

6. SUMMARY AND DISCUSSION

The starting point of the present investigation was the assumption that individuals have aggressive habits in terms of which interindividual differences can be described more generally than at the level of specific responses but in greater detail than at the level of personality traits. In order to explicate the hypotheses on the forms of aggressive habits, a descriptive model of aggression was constructed on the basis of the observable characteristics of aggressive responses. In connection with the descriptive model assumptions were made on the learning processes of different aggressive habits. The empirical examination was focused on the verification of both the descriptive model and the hypotheses concerning the acquirement of aggressive habits. The results are discussed by problem groups in the following chapters.

6.1. The descriptive model of aggression and individual aggressive habits

Three dimensionally varying characteristics were included in the descriptive model of aggression: the intensity of aggression defined by the quantity of the noxious stimuli delivered by responses, the direction (direct/indirect), and aim (offensive/defensive) of aggression, both defined on the basis of the interpersonal context of aggression. In addition, more specific discriminations can be made on the basis of the modes of aggression (physical, verbal, mimic): each mode of aggression may occur toward a target more or less directly, with different intensities, and either with the defensive or offensive aim.

No corresponding combination of characteristics has been employed in previous studies.

The correspondence between the descriptive model and individual aggressive habits was studied through the factor analysis model. The first three principal factors described the interdependences of the 32 aggression variables as expected. The unipolar general aggression factor was interpretable as the intensity or observability of aggression. The next two factors described the qualitative features of interindividual differences, and they were interpreted as the direction (direct/indirect) and aim (defensive/offensive) of aggression. Thus the factors with the largest eigenvalues did not include the mode of aggression, which has been one of the most common principles in the categorizations of aggressive responses in previous studies. *The results supported Hypothesis A. 1.*

It was predicted in *Hypothesis A. 2* that the mode of aggression may account for the variance of interindividual differences in aggression in further analyses for the main forms of aggression. These analyses yielded factors interpretable to some extent as expected, yet more so on the basis of the intensity of aggression or the process of socialization. The factor analysis for direct aggression revealed that *no factors interpretable on the basis of the modes of aggression involving both the defensive and offensive aim could be found.*

All of the empirical common variance was describable in terms of the following types of aggressive habits. (1) Offensive aggression with different modes of responses; also intense defensive aggression toward an instigator. (2) Inhibition of direct aggression and, ensuing from it, outbursts of anger toward objects in the environment and toward innocent persons, and the delivering of noxious stimuli to the initial target through some mediating events. Furthermore, the variables representing the most indirect aggression had more specific common variance which could be interpreted as indirect aggression (b). (3) Direct defensive aggression in thwarting situations with different modes of responses but without the habit of offensive aggression. There were further interindividual differences in direct defensive aggression at least partly due to the instigator: (a) an individual may try to resist a thwarting stimulus immediately, with the physical mode in particular; or (b) he may protest against the progress of events verbally, in which case his response suggests the presence of suppressed affects; or (c) he may restrain himself from active resistance and content himself with showing displeasure by his appearance, in which case his activity may, however, burst out as attacks against other persons in some other situations. Interpretationally mimic ag-

gression was rather close to indirect aggression. In addition to the mentioned aggression factors the halo factor was also extracted, the interpretation of which is discussed in Chapter 6.3.

In aggressive habits direct and indirect aggression were more independent of each other than defensive and offensive aggression. This could also be seen in the structure of the second order factors. *Contrary to Hypothesis A. 3*, the common variance of the primary aggression factors could not be explained by one general second order factor only; two factors were required, one of which was interpreted as direct, the other as indirect aggression.

The difference between the direction and aim of aggression for differentiating between individuals' behaviour can be interpreted as a consequence of the acquirement of the aggressive habits. It was assumed that the adoption of indirect aggression is due to inhibition of direct aggression under certain circumstances, whereas the habit of offensive aggression was assumed to develop at the side of defensive aggression through secondary reinforcers. A conceptual separation of offensive and defensive aggression was, however, found relevant, since there were individuals whose aggression was limited to situations which they had found thwarting, i.e., to defensive behaviour.

When the obtained factors were compared with previous factor analytical results for children's aggression, it was found that the offensive aggression factor corresponded to the factor called »Faktor der Feindseligkeit« obtained by Mandel (1959), which contained both serious spontaneous and reactive aggression. The correspondences between the other factors were slight, because Mandel's advance classification had excluded indirect aggression, and because the variables of the present investigation did not include playful aggression.

The low correlation between direct defensive and indirect aggression corresponded both to the intercorrelation coefficients of corresponding aggression variables obtained in previous studies and to the factor analytical results concerning interdependences of aggression and other personality traits. On the basis of the studies by Koch (1942) et al. it seems probable that extravert personality traits correlate particularly with direct aggression, and general maladjustment with indirect aggression. Presumably there are also other connections between aggressive habits and total personality. The assumption was examined by the writer in a further investigation reported in Part II, in which both aggressive habits and nonaggressive habits replacing aggression in thwarting situations, as well as the relationships between both of these habits and other personality traits were analysed.

6. 2. Learning of aggressive habits

The theoretical frame of reference concerning the acquirement of aggressive habits was constructed by integrating different theories of behaviour. No theory alone was considered sufficient to cover the processes present in the development of different kinds of aggressive habits.

With regard to the *direction of aggression* in the habits of an individual the assumptions were concerned with reinforcement history of aggressive behaviour, inhibition of aggression under certain social circumstances, and reduction of cognitive dissonance. Discussions of developmental psychological aspects in the acquirement of the habits of direct and indirect aggression, which have been presented in previous studies of the relationships between parents' child-rearing practices and children's aggressive behaviour, correspond to the theoretical approach adopted within the present investigation. Learning theory interpretations on the complex effects of punishment and reinforcement of aggression have been presented by Sears et al. (1957), Bandura & Walters (1959), et al. In the assumptions on the reinforcement history of children's aggression the essential role of the child-rearing practices has been clearly comprehended. Reliable information about these practices is, however, obtainable only after considerable effort. The results of earlier studies have varied considerably. Within the present study no empirical information was gathered about parents' child-rearing practices. Consequently, some of the assumptions presented in the theoretical frame of reference remained unverified. One way to study the mentioned relationships would be to choose the subjects so as to represent different types of aggression and to make a thorough investigation of both subjects and their families. The second part of the report includes an examination of some aspects in the presented assumptions.

It was assumed that the direction of aggression is also determined by situational factors which, through cognitive appraisal, have the effect that an individual may or may not consider it possible to defend himself directly. The assumptions on situational factors were examined empirically. The results *supporting Hypothesis B. 1* implied that an individual's inability to defend himself in a kindergarten group was related to his habits of indirect and mimic aggression. Two factors were extracted for indirect aggression. One of these was more specific in content and more characteristic of individuals who impose on other persons' tendency to take care of the others, and it was related to passive total behaviour and a high rather than low frustration toler-

ance. The finding corresponds to the assumption made by Buss that indirect aggression is characteristic of individuals who are typically sly and circumspect in their attacking behaviour. The result encompassed, however, only a part of the aggression defined as indirect within the present investigation.

Effects of specific situational factors on aggressive responses (*Hypothesis D*) were studied by comparing both the frequencies of the different forms of aggression, and the factor configurations for aggression emitted under different degrees of situational control. The results showed that (1) the hypotheses were supported more strongly when situational control was varied by the targets of aggression than when it was varied by the scenes of aggression (free play periods outdoors, etc.), (2) the amount of indirect defensive aggression was determined more strongly by the power of the target compared with that of the attacker than by general controlling and inhibiting factors (e.g., girls or smaller peers should not be harmed), and (3) more dimensions of interindividual differences emerged for indirect aggression with strong situational control than was shown by the primary factor composition for aggression variables. Correspondingly, more dimensions emerged for direct aggression with weak situational control than was shown by the primary factor composition.

When situational variables are taken into account in an examination of interindividual differences in aggression, new problems arise. Some of them deal with the social psychological aspects of aggression. In social groups (kindergarten, school, etc.) competing gangs may be formed which determine the targets and forms of an individual's aggression, perhaps limiting the occurrence of interindividual differences. Similarly, in a social group one of the members may become a scapegoat and thus the target of a great amount of indirect aggression, or aggression may be limited to fights between two constant competitors. If the differential psychological approach is linked with social psychological viewpoints, there appear new opportunities for examination of aggressive habits.

In the theoretical frame of reference *defensive and offensive* aggression were conceptually separated through reinforcers of aggression. It was thought essential in the conceptual analysis to consider the circumstances under which the emission of an aggressive response becomes independent of the emotional arousal instigated by a thwarting stimulus situation. The development of offensive aggression was assumed to be related to the circumstances under which such consequences of aggression as attention-getting, dominance, and seeing the victim suffering injury, are found to be subjectively important stimuli

and, through conditioning, become secondary reinforcers of aggression, i.e. goals of aggressive behaviour. An individual's general activity was assumed to contribute to the development of offensive aggression through the quantity of both conflicts and defensive aggression, and through the probability of operant conditioning. *Hypothesis B. 2 was supported* by the fact that uncontrolled behaviour (activity) predicted very significantly the habit strength of offensive aggression but not at all that of physical defensive aggression independent of it. Lack of control of behaviour may, however, explain only some of offensive aggression, since both these features in an individual's behaviour may be determined by the same background variables. Parents may reinforce the impulsive and tyrannical behaviour of their small child, because they appreciate the general activity it implies, or they may allow it to become reinforced by remaining indifferent toward his responses. Parallel to the result concerning general activity was the dependence between parents' indifference toward the child and offensive aggression. Contrary to the hypothesis, a low socio-economical status did not predict offensive aggression. Consequently, the variables in the present study indicated that lack of maternal care was a more fundamental source of secondary motivation than general depriving circumstances.

The relation between attention-getting and offensive aggression was also revealed by the regression coefficients of the aggression factors in the global rating of secondary motivation of behaviour; the regression coefficient of the offensive aggression factor was very significant, but those of the defensive aggression factors were not.

There are many forms of unsocialized behaviour to which the interpretation of early offensive aggression is applicable. Some of them may develop through the reinforcement of defensive aggression, in which case an individual's behaviour gives an impression of unconcern about the norms of aggressive expressions that prevail in our society. Other forms of unsocialized behaviour, e.g. sadism, which represents utmost desire to injure another organism, may develop from indirect aggression toward substitute objects into an aggressive habit independent of stimulus situations. Correspondingly, destructiveness may become detached from its original connection with stimuli instigating aggression, provided that the stimuli of destruction following anger outbursts bring satisfaction and become secondary reinforcers. The more abnormal responses (extreme groups) are concerned, the more complex dynamic processes determine the subjective value of the consequences of the responses. Moreover, interpretation is complicated by the symbolic functions of the responses.

Within the present investigation the assumption was made that defensive aggression is the primary form of aggression. According to Lagerspetz' (personal communication) observations of the behaviour of mice, however, it is offensive aggression that can be interpreted as the primary disposition: if a mouse that has lived in isolation is placed into a box with another mouse, the former attacks the other mouse immediately, whereas a mouse that has lived with other mice does not react in the same way. According to Lagerspetz' interpretation, the difference is due to the fact that the punishment delivered through the victim's counter-aggression inhibits the development of aggressive habits. It is thus the non-offensive behaviour that is learnt. One cannot, however, make generalizations about human behaviour on the basis of observations of the behaviour of mice, because, for example, the interpretation of sensory cues is more complex in man than in mice. Lagerspetz & Portin (1968) studied, by simulation of cues, the stimuli necessary for the occurrence of aggressive responses in mice: the rotating motion of a bottle brush was a cue sufficient for the elicitation of aggressive responses.

Hypothesis B. 3 included assumptions on the relationships between the modes of aggression and background variables. The interindividual differences were describable in terms of the modes of aggression in defensive aggression only. Contrary to the hypothesis, the correlation between stature and the habit of physical aggression was not higher than that between stature and the habits of verbal or mimic defensive aggression. On the basis of the result the hypothesis cannot, however, be nullified; the correlations should be re-examined by employing variables which would measure physical fitness from more sides than does the index of stature employed in the present study. Verbal development correlated significantly with the habit of verbal defensive aggression but not more highly than with that of physical aggression. The hypothesis was, however, *supported* by the fact that the variables of general activity correlated more highly with the habits of verbal and physical aggression than with that of mimic aggression.

6. 3. Global rating of aggressiveness

Hypothesis C concerned the kind of aggressive habits of an individual which determine most strongly the impression about his personality trait of aggressiveness. The results showed first of all that

global rating of aggressiveness was determined most strongly by the habit strength of *o f f e n s i v e* aggression and by intense defensive aggression connected with it. The finding *supported the hypothesis* and accorded with previous results. Mandel (1959) had found that the highest loading (0.68) of the variable of aggressiveness rated by teachers was on the factor »Faktor der Feindseligkeit«. In the study by Banta & Walder (1961) the best indicators of the general aggression factor were the peer rating items referring to initiated interpersonal harm. The results showed further that global rating of aggressiveness was determined next by the habit of general *i n d i r e c t* aggression: rating was independent of the more specific form of indirect aggression. The habit that least determined the rating of aggressiveness was, in addition to the habit of specific indirect aggression, that of physical defence independent of offensive aggression. The finding corresponded to that of Lesser (1959).

Of the aggression factors the one interpreted as the halo factor was also strongly related to global rating of aggressiveness. The halo factor correlated more highly than the other aggression factors with the background factors of uncontrolled behaviour and low socio-economical status.

Secondly it could be seen that besides the general impression about aggressive behaviour the kindergarten teachers' ratings were also concerned with more specific aspects of aggression. Low frustration tolerance was related, as a separate component, to defensive aggression independent of offensive aggression, the targets of which were mainly taller boys and boys of the same size. The amount of aggression toward smaller peers as well as passiveness in total behaviour were related to a low position in the dominance hierarchy (often teased by others), and the amount of aggression toward teachers as well as a low socio-economical status to aggressive behaviour interpreted as attention-getting.

Contrary to the hypothesis, no differences could be found between the variables for the targets and scenes of aggression in the respect how strongly they had determined the impression about aggressiveness.

6. 4. Generalizability of the results

Within the present investigation the uniformity of overt aggression was studied on the basis of the behaviour of boys aged 5—6. Naturally, aggression displayed by children deviates in many respect from that of adults, wherefore the results do not lend themselves to direct

generalization with regard to other age groups. It was assumed, however, that if dimensions describing theoretically interpretable inter-individual differences can be found in children's aggression, the result provides a starting point for an investigation and description of adults' aggression, provided that those changes in behaviour are taken into account which result from the development of means and habits of communication and from prevailing norms and pressures against expressions of aggression. Normally such changes manifest themselves in all communication between adults as slightness of intense, particularly of physical, aggression. Aggression is displayed in more subtle forms, such as verbal, mimic, and indirect aggression. The latter can also be taken to include hostility, which, according to Buss, can be understood as a conditioned anger reaction controlled in an actual thwarting situation by the process of negative labelling.

The conception of aggression employed here is a product typical of western cultures, moulded by their norms. In generalizations this aspect should be taken into account. It seems probable that the verbal component of the rating method strengthens those interdependences of variables which can be understood as a consequence of common social expectations and evaluations. For example, the large common variance of the variables for offensive aggression compared with that for defensive aggression may be due to the fact that unjust offensive aggression is generally considered very condemnable. As the difference between offensive and defensive aggression is, however, theoretically interpretable, and because the separate halo factor was extracted in addition to the offensive aggression factor, there is no reason to base the present interpretation only on the conceptual framework of the raters.

Within the present investigation an estimation of the reliability of the variables was left to a preliminary study, since it was not considered possible to obtain absolutely independent ratings from the two different teachers in each whole-day course, as the time for observation was one month and the material was gathered by post, and since the inter-rater agreement was rather good in the preliminary study.

In the research project the main emphasis was given to the construction of a descriptive model and to the assumptions behind it. The realization of the empirical examination was one way to test the main points of the hypotheses. In further investigations it will be possible to deal with one specific problem group at a time and to explain more thoroughly the empirical correspondences which the results obtained in the present study seem to indicate.

