Interpersonal behaviour and social perception in a hierarchy: The interpersonal power and behaviour model

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Abstract

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Keywords: Power; Social perception; Interpersonal behavior; Hierarchy.

Social interactions and relationships are characterized by differences in power, dominance, or status among social interaction partners, and this hierarchy or vertical dimension (Hall, Coats, & Smith LeBeau, 2005) is omnipresent in many of our daily encounters (Gifford, 1991; Wiggins, 1979). Relationships in the workplace, in the larger society, and even within the family, are hierarchically structured. Hierarchies can be very pronounced, such as in the military, while others are quite flat. Some hierarchies are

explicit, such as the differences in executive decision-making power between a CEO and an office clerk, and others are more implicit, such as the differences in influence on the decision to watch a particular movie among a group of friends.

Hierarchies have a profound impact on people. Social psychologists demonstrated some time ago that people are particularly obedient vis-à-vis a higher-status authority figure (Milgram 1965) and research on conformity shows that people mistrust their judgements when a higher-status person is of a different opinion (Larsen, Triplett, Brant, & Langenberg, 1979). There are impressive real-life examples illustrating the effects of power on people's perceptions, judgements, and behaviour. For instance, being in a subordinate position can make a person perform acts of cruelty or mindlessness he or she would probably not have committed otherwise. To illustrate, Lynndie England was convicted in 2005 of prisoner abuse in Abu Ghraib in Iraq and said in her defence that she was just following orders. Also, in February 2001 the US submarine *Greenville* collided with a Japanese vessel while surfacing, resulting in nine deaths. One among many things that could have caused the accident was the following: After a periscope check, the commander of the *Greenville* reported that everything was clear for surfacing. Although the fire control technician saw on his radar that there was another ship close by, he never reported it, because it contradicted what the commander saw.

Although interest in power never disappeared in social psychology research, it remained relatively dormant for many decades. Only in the last 10 years or so has there been a revived interest and research activity on issues of power. This interest has increased exponentially in the last couple of years. Different levels of studying power have been distinguished in the literature: the ideological, the intergroup, the interpersonal, and the intrapersonal level (Brauer & Bourhis, 2006). The present article focuses on *interpersonal* power, meaning the power differences and their manifestations among two or more social interaction partners. *Social* power refers to a person belonging to a certain social group with more or less societal power (e.g., European Americans have more social power than African Americans in the USA) (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 1999; Simon & Oakes, 2006; Turner, 2005). It goes without saying that social group identity can influence power issues in interpersonal interactions, and thus there is considerable overlap between interpersonal and social power.

Power is an inherently relational concept that manifests in an interaction or relationship with another person. A high-power person can only be high power if there is at least one other person who is low power. The present article focuses on power and its manifestations in dyadic social interactions and puts an emphasis on *interpersonal behaviour*. It considers the mechanisms through which hierarchies form and the outcomes of existing hierarchies.

There is accumulating evidence demonstrating that the kind of power under scrutiny as well as additional variables such as gender or competence, among others, are important moderators of the link between power and interpersonal behaviour. The present article advocates the position that power as a main effect might have limited explanatory value, and that much can be gained by adopting a more refined view on how different facets of power affect interpersonal outcomes. This position is not new (Hall et al., 2005; Lammers, Stoker, & Stapel, 2009) but existing models of power often neglect to explicitly include such moderators.

In sum, the goals of the present article are (a) to provide an overview of the research addressing how power is expressed in interpersonal behaviour and how power is perceived based on interpersonal behaviour, and (b) to introduce a model of interpersonal power that illustrates how different facets of power of each interaction partner affect interpersonal behaviour.

THE INTERPERSONAL POWER AND BEHAVIOUR MODEL

Interaction behaviour is the focus of the interpersonal power and behaviour model (Figure 1). One goal of the model is to predict individual behaviour
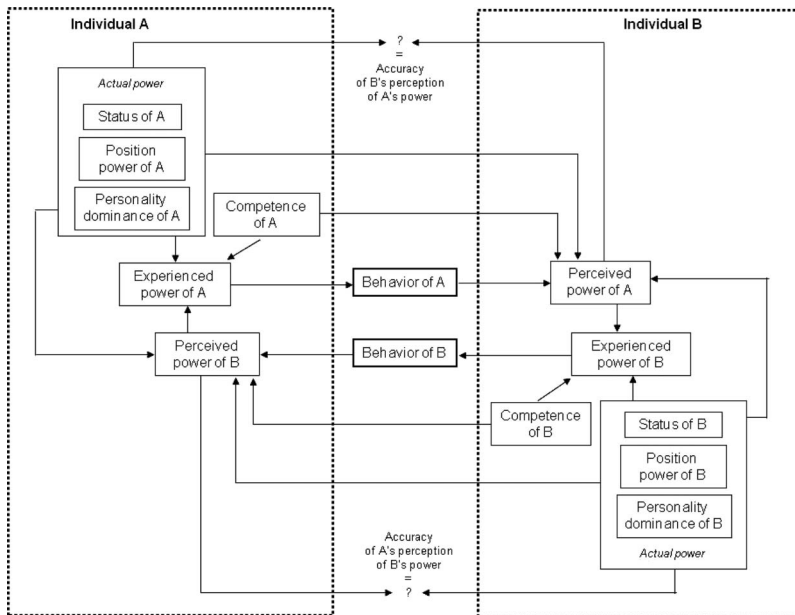

Figure 1. The interpersonal power and behaviour model; explanations in the text.

depending on the person's own power and on this person's perception of the social interaction partner's power. Interaction behaviour is thus conceptualised as an outcome variable but at the same time it is also an input variable in the model. Behaviour as an input into the model means that we constantly form an impression about our social interaction partner, which includes an impression about his or her level of power. Especially if we do not know the interaction partner, his or her exhibited verbal and nonverbal behaviours are the sources of these impressions. Because it is impossible *not* to behave in a social interaction (e.g., not speaking is a behaviour that can be interpreted), the behaviour of the interaction partner is constantly on display for perception and interpretation and can therefore influence the perceiver's behaviour.

In many of our daily interactions, power differences are not pre-established between interaction partners; rather, a hierarchy forms. Even if a hierarchy exists, the low-power individual might challenge the powerful individual's position, in which case the latter will most likely not conform to the behavioural expectations linked to a low-power position. In other words, to explain the dynamic nature of hierarchies and power interactions, both interaction partners have to be represented in the model at the same time. Interpersonal behaviour of one person and his or her social perception of the other person, and vice versa, go hand in hand. Moreover, only when both interaction partners are present in the model is it possible to separate actor and partner effects (Kenny, 1994; Langner & Keltner, 2008). Hierarchies are often built based on dyadic power interactions, which is why the dyadic interaction can be seen as the smallest unit constituting a hierarchy. The interpersonal power and behaviour model describes a dyadic interaction but can be extended to include more than two social interaction partners.

The model extends many existing power models in that it explicitly postulates that there is not "one power" that affects interpersonal behaviour, but there are different facets of power (e.g., state or trait power or competence) that shape behaviour separately or in conjunction with each other. Not all superiors behave in the same way by virtue of the position or structural power they possess. Whether the superior is a woman or a man, whether he or she has a dominant personality, whether he or she feels competent in the interaction, and how powerful he or she perceives the social interaction partner to be, can all affect the superior's behaviour. Before going into more detail and explaining how the model works, the variables of the model are defined.

DEFINITION OF THE VARIABLES IN THE INTERPERSONAL POWER AND BEHAVIOUR MODEL

I define *power* as the extent to which an individual exerts or can exert control or influence over another person (Schmid Mast, Jonas, & Hall,

2009). Note that power is used as an umbrella term for different concepts such as dominance, status, leadership, or authority. Although these terms have somewhat different connotations, they all are indicative of a vertical organisation—or a hierarchy—among social interaction partners (Hall et al., 2005).

Actual power describes trait and state power aspects a person possesses, and subsumes status, position power, and personality dominance. *Position power* or *structural power* are used interchangeably and describe the power an individual possesses because he or she holds a certain function (e.g., a CEO), to which a predetermined specific level of power together with role expectations is attached (Ellyson & Dovidio, 1985). *Status* means the power that an individual possesses because of her or his social group membership, given that different social groups often hold different amounts of social power (Pratto et al., 1994; Sidanius & Pratto, 1999; Simon & Oakes, 2006; Turner, 2005) (e.g., men have more status than women). Again, role expectations are linked to individuals of different groups. Note that I use a very narrow definition of status and thus exclude meanings of status defined as depending on earned respect or dominance within a group. This would be perceived power in my model (defined later). *Personality dominance* is understood as an individual difference in the extent to which a person has the desire to influence or control others (Ellyson & Dovidio, 1985). It is generally measured with a personality dominance questionnaire. Even when there is a structural hierarchy in place, people differ in how dominantly they behave in their respective power positions, and this might depend on their personality dominance, among other factors.

Dominance behaviour is behaviour that is used with the goal to gain or maintain control or influence over another. Note that any behaviour can be in the service of trying to influence others. Therefore even helping behaviour can be a dominance behaviour when it is shown with the intent to influence or control another person (Schmid Mast & Bischof, 1999). Receiving help creates a dependency of the person receiving the help (e.g., the person is obligated to thank the helper, to be grateful to the helper, or to reciprocate the help) and a power difference thus emerges (Fisher, Nadler, & Whitcher-Alagna, 1982). If the helper uses helping behaviour with the goal of creating this dependency, it would be considered dominance behaviour. Nevertheless, there are a number of behaviours that are typically and frequently used to manifest or enhance one's power and these are often labelled as dominance behaviours: for example, speaking a lot, speaking in a loud voice, close interpersonal distance (Hall et al., 2005; Schmid Mast, 2002a).

Perceived power is the impression an observer or interaction partner gains of a target's power. Perceived power can stem from the knowledge of each other's position power (e.g., one is the boss of the other) and/or status (e.g., one is a pilot and the other is an office clerk). It can also stem from

information a person receives about the interaction partner's personality dominance level (e.g., he is quite a dominant person) or his or her expertise. Additionally, perceived power is inferred based on each other's observable behaviour, especially when there is no formal hierarchy in place. This will be described in more detail below.

Experienced power describes the extent to which a person feels powerful in a given situation with a given interaction partner for a given task or type of interaction. *Competence* refers to a person's potential contributions to the social interaction, and encompasses skills, abilities, or knowledge relevant for the social interaction at hand, which can be solving a task, taking a decision, or discussing a subject, among others.

HOW THE INTERPERSONAL POWER AND BEHAVIOUR MODEL FUNCTIONS

The centrepiece of the model is the interaction behaviour emitted by both interaction partners (Figure 1). This interaction behaviour is at the same time an outcome and an input variable. As an outcome variable, it reflects how different aspects of power affect the interaction behaviour of a person. As an input variable, interpersonal behaviour is the information available to the interaction partner with which to form an impression of the other's power. The model can thus serve to explain the mechanisms through which hierarchies form and the behavioural outcomes of existing hierarchies. Both of these aspects will be reviewed in more detail below. Although the common denominator of the different concepts related to power is the idea of verticality, the interpersonal power and behaviour model puts an emphasis on the different facets of power as they have been defined above.

Only a brief overview of the model is provided at this point, as the specific relations among the variables will be discussed in more detail throughout the text. As depicted in Figure 1, a person's status, position power, and personality dominance as well as the person's competence and the perceived power of the social interaction partner all influence experienced power (see arrows from these variables to experienced power). Although the model suggests a direct link from experienced power to behaviour, there are situations in which an actor might choose not to express the power he or she feels. Individuals might be motivated to conceal their experienced power in order not to intimidate the social interaction partner. As an example, powerful women are prone to engage in status-levelling behaviour in that they generally use less self-promotion (Rudman, 1998) and adopt a modest self-presentational style (Daubman, Heatherington, & Ahn, 1992).

Emitted interaction behaviour is perceived and interpreted by the interaction partner who forms an impression about the other's power (see arrow going from behaviour to perceived power). In so-called

zero-acquaintance situations (Ambady, Hallahan, & Rosenthal, 1995; Kenny, Horner, Kashy, & Chu, 1992)—when strangers meet for the first time—all the perceiver has to base his or her impression on, is the exhibited verbal and nonverbal behaviour of the other and appearance cues, such as how formally dressed the person is or how baby-faced or mature-faced an individual is. When the interaction partners know each other or when the perceiver has knowledge about the other's power (e.g., because the person has been introduced as the boss), perceived power of the other is also affected by this knowledge. This is depicted in the model with the arrow going from status, position power, and personality dominance of one interaction partner to perceived power of that interaction partner by the other.

Being competent with respect to a relevant aspect of the interaction might make a person feel more powerful (increased experienced power) and knowledge about an interaction partner's competence affects how he or she is perceived in terms of power as will be described in more detail below. This latter relation is depicted in Figure 1 as the arrow going from competence of one interaction partner to the perceived power of that interaction partner by the other.

The interpersonal power and behaviour model adopts a Brunswikian lens model perspective (Brunswik, 1956). On the one hand, it describes how a target's *actual* state or trait (i.e., personality dominance) is expressed in verbal and nonverbal behaviour. On the other hand, the model shows that observers form an impression about a target's state or trait (i.e., whether he or she is the leader of a group) based on the target's expressive behaviour (*perceived power*). Actual power refers to the grey square and consists of status, position power, and personality dominance (Figure 1).

In a Brunswikian lens model approach the comparison between the actual state or trait and the inferred or perceived state or trait results in various degrees of interpersonal accuracy. Accuracy in the interpersonal power and behaviour model is depicted as the comparison between one's actual power and the degree of perceived or inferred power of that person by the social interaction partner. For example, when a new collaborator participates at a meeting and observes that a specific person talks more than all others, he or she may infer that this person is situated higher in the organisational hierarchy. Only if this is indeed the case was the assessment accurate.

Note that status, position power, and personality dominance are all subsumed in the grey area of Figure 1. In general, these facets of power are positively related with each other. This is not surprising because they all can be subsumed under the notion of power for which a common definition has been provided. Here are a few examples of these positive intercorrelations. Status of a person is related to position power: men are more frequently found in leadership positions than women are (Eagly & Karau, 1991). Personality dominance predicts who will emerge as the leader of a group

(position power), except that this relation is stronger for men than for women (Golub & Maxwell Canty, 1982).

Despite these often-positive correlations, one aspect of power cannot simply be substituted by another. Only occasionally have researchers included different aspects of the power concept in one and the same study. Schmid Mast and Hall (2004a) showed that the correlations among trait dominance, behavioural dominance (rated by external judges based on the observation of interaction partners' interpersonal behaviour during a discussion), and felt dominance (measured by a questionnaire after the interaction with items such as ''I felt in control during the interaction'') differed according to the power position (randomly assigned) and according to the status (i.e., gender) of the person. Table 1 shows that trait dominance was linked to felt dominance, except for women in subordinate positions. Trait dominance was related to behavioural dominance only for low-power men and women but not for high-power individuals. Felt dominance was not related to behavioural dominance. Note that felt dominance is very similar to experienced power in the interpersonal power and behaviour model.

Moreover, there is accumulating research evidence testifying to the fact that the different facets of power affect interpersonal behaviour and social perception quite differently and can moderate the relation between power and interpersonal behaviour. As an example, Lammers et al. (2009) showed that although personal power (defined as independence from others) and social power (defined as power over others) resulted in behavioural approach (measured by a questionnaire) as compared to a control condition, social power decreased and personal power increased stereotyping.

The merit of the interpersonal power and behaviour model is to state the different facets of power explicitly in order to encourage investigators to refine their perspective on power and to increasingly look for moderators of the power–interpersonal behaviour and of the power–social perception

TABLE 1
Intercorrelations for high and low position-power women and men

Correlations between (variables)	High position power		Low position power	
	Women	Men	Women	Men
Trait dominance – felt dominance	.43*	.40*	.15	.43**
Trait dominance – behavioural dominance	−.09	.05	.33+	.37*
Felt dominance – behavioural dominance	−.10	.03	.18	.22

Data from Schmid Mast and Hall (2004a). Entries are Pearson's r. $+p < .10$; $*p < .05$; $**p < .01$.

relations. Moreover, because both interaction partners are represented in the model with respect to their individual behaviour and social perception, the model describes the variables important for *hierarchy formation* and for explaining *behavioural outcomes* in hierarchical encounters. The following sections first describe hierarchy formation, the perception of power, and the behavioural outcomes of power. Only then are the moderating effects of the power facets discussed.

HIERARCHY FORMATION

Formal hierarchies are pre-existing vertical structures that are "filled" with people and provide each individual with a certain amount of structural power. The CEO is the top position in a company's hierarchy and the holder of this position is equipped with extensive power (e.g., to downsize departments or to restructure the company). But hierarchies not only exist in a top-down mode, they also form bottom-up. Among peers (individuals with equal status or position power) or in so-called leaderless groups (Bales & Slater, 1955; Schmid Mast, 2001, 2002b) informal hierarchies typically form. The regularity and ease with which informal hierarchies emerge is documented in research showing that dominance behaviour of one person is often complemented (unconsciously) by submissive behaviour of the social interaction partner (Tiedens & Fragale, 2003; Tiedens & Jimenez, 2003).

   The mechanism of the emergence of a hierarchy in an initially leaderless group has been described by expectation states theory (EST; Berger, Conner, & Fisek, 1974; Berger, Fisek, Norman, & Zelditch, 1977; Ridgeway & Berger, 1986). In an EST approach, group members harbour performance expectations about each other. A performance expectation describes the anticipation of each group member's capacity to make a meaningful contribution towards solving a task. Performance expectations can stem from so-called specific (e.g., expertise) or diffuse (e.g., gender, age) status cues and, because they are shared by all group members, they become self-fulfilling prophecies. To illustrate, when a man (as opposed to a woman) is expected to perform particularly well on a given task (i.e., high performance expectation), the group will provide more opportunities for him to contribute, his contributions will be valued more, and he will finally gain more influence in the group, thus more status or power.

   In homogeneous groups (with respect to specific or diffuse status characteristics), hierarchies still form. In this case, subtle (nonverbal) behaviour differences among group members shape the performance expectations (Ridgeway, Berger, & Smith, 1985). For instance, a person who speaks a lot in a group interaction might be perceived as knowing much about the topic at hand; thus the performance expectation is high.

The self-fulfilling prophecy predicts that this person will secure a high status position within the group.

Within the framework of the interpersonal power and behaviour model, hierarchy formation in a heterogeneous dyad can be explained in much the same way as in EST. Let us assume that A is the woman and B is the man and they thus differ with respect to status. A perceives the status of B as high because B is a man. This is represented in the model by the arrow going from actual power (of B) to perceived power (of B). Perceived high power of B most likely intimidates A, thus reduces A's experienced power (illustrated by the arrow between these two variables), resulting in A showing more deferential interpersonal behaviour by, as an example, contributing less to the discussion at hand. This behaviour of A is perceived and interpreted by B as low power, which will contribute to B feeling increased power (*experienced power*) and behaving accordingly. In the interpersonal power and behaviour model a negative relation between perceived power of the interaction partner and own experienced power is assumed. The more powerful the interaction partner is perceived, the less powerful a person feels and vice versa (Tiedens, Unzueta, & Young, 2007). As in the EST, status cues that characterize social interaction partners become self-fulfilling prophecies and hierarchies will form along those status differences. This also confirms that social interaction partners often show behavioural complementarity with respect to power (Tiedens & Fragale, 2003; Tiedens & Jimenez, 2003). Note, however, that A and B do not show complementarity in dominance behaviour under all circumstances. If there is a power struggle, for instance, both interaction partners show high levels of dominance behaviour before one submits and a hierarchy is (re)established.

In homogeneous groups (i.e., groups with no specific or diffuse status cue differences among group members), EST posits that performance expectations are not based on status cues but on subtle behavioural differences. This can also be illustrated with the interpersonal power and behaviour model. The only difference to the above-cited mechanism is that the starting point is not the actual power of B but the behaviour of B (e.g., B interrupts A often).

The perception of each other's power is not only crucial for hierarchy formation, but also for maintaining or renegotiating individual hierarchy positions. Detecting that one interaction partner shows increased dominance behaviour might challenge the other's power position and result in a power struggle. In a power struggle, both interaction partners show increased dominance behaviour and only when one gives in (i.e., shows deferential behaviour) to signal that he or she accepts the lower rank, is a hierarchy again established. The following section illustrates the link between observed behaviour and perceived power.

HOW POWER IS PERCEIVED

In the interpersonal power and behaviour model, perceived power is affected by the knowledge of the actual power or the competence of the interaction partner and by his or her verbal and nonverbal behaviour and appearance, as well as by the perceiver's own level of actual power.

Expectations and power perception

Knowing the actual power of the social interaction partner can affect how power in others is perceived, because such knowledge creates expectations. This is represented in the model by the arrow going from the grey case of actual power of one interaction partner to the perceived power of that partner by the other. Information about a person's status (e.g., seeing that the interaction partner is a woman) affects how powerful the person is perceived. Men and women are not only associated differently with power, men are also associated with being more hierarchical and women with being more egalitarian (Schmid Mast, 2004).

   The association between gender and hierarchy was assessed with the paper-based hierarchy–gender IAT (Implicit Association Test; Greenwald, McGhee, & Schwartz, 1998). Participants were asked to classify words of the concepts female, male, hierarchy, and egalitarian under time pressure. They performed this task twice, once when stereotypical concepts were paired (male with hierarchy and female with egalitarian) and once when non-stereotypical concepts were paired (male with egalitarian and female with hierarchy). The IAT effect is the difference between the associative strength of the stereotypical pairings minus the associative strength of the non-stereotypical parings. The stronger the stereotypical associations are, the more pronounced is the IAT effect that emerges. Results showed that both women and men showed an IAT effect but the effect was significantly more pronounced for female than for male participants. This association between gender and hierarchy points to a strong link between a person's status (i.e., gender) and the perception of this person's power by others. Although this study does not show that men are associated with *high* and women with *low* power, it shows that target status is associated with expectations in the realm of power. Those expectations can then influence the perception of a target's power.

   Not only status but also position power of the target affects how powerful he or she is perceived as being. When participants were asked to form an impression of a target described as high power (head of the accounting division of a large company supervising directly 30 employees), they described that person as more assertive, less yielding, and less persuadable—thus more powerful—than when asked to form an impression about the same target described as being low power (working in a large company with

30 co-workers, all under the direct supervision of the head of the department) (Eaton, Majka, & Visser, 2008). Obtaining the information that a certain individual is dominant in terms of his or her personality might also affect how powerful he or she is perceived. In the interpersonal power and behaviour model such a relation is suggested, although the author is not aware of any research having addressed exactly this question.

In the interpersonal power and behaviour model, competence of the interaction partner affects the perception of this interaction partner's power. It is thus postulated that the information that the social interaction partner is an expert concerning an important aspect of the interaction (i.e., the task to be solved) affects the perception of this person's power. Competence can function as a proxy for actual power in the eyes of the perceiver. Indeed, there is a strong link between perceived competence and power documented in the literature (Berger et al., 1974, 1977; Darioly & Schmid Mast, in press).

We showed that social interaction partners' differences in competence were perceived as differences in power which, in turn, explained how the participant behaved towards that interaction partner (Darioly & Schmid Mast, in press). In two studies, participants interacted with either a task-competent or task-incompetent superior on a problem in which they had to come to a consensus decision (prioritise a list of items to pack in a first aid kit for a trip to Peru). Perceived competence was manipulated by making the superior an expert (student in pharmacology) or a non-expert (student in history). In Study 1 participants interacted via email with the superior and we coded their dominance behaviour based on the written email messages. In Study 2 participants interacted face-to-face with a confederate and the interactions were videotaped. Based on the videos we coded dominance behaviour. Results of both studies converged and showed that incompetent leaders were perceived as less dominant, that subordinates of incompetent leaders behaved more dominantly towards their leader, and that they were less influenced by how the leader suggested ranking the items. Also, perceived leader dominance mediated the relation between leader competence and subordinate dominance behaviour, and between leader competence and subordinate resistance to the leader (the latter only in Study 1).

Besides the effects of possessing knowledge about the interaction partner's actual power and competence, the actual power of the perceiver can affect his or her power perception of the other. This will be discussed in more detail in the following section.

Perceiver power and power perception

In the interpersonal power and behaviour model it is postulated that actual power of the perceiver affects to what degree he or she perceives the social

interaction partner as powerful (see the arrow going from actual power to perceived power within each individual). This aspect has primarily been investigated with respect to the perceiver's trait dominance. We showed that high personality dominant men but not women (expressed in the wish for a high power position in an interaction) were more prone to see dominance in others (Schmid Mast, Hall, & Ickes, 2006). Participants were asked to infer a target person's thoughts and feelings and these inferences were rated by external judges with respect to how much they were related to power. Data were analysed using a signal detection approach and results showed that there was no difference in how accurately high- and low-power individuals were able to read the targets' power-related thoughts and feelings, but that high-power individuals showed more of an overestimation bias than low-power individuals; they perceived more power-related thoughts and feelings in others.

Another personality variable that is linked to power and that affects how power is perceived in others is interpersonal hierarchy expectation (IHE; Schmid Mast, 2005a). IHE is understood as an individual difference construct indicating to what degree a person expects social interactions or relationships to be organised in a hierarchical way. It is a similar measure to the Social Dominance Orientation Scale (SDO; Pratto et al., 1994) with the difference being that SDO measures an acceptance of power differences among different *social groups* whereas the IHE measure refers to power differences among *individuals*. IHE can be measured with an eight-item questionnaire. Sample items are: "When people work together on a task, one person always takes over the lead" or "I feel more comfortable if I know the hierarchical structure of a group of people I am introduced to". The IHE showed good convergent and discriminant validity as well as incremental validity (with respect to personality dominance and SDO) in predicting perception of hierarchies. People scoring high in IHE perceived social interactions they observed as particularly vertically structured, and men scored significantly higher on IHE than women did (Schmid Mast, 2005a). To measure the perception of a hierarchical structure, participants were asked to indicate the status difference among dyadic interaction partners in different photographs. The more power difference among the target persons a participant perceived, the higher his or her score on the IHE scale.

IHE was related to stereotyping and to stereotyped perception of the power distribution among women and men (Schmid Mast, 2005b). Men scoring high in IHE were prone to stereotype others in general, measured with a questionnaire assessing the acceptance of stereotyping (Carter, Hall, Carney, & Rosip, 2006) and they were also prone to perceive men as more powerful than women (Table 2). The latter was assessed as the likelihood of judging a man to be the higher status person than the woman when observing opposite-gender dyadic interactions. Note that the

TABLE 2
Associations between interpersonal hierarchy expectation (IHE) and stereotyping for
women and men separately

	Stereotyping	
	Acceptance of Stereotyping questionnaire	*Gender-stereotyped view of power (seeing men as high power and women as low power)*
Women	.25[+]	.06
Men	.67***	.40**

Entries are Pearson's r. [+] $p < .10$; **$p < .01$; ***$p < .001$.

IHE–stereotyping relation was present in men but absent in women. This alludes to the influence of perceiver status (i.e., gender) on perceived power, a link that is suggested in the interpersonal power and behaviour model. How status of the perceiver and power position of the perceiver influence power perception remains to be investigated.

In the following section I discuss how the behaviour the interaction partner emits serves as a source of information about his or her power and thus affects how powerful he or she is perceived to be.

Power perception through behaviour

When turning to the arrow between behaviour of one interaction partner and the perception of that behaviour by the other in the interpersonal power and behaviour model, we can ask which behavioural cues people use to infer power in others. Carney, Hall, and Smith LeBeau (2005) found that people believed there to be a difference between high- and low-power individuals with respect to 35 of 70 behaviours. Participants were asked to imagine high- and low-power people and then imagine what their behaviour would be. Participants were then presented with a list of 70 behaviours gained from the literature and asked to indicate to what degree they thought a high- (or low-) power person would show that specific behaviour. Results showed, for example, that people expected high-power individuals to interrupt others successfully, to initiate hand shaking, or to approach others closely, more so than such behaviour was expected from low-power individuals. Low-power people were believed to pay more attention to the other, avert their gaze more often, and more easily show facial fear expressions, to cite just a few of the results.

When investigating which actual behaviours are perceived by observers as indicators of power, meta-analytic work (Hall et al., 2005) reveals that people who show the following behaviours are perceived as more powerful: more gazing, lowered eyebrows, a more expressive face, more nodding,

more smiling, less self-touch, more other-touch, more gestures, more bodily openness, more erect or tense posture, more body or leg shifts, smaller interpersonal distance, a more variable voice, a louder voice, more interruptions, less pausing, a faster speech rate, a lower voice pitch, and more vocal relaxation. Moreover, observers use the visual dominance ratio as an indicator of high status (Dovidio & Ellyson, 1982). Visual dominance is the ratio of percentage of looking while speaking divided by percentage of looking while listening. Increased visual dominance is thus characterized by a person who looks at the social interaction partner while talking to him or her but avoids eye contact when listening to the interaction partner.

Perceivers also expect certain verbal behaviours to be an indicator of high power. People who talk more are perceived to be more powerful (Schmid Mast, 2002a). People who initiate more speech acts, receive more such acts, make more self-referent statements, ask more questions, agree and disagree more, and initiate more laughter are perceived as more ambitious-dominant (Gifford & Hine, 1994). Appearance cues such as attractiveness (Anderson, John, Keltner, & Kring, 2001) or height (Wilson, 1968) are both used by perceivers to judge power. In a study looking at what cues perceivers use to judge professional status among two interaction partners (i.e., an employee and his or her superior at a university) in photographs, age and formal dress were both used by perceivers as indicators of high power in men but not in women (Schmid Mast & Hall, 2004b).

Observing a person's traces of behaviour or behaviour outcomes can also provide information about that person's level of power. Individuals who displayed more action orientation (e.g., taking more decisions concerning one's personal life or voting for a change in organisational policy) were perceived as possessing more power than individuals with less action orientation (Magee, 2008).

This section discussed interpersonal behaviour as an input variable in the interpersonal power and behaviour model. The next section will address how interpersonal behaviour is affected by power and thus focus on power as an outcome variable.

BEHAVIOURAL OUTCOMES OF EXISTING HIERARCHIES

The approach/inhibition model of power developed by Keltner, Gruenfeld, and Anderson (2003) predicts behaviours, perceptions, cognitions, and emotions for both the high- and the low-power individual. The model posits that high-power individuals possess more rewards and resources, which makes it easier for them to attain their goals and makes them less subject to constraints. High power thus activates the motivational approach system

whereas low power activates the motivational avoidance system. Lack of power means less access to rewards and resources, proneness to punishments, and the experience of dependency and being controlled by others.

With respect to behaviour, empirical evidence bolsters those predictions. High-power individuals were more prone to show approach, in that they were more likely than low-power individuals to take goal-oriented actions (Guinote, 2007) and, for instance, remove an annoying electric fan (Galinsky, Gruenfeld, & Magee, 2003) or make the first move in a negotiation context (Magee, Galinsky, & Gruenfeld, 2007). High-power individuals were more likely to engage in risky behaviour (Anderson & Galinsky, 2006). They showed more behaviour directed to the pursuit of a specific goal by prioritising and focusing their attention on the goal to be attained (Guinote, 2007).

With respect to interpersonal behaviour, the approach or inhibition tendency affects individuals' expressive behaviour such as their verbal and nonverbal behaviour and their expression of emotions. High-power individuals more easily activated their behavioural approach system than did low-power individuals (Smith & Bargh, 2008): High-power primed individuals sat closer to another student waiting for an experiment than did low-power primed individuals.

A meta-analysis on the expression of power in nonverbal behaviour showed that only a few cues were related to the expression of actual power but all of them can be seen as a manifestation of approach behaviour (Hall et al., 2005). High-power people show more bodily openness (arms and legs), interact at a closer interpersonal distance, have louder voices, and interrupt others more often than do low-power individuals. Concomitantly, power hierarchies in small groups were found to be built according to the relative difference of speaking time and interruptions among group members (Schmid Mast, 2001, 2002b). Small same-gender groups were observed during a 45-minute group discussion and the relative speaking time of each group member was registered during the first and the last 8 minutes of the group discussion. Results showed that, in female and male groups, the distribution of speaking time among group members became more pronounced at the end (last 8 minutes) of a group interaction compared to the beginning (first 8 minutes), in both all-female and all-male groups. The differences in speaking time were associated with peer-rated differences in perceived dominance during the interaction. This is an indicator that the hierarchical organisation within a group increased during the interaction. In other words, whereas at the beginning of an encounter among strangers, group members tended to talk for rather similar amounts of time, at the end of the interaction the speaking time was more unequally distributed among group members, so that one or two spoke more than the rest of the group, and they were seen as most dominant.

High-power people have more expressive faces and are better able to express emotions through nonverbal cues than are low-power people (Hall et al., 2005). High-power people also talk more than low-power people (Schmid Mast, 2002a), and high-power people have higher visual dominance than low-power people (Dovidio & Ellyson, 1982). In terms of verbal behaviour, powerful people use fewer back-channels (listener responses such as "really?" or "wow!") and fewer qualifiers ("maybe", "I guess", or "I think") than people in low-power positions, indicating that appointed leaders use less-tentative and less-supportive language (Johnson, 1994). Subordinates in comparison to superiors use different linguistic strategies when communicating: Low-power individuals use more politeness in their communication (e.g., apologising, using words that minimise the imposition or diminish the force of a communication, or claiming a common point of view) than high-power individuals (Morand, 2000). Gifford and Hine (1994) used written transcripts of dialogue to investigate encoding of personality traits via 10 verbal behaviours (e.g., initiation of speech acts, reception of speech acts, questions, initiation of laughter, agreement, disagreement, self-referent statements, total talk). Contrary to the aforementioned results, none of the measured verbal behaviours was related to the personality trait of ambitious-dominant. With respect to appearance cues, research shows that formal dress was an expression of high power but only in men (Schmid Mast & Hall, 2004b).

These sometimes-contradictory findings suggest that power is a manifold concept that does not simply produce or fail to produce a certain behaviour. Adopting a formal high-power position might not result in the same behaviour as having a dominant personality, and the behavioural manifestations of belonging to a high-power social group or having or lacking task competence might show different behavioural manifestations altogether. How the different facets of power affect behavioural outcomes will be discussed later.

This section has reviewed how power is expressed in different behaviours, whereas the previous section addressed how different behaviours are perceived in terms of power. Comparing directly the perceived power of a person with his or her actual power and thus discussing to what degree observers are accurate in inferring others' power is detailed in the following section.

ACCURACY OF ASSESSING POWER

Accuracy of assessing power is depicted in the interpersonal power and behaviour model as the correspondence of an interaction partner's inference about the other's power (perceived power of A) with the actual state or trait power of A. To determine the actual state or trait (i.e., the criterion to which perceived power can be compared) different approaches are used. In terms of position power, the criterion would be the actual position in an organi-

sational hierarchy, and with respect to personality dominance, the criterion would be a self-report measure of personality dominance. In the latter case, the self-evaluation is often complemented by a personality dominance measure about the target person filled in by people who know the target well (e.g., parents or peers) (Colvin, Vogt, & Ickes, 1997; Funder & Colvin, 1988).

We have seen that speaking time is used as a sign of elevated power by perceivers, and it seems that perceivers are right in doing so because high-power individuals actually do talk more than low-power individuals (Schmid Mast, 2002a). As depicted in Table 3, individuals who talk more are perceived as more powerful than individuals who talk less (perceived power; effect size of $r = .60$) and actual power is expressed in speaking time (effect size of $r = .35$). Thus, speaking time is a valid and diagnostic indicator of power. However, there is not always correspondence between how a trait or state is expressed in behaviour and how that behaviour is perceived or interpreted. For example, people think that avoiding eye contact with the interaction partner (gazing less at him or her) is a sign of high status, but research shows that actual power is unrelated to gazing (Hall et al., 2005).

As shown in the meta-analysis by Hall et al. (2005), and detailed in the previous paragraphs, people use many more expressive cues as indicators of power than there are cues that actually are indicative of actual power. People obviously have stereotypical beliefs about the relation between certain behaviours and power, and thus use cues that are not necessarily diagnostic of the power dimension. If this is the case, are people still accurate in judging another person's power?

In general, the relative power position of a person can be judged accurately. Barnes and Sternberg (1989) found better than chance accuracy when perceivers judged which of two target people in a photograph was the other's boss. Also, as noted above, people are able to correctly assess status based on photographs (Schmid Mast & Hall, 2004b). We took pictures of dyadic interactions among university employees who were in a hierarchical

TABLE 3
Power as expressed and perceived through speaking time

Variable	Effect size	# Studies
Power expressed in speaking time	.35	2
Personality dominance	.27	14
Position power (experiment)	.56	5
Position power (actual power positions)	.20	2
Perceived power	.60	25

Entries are weighted (according to sample size) effect sizes (Pearson r); # studies means the number of studies on which the effect size is based. All effect sizes: $p < .00001$ (Schmid Mast, 2002b).

relationship with each other. Pictures were taken at unannounced intervals and then shown to third, uninvolved observers who guessed the occupational status difference between the two targets on the photographs. Results showed that observers were able to infer the dyad member's relative position power at better than chance levels. In the same vein, observers were able to assess targets' assertiveness in videotaped interaction at better than chance level (Schmid Mast, Hall, Murphy, & Colvin, 2003). We obtained targets' self-ratings of assertiveness (a facet of the NEO-extraversion dimension) and compared these with the observers' ratings of assertiveness to obtain a measure of accuracy.

In addition, Kraus and Keltner (2009) showed that observers were able to accurately judge target socioeconomic status. Ratings of socioeconomic status by observers based on videotaped excerpts of brief (60-second) social interactions were related to actual family income, maternal education, and subjective socioeconomic status indicated by the target.

Despite the fact that perceivers seem to use many non-diagnostic cues to infer the power of another person, they are still able to correctly infer a person's power position. One explanation for the fact that they could have incorrect usage yet still be accurate could be methodological, in that any given study only measures a certain number of nonverbal cues, whereas the list of potentially diagnostic indicators of power is endless. Researchers might not have measured the cues that observers used to draw inferences. To illustrate, observers might judge the status of a person exclusively based on how formally he or she is dressed. If the researcher only looks at nonverbal behaviour and does not code formality of dress (assuming this to be a diagnostic cue), the nonverbal behaviours will not correlate with perceived status (because indeed the observers did not use them). But the perceiver will still make an accurate assessment of others' status.

Moreover, perceivers might change their assessment strategy when judging power; they might rely on a different salient cue for each target. As an example, target A is judged to be high power because of his formal dress, whereas target B is judged to be high power because of his loud voice. Which cues are salient and thus more likely to be used to judge power might, for instance, depend on the gender of the target. Indeed, research shows that when judging dominance of women targets, perceivers use crossed arms and lowered eyebrows as an indicator of status, but they use open arms and raised eyebrows as an indicator of status when judging men (Schmid Mast & Hall, 2004b). These findings emerged from the study described above with the photographs of university employees. We coded the behaviours visible on the photographs and then correlated the perceived power of the targets with each of the coded cues to obtain information about which cues varied with the judgement of perceived power, indicating that these were the cues observers relied on when judging occupational status.

Another explanation of why perceivers are accurate, even if they use non-diagnostic cues, is that correct assessment of individuals' power might be made based on a combination of different cues, rather than on one specific cue and is thus a ''Gestalt''-like impression formation process (Zebrowitz, 2001). To illustrate, neither erect posture nor self-touch was an indicator of the actual power of male targets if considered individually (Schmid Mast & Hall, 2004b). However, actual high power was expressed relatively more through erect posture than through self-touch, and this is also the relative weight perceivers attributed to these two behaviours when assessing target power; they relied more on erect posture than on self-touch. In other words, there was a profile match between the actual and the perceived power-nonverbal behaviour relation which can explain that, although each of the single cues might not be diagnostic of power, the correct weighting of all the nonverbal cues available might still result in accuracy. Similarly, the actual and perceived effects of the Hall et al. (2005) meta-analysis were correlated, suggesting that in general the perceptions do have some accuracy.

Although there is evidence of women outperforming men in interpersonal accuracy tasks (Hall, 1984, 2006; Hall & Schmid Mast, 2008; McClure, 2000), women do not seem to have an advantage in judging dominance or power in others as compared to men (Schmid Mast & Hall, 2004b; Schmid Mast et al., 2003). Perhaps men have greater accuracy because power is a male-typical issue, and men might be more expert in power issues than women because they are more competitive (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Eagly, Karau, Miner, & Johnson, 1994), more easily form hierarchies when they first meet (Schmid Mast, 2001, 2002b), and are more motivated to take on the leadership role (Eagly et al., 1994). This expertise might bring their accuracy in judging power up to the already high level of women's accuracy. Or, women may be particularly bad at judging power (as compared to judging emotions, in which they do a better job than men) because they are comparatively non-experts, or any combination of the above. There is some evidence to suggest that men's accuracy was increased when the situation was related to power than if the situation was not (i.e., they had to remember the opponent's performance in a competitive task as compared to a cooperative task; Hall & Schmid Mast, 2008).

All in all, people are able to assess others' personality dominance or power position within a hierarchy accurately, meaning at better than chance level.

MODERATORS OF HOW POWER IS EXPRESSED IN BEHAVIOUR

Research clearly shows that knowing a person's position power does not mean one knows the person's interpersonal behaviour. The fact that power

is expressed in relatively fewer verbal and nonverbal cues than perceivers think are related to power, points to the importance of moderators when trying to understand or predict high- or low-power individuals' interpersonal behaviour. Especially relevant to the idea of moderators is the fact that the effects were so extremely heterogeneous in Hall et al.'s (2005) meta-analysis. In other words, studying the expression of power as a main effect might be less revealing than looking at how different facets of power affect the power–behaviour link. As an example, Table 3 illustrates that different conceptualisations and operationalisations of power affect how power is expressed in behaviour (i.e., speaking time). Position power as allocated roles to participants in psychology experiments showed the strongest positive link with speaking time, whereas position power operationalised as real world superior–subordinate relationships showed the weakest relation to speaking time. Personality dominance was in between.

In the interpersonal power and behaviour model, the different facets of power are represented by status, position power, personality dominance, and competence. Experienced power results from the integration of all these different facets of a person's power as well as of the perceived power of the interaction partner. All of these aspects affect interpersonal behaviour. Any different combination of these variables is possible and might lead to different behavioural outcomes. A male leader (high status and high position power) with a dominant personality (high personality dominance) but with no expertise (low competence) for the task at hand might behave more dominantly than a female leader with the same attributes. Or, the above might be qualified by the fact that this gender difference only emerges when the interaction partner is perceived as low power. Typically, studies do not include all of those variables but many studies feature a few different measures of power and these often show moderating effects.

In the following sections some of the possible interplays between the different facets of power and how they affect interpersonal behaviour will be illustrated with the aid of empirical studies.

Gender as a moderator of the position power–behaviour link

Gender moderates how position power is translated into behaviour (i.e., leadership behaviour). Women's leadership style is different from men's in that it is more democratic than directive (Eagly & Johnson, 1990). Also, women use a more transformational leadership style than men do (Eagly, Johannesen-Schmidt, & van Engen, 2003). Transformational leadership is characterised by inspiring motivation and intellectually stimulating subordinates, as well as showing individual consideration for them.

The role congruity theory of prejudice towards female leaders (Eagly & Karau, 2002) posits that women leaders are evaluated more negatively than

male leaders, and that this gender difference is particularly pronounced when women show a gender role incongruent leadership style (i.e., directive leadership). Incongruity results from differences in expectations harboured towards leader and towards women and men (Eagly & Karau, 2002; Eagly & Wood, 1999; Schein, 1973, 1975; Schein, Mueller, Lituchy, & Liu, 1996). For men, there is congruity between what is stereotypically expected from them as a man and the expectations harboured towards a manager or a leader (e.g., agentic or instrumental: assertive, achievement-oriented, and oriented towards hierarchies), whereas women are in a situation of incongruity, which makes for a more negative evaluation. When women's behaviour disconfirms the female gender stereotype, they suffer from social and economic backlash effects impacting on hiring, salary negotiations, promotions, and leadership evaluations, all factors contributing to the gender inequality linked to employment (Rudman & Phelan, 2008). Heilman (1983) posits a lack of fit model in which expectations about the success of a person working in a particular job or at a particular task are determined by the fit between the perception of that person's characteristics and the perception of the characteristics required by the job or task. If there is fit, performance expectations are high (one expects success), and if the fit is low, performance expectations are low.

Moreover, gender, competence, and power position also interact. Competence seems to be of particular importance for women in high-power positions: Women's leadership behaviour differed according to whether they achieved the leadership role or whether they became leaders by chance. For men, their leadership style did not differ regardless of whether their leadership role was appointed or attained (Eskilson & Wiley, 1976).

Personality as a moderator of the position power–behaviour link

Personality, and particularly personality dominance, affects how power is used. Whether a person was exchange oriented or communally oriented affected how power was exerted (Chen, Lee-Chai, & Bargh, 2001). Exchange oriented power holders behaved more egoistically, and communally oriented ones more empathically. In the same vein, when individuals were motivated by self-serving power they were prone to make antisocial decisions, whereas individuals with other-serving power motivation made prosocial decisions (Magee & Langner, 2008).

Personality dominance also affects how different levels of power are expressed in interpersonal behaviour. This was shown in a study measuring individuals' personality dominance before putting them into either a high- or low-power position and observing their interaction behaviour (Schmid Mast & Hall, 2003). Personality dominance was measured with a

questionnaire and participants were also asked whether they would like to be in the superior or subordinate position for a subsequent dyadic interaction. Participants were told that they would assume the role of an owner of an art gallery or the role of the assistant to the art gallery. In their roles, they would discuss which out of a series of paintings should be exhibited in their art gallery with the goal of coming to a consensus decision. They were instructed that the owner had the responsibility for the quality of the choice and had to evaluate the assistant at the end of the task on his or her qualities as an assistant. The assistant's role was to contribute ideas and to follow the owner's instructions. Prior to the interaction, participants were asked if they preferred the owner or the assistant role. This role preference was used as a proxy for personality dominance because it was highly correlated with the latter. Roles were randomly assigned to the interaction partners. Participants who wanted to be in a leadership position (high personality dominance) were either granted that position (fulfilled high power) or were allocated the subordinate position (striving for power), and participants who wanted to be in a subordinate position (low personality dominance) were either put in that position (fulfilled low power) or were allocated the leadership position (aversion to power). The behaviour of both dyad members during the 8-minute interaction was videotaped and speaking time, an indicator of dominance behaviour, was coded.

Results showed that the initial motivation for the high- or the low-power position (personality dominance) affected the interaction behaviour in some cases but not in others. Figure 2 shows that participants who were allocated the high-power position did not differ in their dominance behaviour (measured by speaking time and by third-observer ratings of dominance) regardless of whether they initially wanted that position or not (thus regardless of their personality dominance). Participants who were allocated the low-power position behaved differently according to their trait dominance. Those who were subordinates but initially wanted to be the superior (striving for power) behaved more dominantly during the interaction (assessed by speaking time and by third-observer ratings of dominance) than did those who wanted the low-power position all along (fulfilled low power).

Thus, subordinates are not just subordinates: those who are motivated to climb the hierarchical ladder and strive for more power than they currently have (high in personality dominance) reveal this underlying motivation in their behaviour. For allocated high-power people, one can conclude that, at least on the behavioural level, anybody could be a boss. This has to be taken with a grain of salt, however. Interactions including a superior who did not want to be in charge showed decrements in performance of both interaction partners (Schmid Mast, Hall, & Schmid, in press). Thus, although observable behaviour was not affected, leadership effectiveness depended
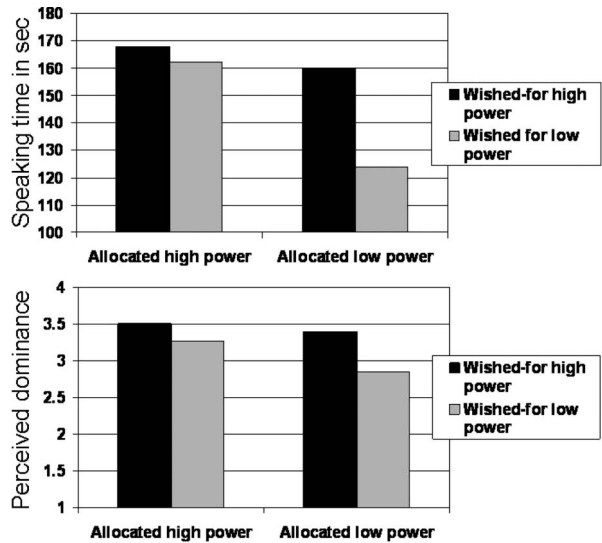
Figure 2. Speaking time and perceived power depending on the wished-for and the allocated power position.

on how much the superior was motivated to take on the powerful role, reflected in his or her personality dominance.

In this very same study we also investigated how different facets of power affect smiling (Schmid Mast & Hall, 2004a). Smiling is often seen as a sign of subordination (Henley, 1977; Henley & LaFrance, 1984) but as a matter of fact, actual power does not show a systematic relation to smiling (Hall et al., 2005). We had women and men in high- and low-power positions and these positions either corresponded to their personality dominance or not. Women in the low-power role who wanted to be low power smiled more than women in the low-power role who wanted to be high power. No such effect emerged for men in low-power positions, or for women or men in high-power positions. This result shows that the interplay of different aspects of power (position power, status, and personality dominance) affects interpersonal behaviour and that conceptualising or operationalising power in one way only might mask important underlying effects.

Moderators of how power is perceived

Target power moderates the perceived power–behaviour link. Or, in other words, how powerful a certain interaction behaviour is perceived to be depends on the perceiver's knowledge about the target's actual power. In this realm status, and more specifically gender, has gained much research

interest. On the one hand, the same nonverbal behaviour exhibited by a woman or a man is often perceived and judged differently in terms of how powerful or influential it is. In other words, different standards of judgements are used for women and men as suggested by the model of stereotype-based shifts in judgement standards (Biernat & Manis, 1994). To illustrate, women expressing anger in the same way as men did were perceived as less powerful than the men (Brescoll & Uhlmann, 2008). Moreover, they were also accorded lower salary and seen as less competent than angry men.

When judging the assertiveness of female and male videotaped targets, the nonverbal cues used by participants differed (Schmid Mast et al., 2003). Participants watched 44 one-minute video clips of dyadic interactions and rated each person on the video on assertiveness, defined as "a dominant, forceful person; a person that is rather a leader of groups she/he belongs to; other people often look to him/her to make decisions" (p. 734). Behaviour was coded based on the videotapes. For each perceiver, the degree of perceived assertiveness was correlated with each of the behaviours across targets. This correlation was used as an indicator of how much the perceiver used each behaviour to judge assertiveness of the targets. Results showed, for instance, that *high* level of fidgeting was used as a sign of assertiveness in female targets, whereas in male targets a *low* level of fidgeting was used as an indicator of assertiveness. This example shows that gender can influence the meaning of specific nonverbal cues. Fidgeting is generally considered to be an indicator of social anxiety (Heerey & Kring, 2007). So maybe fidgeting is perceived as a sign of social anxiety in men and thus related to low perceived assertiveness, whereas in women fidgeting might be seen as a sign of agitation or effortful involvement in the interaction and thus related to high perceived assertiveness.

On the other hand, to assess power of the interaction partner, observers might rely on different verbal and nonverbal indices. This was confirmed in a study in which participants were asked to rate the status of each of two people in a photograph for a total of 48 target dyads (Schmid Mast & Hall, 2004b). Based on the photographs, the targets' nonverbal behaviour and appearance were assessed, and each cue was correlated with perceived status for female and male targets separately. Results showed that perceivers relied on different nonverbal and appearance cues when judging female or male targets' status. For instance, to assess female targets' status, perceivers used downward head tilt and lowered eyebrows significantly more than they did to assess male targets' status, whereas to assess male targets' status they relied significantly more on how formally dressed the male targets were.

These examples illustrate how knowledge about the interaction partner's status affects how target behaviour is perceived in terms of power. In the interpersonal power and behaviour model it is postulated that such a link also exists for position power and for personality dominance. It is therefore

suggested that knowing a person's power rank can influence how this person's behaviour is perceived. Indeed, men who expressed anger and occupied a higher occupational rank were perceived as more powerful than angry men with a lower occupational rank (Brescoll & Uhlmann, 2008). For women, position power (whether they were described as the CEO or the trainee) did not affect the relation between anger and perceived power.

Whether information about the target's trait dominance affects how his or her behaviour is perceived remains to be tested. The author is not aware of a study that has investigated this effect.

DISCUSSION OF THE INTERPERSONAL POWER AND BEHAVIOUR MODEL

Interpersonal behaviour is the most prominent feature of the interpersonal power and behaviour model. Many textbooks state that the goal of psychological research is to predict behaviour. While it is unchallenged that behaviour is the result of cognitive, emotional, intentional, and motivational factors, surprisingly few studies are concerned with the observation of actual behaviour emitted by a person in a specific situation with a specific interaction partner. Such interpersonal behaviour is what shapes our social relations. The interpersonal power and behaviour model focuses on the power dimension of our social relations and interactions. Power does not exist in a vacuum; it is interpersonal by nature and unfolds in interpersonal behaviour among two or more social interaction partners. Power is affected by both interaction partners' behaviour and their mutual perception thereof.

Sometimes we are high in interpersonal power and sometimes we are low, depending on the social interaction partner and on situational constraints (Eaton et al., 2008). Research looking at how individuals change their behaviour according to whether they interact with a higher- or lower-power individual is almost non-existent. The interpersonal power and behaviour model constitutes a basis on which such effects can be studied. It is inherent in the model that when the interaction partner changes, perceived power of the interaction partner is affected as well as the individual's experienced power. Moreover, according to the competences required by the situation, experienced power of the individual changes. The model is thus adaptive to situations and persons.

Explicitly unpacking the power concept and postulating different facets of power opens up the research field for the investigation of more complex interplays of the different aspects of power, and thus can refine our understanding of how power affects behaviour. The model provides avenues of future research because (a) for some of the postulated links there is scarcely any data available and (b) other links currently not explicit in the

model can be added. The lack of research addressing some of the explicitly stated relations in the model has been pointed out throughout this article.

As for new links among the variables in the model, one could imagine that competence also influences perceived power of the interaction partner, especially since much research points out that competence differences often closely match power differences. Indeed, research shows that perceived interaction partner competence and perceived power of the interaction partner are highly correlated (Darioly & Schmid Mast, in press). Also, it is possible that the behaviour of my social interaction partner directly affects my experienced power without being mediated by the perceived power of the interaction partner. For example, I may accidentally sit at the head of the table, but because I notice that my interaction partners look at me for long periods of time I thus perceive that I must be the group leader. Self-perception theory says that in certain circumstances we learn about ourselves by observing how we behave, or, in this case, how others react to our behaviour (Bem, 1967). This is an example in which the power in the eye of the beholder (perceived power) can become a self-fulfilling prophecy and actually determine the experienced power of a person, and maybe on the long run also his or her actual power. The person might, as a consequence of being viewed by others as powerful, develop a more dominant personality or achieve a higher occupational position. This might necessitate a link between experienced power and actual power within each individual in the model.

The interpersonal power and behaviour model advocates the idea that behind all the facets there is one overlapping concept, or one all-encompassing definition of power. This means that in many instances, regardless of the facet under investigation, main effects of power on behaviour will emerge. This is what many existing power models postulate. Keltner et al. (2003) postulate that high power is related to the behavioural approach system, and in the Lammers et al. (2009) study both personal (independence) and social power (controlling others) indicated more approach behaviour. Although these main effects may persist, we need to turn our attention to the interaction effects (that can exist in conjunction with the main effects) involving different facets of power, as suggested with the interpersonal power and behaviour model. The facets suggested in the model might not be exhaustive and there might be different definitions of power underlying the facets. As just mentioned, some researchers make the distinction between personal power and social power, or legitimate and illegitimate power, not to mention the plethora of different operationalizations of power noted in the literature, any of which might function as a moderator. In a situation in which status or competence of an individual does not match his or her position power, the person can be seen as illegitimate. With respect to legitimacy, Lammers, Galinsky, Gordijn, and Otten (2008) showed that in a situation of illegitimate power, the powerless

did not differ from the powerful with regard to the activation of the approach system and the corresponding behaviour. Only in a situation of experienced legitimacy of the high- and low-power positions did high-power individuals show more of the predicted behavioural approach: They were more likely to negotiate and more ready to take risks than low-power individuals. In sum, there are also flavours of power within each of the facets—for example, personal versus social power, legitimate versus illegitimate power, aggressive versus sociable power (Kalma, Visser, & Peeters, 1993)—that are not included in the model but merit further investigation with respect to their potentially moderating role.

Conducting research involving a high- and a low-power individual by observing and measuring their behaviour during a social interaction is laborious. A particular challenge is to disentangle whether an observed difference between the high- and low-power persons is due to the power role of the ego or to the fact that ego was interacting with a person of complementary power. Despite this complication, researchers should bring the social interaction partner back into the interaction when studying power. Such a dyadic approach not only increases the ecological validity of the research findings, it also sets the groundwork for studying dynamic processes in hierarchical relationships. High (or low) power is not a stable attribute of a person but can change over time and situations, and especially so with different interaction partners. Research has so far neglected to investigate how one and the same person behaves, feels, and thinks when interacting as a superior, a subordinate, or when interacting with a peer.

To stay true to a relational approach to studying power, future research might want to place emphasis either on dyadic outcomes such as dyadic performance or on variables related to the quality of the relationship, such as relationship satisfaction, liking of the partner, or long-term stability of the relationship. Power plays a role in many of our social interactions, and there is thus much to be gained by a more refined and broadened understanding of the functioning, consequences, and implications of power for our everyday lives.

CONCLUSIONS

The study of power needs to be brought back in the context of the social interaction: Power emerges in social interactions and affects social interactions in turn. The *expression of power* of the interaction partners and their *perception of each other's power* are interwoven in actual social interactions and determine how each person feels, thinks, perceives, and acts. Interpersonal behaviour (verbal and nonverbal) is at the same time the vehicle of communicating one's own power to others and the source of information for others about one's power.

Power comes in many shades and hues. For one thing, the power position of a person does not entirely—if at all—determine his or her expressed behaviour. Not all leaders behave equally. Some use a more democratic, some a more autocratic leadership style. Gender and felt competence affect how high power is expressed in interpersonal interactions. In analogy, a specific behaviour is not an infallible indicator of high or low power, and even if it is, it remains unclear whether a person's behaviour reveals his or her position power, status, personality dominance, or competence or any possible combination of these. To give an example, observing one person interrupting another more often than vice versa does not necessarily mean that the former has more position power than the latter—perhaps he or she is just more competent in the matter. As long as we do not consider the effects of different aspects of power (e.g., personality dominance, gender, competence), our understanding of how power affects behaviour and of how behaviour is interpreted in terms of power remains very superficial.

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