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Mastering (with) a handicap

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CHAPTER 2

THEORIES ABOUT COMPETENCE-MOTIVATION, PERCEIVED COMPETENCE AND ATTRIBUTIONS

In order to place our researches in a broader theoretical context, this chapter presents a short overview of recent theories about competence-motivation, perceived competence and attributions. The theories concerning attributions and attributional preferences are considered to be in part theories of perceived control, because one of the underlying dimensions in making attributions is the dimension of 'controllable' versus 'non-controllable' attributions. As far as possible, the theories will be discussed separately. A strict distinction between the three kinds of theories is not possible however, because all theories refer to the relations of the target variable with the other two variables. Relations between them are discussed in more detail in a concluding section.

2.1 Competence-motivation

The question why people undertake activities that are not necessary for survival has received much attention in psychology. Until the fifties motivation theory was dominated by two viewpoints, the Freudian and the behaviouristic. Both present humans as passive beings, products of and motivated by either internal drives or environmental influences (Deci, 1980). These theories however cannot explain why people explore and look for new challenges.

This imperfection resulted in the development of new theories, which are characterised by the postulation of a basic human need or drive to influence and control the environment. According to these theories man is not the passive object of environmental or internal forces, but an active creator of his own environment and development (see for instance White, 1959; Lefcourt, 1976; DeCharms, 1980; Deci, 1980; Flammer, 1988).

White (1959) postulated an innate need that he called 'effectance motivation'; this is a need to use one's own capacities in an effective and competent way. Similarly, DeCharms (1968) postulates that 'Man's' primary motivational propensity is to be effective in producing changes in his environment'. Because of this need a human being shows curiosity, explores and tries to master for the sake of mastery only. An essential difference between this motivation and the drives postulated in earlier theories is that this motivation causes humans to look actively for new

challenges. Moreover, it is not caused by a shortage or an excess, so that it disappears when the shortage or excess is over. On the contrary, the need for efficacy is increased by experiences of efficacy. Harter (1978b) worked out White's concept of 'effectance-motivation' more concretely in terms of task-behaviour. She distinguishes motivation for challenging tasks, motivation for independent work and motivation to undertake activities because of interest and curiosity. These operationalisations resemble the behaviour that is generally mentioned as indicative of competence-motivation.

Competence-motivation can be described as a general desire to engage in achievement-tasks, succeed in them and perceive one's own successes. Deci and Ryan (1985) Deci (1980), Meyer (1973) and Heckhausen et al. (1985) suppose that the desire to be effective is basically the same as the desire to get information about one's own competence. DeCharms (1968, page 269) however states that man's striving to be a causal agent "forces him to actively engage the environment thereby testing and deriving valid personal knowledge from it... The ultimate basis for any system of knowledge is personal knowledge of universals". As this quotation makes clear, DeCharms places the striving first and sees the gathering of essential knowledge as consequence, although this consequence is in its turn prerequisite for being a causal agent. Undoubtedly, gathering information about oneself and the environment is essential to being effective and in control.

Engaging in achievement tasks includes however the risk of failure, which can be interpreted as a failure to be effective. Atkinson (1966) supposes that competence-motivation for a specific task should be divided into motivation to approach success and motivation to avoid failure. The first is determined by a rather stable individual tendency to approach success, the probability to achieve a particular success, and the value of that success. The second is determined by a general tendency to avoid failure, the chance and the value of the failure. The resultant motivation is the summation of these two. By postulating individual tendencies, this theory explains why people behave differently following similar outcomes, but cannot explain the complexity of emotional reactions that mediate between outcomes and subsequent motivational behaviour (Weiner, 1986). According to attribution theory (Weiner, 1986) the perceived causes of an outcome are responsible for these reactions.

Previous attributions influence both affect and subsequent expectancies, and these influence subsequent motivational behaviour.

Whether the cause is perceived as internal or external influences the strength of the affective reactions (internal causes having stronger effect), and the impact upon motivation. Whether the cause is seen as stable or variable, influences the subsequent expectancy of success (for a research-overview see Weiner, 1986). Attributing failure to stable (enduring) causes reduces the expectation to achieve success in next trials, and reduces motivation to keep trying. Perceiving oneself as effective and in control implies that one attributes outcomes to controllable factors.

By conducting path analysis, Graham et al. (1984) found that the influence of attributions upon motivation ran mainly via perceived competence. Attributions also influenced expectancies, but these expectations influence motivation only via perceived competence.

In these theories, expectation of success is perceived as being influenced by factors inside the person (perceived competence, attributions). In a concrete task, also specific characteristics of these tasks are important (Otto, 1989).

In theories about competence-motivation (Heckhausen et al., 1985, Atkinson, 1966) high competence-motivation is opposed by either total lack of motivation (no interest in achieving) or by a strong motivation to avoid failure. The differences between these two opposites of high competence-motivation can be explained by attributions. In the case of total lack of motivation all achievement outcomes are ascribed to external non-controllable factors. In the case of a strong motivation to avoid failure, failures are probably ascribed to internal non-controllable factors, i.e. factors threatening one's self-esteem.

Attributional theory does not account for all aspects of motivation however. It does not say anything about the influence of the value of the goal. This value influences motivation. In so far as the value consists of enhancement of perceived competence, attributions play a part, but other factors, like external rewards, influence the value of a goal regardless of attributions. The importance of the outcome influences the probability that attributing outcomes or events to non-controllable causes results in feelings of hopelessness, with total loss of motivation as one of its symptoms (Abramson et al., 1989).

In general, we found that the competence-motivation is assumed to develop out of an innate desire to achieve success. Competence-moti-

vation for a specific task appears to be determined by the value of success and failure and by the expectation of success (via perceived competence and specific task characteristics). The perceived causes of the outcome influence the expectations and values of success and thus subsequent motivation. The development of competence-motivation thus results from a complex interaction between initial motivation, success-frequency and modes of valuing and interpreting performances. The latter two are also considered to be of major importance for the development of perceived competence, which is the topic of the next section.

2.2 Perceived competence

People do not just act, they also reflect upon their actions. Through these reflections they develop a perception of themselves. One of the aspects of these perceptions concerns their own competence, their capacities in performing particular activities. Perceived competence is that part of the self-concept that contains the perception and evaluation of the person's own competences in different fields. Perceived competence has an important function in the interaction with the environment. It gives information about which tasks and activities are within the possibilities of a person, which interactions and activities are worth trying.

In adults, perceived competence is not one homogeneous construct, but is divided in specific perceived competences for different skills and fields. A global perceived competence could be described as a general perception of one's own competence to cope with different aspects of life. This global competence is not simply the sum of the different field-specific perceived competences. The impact of each specific perceived competence on the global perceived competence depends upon the importance of the specific skill for the person and for the environment. Global perceived competence is also influenced by the accuracy of the perceived competence, general affects about oneself and attributions (Harter, 1985b).

Perceived competence can thus be described as the whole complex of beliefs and cognitions people have about their own capacities.

Bandura (1981, 1982) assumes that perceived competence is determined by two processes: first the selection and second the processing of information. This information may consist of one's own previous achie-

vements, characteristics of the tasks performed, information about performances of others and the characteristics of these others and the reactions of others to successes and failures and performance attempts in general.

There are individual differences in the way available information is selected and used to form a perceived competence (Bandura, 1982; Otto, 1989). The differences depend upon personal ideas and theories about what causes one's achievements (Coopersmith, 1967; Heckhausen et al., 1985). These personal theories are influenced by past experiences with achievement-outcomes and by information from others. People tend to attribute in such a way that their perceived competence is confirmed (Bandura, 1982; Taylor & Boggiano, 1987). There thus exists a circular influence between ideas about one's own competence and attributions. This raises a 'chicken-egg' question: "what came first, the perceived competence or the attribution preference?" The same question can be asked with regard to the selection of information. People with a high perceived competence tend to forget information about their own failures more readily, evaluate similar performances as more positive, and are less sensitive to evaluations of others (Burns, 1979). This selectivity in turn has a positive influence upon perceived competence.

Apparently, people have a kind of theory or perception of their competence and use rules for selecting and processing information about their own competence in such a way that this theory or perception is confirmed.

Optimally, formation of perceived competence requires a complex cognitive process. It appears however that in general people use only a small amount of information and use simple rules which are not always rational (Bandura, 1982).

It can be concluded that the perceived competence of an individual is determined by the information that is available and by the individual style of selecting and processing this information.

A factor which is closely related to this individual style of selecting and processing is the attributional style -the preference for internal, stable and controllable attributions- of an individual. Theories about attributing are discussed in the next section.

2.3 Attributional styles

When evaluating their performances, people do not restrict themselves to observing the outcome, they ascribe the result to a specific cause. Attributing causes to performances serves two functions; firstly by means of attributing people try to give a meaningful interpretation of and achieve control over their behaviour and the environment. Secondly causal attributions are used to protect one's self-esteem (Weiner, 1986).

The potential causal explanations for situations are almost uncountable. According to Weiner (1986) they can all be classified with help of three underlying dimensions. These dimensions are: (a) locus: is the cause found in or outside the person? (b) stability: is the cause stable over time or not? and (c) controllability: can the person influence the cause? In addition Abramson et al. (1989) stress the dimension global-specific: does the cause affect this specific outcome only, or a broad range of outcomes?

An attribution made to a performance is determined by two sources; Firstly individual preferences for certain attributions (style of attributing), and secondly situational factors (Bandura, 1982). People do not make explicit attributions for all performances: they look for causes of performances particularly if the outcome was unexpected and if the outcome is failure (Heckhausen et al., 1985; Weiner, 1986). There are different explanations for this finding. Possibly people are rather optimistic in their expectations of success. If success is achieved, their optimism is confirmed. After failure however, incongruence of result with these cognitions is followed by more thoroughly thinking about potential causes (Taylor & Boggiano, 1987). Another explanation follows from the function of attributions in helping one to cope with the world. Unexpected and negative outcomes suggest that adaptation of existing ways of coping may be needed. One can argue that even if one does not make explicit conscious attributions, a global concept of the cause and its consequences are present. This global concept is reflected for example in feelings about the performance and in attempts to try again.

In order to make attributions one has to collect information. Environmental information consists of situational circumstances like facilitating or debilitating factors, task characteristics, performances of others and characteristics and reactions of others. Information from the person herself contains past experiences, perceived competence and perceived

effort. This information is selected and interpreted according to personal rules. Based upon past experiences and feedback from others, people may perceive the world as essentially controllable or uncontrollable, they may in general see either themselves or external factors as being the cause of what happens. For instance, experiences that can bring people to see the world as essentially non-controllable are: an accumulation of failures, irrespective of amount of effort invested, repeated confrontation with totally unknown tasks, being for a long period in a role in which one is not responsible for results, or in a situation where all responsibilities have been taken over by others (e.g. in master-servant relationships and after a long period in hospital) (Langer, 1980).

Kelley (1973) developed a model for the influence of different kinds of achievement information upon the attributions. He supposes consensus-information (achievement of others) and distinction information (achievement at other tasks) to influence whether the attribution is internal or external, and consistence information (performances at the same task in the past) to influence whether the attribution is stable or variable. Kelley developed this model to explain the choice of attributions in a specific situation. However, an accumulation of the same kind of information may result in a stable attributional style.

Kelley's model is only partly confirmed in experimental studies (Heckhausen et al., 1985). The role of consensus information (in adults) in particular, appears to be small. An explanation for this finding may be that in this model personal biases and rules are left out; it supposes that people collect and process information in a purely rational way.

In general, while forming attributions people appear to use very little information (Major, 1980). They are most likely to select the information that confirms an assumption which already exists. They tend to attribute in such a way that their perceived competence is confirmed (Bandura, 1982).

Taylor and Boggiano (1987) found that the pattern of attributing is partly determined by the presence of 'self-schemes' with regard to a specific field of competence. Self-schemes are cognitive generalisations, based upon prior experiences with a particular kind of tasks. Self-schemes differ in direction, positive or negative, and in degree of development. These variations are dependent upon the amount and the kind of experiences with the particular field. In addition, the development of the schemes is dependent upon the information-processing capacity of the person. The content of the scheme is related to the kind of attributions

given. People who do not have a scheme for a particular field, attribute in a random way.

People with a positive scheme more often ascribe failure to lack of effort, task-difficulty and bad luck, as opposed to people with a negative self-scheme, who ascribe failure to internal stable causes, and success to external causes. In this way the existing scheme is not violated. Here again the question arises: "What came first, the scheme or the attributional preference?". Once both the scheme and the attributional preference for a particular field exist, they strengthen each other. A negative scheme results in attributing failure to stable, internal causes. These perceived causes influence subsequent behaviour: stable attributions for failure negatively influence success expectations and persistence. Affect appears to play a mediating role (Weiner, 1986). Negative success expectations and low persistence reduce the probability of success in a next trial. In this way more negative outcomes contribute to the negative scheme.

It can be concluded that both specific information about an outcome and the situation, and personal preferences and rules contribute to the selection of a specific cause explaining an event.

2.4 Relations between motivation, perceived competence and attributional styles

We have seen that in a concrete situation the three variables, competence-motivation, perceived competence and attributional preferences, result from an interaction between situational information and the person's notions and conceptions. These notions and conceptions can be described as a kind of theory about oneself, containing ideas about one's competence, one's possibilities for influencing the environment, and for having control over one's own behaviour.

These theories are built upon prior achievement experiences, and upon information from the environment (like feedback from others, observations of others' performances). They determine in what way information about results is processed and interpreted. They influence the perceived control over the outcome and the impact of the outcome upon the perceived competence. These, in turn, affect competence-motivation. It is supposed that these personal theories are relatively stable over time.

It can be questioned whether it is useful to distinguish between personal theory on the one hand and perceived competence and perceived

control on the other. Ideas about one's competence influence the way of processing information, but at the same time they can be considered to be part of the perceived competence. Here we consider the 'theory' as underlying the process of interpreting information, and the perceived competence as the outcome. To give an example: An individual may have a very low perceived competence with regard to playing football. His personal theory may contain the rule: "Failures mean lack of competence, lack of competence is stable and cannot be changed. I am not competent in football, and successes in football must be caused by good luck". His theory thus causes him to interpret his achievements in a specific way, this interpretation influences his perceived competence, and the perceived competence in turn influences the rules that are used for interpretation. We realise that this distinction is somewhat artificial, still it may help to clarify the interaction between the variables under investigation.

If these theories systematically influence competence-motivation, perceived competence and attributions, specific relations between these concepts have to be expected. Let us see what sort of ideas about these relations have been advanced thus far.

Attribution theory assumes that attributions have a specific influence upon perceived competence and affect, and further, that the perceived competence in turn influences competence-motivation. Performance is influenced by this motivation. This particular model has been only very partially confirmed in path-analysis (Covington & Omelich, 1979). The influence of attribution in particular remained unclear in the analysis. This is possibly due to methodological deficits with regard to operationalisation of motivation and dimensions of attributions (Weiner, 1986). The only study which has actually supported the model is that of Graham et al. (1984). They used path analysis on data of twelve-year-old children.

Attribution theory supposes that perception of control should be seen as the consequence of specific attributions. Weiner (1986) however has suggested that people may have a preference for a certain type of attributions and look for a cause that fits this preference. We assume however, that a personal theory, containing basic assumptions concerning capacities and possibilities to have control, influences the perceived competence, the perceived control and preference for specific attributions.

Although attribution theory as a whole has not received much empirical support, some investigations have succeeded in demonstrating specific relations between the different components of the attributional model. People with high competence (who frequently perceive successes) tend to give more internal attributions for success (Lefcourt, 1976; Ryckman, 1980; Kukla, 1972) and less internal stable attributions for failure (Abramson, 1978). They feel more responsible for their performances (DeCharms, 1980), have a higher perceived competence (Bandura, 1982) and higher competence-motivation (Weiner, 1974) than people with low competence. Perceived competence increases more after success and decreases more after failure if stable attributions are given (Weiner, 1974; Meyer, 1973). We assume however that this co-variance might not be the result of causal relations between specific attributions and perceived competence, but instead may be the result of underlying interpretation rules, which affect both. Ascribing success to external factors and failure to internal stable factors is often found to be related with low competence-motivation (Weiner, 1979, 1986; Andrews & Debus, 1978; Craske, 1988).

In general it can be stated that although there is considerable evidence that competence-motivation, perceived competence and attributions are closely interrelated, the exact structure of these interrelations is not clear (Heckhausen et al., 1985). Inconsistent experimental results may have been caused by factors like different and sometimes inadequate operationalisations, differences in external factors like situation, instruction, kind of achievements investigated, etcetera. Weiner (1986) points out that the existence of many circular influences make the nature of the relationships unclear. The network of relations between the variables that are investigated in these researches appears to be very complex.

Let us discuss one potential source of inconsistent results in more detail. In general, researches and theory concerning perceived competence focus only upon people's perception of their actual competence and skills. This aspect of perceived competence is probably the most important factor in formulating expectancies of success in actual tasks. With regard to the influence of perceived competence upon affect and future behaviour it can be argued however that the perception of present skills is less important than the perception of possibilities to learn and to acquire new skills. This aspect of perceived competence is often neglected. The same holds true for many researches concerning attributions. Attributing a

failure to incompetence will have an effect upon the expectancies for the next trial. The consequences for future behaviour and affect may be determined primarily by the person's theory about possibilities to overcome actual incompetence. Both perceived competence and attributions thus have a common element, namely perceived control, or perceived capacity to learn and improve skills. The neglect of this aspect in perceived competence may cloud the outcome of path-analyses and correlational researches that look for relationships between attributions, general motivation to learn and affects following a performance. In our model we shall try to overcome the neglect of perceived control by postulating it to be a factor distinguishable from perceived competence in terms of actual skills and from attributional preferences. By making this distinction we hope to throw some light upon the influence of the three factors upon motivation. Moreover, most researches implicitly subscribe to this distinction, by leaving out perceived control from both perceived competence and attributions. Developing a model in which perceived competence, perceived control and attributions are separated gives better possibilities for using existing findings in order to evaluate the model.

The theories discussed above are concerned with adults. Because cognitive processes and experience appear to play an important role, it is important to study the development of perceived competence, competence-motivation and attributional styles, and their interactions, in order to explain and predict them in children of different ages, in different situations and with different histories.

Moreover, studying the development of the three variables may help to throw some light on the different chicken-egg questions that were referred to in this chapter.