

The relationship between managers' goal-setting styles and subordinates' goal commitment



Authors:

Xander van Lill¹ 
 Gerhard Roodt¹ 
 Gideon P. de Bruin² 

Affiliations:

¹Department of Industrial Psychology and People Management, University of Johannesburg, Johannesburg, South Africa

²Department of Industrial Psychology, Stellenbosch University, Stellenbosch, South Africa

Corresponding author:

Xander van Lill,
 xvallill@gmail.com

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Background: Convincing employees to set aside their self-interests and commit to collective goals is essential for the effective functioning of organisations. It is critical that the impact of different managerial goal-setting styles, and the associated impressions of fair interpersonal treatment in the workplace, is understood from subordinates' perspective. This might clarify the psychological mechanisms involved in motivating subordinates to commit to organisational goals.

Aim: The primary aim of this article is to determine the relationship between managers' goal-setting styles and subordinates' goal commitment. The secondary aim is to determine whether this relationship is mediated by interactional justice.

Setting: A total of 451 working adults completed an online or paper-and-pen survey.

Methods: A mediator model was conducted in structural equation modelling with maximum likelihood estimation and Bollen-Stine bootstrapping, with 5000 bootstrap resamples, to test the hypotheses.

Results: The perception that managers are deliberative had the greatest positive direct relationship with subordinates' goal commitment, followed by the directive style. Subordinates' perception of managers as complaisant, in turn, were unrelated to goal commitment (amotivational), whereas the perception of managers as hostile had a negative relationship with goal commitment. Informational justice, not interpersonal justice, emerged as the only mediating variable.

Conclusion: Managers should be encouraged to actively seek feedback from subordinates on their goal-setting styles. Managers can accordingly adapt their behaviour to effectively motivate subordinates to commit to organisational goals.

Keywords: work motivation; goal-setting styles; supervisor-focused interactional justice; goal commitment.

Introduction

A motivated workforce is central to the performance and, therefore, the competitiveness of any organisation in the global economy (Campbell & Wiernik 2015; Van Iddekinge et al. 2018). Although motivation is strongly related to work performance (Schmidt, Beck & Gillespie 2013; Van Iddekinge et al. 2018), a study conducted by Gallup (2017) indicated that only 15% of employees in 155 countries were highly involved in and enthusiastic about their work. Continued research into cognitive factors that motivate employees to make constructive contributions is critical to achieving success in the present-day workplace. The study under discussion attempts to create a framework that highlights the importance of subordinates' social perceptions of managers' styles during goal setting on subordinates' commitment to goals. The term social perception refers to the cognitive schemas employees instinctively use when making sense of and reacting to behaviours of others in the workplace (Cuddy, Glick & Beninger 2011; Fiske 1993).

Goal setting, in the study under discussion, is defined as the social exchanges between managers and subordinates when determining the aim of their collective actions (Locke & Latham 2013). Managers were defined as persons in positions of authority who, in part, must motivate subordinates to set aside self-interests and commit to collective goals (Hogan & Sherman 2020). If managers can motivate subordinates to commit to goals, employees' collective actions can be directed towards important and practically relevant organisational outcomes with greater intensity and persistence (Meyer 2014; Meyer, Becker & Vandenberghe 2004). Subordinates' commitment to

goals is, therefore, instrumental to organisational performance (Locke & Latham 2013; Piccolo & Buengler 2013), but, to date, limited attention has been paid to the impact of subordinates' social perceptions of managers' styles on their goal commitment. The primary aim of the present study was to investigate the relationship between subordinates' perceptions of managers' goal-setting styles and subordinates' goal commitment. The secondary aim of the present study was to determine whether an additional layer of social perception, namely supervisor-focused interactional justice, mediates the relationship between subordinates' initial impressions of managers' goal-setting styles and subordinates' subsequent goal commitment.

Literature review

The central aim of the current study was to determine the relationship between managers' goal-setting styles and subordinates' goal commitment. Goal commitment can be viewed as an important benchmark against which the effectiveness of managers' attempts to motivate subordinates through goal setting is measured (Piccolo & Buengler 2013). An orientation to conceptualise goal commitment will follow.

Subordinates' goal commitment

Even though consensus exists among scholars about the importance of a committed workforce for the performance of an organisation, there is disagreement about its conceptualisation (Klein, Molloy & Brinsfield 2012; Meyer 2014). Roodt (2004) argues that the lack of conceptual clarity could be attributed to the haphazard way in which research on commitment evolved. Disagreement exists as to whether the experience of commitment can be described as cognitive (positive expectations of goals' attractiveness and attainability), affective (positive emotions such as satisfaction with goals), volitional (wilful dedication to goals), conative (intentions to work hard to implement goals), or inclusive of all four psychological constructs (Klein et al. 2012; Roodt 2004). A study conducted by Van Lill, Roodt and De Bruin (2020) provides evidence that goal commitment could be viewed as a hierarchical model with a strong unidimensional factor, which consists of cognitive, emotional, volitional and conative dimensions. The general factor of commitment is theorised to be an intrinsically motivated bond with a goal (Klein et al. 2012), which influences the direction, intensity and persistence of subordinates' efforts at work (Meyer 2014). Following prior studies, goal commitment was used as the benchmark in the present study to investigate the effectiveness with which different goal-setting styles motivate subordinates to pursue and implement goals (Piccolo & Buengler 2013). However, in contrast to prior studies, goal commitment was measured as a hierarchical factor which is inclusive of a cognitive, affective, volitional and conative factor.

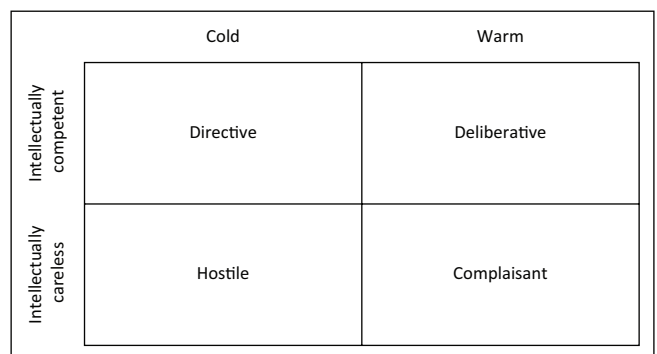
Managers' goal-setting styles

House and Mitchell's (1975) path-goal theory is the only framework that explicitly addresses the different styles that managers adopt during goal setting to motivate subordinates

to pursue goals (Piccolo & Buengler 2013). Few, if any, alternative frameworks of managers' goal-setting styles, with the necessary empirical support, since 1975 could be identified. An alternative framework that accounts for key evidence in the preceding 50 years of goal-setting literature might provide a new perspective and advance scientific literature (Locke & Latham 2019).

Two constructs measured by Latham, Erez and Locke (1988), namely participative goal setting and goal rationales, provide axes around which an alternative and coherent theory of managers' goal-setting styles can be formulated. However, as portrayed in Figure 1, the constructs are reformulated in the present study to reflect universal dimensions on which subordinates form social impressions of managers (Cuddy et al. 2011; Rosenberg, Nelson & Vivekananthan 1968). Subsequently, goal rationale is reformulated as intellectual competence, which reflects managers' ability to persuade others to pursue collective goals by using convincing rationales in support of the importance and practicality of the proposed goals (Cuddy et al. 2011; Latham et al. 1988; Rosenberg et al. 1968; Yukl, Kim & Chavez 1999). Participative goal setting, in turn, is reformulated as warmth, which refers to the degree to which managers are concerned about others' well-being and their respectfulness towards alternative views or concerns raised while setting goals (Falbe & Yukl 1992; House & Mitchell 1975; Latham et al. 1988; Rooney & Gottlieb 2007). Intellectual carelessness and coldness anchor the intellectual competence and warmth dimensions on the opposite ends of the axes. Intellectual carelessness occurs when managers set goals impulsively, with little thought given to the importance or practical implications of goals (De Vries 2018; Shaw, Erickson & Harvey 2011). A perception of coldness is created by managers who are overly critical and discourage others from participating in goal setting (De Vries 2018; Rooney & Gottlieb 2007).

Four goal-setting styles are inferred from the two theoretical axes, which are argued to have weak or strong relationships with intellectual competence, warmth, intellectual carelessness and coldness depending on the constructs' relative locations in Figure 1. The four styles inferred from the two axes are: deliberative, directive, complaisant and hostile.



Source: Adapted with permission from: Van Lill, X., Roodt, G. & De Bruin, G.P., 2019, 'Democratising goal setting: Possibilities and pitfalls of online deliberation and big data methods', in M. Coetzee (ed.), *Thriving in digital workspaces: Emerging issues for research and practice*, p. 172, Springer Nature, Cham. https://doi.org/10.1007/978-3-030-24463-7_9

FIGURE 1: Taxonomy of managers' goal-setting styles.

Deliberative managers are perceived as persons in positions of authority who encourage democratic forms of goal setting, by thoughtfully engaging subordinates in critical discussions, to set goals that are meaningful and practical (Gastil 1994; Van Lill, Roodt & De Bruin 2019). The view that managers are intellectually competent could emerge when managers provide new insight about the meaningfulness or practical relevance of goals when deliberating with subordinates (Schneiderhan & Khan 2008; Van Lill et al. 2019). The impression that deliberative managers exchange relevant information, and invite and carefully consider alternative views, could simultaneously increase the sense that managers are warm (Redeker et al. 2014; Schneiderhan & Khan 2008; Van Lill et al. 2019).

Directive managers are perceived by subordinates as forceful persons in positions of authority who set goals with assertiveness, conviction and a determination to achieve set standards and follow procedures (Redeker et al. 2014; Schriesheim & Kerr 1974). Anderson and Kilduff (2009) posit that dominance is strongly associated with indicators of intellectual competence, such as the ability to persuade others. However, subordinates who perceive their managers as decisive and unbending in convictions about assigned goals might also believe that subordinates' views and concerns are disregarded (Gagné & Deci 2005; Rooney & Gottlieb 2007), reducing managers' perceived warmth (Cuddy et al. 2011; Redeker et al. 2014).

Subordinates who perceive managers as complaisant might believe that managers are willing to compromise organisational goals to accommodate subordinates (Einarsen, Aasland & Skogstad 2007) and, consequently, the style is associated with greater warmth (Cuddy et al. 2011; Redeker et al. 2014). A perception of managers as complaisant might, however, be associated with an ineffectiveness to rise above individual concerns and set broader strategic goals (Einarsen et al. 2007). The perception that managers are less attentive to broader strategic matters might lead subordinates to believe that managers are intellectually careless (Einarsen et al. 2007; Van Lill et al. 2019).

Hostile managers are, in subordinates' view, destructive persons in positions of authority who actively undermine subordinates' attempts to reason and misrepresent facts to support assigned goals (Duffy, Ganster & Pagon 2002; Rooney & Gottlieb 2007; Shaw et al. 2011). Perception of managers as individuals who ridicule subordinates' views while misrepresenting facts to persuade others might cause subordinates to believe that these managers are higher in intellectual carelessness and coldness (Cuddy et al. 2011; De Vries 2018; Rooney & Gottlieb 2007).

Relationships between goal-setting styles and goal commitment

Each goal-setting style is hypothesised to have a different relationship with goal commitment depending on its relative location in Figure 1. However, this relationship is argued to

be dependent on an additional social layer of interpretation that subordinates use to make sense of their exchanges with managers when setting goals (Cropanzano et al. 2017), namely supervisor-focused interactional justice. Supervisor-focused interactional justice refers to the perceived fairness of interpersonal treatment received from managers (Bies 2015), which in the current study is argued to be influenced by subordinates' perceptions of managers' relative standing on intellectual competence and warmth during goal setting. Greenberg (2009) differentiates between two concepts of interactional justice, namely interpersonal and informational justice. When managers provide clear rationales for goals (intellectual competence), subordinates are theorised to experience a deeper sense of being treated with sincerity and honesty and, therefore, attribute supervisor-focused informational justice to the goal-setting style (Bies 2015; Greenberg 2009). When managers are perceived to be considerate of alternative views or concerns about goals (warmth), subordinates are theorised to experience a greater sense of being treated with dignity and respect (Bies 2015; Greenberg 2009) and, therefore, attribute supervisor-focused interpersonal justice to the goal-setting style.

Relationship between the deliberative style and goal commitment

Managers who insightfully engage in critical discussions about the meaningfulness and practicality of goals are theorised to increase subordinates' positive expectancies, intentions to implement and, therefore, commitment to goals (Van Lill et al. 2019; Vroom 1964; Yukl et al. 1999). Subordinates' impression that managers exchange relevant information, and invite and carefully consider alternative views (warmth) could further increase subordinates' sense of self-determination, positive emotions about, internal dedication and, therefore, commitment to goals (Deci, Olafson & Ryan 2017; Gagné & Deci 2005; Redeker et al. 2014; Van Lill et al. 2019). Considering the deliberative styles' higher standing on both intellectual competence and warmth, it is hypothesised that:

H_{1A}: The deliberative style has the strongest positive relationship with goal commitment.

The mediation of the relationship between a deliberative style and goal commitment by informational and interpersonal justice

Subordinates are likely to experience a greater sense of honesty and dignity when managers share relevant information and thoughtfully engage subordinates in discussions about the meaningfulness and practicality of goals (Cropanzano et al. 2017). An increase in the experience of honesty (informational justice) and dignity (interpersonal justice) is, in turn, argued to increase subordinates' willingness to reciprocate managers' fair interpersonal treatment by committing to goals (Colquitt et al. 2013; Cropanzano et al. 2017). Against this background, it is hypothesised that:

H_{1B}: Supervisor-focused informational and interpersonal justice will mediate the positive relationship between the deliberative style and goal commitment.

Relationship between the directive style and goal commitment

Subordinates might associate the dominant characteristics of a directive style with greater competence, which could increase subordinates' positive expectancies of, intentions to implement and, therefore, commitment to goals (Anderson & Kilduff 2009; Van Lill et al. 2019). However, subordinates might also experience managers' unbending conviction about assigned goals as a disregard for others' views (coldness). This disregard could decrease subordinates' sense of self-determination, positive emotions about and internal dedication to goals, and, therefore, reduce the intensity of subordinates' commitment to goals (Deci et al. 2017; Gagné & Deci 2005; Van Lill et al. 2019). Considering this background, it is hypothesised that:

H_{2A}: The directive style has a positive relationship with goal commitment, albeit with a weaker relationship than the deliberative style.

The mediation of the relationship between a directive style and goal commitment by informational and interpersonal justice

Managers who are decisive, confident and clear about their expectations might be viewed as honest and thorough in their explanations of goals. Subordinates could, as a result, commit to goals as a social exchange for what is perceived to be supervisor-focused informational justice (Colquitt et al. 2013; Cropanzano et al. 2017). However, subordinates are less likely to attribute interpersonal justice to directive managers because of disregard for alternative views and concerns about goals. On that premise, it is hypothesised that:

H_{2B}: Supervisor-focused informational justice, but not interpersonal justice, will mediate the positive relationship between the directive style and goal commitment.

Relationship between the complaisant style and goal commitment

A perception of managers as complaisant might be associated with an ineffectiveness to rise above individual concerns and set broader strategic goals and, therefore, reduce positive expectancies of and the intention to implement goals (Einarsen et al. 2007). Even if managers' complaisance is perceived to be a sincere attempt to maintain warm relationships and allow any person to take control of the goal-setting process (Cuddy et al. 2011; Redeker et al. 2012), the perception that managers are less attentive to broader strategic matters might render subordinates emotionally unaffected, undedicated (Deci et al. 2017; Gagné & Deci 2005; Redeker et al. 2012; Van Lill et al. 2019) and more attuned to other role players who are perceived to be more deliberate when setting goals (Einarsen et al. 2007; Latham et al. 1988; Van Lill et al. 2019). It is accordingly hypothesised that:

H_{3A}: A complaisant style has a negligible relationship with goal commitment.

The mediation of the relationship between a complaisant style and goal commitment by informational and interpersonal justice

Managers who are perceived as easily manipulated might also be viewed as less capable of maintaining subordinates'

dignity or upholding the truth when it is socially inconvenient to do so (Einarsen et al. 2007; Van Lill et al. 2019). When managers are viewed as ineffectual in upholding interpersonal and informational justice, subordinates might also be unmotivated to commit to goals. Against this background, it is hypothesised that:

H_{3B}: Neither supervisor-focused informational nor interpersonal justice will mediate the relationship between a complaisant style and goal commitment.

Relationship between the hostile style and goal commitment

The belief that hostile managers are intellectually careless is theorised to erode subordinates' positive expectancies of, intentions to implement, and, therefore, increase the likelihood to withhold commitment to goals (Van Lill et al. 2019; Vroom 1964; Yukl et al. 1999). The view that hostile managers are disregarding could further increase a sense of external tyranny that might erode positive emotions about, increase an internal opposition to and also enhance the likelihood that subordinates will withhold goal commitment (Gagné & Deci 2005; Redeker et al. 2014; Van Lill et al. 2019). It is accordingly hypothesised that:

H_{4A}: The hostile style has the strongest negative relationship with goal commitment.

The mediation of the relationship between a hostile style and goal commitment by informational and interpersonal justice

Subordinates are less likely to attribute informational justice (honesty and thoroughness) to managers who misrepresent facts (or display dishonesty) to motivate others to pursue assigned goals. Managers who further undermine subordinates' ability to reason during goal setting are also likely to decrease subordinates' perceptions of being treated with dignity and respect (Tepper 2000). Subordinates might withhold their commitment to goals as a psychological form of retribution to restore a psychological imbalance caused by supervisor-focused informational and interpersonal injustice (Colquitt et al. 2013; Colquitt & Zipay 2015; Cropanzano et al. 2017). It is accordingly hypothesised that:

H_{4B}: Supervisor-focused informational and interpersonal justice will mediate the negative relationship between a hostile style and goal commitment.

Method

Subordinates' cognitive schema of their managers' goal-setting styles, as well as their willingness to commit to goals, were central to this study, which could not be investigated from other stakeholders' points of view (Spector 2019). Furthermore, a measurement of subordinates' cognitive schemas at different time intervals might have introduced extraneous variables into the design (Spector 2019). A cross-sectional design was selected to explore the multifaceted nature of the subjective ways in which subordinates make sense of and react to their managers' goal-setting styles at one point in time (Pierce & Aguinis 2003; Spector 2019).

Setting

The respondents were 451 working adults aged 18 and older who had at least a Grade 12 education, a satisfactory English reading ability and who reported to a manager in their work setting. To achieve generalisability of results, 17 organisations across various sectors and industries were targeted for participation in an online or paper-based survey. Respondents were drawn from six participating organisations that represented the industries of agriculture, finance, manufacturing, science, human health and transport. A total of 77% of the respondents were non-managerial employees, while 23% were managers; 36% had a university qualification and 64% held Grade 12 (matric) or a diploma.

Instruments

A five-point intensity rating scale was employed for all the items (Zikmund et al. 2010). Verbal anchors were used to define extreme points at both ends of the scale (Zikmund et al. 2010).

Goal-setting styles

The deliberative scale (e.g. 'How keen is your manager to clarify uncertainties, regarding proposed goals, through mutual reasoning?'), directive scale (e.g. 'How assertively does your manager communicate his/her expectations for assigned goals?') and hostile scale (e.g. 'How prone is your manager to undermine subordinates' attempts to reason about assigned goals?') each consisted of six items. The complaisant scale (e.g. 'How willing is your manager to sacrifice organisational requirements to promote subordinates' interests when setting proposed goals?') consisted of four items. The internal consistency reliabilities of all the goal-setting style scales were satisfactory (Cronbach's alpha and McDonald's omega ≥ 0.71).

Social perception

The intellectual competence scale (e.g. 'How clearly does your manager explain why proposed goals are necessary?'), warmth scale (e.g. 'How concerned is your manager with the impact that proposed goals may have on subordinates' welfare?'), intellectual carelessness scale (e.g. 'How impulsively (irrationally) does your manager set goals?') and coldness scale (e.g. 'How disregarding is your manager about the impact, whether positive or negative, of assigned goals on subordinates?') each consisted of six items. The internal consistency reliabilities of all the social perception scales were satisfactory (Cronbach's alpha and McDonald's omega ≥ 0.93).

Supervisor-focused interactional justice

An adapted version of Colquitt and Rodell's (2015) justice measure, with the supervisor as focus, was administered. Respondents had to rate their perceptions of managers' fairness on the interpersonal justice scale (e.g. 'How politely does your manager treat you?') and the informational justice scale (e.g. 'How honest is your manager when communicating?'). The interpersonal and informational justice scales consist of four and five items respectively.

The internal consistency reliabilities of all the supervisor-focused justice scales were satisfactory (Cronbach's alpha and McDonald's omega ≥ 0.93).

Goal commitment

Three items were developed for each of the scales measuring the first-order factors of goal commitment: cognitive commitment (e.g. 'How reachable are goals set by your manager?'), affective commitment (e.g. 'How satisfied are you with goals set by your manager?'), volitional commitment (e.g. 'How dedicated are you to goals set by your manager?') and commitment intentions (e.g. 'How willing are you to put forth a great deal of effort, beyond what normally is required, to achieve goals set by your manager?'). The internal consistency reliabilities of all the goal commitment scales were satisfactory (Cronbach's alpha and McDonald's omega ≥ 0.95).

Procedure

Access to organisations in Gauteng was obtained by approaching executives or human resource practitioners within the organisations. The questionnaires were administered using an online platform or a paper-and-pencil version of the survey. To prevent non-responses, which posed a threat to the external validity of the survey administered using the online platform, frequent reminders were sent to encourage participation. To prevent missing responses, which posed a threat to the external validity of the paper-and-pencil survey, respondents' questionnaires were inspected upon submission.

Ethical consideration

The study was low in risk, but precautions were taken to ensure that participation was voluntary and anonymous, that no harm was caused, that the questions were completed truthfully and that informed consent had been given to use the results for purposes of research. Ethical approval for the research project was obtained from the Research Ethics Committee, College of Business and Economics, University of Johannesburg. FOM2016-IPPM02, 14 April 2016.

Analysis

As a preliminary step in investigating each research hypothesis, the multivariate skewness and kurtosis, inter-factor correlations, factor regressions, mean, standard deviation and inter-item reliabilities of each scale were inspected. Inter-factor correlations and factor regressions were inspected by conducting structural equation modelling (SEM) with robust maximum likelihood estimation (MLM) (Li 2016). Fit, based on absolute indices, was considered suitable if the root mean square error of approximation (RMSEA) and standardised root mean residual (SRMR) were 0.08 or lower (Brown 2006; Browne & Cudeck 1992). Fit, based on comparative indices, was considered suitable if the comparative fit index (CFI) and Tucker-Lewis index (TLI) were 0.90 or higher (Brown 2006; Hu & Bentler 1999).

A parallel multiple mediation model was inspected by conducting SEM using version 0.6-4 of the *lavaan* package in R (Rosseel 2012; Rosseel & Jorgensen 2018) to examine $H_{1A'}$, $H_{2A'}$, $H_{3A'}$, $H_{4A'}$, $H_{1B'}$, $H_{2B'}$, $H_{3B'}$ and $H_{4B'}$. Model parameters were obtained by conducting SEM with ML and Bollen-Stine bootstrapping with 5000 bootstrap resamples (Bollen & Stine 1992; Finney & DiStefano 2006; Hayes 2018). Hayes's (2018) guidelines were followed to specify the paths between the latent variables, and to calculate the direct, indirect, indirect total and total effects. As recommended by Baron and Kenny (1986), the products of paths relevant to H_{1B} to H_{4B} ($a*b$) were calculated to inspect the hypothesised multiple mediator model. The indirect effects were interpreted in line with the squared values in Cohen's (1988) guidelines (Kenny 2018; Shrout & Bolger 2002). An effect size of 0.01 to 0.09 was interpreted as small, 0.09 to 0.25 was interpreted as moderate, and 0.25 to 1 was interpreted as large (Cohen 1988; Kenny 2018; Shrout & Bolger 2002).

Results

Descriptive statistics

Mardia's multivariate skewness and kurtosis coefficients for the entire set of 72 items (manifest variables) were 99.332.88 ($p < 0.05$) and 117.73 ($p < 0.05$), which provided justification for the use of more robust estimation techniques. The standardised inter-factor correlations are reported in Table 1, with the mean, standard deviation and internal consistency reliability of each variable in the last four rows. The models specified to determine the inter-factor correlations yielded satisfactory fit ($\chi^2 [df] = 1567.44 [835]$; CFI = 0.94; TLI = 0.94; SRMR = 0.06; RMSEA = 0.05).

The internal consistency reliability of each of the scales in Table 1 was satisfactory (α and $\omega \geq 0.71$). The size of the correlations between the factors pointed towards the order in which the styles were expected to be related to informational justice, interpersonal justice and goal commitment. The deliberative style had the highest positive correlation with informational justice, interpersonal justice and goal commitment. The directive style also had a positive relationship with informational justice, interpersonal justice and goal commitment, albeit smaller than the deliberative style. Even

TABLE 1: Inter-factor correlations of the goal-setting scales.

Styles	DEL	DIR	COA	HOS	INT	INF	COM
DEL	-	-	-	-	-	-	-
DIR	0.70*	-	-	-	-	-	-
COA	0.23*	0.01	-	-	-	-	-
HOS	-0.66*	-0.49*	-0.04	-	-	-	-
INT	0.66*	0.58*	0.12*	-0.75*	-	-	-
INF	0.82*	0.70*	0.16*	-0.70*	0.78*	-	-
COM	0.82*	0.71*	0.14*	-0.66*	0.71*	0.89*	-
Mean	3.34	3.77	2.46	2.19	3.78	3.47	3.77
Standard deviation	1.10	0.86	0.81	1.10	1.11	1.08	0.84
Alpha	0.95	0.89	0.71	0.92	0.93	0.94	0.95
Omega	0.95	0.89	0.72	0.92	0.94	0.95	0.97

DEL, Deliberative; DIR, Directive; COA, Compliant; HOS, Hostile; INT, Interpersonal justice; INF, Informational justice; COM, Commitment.

*, $p < 0.05$.

though the complaisant style had positive relationships with informational justice, interpersonal justice and goal commitment, the size of these relationships was small. Per the predictive hypotheses, the hostile style had negative relationships with informational justice, interpersonal justice and goal commitment. The inter-factor correlations merited a further investigation into the predictive validity of different goal-setting styles for goal commitment.

Relationship between goal-setting styles and social perceptions

The central aim of the current study is to investigate the relationship between managers' goal-setting styles and subordinates' goal commitment. Evidence in support of the cognitive schema that subordinates use to make sense of different goal-setting styles, as proposed in Figure 1, assists in validating the framework used to explain the relationships between goal-setting styles and goal commitment. The relative standing of goal-setting styles was tested by regressing the four goal-setting styles on four different social perceptions, namely intellectual competence, warmth, intellectual carelessness and coldness, simultaneously. The standardised factor regressions are reported in Table 2, with the mean and standard deviation of the social perceptions in the last two rows. The model specified to determine the factor regressions ($\chi^2 [df] = 1602.29 [961]$; CFI = 0.96; TLI = 0.95; SRMR = 0.05; RMSEA = 0.05) yielded satisfactory fit. The internal consistency reliability coefficients of the social perception scales are also provided in the last two rows of Table 2.

The internal consistency reliability of each of the scales in Table 2 was satisfactory (α and $\omega \geq 0.93$). The factor regressions indicate that the deliberative style had the strongest positive relationship with intellectual competence and warmth. The directive style had a small positive relationship with intellectual competence but was not positively related to coldness. Evidence, at this juncture, suggests that directive managers might simply be unsuccessful at increasing perceptions of warmth among subordinates. A small positive relationship was found between the complaisant style and intellectual carelessness and warmth. The hostile style had a positive relationship with intellectual carelessness and coldness. Most of the styles' associations with social perceptions, apart from the directive style's relationship with coldness, confirmed the relative location of goal-setting styles

TABLE 2: Factor regressions of goal-setting styles scales on social perception scales.

Style	Intellectual competence	Warmth	Intellectual carelessness	Coldness
Deliberative	0.78*	0.72*	-0.30*	-0.21*
Directive	0.14*	0.06	-0.04	-0.07
Complaisant	-0.02	0.10*	0.11*	-0.07*
Hostile	-0.05	-0.21*	0.63*	0.72*
Mean	3.43	3.33	2.27	2.24
Standard deviation	1.06	1.09	1.04	1.10
Alpha	0.95	0.96	0.93	0.94
Omega	0.95	0.96	0.93	0.94

*, $p < 0.05$.

in Figure 1. Given the evidence in support of the location of goal-setting styles in Figure 1, the next step was to test the predictive hypotheses.

Parallel multiple mediator model

Before the relationships in H_1 to H_4 could be inspected, the fit statistics of the parallel multiple mediator model had to be evaluated. The fit statistics for the model ($\chi^2 [df] = 2252.66 [836]$; CFI = 0.92; TLI = 0.92; SRMR = 0.07; RMSEA = 0.06) were satisfactory. Two alternative models to Figure 2 were specified, to inspect the viability of other explanations for the relationship between the observed and latent variables. Firstly, due to the high inter-factor correlations between the deliberative style, the directive style, interpersonal justice and informational justice (see Table 1), the measurement variables of all the factors were loaded on a unidimensional factor called the constructive approach to goal setting. The direct relationship between the constructive approach, hostile style, as well as the complaisant style, and goal commitment was, in turn, determined. However, the fit statistics for the model ($\chi^2 [df] = 4508.16 [850]$; CFI = 0.80; TLI = 0.79; SRMR = 0.08; RMSEA = 0.10) were unsatisfactory. Secondly, the mediation of interactional justice (a unidimensional factor containing items from both informational and interpersonal justice) on the relationship between goal-setting styles and goal commitment was specified. This model also did not yield satisfactory fit with the observed data ($\chi^2 [df] = 3015.43 [841]$; CFI = 0.88; TLI = 0.87; SRMR = 0.07; RMSEA = 0.08). After establishing model fit, path coefficients were inspected to obtain a detailed understanding of the coefficients on which direct and indirect relationships between goal-setting styles and goal commitment were calculated, which are reported in Figure 2.

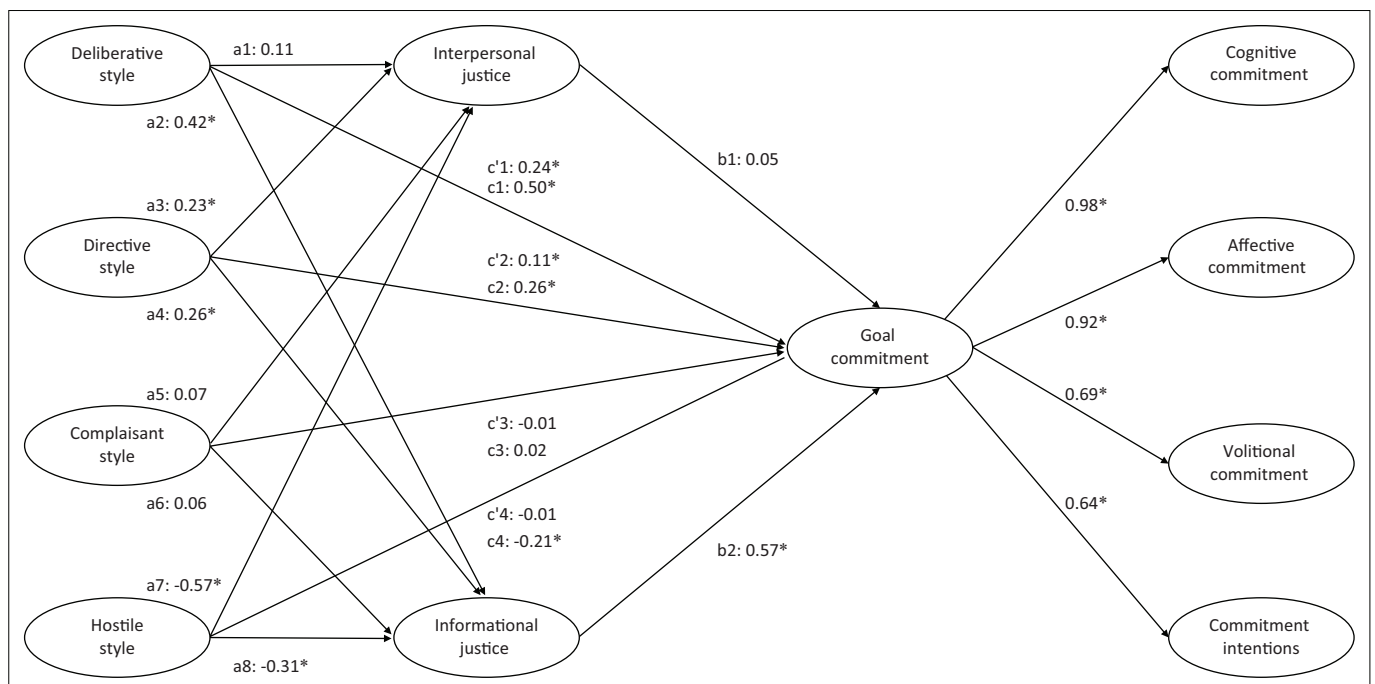
Direct relationships between goal-setting styles and goal commitment

As reflected in Figure 2, the deliberative style had the strongest positive direct relationship ($c1: 0.50^*$) with goal commitment, unadjusted for the mediation of informational and interpersonal justice, followed by the directive style ($c2: 0.26^*$), which supported H_{1A} and H_{2A} . The complaisant style had a non-significant direct relationship with goal commitment ($c3: 0.02$), unadjusted for the mediation of informational and interpersonal justice, which supported $H3A$. The hostile style had a negative direct relationship with goal commitment ($c4: -0.21^*$), unadjusted for the mediation of informational and interpersonal justice, which supported $H4A$. After the direct relationships have been established, the dependence of the primary relationship on a third and fourth variable, namely informational and interpersonal justice, could be investigated.

Mediation of the relationship between goal-setting styles and goal commitment by informational and interactional justice

The coefficients for the hypothesised mediation of informational and interpersonal justice, after controlling for all the other relationships, are reported in Table 3.

In partial support of H_{1B} , informational justice (effect 2: 0.24^*), but not interpersonal justice (effect 1: 0.01), mediates the positive relationship between the deliberative style and goal commitment. The direct positive relationship between the deliberative style and goal commitment decreased (from $c1: 0.50^*$ to $c'1: 0.24^*$ in Figure 2) when the mediation of informational and interpersonal justice was controlled for. The positive relationship between the directive style and goal commitment is mediated by informational justice (effect 4: 0.15^*), but not interpersonal justice (effect 3: 0.01), which



*, $p < 0.05$.

FIGURE 2: The direct and indirect relationships between goal-setting styles and goal commitment.

TABLE 3: Mediation of the relationship between goal-setting styles and goal commitment by informational and interpersonal justice.

Number	Effects	Product of coefficients		95% bootstrapped confidence interval	
		Standard estimate	Bootstrapped standard error	Lower	Upper
1	DEL→INT→COM (a1*b1)	0.01	0.02	-0.02	0.04
2	DEL→INF→COM (a2*b2)	0.24	0.10	0.36	0.74
3	DIR→INT→COM (a3*b1)	0.01	0.03	-0.02	0.08
4	DIR→INF→COM (a4*b2)	0.15	0.07	0.20	0.48
5	COA→INT→COM (a5*b1)	< 0.01	0.01	-0.01	0.03
6	COA→INF→COM (a6*b2)	0.03	0.05	-0.01	0.16
7	HOS→INT→COM (a7*b1)	-0.03	0.06	-0.20	0.06
8	HOS→INF→COM (a8*b2)	-0.18	0.07	-0.56	-0.27

DEL, Deliberative; DIR, Directive; COA, Compliant; HOS, Hostile; COM, goal commitment; INT, interpersonal justice; INF, informational justice.

supports H_{2B} . The direct positive relationship between the directive style and goal commitment decreased (from c_2 : 0.26* to c'_2 : 0.11* in Figure 2) when the mediation of informational and interpersonal justice was controlled for. Neither informational (effect 6: 0.03) nor interpersonal justice (effect 5: < 0.01) mediated the relationship between the compliant style and goal commitment, which supports H_{3B} . The negative relationship between the hostile style and goal commitment was mediated by informational justice (effect 8: -0.18*), but not interpersonal justice (effect 7: -0.03), which provides partial support for H_{4B} . The relationship between the hostile style and goal commitment decreased (from c_4 : -0.21* to c'_4 : -0.01) after controlling for the mediation of informational and interpersonal justice. Unexpectedly, interpersonal justice appears to play a limited role in mediating either the relationship between the deliberative style and goal commitment, or the relationship between the hostile style and goal commitment. The assumption of full mediation, as with the non-significant adjusted direct effect of the hostile style, should be viewed with caution, as the calculation of mediators has a power advantage over the calculation of direct effects (Kenny & Judd 2014; Shrout & Bolger 2002). Subsequently, the coefficients of the hypothesised indirect effects (see Table 3) were of primary concern, irrespective of whether zero could be ruled out as a value for the direct effects.

Discussion

To date, limited attention has been paid to the relationship between subordinates' social perceptions of managers' goal-setting styles and subordinates' goal commitment as mediated by supervisor-focused informational and interpersonal justice. The central aim of the study under discussion was to determine the impact of a greater range of subordinates' perceptions of managers' behaviours during goal setting on subordinates' goal commitment.

The hypotheses that goal-setting styles would have different relationships with goal commitment, based on the styles' relative location to intellectual competence, warmth, intellectual carelessness and coldness in Figure 1, received preliminary support. Firstly, the perception of managers as deliberative had the strongest positive relationship with goal commitment (H_{1A}). The finding is, in part, attributed to an

increase in positive expectancies of and intentions to implement goals set when managers afford insights about the meaningfulness and practicality of goals while deliberating with subordinates (intellectual competence). Deliberative managers are also likely to increase subordinates' sense of self-determination, positive emotions about and internal dedication to goals when thoughtfully considering alternative views (warmth). Secondly, perceptions of managers as directive had a smaller positive relationship with goal commitment relative to a deliberative style (H_{2A}). It is theorised that a perception of managers' unbending conviction about assigned goals could leave subordinates ambivalent about managers' warmth or coldness. This ambivalence might reduce positive emotions about and an internal dedication to goals. Thirdly, subordinates' perception of managers as compliant had an amotivational relationship with goal commitment (H_{3A}) due to a strategic ineffectiveness to increase positive expectations about, intentions to implement and dedication to goals. Instead, subordinates might be more dedicated to the goals of other strategic role players who are perceived as more deliberate. Finally, the evidence supports the notion that subordinates' perception of managers as hostile provokes subordinates to withhold their commitment from goals (H_{4A}). The finding is, in part, attributed to doubt brought about by subordinates' perception that hostile managers withhold information or misrepresent facts, thereby reducing positive expectations of and subsequent intentions to implement assigned goals. Hostile managers' undermining of subordinates' attempts to reason about goals might further be interpreted as a form of external tyranny that erodes positive emotions about and increases the will to oppose goals set.

Informational justice (H_{1B} , H_{2B} , H_{4B}), relative to interpersonal justice (H_{1B} and H_{4B}), appears to be a more important interpersonal criterion used by subordinates to determine whether they should reciprocate goal-setting styles by bonding with or withholding their commitment from goals. The sincerity and truthfulness with which managers communicate information may be foundational to effective deliberation, since its absence could jeopardise the impact of democratic leadership by distorting discussions, thereby obstructing the goal-setting process from following the intended course (Gastil 1993). The growing need for sharing information is amplified by the complexity of the business environment, which emphasises the increasing need for managers to create networks in organisations through the effective sharing of information (Uhl-Bien & Arena 2018).

Theoretical implications

The results of the study suggest that subordinates' commitment to goals is influenced by their unique social perceptions of their managers, based on two dimensions of social cognition, namely the degree of warmth (increasing self-determination, positive emotions about and an internal dedication to goals) and intellectual competence (increasing

positive expectations and intentions to implement goals) associated with managers' goal-setting styles (Cuddy et al. 2011; Van Lill et al. 2019). As a result, each style's relationship with goal commitment depends on its relative location to intellectual competence, warmth, intellectual carelessness and coldness in Figure 1. New insights on the social dynamics between managers and subordinates when setting goals is, therefore, obtained by integrating the theory of goal setting with workplace deliberative democracy and social cognition.

The present study further provides evidence that perceptions of managers' styles as informationally fair, more so than interpersonally fair, has important implications for subordinates' commitment to goals. The findings shed a unique light on an additional social perceptual layer that could be incorporated into future studies to make sense of democratic goal setting, namely supervisor-focused informational justice.

Managerial implications

The dimensions outlined in this section could be used by managers to actively seek structured feedback from subordinates about their goal-setting styles. If managers can identify early signs of the negative impact of their goal-setting styles by asking subordinates what they think of and feel about goals set, including taking note of expressions of subordinates' dedication to and intentions to implement goals, managers could engage their teams by using more effective goal-setting styles that are likely to ensure subordinates' sustained effort on important and practically relevant collective goals. However, managers should also be cognisant that subordinates evaluate managers' goal-setting styles through the lenses of supervisor-focused informational justice in the workplace. Goal-setting styles that are more strongly associated with the rules of informational justice (honesty and thoroughness) may have a greater motivational impact on subordinates' commitment to goals set.

Conclusion

Limitations and future directions

A self-report survey was administered to respondents, to ensure an efficient measure of the relationships between subjective variables at a given time, which may be perceived as a weakness in terms of common method variance (Spector 2019). However, given the centrality of subordinates' social perceptions in the present study, it would not have made sense to infer their social cognition from other stakeholders' (managers, peers, subordinates or clients) points of view (Podsakoff et al. 2012; Spector 2019). Furthermore, a measurement of subordinates' impressions of managers' goal-setting styles and goal commitment at different time intervals might have introduced extraneous variables into the design (Spector 2019). To reduce method bias in the study under discussion, apprehension was reduced by protecting respondents' anonymity (cf. Podsakoff et al.

2003). The ambiguity of items was further investigated by conducting an item-sort exercise with subject matter experts (cf. Podsakoff et al. 2012; Van Lill 2019). Items with low substantive validity were subsequently adjusted or removed from the measures (Howard & Melloy 2016; Van Lill 2019).

An investigation of the consistency of the effects of goal-setting styles on goal commitment across goal conditions might provide invaluable information about situational variables that could influence the relationships reported. For example, the SEM could be nested in different types of goals (i.e. learning or performance goals) or managerial levels. Learning goals might elicit more interest and enjoyment than performance goals from subordinates and, as a result, lead to greater goal commitment, irrespective of managers' goal-setting styles. The importance of goals set at higher levels of management might accentuate the need for greater deliberation to get commitment when compared to lower levels of management. To investigate the effects of situational variables, a multilevel SEM model that nests the effects in different goal conditions could be investigated (Rabe-Hesketh, Skrondal & Zheng 2012). According to Stone-Romero and Rosopa (2008), erroneous inferences can be made about causal effects based on non-experimental research. The study under discussion relied on theory, as well as the inspection of alternative SEM models, to determine if supervisor-focused informational and interpersonal justice mediate the relationship between goal-setting styles and goal commitment. However, it is strongly recommended that future experimental studies be designed to determine whether the findings of this study are replicable.

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Author's contributions

X.v.L. and G.R. developed the conceptual framework. G.P.d.B. contributed to the research method.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, X.v.L., upon reasonable request.

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