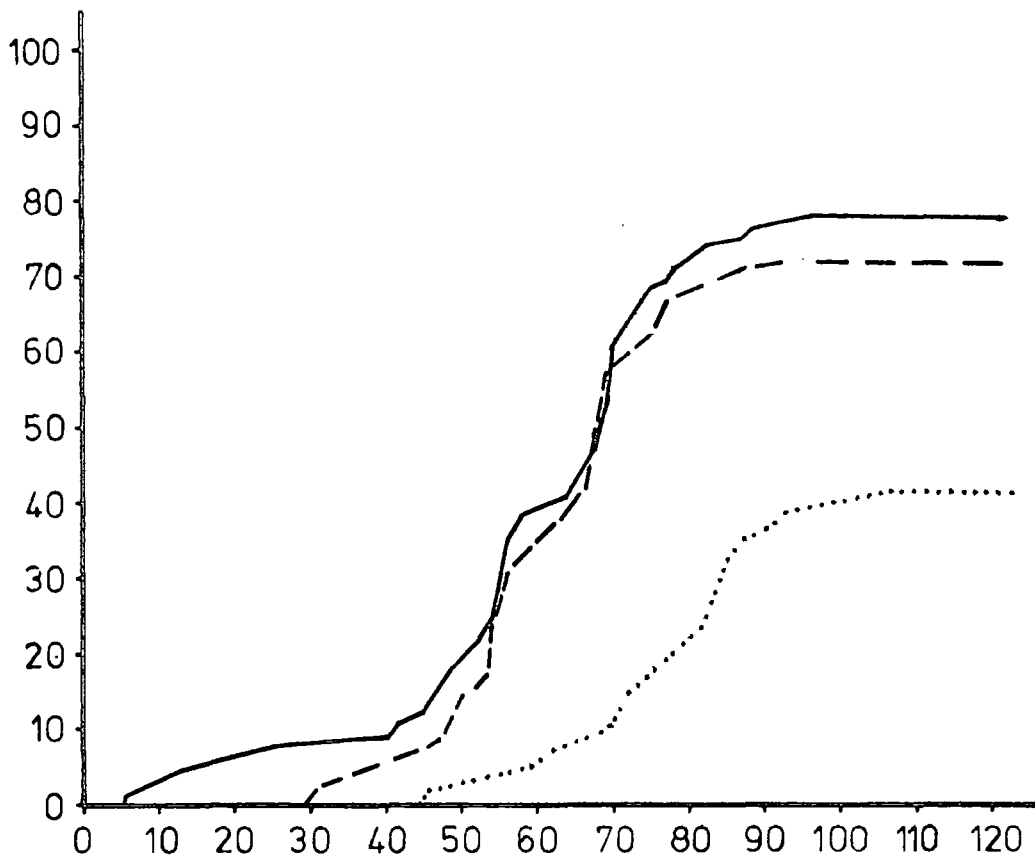
TIME (Seconds)

—————————————— Experiment 2   (N = 72)

················· Experiment 3   (N = 44)

— — — — — — Experiment 4   (N = 72)

Comparison of Helping Behaviour

In Three Experiments Using

The Same Emergency

Subjects Alone

% HELPING

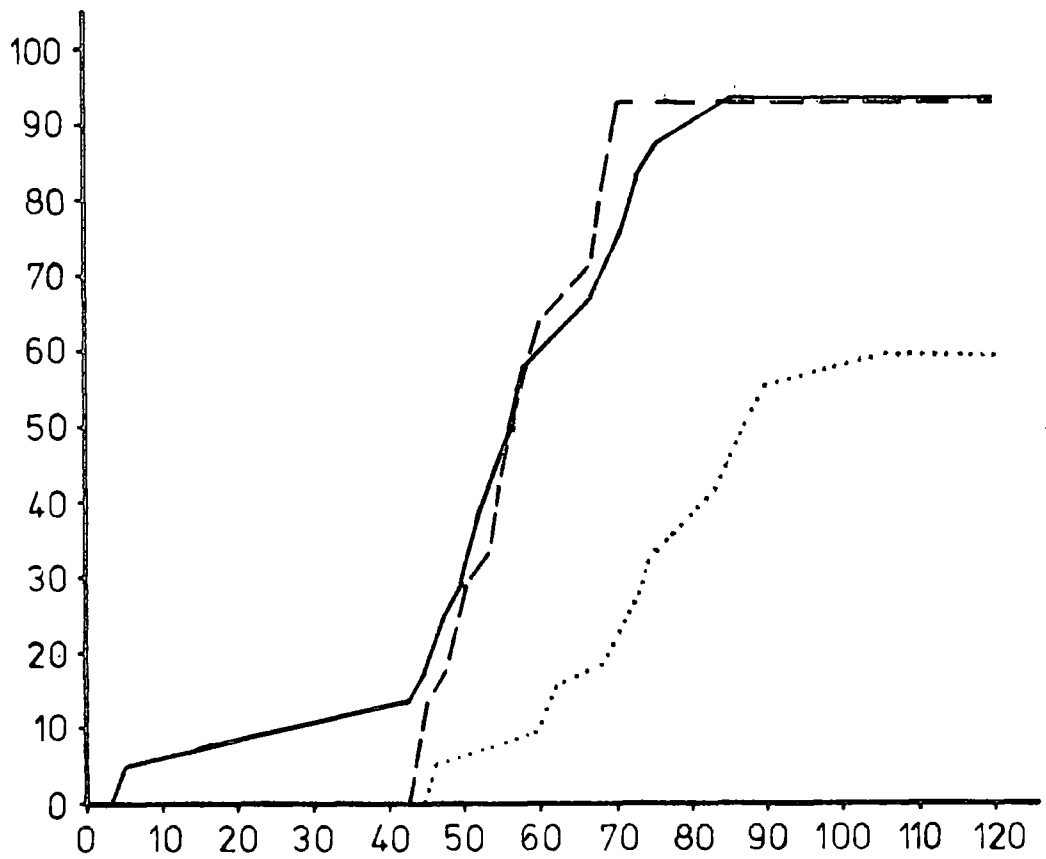

TIME (Seconds)

——————— Experiment 2 (N = 24)

················· Experiment 3 (N = 22)

— — — — — Experiment 4 (N = 24)

Comparison of Helping Behaviour
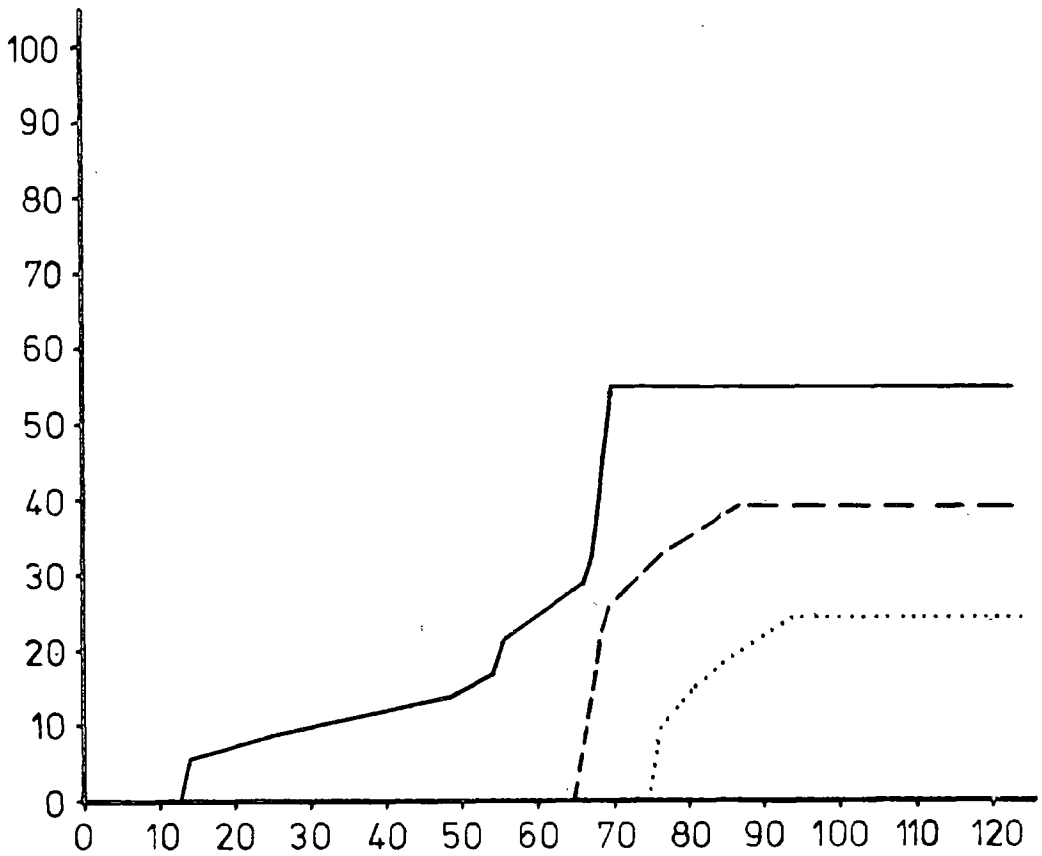
In Three Experiments Using

The Same Emergency

Communicating Groups

% HELPING

Experiment 2 (N = 24)

Experiment 3 (N = 22)

Experiment 4 (N = 24)

Helping Times in Seconds

Experiment 1

SIZE OF GROUP	NO LEADER		NAIVE LEADER		CONFEDERATE LEADER	
2	LF	20	LM	8	LM	24
	MF	7	MF	10	LM	24
	MM	x	MM	9	MM	x
	HF	24	HF	x	HF	x
	HM	11	HF	13	HF	x
	HM	x	HM	12	HM	x
3	LM	10	LF	6	LF	20
	MF	6	LM	10	MF	x
	MF	11	MF	x	MF	x
	MM	x	MF	x	HM	x
	MM	14	MM	x		
	MM	10	MM	x		
			MM	11		
			HF	7		
4	MF	11	MM	13	LM	16
	MM	10	MM	16	MM	x
					HM	x

x = no help

LF - Low Mach females
MF - Medium Mach females
HF - High Mach females
LM - Low Mach males
MM - Medium Mach males
HM - High Mach males

Helping Times in Seconds

Experiment 2

	LOW MACHS			HIGH MACHS		
ALONE	5	52	71	14	54	69
	45	56	73	41	55	76
	47	66	73	46	58	86
	50	66	x	52	59	x
COMMUNICATING TRIAD	14	66	70	25	x	x
	49	68	x	61	x	x
	54	68	x	67	x	x
	56	69	x	68	x	x
NON-COMMUNICATING TRIAD	40	70	75	19	56	95
	47	70	77	48	66	x
	56	72	82	55	70	x
	64	74	87	55	82	x

x = no help

Helping Times in Seconds

Experiment 3

	DEMANDING TASK			NON-DEMANDING TASK		
	68	90	x	46	74	x
	72	106	x	59	83	x
ALONE	83	x	x	62	85	x
	87	x		70	x	
	77	x	x	81	x	x
	77	x	x	93	x	x
PAIR	85	x	x	x	x	x
	x	x		x	x	

x = no help

Helping Times in Seconds

Experiment 4

	DEMANDING TASK			NON-DEMANDING TASK		
ALONE	45	60	67	45	50	57
	50	60	68	45	53	67
	56	63	70	48	54	68
	56	66	x	50	54	x
COMMUNICATING PAIR	67	87	x	68	x	x
	67	x	x	68	x	x
	67	x	x	76	x	x
	69	x	x	76	x	x
NON-COMMUNICATING PAIR	54	66	80	30	53	68
	55	67	80	31	54	69
	55	75	96	50	58	x
	56	77	x	52	66	x