

Goal ambiguity and managerial goal setting strategies

From item generation to scale validation



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Abstract

Public sector goals are prone to goal ambiguity: a situation in which goals can be interpreted in multiple ways. With the rise of performance management, clear goals have gained in practical importance as they are needed to know what should be accomplished. However, our understanding of what goal ambiguity is exactly is still limited. Moreover, being able to deal with goal ambiguity can support performance management, for which managerial goal setting strategies provide an opportunity. This concept, however, needs better conceptualisation. Both concepts are also in need of good survey measures to study them.

To address those gaps, three empirical studies within the context of universities in the Netherlands have been conducted to develop better conceptualisations and survey measures for goal ambiguity and managerial goal setting strategies. Starting with a qualitative approach to delve into the meaning of the key concepts, interviews (n = 8) and focus groups (n = 10) were conducted as a source for item development. Subsequently, the items were tested in cognitive interviews (n = 6) to improve the questionnaire. In the third study, the newly developed items were tested at social and legal science departments within six universities (n = 57). Exploratory factor analysis was performed to evaluate the data and develop measurement scales. The qualitative findings confirm the importance and reality of goal ambiguity, but analysis of the survey data does not produce meaningful scales. For managerial goal setting strategies, on the other hand, three scales have been developed: translation, participation, and direction. Validation in future research is encouraged.

1. Introduction

Performance management is commonly used in public organisations. However, its application is not without criticism (Diefenbach, 2009; Pollitt & Bouckaert, 2011; Van Thiel & Leeuw, 2002). This management practice, adopted from the private sector with the introduction of New Public Management (NPM), can be defined as “systematic, regular and comprehensive capturing, measurement, monitoring and assessment of crucial aspects of organizational and individual performance through explicit targets, standards, performance indicators, measurement and control systems” (Diefenbach, 2009, p. 894). Performance management may then be useful as it could stimulate performance, but is also difficult. Steering on results, rather than on input or processes, requires determining what good results are through setting clear goals (Diefenbach, 2009; Hood, 1991; Hughes, 2012; Pollitt & Bouckaert, 2011; Rainey, 2014).

It is exactly at this point where problems arise in public organisations. As noted by various scholars before, goals in public organisations tend to be ambiguous as public organisations face difficulties in formulating clear and specific goals (Chun & Rainey, 2005a, 2005b; Davis & Stazyk, 2015; Jung, 2011, 2012, 2014a, 2014b; Pandey & Rainey, 2006; Pandey & Wright, 2006; Rainey, 2014; Rainey & Jung, 2015; Wright, 2004). Such ambiguity exists because public goals often contain multiple sub goals that are linked to various values simultaneously, some of which are hard to capture in numbers (Diefenbach, 2009; Hood, 1991; Pollitt & Bouckaert, 2011; Rainey, 2014; Rainey & Jung, 2015) – think of a goal such as delivering high quality service to citizens, in which values of effectiveness, efficiency, fairness, robustness all play a role. This means that goals can be understood in different ways with diverse interpretations – a common understanding of goal ambiguity (e.g. Chun & Rainey, 2005b). This comes at the cost of goal clarity, an important condition for managing towards good performance (Locke & Latham, 1990, 2013). In an attempt to alleviate this problem, public managers specify output targets to be obtained by employees, for example using the SMART principles. However, dissatisfaction with and criticism about those measurable, mainly quantitative, specifications of goals are omnipresent, because these do not do justice to the multiple facets of public goals (Diefenbach, 2009; Pollitt & Bouckaert, 2011; Van Thiel & Leeuw, 2002).

If we want performance management to work well within the public sector context, the issues of goal ambiguity and setting goals have to be addressed. Although much research is being done, so far there is a lack of understanding how goal ambiguity affects motivation and performance of employees and especially how managers can influence those factors in the process of setting goals (Perry, Mesch & Paarlberg, 2006; Staniok, 2014, 2015). Consequently, there is no fruitful way to use performance management effectively in the context of goal ambiguity yet. This knowledge gap is highly relevant, because performance management strongly depends on goals. Making this

connection between goals and performance management explicit leads us to goal setting theory, the missing piece in the research on performance management and goal setting in the public sector. Locke and Latham developed goal setting theory, which explains an individual's performance by looking at the goals that are set. The clearer, more specific and more challenging a goal is, the better one performs. The certainty that such goals provide to the individual enhances the ability to take directed and appropriate action and stimulates effort, which lead to better results (Locke & Latham, 1990, 2013). The condition of goal ambiguity, which is common in public organisations (e.g. Chun & Rainey, 2005b; Davis & Stazyk, 2015; Jung, 2011; Pandey & Rainey, 2006; Pandey & Wright, 2006; Rainey & Jung, 2015; Wright, 2004), then frustrates these relationships since ambiguity is roughly the opposite of clarity and specificity as it induces uncertainty (Breugh & Colihan, 1994; Davis & Stazyk, 2015). The question is: If there is goal ambiguity, how can we manage toward good performance anyway?

Two key concepts in this matter are goal ambiguity and managerial goal setting strategies. Both concepts are essential to appreciate if you want to apply the insights from goal setting theory in organisational contexts. Indeed, managers have to deal with goal ambiguity as they encounter it in practice. Currently, however, there is ambiguity about what goal ambiguity is exactly. As Chun and Rainey (2005b) point out, there are multiple goal attributes, such as vagueness, specificity, and complexity, which are related somehow. So far it is not clear, however, which of those goal aspects are relevant and how they fit in the goal ambiguity construct. The current conceptualisations (Chun & Rainey, 2005b; Jung, 2011) are too general and fail to pay attention to such goal attributes. Therefore, this research aims to fill in this gap by going deeper into the concept of goal ambiguity to find out *what* goal ambiguity is and what managers have to address in managing public performance.

In addition, *how* goal ambiguity can be handled by public managers needs attention. Managers can potentially play an important role in setting goals for employees to benefit motivation, commitment and performance (Staniok, 2015; Moynihan, Pandey & Wright, 2012; Moynihan, Wright & Pandey, 2012). Conceptualising managerial goal setting strategies is another necessary step to be able to study effective ways to deal with goal ambiguity in performance management. The ambition thereby is not to contribute to removing goal ambiguity since ambiguity does not have to be only problematic (Davis & Stazyk, 2015), but to study the strategies that managers could adopt to manage goal ambiguity better in order to contribute to our understanding of the function of goal setting in public organisations and to the application of goal setting in performance management. Delving into both concepts simultaneously could then help improve our theoretical understanding of how goal setting could be used in the face of goal ambiguity and advance public performance management. The first step into this process is to establish what it is we talk about so that it could be validly studied.

The central research question of this study is then: *What are goal ambiguity and managerial goal setting strategies and how can those concepts be measured?* The study's goal is to develop better conceptualisations and accompanying measurement instruments for questionnaires for both concepts. To get there, relevant literature has been reviewed and three empirical phases have been passed through which are reported here. Based on the literature, preliminary new conceptualisations were formulated as will be discussed in the next section. Combined with findings from empirical research conducted in the context of higher education among academic staff, these served as input for scale development. For this purpose, I had to find out first in what terms employees talk about their goals and how goal ambiguity and managerial goal setting strategies take shape in practice. In depth qualitative data were collected in eight individual interviews and three focus groups with a total of ten participants to catch this real life context, which served as a basis for item formulation. Transcripts were analysed for indicators of elements of the goal ambiguity and goal setting strategies constructs, which were used to formulate survey items. In the second phase, employees were asked to review these items in six cognitive interviews, with the aim to find out whether the items matched employees' understanding of their goals and goal setting in their work. This has led to adaptations in wording, order, and instructions to improve the instruments. In the final third phase, the newly constructed scales were tested in a pilot survey. With the responses, factor structure, reliability, and validity have been assessed. In the end this process has led to a new survey instrument for managerial goal setting strategies.

The rest of this paper proceeds as follows. The next section reviews the literature on goal ambiguity and managerial goal setting and points out where current conceptualisations and research measurements are insufficient. This is followed by a description of the research design and a sequential treatment of the three research phases and findings that are central to the empirical part of this paper. The final section draws conclusions and discusses this research's value and limitations, whereby suggestions for future research are provided.

2. Goal setting in a context of goal ambiguity

Within the public sector, goal setting by managers cannot be studied without considering goal ambiguity as this condition is omnipresent (e.g. Chun & Rainey, 2005b; Davis & Stazyk, 2015; Jung, 2011; Pandey & Rainey, 2006; Pandey & Wright, 2006; Rainey & Jung, 2015; Wright, 2004). To be able to handle goal ambiguity, managers need suitable goal setting strategies. Both concepts are inextricably connected as they are central to applying goal setting theory in public organisations, which calls for combining them in this study. What goal ambiguity is will be addressed first, after which potential strategies are outlined. This is followed by how the concepts are currently measured.

2.1 Goal ambiguity

With regard to goal ambiguity, there is a deficiency in terms of conceptualisation and consequently in measuring it. It is not surprising that there is no good solution to managing performance in a context of goal ambiguity when it is not clear what the issue is exactly. A definition that is commonly used is provided by Chun and Rainey (2005b): “We define organizational goal ambiguity as the extent to which an organizational goal or set of goals allows leeway for interpretation, when the organizational goal represents the desired future state of the organization.” (p. 2). This definition gives a good idea of what the general state of ambiguity is, as it refers to a sense of uncertainty (Breugh & Colihan, 1994; Davis & Stazyk, 2015) that is contrary to knowing what is expected of you, a key aspect in goal setting theory (Locke & Latham, 1990, 2013). However, it does not state what goals look like when they are considered to be ambiguous. Chun and Rainey (2005b) indicate in the same paper that goals have several attributes which are connected to the overarching concept of goal ambiguity. The richness of this construct with its various goal attributes –Chun and Rainey (2005b) mention vagueness, specificity, complexity, multiplicity, conflict, tangibility, and measurability as potentially relevant– should therefore be reflected and incorporated in the conceptualisation and measurements of goal ambiguity.

Rather than elaborating the concept using these attributes, Chun and Rainey (2005a, 2005b) identify different dimensions where goal ambiguity can be present: directive goal ambiguity, evaluative goal ambiguity and priority goal ambiguity. These dimensions differ in the focus adopted to evaluate goals. Directive goal ambiguity refers to a lack of clarity in the guidelines and directives formulated to achieve the organisation’s mission (Chun & Rainey, 2005b), for instance when there are no basic principles concerning how courses are to be structured to meet the goal of providing challenging education. Evaluative goal ambiguity is situated at the level of performance indicators and assessment of goal achievement (Chun & Rainey, 2005b): e.g. when the goal is doing state-of-the-art research that contributes to debates in academia and society, but no requirements regarding knowledge distribution are made. Finally, priority goal ambiguity is present when it is unclear for employees which choices should be made in terms of prioritising specific goals and tasks over others to contribute to mission accomplishment (Chun & Rainey, 2005b). Such ambiguity is present, for instance, when a research group aims to be leading in its field, but there is uncertainty whether publishing articles or applying for research grants should be prioritised by the researchers. Jung (2011) has also examined goal ambiguity, using three dimensions that are closely related to those of Chun and Rainey (2005b). Multiple goal ambiguity concerns the number of goals that are in place simultaneously and in a later paper, Jung (2014a) renames this priority goal ambiguity. Time-specification (Jung, 2011) or timeline (Jung, 2014a) goal ambiguity is present when it is unclear what

long-term and short-term or annual goals are. These two dimensions are similar to priority goal ambiguity as discerned by Chun and Rainey (2005b). Target-specification (Jung, 2011) or target (Jung, 2014a) goal ambiguity refers to whether or not targets for performance objectives are stated and resembles Chun and Rainey's (2005b) evaluative goal ambiguity dimension.

The problem is that these dimensions do not provide us with a better conceptualisation of goal ambiguity itself. Moreover, the dimensions brought forward differ in terms of focus and are not all related to goal ambiguity, but instead to having multiple goals and goal conflict. Goal conflict is a separate concept –the occurrence of which becomes more likely in situations with multiple goals– instead of a goal attribute under the umbrella of goal ambiguity as suggested by Chun and Rainey (2005b). Goal conflict has to do with an imbalance between available resources and goals to be attained or an incompatibility between different goals (Chun & Rainey, 2005b; Lee, Locke & Latham, 1989; Locke & Latham, 2013), rather than with the interpretation of goals. Goal conflict refers explicitly to opposing interrelationships between goals or different aspects of the same goal, while goal complexity –another goal attribute that Chun & Rainey (2005b) point out– concerns the existence of multiple aspects within a goal and their interrelationships, which do not have to be conflicting (Chun & Rainey, 2005b; Lee et al., 1989). Interpretive leeway of a goal or a set of goals – goal ambiguity– does not necessarily occur because of goal conflict, but it can occur as a result of goals being complex: having a goal containing multiple aspects, such as a quality and quantity component of performance, leaves the door open to different interpretations of that goal. The priority and timeline goal ambiguity dimensions of Chun and Rainey (2005b) and Jung (2014a) directly connect to the notions of goal multiplicity and conflict and are therefore left out of this study. On the other hand, it is useful to account for the directive, evaluative (Chun & Rainey, 2005b) and target (Jung, 2014a) goal ambiguity dimensions in the conceptualisation as interpretive leeway can arise with regard to how goals are to be realised and how goals are assessed.

In sum, goal ambiguity can be defined as a condition in which a goal or a set of goals allows leeway for interpretation whereby the organizational goal represents the desired future state of the organization. Goal ambiguity can be present at the level of expectations regarding how work should be done (directive dimension) and with what results (evaluative dimension) as well as with regard to the content of goals (general dimension). Goal ambiguity can result from goal attributes that induce this uncertainty concerning goal interpretation.

2.2 Managerial goal setting strategies

Besides the deficiencies with regard to the concept of goal ambiguity, no clear answer has been provided yet to the question how goal ambiguity can be managed. Goal setting theory argues that

clarifying goals enhances employee motivation and performance (Locke & Latham, 1990, 2013). Public managers might be able to reinforce the effects of goal setting on individual and organisational performance (Colbert, Kristof-Brown, Bradley & Barrick, 2008; Moynihan, Pandey & Wright, 2012; Moynihan, Wright & Pandey, 2012; Wright, Moynihan & Pandey, 2012). However, the presence of goal ambiguity in public organisations complicates this. So far, the academic literature has not provided consistent answers how to use goal setting in such environments. We understand managerial goal setting strategies as the actions of managers in the process of determining goals and handling ambiguity. While there have been studies taking managerial goal setting strategies into account, no elaborate conceptualisation has been provided. Part of the problem of having no good way to handle goal ambiguity so far stems from this lack of conceptualisation.

Recently, some studies have been conducted in which the behaviour and leadership style of managers appeared to have beneficial effects within the framework of managing performance (Staniok, 2015; Moynihan, Pandey & Wright, 2012; Moynihan, Wright & Pandey, 2012). Staniok (2015), for example, studied the effect of prioritising by managers in situations of intra-goal conflict and found a positive effect of this managerial behaviour on goal commitment and performance. Moynihan and colleagues (Moynihan, Pandey & Wright, 2012; Moynihan, Wright & Pandey, 2012) found that transformational leadership contributes to perceived goal clarity. However, specifically studying what goal setting strategies managers use to deal effectively with goal ambiguity in order to benefit their employees' motivation, commitment, and performance has not been done so far and needs more attention (Staniok, 2015).

Based on previous research, two mechanisms can be identified through which managerial goal setting strategies may affect performance: (a) translation and (b) participation. For both mechanisms, competing theoretical expectations concerning their efficacy can be formulated.

(a) The degree to which goal ambiguity is maintained or reduced could be seen as an important outcome of managerial goal setting strategies (Davis & Stazyk, 2015). In the common logic, less ambiguity is beneficial for motivation and performance (e.g. Breugh & Colihan, 1994; Chun & Rainey, 2005a, 2005b; Jung, 2014a, 2014b), so managers should try to reduce ambiguity as 'translators' between the organisational and job levels, for example by explaining to their employees what should be considered as challenging education. However, another line of reasoning suggests that goal ambiguity could be beneficial by giving employees more room for interpretation, thereby enabling them to deal with complex situations and conflicting goals (Davis & Stazyk, 2015). Leaving room for ambiguity could then be thought of as an alternative way to achieve high performance,

which can be part of managerial goal setting strategies. In the example, the judgment of what challenging education is would then be left to the employee.

(b) The second mechanism relates to the participation of employees in the goal setting process. In this way, motivation, goal commitment, and goal importance can be influenced which in turn has an effect on performance. On the one hand, managers could use participative strategies that draw on the benefits in line with stewardship theory, whereby more voice for employees stimulates positive employee outcomes and subsequently performance (Jacobsen & Andersen, 2014; Latham, Borgogni & Petitta, 2008; Locke & Latham, 2013; Perry et al., 2006; Rainey, 2014). Managers could then invite employees to provide suggestions about what they should accomplish in the coming year, for example. On the other hand, more top-down, authoritative strategies in line with principal agent theory could lead to good performance as well through enhanced managerial control (Locke & Latham, 2013; Staniok, 2015). Such a strategy could encompass managers deciding on the goals of employees (e.g. publishing a specific number of journal articles and submitting a grant proposal within the next year), whereby the manager connects this decision to the goals of the department.

Managerial goal setting strategies could then be conceptualised as the actions of managers in the process of determining goals for their employees, whereby the extent to which ambiguity is maintained or reduced (translation) and the extent to which employees are involved and have a voice in this process (participation) are of interest.

2.3 Measurement

In terms of measurement, progress can be made for both key concepts. While considerable research on goal ambiguity has been conducted, a sound questionnaire instrument is lacking. Managerial goal setting strategies have not been studied in surveys at all, leaving a valuable research opportunity unexploited so far.

2.3.1 Goal ambiguity

With regard to goal ambiguity, a distinction can be made between objective and subjective measures, both of which are important and insightful. Objective evaluations are less likely biased by individual preferences, while the key value of subjective perceptual information lies in the role this plays in explaining behaviour (Jung, 2014a; Wright et al., 2012). Both types have been used in empirical research. The methods of Chun and Rainey (2005b) and Jung (2011) rely on existing information about an organisation's goals that is formatted in a standardised way across a wide range of organisations. This information is coded using the measurements of the suggested dimensions, forming an objective assessment.

Subjective evaluations –how people in an organisation perceive goal ambiguity– have been used as well. There is a three item self-report survey scale which multiple authors have used (e.g. Moynihan, Pandey & Wright, 2012; Pandey & Rainey, 2006; Rainey, Pandey & Bozeman, 1995; Sun, Peng & Pandey, 2014; Wright et al., 2012). However, this instrument is highly criticised because it would be too simple and too direct (Rainey & Bozeman, 2000), asking only about clarity of organisational goals and leaving other goal attributes out of consideration. In light of Chun and Rainey's (2005b) remarks about the variety of relevant goal attributes, Rainey and Bozeman's (2000) criticisms seem warranted. An improvement in this respect compared to the old scale is offered by Calciolari, Cantù and Fattore (2011), who used a seven item scale in which each item addresses a goal attribute that they identified in the literature. This scale is still rather simple as it does not include relevant goal ambiguity dimensions distinguished by Chun and Rainey (2005b) and Jung (2011, 2014a). Combining goal attributes and ambiguity dimensions could be insightful since this would provide a richer insight in when goals are ambiguous, but needs more empirical underpinning.

Despite criticism of Rainey and Bozeman (2000), perceptual data are useful. After all, one's behaviour is strongly influenced by how one experiences his/her environment (Jung, 2014a; Wright et al., 2012). This is relevant for the goal ambiguity concept, because it can be theorised that goal ambiguity affects attitudinal variables such as motivation and commitment (e.g. Chun & Rainey, 2005a, 2005b; Jung, 2014a, 2014b; Locke & Latham, 1990, 2013), which are strongly dependent on one's attitudes towards and perceptions of the environment (Rainey, 2014). Measuring goal ambiguity in the minds of employees instead of on paper is then necessary. The way this is currently done is still inadequate and in need of a better instrument, that addresses both relevant goal attributes and dimensions of goal ambiguity.

2.3.2 Managerial goal setting strategies

Despite earlier research regarding the two mechanisms along which managerial goal setting can affect performance, what strategies for goal setting look like that fit with these mechanisms has not been elaborated. To study the effects of such strategies, more insight in what these comprise is needed. Managerial goal setting strategies, in the studies that have included it, have been modelled as conditions in an experiment without providing a clear conceptualisation and has mainly focused on the participative dimension of managerial goal setting (e.g. Erez, 1986; Erez & Arad, 1986; Erez & Earley, 1987; Latham, Erez & Locke, 1988). Given the commonly used measurement method, no survey scale is available. Moreover, the goal ambiguity translation dimension of goal setting strategies has not been included but deserves attention as well (Davis & Stazyk, 2015). For both dimensions it is interesting to ask employees how they experience their supervisors' management behaviour with regard to setting goals. Goal setting strategies that managers adopt are not bound by

single events, but could be thought of as continuously present in the interaction between supervisor and employee: goal setting is not just a matter of making a decision, but also of discussion about progress, reinforcement, and focusing which take place outside events such as annual performance appraisal conversations. This means that studying managerial goal setting strategies in a quantitative approach is better facilitated by surveys than by experiments, as experiments focus on specific delineated interventions and in that way provide too crude measurements. Developing a survey scale for this construct is then necessary.

Goal ambiguity is an important issue and managerial goal setting strategies could provide an answer to effectively handle it. Clarity about the concepts and accompanying assessment tools are required to improve performance management. The empirical research reported below will address this need.

3. Research design

The context in which the empirical research has been carried out deserves attention as it could affect the variables of interest (Johns, 2006). The sector of higher education was chosen as the study's context because of a combination of critical factors: the high saliency of goal ambiguity and the strong performance orientation. Rainey and Jung (2015) report that agencies that score highest on the three dimensions of goal ambiguity they studied include research-focused organisations. March and Olsen (1979), in their classical book on ambiguity in organisations, also studied universities, as educational institutions are prone to ambiguity. Adding to this is the strong performance orientation that has emerged under influence of NPM thinking, as could be seen in a focus on output of international journal publications in performance appraisals (Beerkens, 2013; Broucker, De Wit & Leisyte, 2015; Jacobsen & Andersen, 2014). Since this performance orientation is largely focusing on quantitative output, an uncomfortable situation arises in universities because of the ambiguity of goals, which does not fit well with NPM's preference for specification of targets. The combination of these factors makes that using universities as a context for this study is insightful.

The development of survey scales for the core concepts is based on mixed-methods research and has been guided by DeVellis' (2016) recommendations. Qualitative and quantitative data were collected and combined (Bryman, 2006). The research was divided in three consecutive rounds of data collection and analysis, which are discussed in the next sections. First, qualitative data were collected to strengthen the conceptualisation and devise questionnaire items for the central concepts. These items were tested in a pilot survey, seeking quantitative data to explore the measurement properties of the scales. In this way, the survey instrument has a solid empirical basis from the qualitative data to be validated with the quantitative data (Bryman, 2006).

4. Study 1: Item generation

4.1 Data collection

After conceptualisation, the first part of scale development consists of item generation (DeVellis, 2016). For this purpose, focus groups and individual interviews were conducted between April 18 and May 13. Qualitative research is particularly useful to obtain rich data about meaning giving with an eye for the context of the phenomenon of interest (Boeije, 2010) and is therefore suitable to develop concepts and generate items with sensitivity to the language and practices used at universities, in favour of content validity (DeVellis, 2016). The two methods were combined for two reasons. First, both methods have particular benefits: interviews allow the researcher to follow up on participants' remarks in depth and go deeper into topics that appear to be particularly salient for a participant (Berg & Lune, 2012), while focus groups have the special feature that discussion among participants is enabled, so that agreement or disagreement on a broad range of views can be discovered (Krueger & Casey, 2015). A second reason is more pragmatic: it appeared very difficult to organise focus groups because of busy schedules of academics. In order to retain willing participants for the study whose schedules did not allow focus group participation, these participants were interviewed individually.

The data collection in both focus groups and interviews was semi-structured to guarantee that data are comparable in terms of the topics covered (Berg & Lune, 2012), whereby the topic list was based on the literature discussed above and included the dimensions and characteristics of goal ambiguity and goal setting strategies covered in the new conceptualisations (see appendix). The dimensions, attributes and mechanisms described above were used as sensitising concepts (Berg & Lune, 2012; Boeije, 2010). Open questions regarding participants' thoughts about their goals and their supervisors' roles in setting goals were formulated, without directly leading participants to think about the goal attributes from the literature. Probes were prepared to ask about goal aspects or goal setting strategies if these had not been brought up by participants themselves to test whether these were relevant to participants nevertheless. Since sensitivity to context and openness towards the participant's perspective are important, the order of the questions, probing, and wording were adapted during the focus groups and interviews to accommodate the participants' input (Berg & Lune, 2012; Boeije, 2010). Moreover, all participants were invited to introduce topics that they thought were relevant but had not been discussed earlier.

In the invitation to participate and the introductions of the focus groups and interviews goal ambiguity was not mentioned as one of the central concepts. This was done to avoid that participants would use the term ambiguity instead of using terms that refer to ambiguity that reveal how they think about ambiguity, which was the aim of the data collection. When all prepared topics

had been discussed, however, the goal ambiguity concept was introduced. Participants reacted by sharing their thoughts about goal ambiguity, which connected earlier remarks to the concept.

Saturation, a point which is reached when no new information is obtained anymore, was aimed for as a cut-off point to stop collecting more data (Boeije, 2010). Using small groups for the focus groups allowed participants plenty of room to discuss a broad range of views and experiences, which enhanced reaching saturation quickly (Krueger & Casey, 2015). Also in the interviews, participants brought up very similar issues. This experience of saturation and considerations concerning available time informed the decision to stop collecting data.

4.2 Sample

Participants were academic staff with a social science background and were employed at one Dutch university. It was decided to recruit participants within the social science departments because of easy access. For convenience of the participants, all data collection sessions took place at the university. In total two focus groups with PhD candidates and one focus group with assistant and associate professors –each with three or four participants– were organised. These focus groups lasted between 60 and 90 minutes. In addition, eight interviews with assistant professors, associate professors, a full professor, and (associate) professors with management tasks were conducted, which had a length between 40 and 60 minutes. Table 1 shows the composition of the sample.

To avoid that participants would be reluctant to share their views and experiences in the focus group setting, a degree of homogeneity was aimed for in the group composition (Krueger & Casey, 2015). This means that it was arranged that participants within the same group were on the same job level and women were not in a minority. No PhD candidates and assistant/associate professors were invited together, because the latter supervise the former and awkward situations could arise as PhD candidates may feel uncomfortable sharing their views about their supervisors, even if their own supervisors would not be present. Furthermore, women tend to be reluctant to participate in group discussion when the group consists of mostly men (Krueger & Casey, 2015). During the focus groups, no such reluctance was displayed. One participant, however, appeared less engaged in the discussion. When directly addressed whether this participant had other or similar experiences, she

Table 1 Composition sample study 1

		Focus groups (n = 10)	Interviews (n = 8)
Position	PhD candidates	7	0
	Assistant/associate/full professors (with management tasks)	3	8
Gender	Men	4	6
	Women	6	2

replied that everything had already been said and indicated the points of agreement. It therefore seems that there are no problems of reluctance to participate.

4.3 Analysis

All sessions were recorded with permission of the participants and recordings were transcribed, without attaching names to comments. The analysis of transcripts was done by coding fragments. Codes could then be attached to sentences, full answers to interviewer questions, parts of answers, or parts of a discussion between focus group participants. Multiple codes per fragment were allowed (Boeije, 2010). The initial codes were based on the discussed literature but were adapted based on the data (Boeije, 2010). Indicators to use for item formulation were generated during this coding process. Nvivo 11 was used for coding, since this software allows that fragments could be easily retrieved and combinations of codes could be studied.

4.4 Results

Based on the coding of the transcripts, combinations between several goal attributes and the directive and evaluative goal ambiguity dimensions could be made to develop questionnaire items. Words, phrases and expressions from the transcripts were used to inform item wording. Below, per concept the findings are discussed and a table containing the items that were formulated based on the analysis is displayed. The items are formulated in a way that they can be used in other contexts than academia, as the items do not specifically refer to goals relating to research or education. However, context is captured by the first open question, which asks respondents to provide their goals (box 1 below) and serves as contextualisation of the rest of the answers. Nevertheless, since all research activities to develop the questionnaire have been conducted within the same sector, validation in other sectors is necessary to be certain about the items' context independence.

Box 1 Initial opening question

Het werken met doelen staat centraal in dit onderzoek. Waar wij nu in geïnteresseerd zijn, zijn de doelen waar u als medewerker aan werkt, met andere woorden: wat u bij het uitvoeren van uw werkzaamheden probeert te bereiken. Daarbij beperkt dit onderzoek zich tot de doelen die verbonden zijn aan uw taken en waar u het met uw leidinggevende over heeft, niet uw persoonlijke doelen.

Kunt u aangeven welke doelen u heeft in uw werk?

.....

Houdt u bij de beantwoording van de volgende vragen de doelen die u zojuist genoemd heeft in gedachten.

4.4.1 Goal ambiguity

From the transcripts, a picture of goal ambiguity arose that strongly resembles what has been written in the literature discussed above. Since the questioning did not use the word goal ambiguity but focused on what participants thought about their goals, relevant goal attributes were mentioned spontaneously. The code tree for goal ambiguity started with headings for the dimensions directive, evaluative and 'other' and for each goal attribute identified in the literature. During the analysis, words or word combinations that signified a particular dimension or attribute were looked for and, if found, were added to the code tree. For example, word combinations such as 'checking progress' and 'recognising value' were linked to the evaluative dimension and 'formally recorded' or 'explicitly agreed upon' were connected to the tangibility goal attribute. The complete code tree can be found in the appendix.

All goal attributes that were mentioned by Chun and Rainey (2005b) were present in the data. As argued in the theory section, goal conflict and goal multiplicity were not considered to be part of the goal ambiguity construct, but were coded because participants talked about goal conflict. While specificity and vagueness had been treated as separate attributes, during the coding it appeared to be very difficult to make the distinction as words that fit one of these attributes could also be linked to the other as an antonym, such as 'defined' and 'abstract'. These attributes are therefore treated as two ends on the continuum of a single goal attribute (specificity). In the end, the goal attributes incorporated in the items are clarity, specificity, complexity, tangibility, and measurability.

The dimensions and attributes were combined in three envisaged scales – one for each dimension. Items then referred to goals in general (1-6) or to the directive (7-14) or evaluative (15-21) side of goals while addressing a particular goal attribute (see table 2). An example is item 17, which was formulated based on a participant's remark that he values that his goals inform him clearly about what he has to do to get a good evaluation and to make a promotion. In this item, the evaluative dimension is coupled with the goal clarity attribute. Another example is item 11: participants talked about their freedom to choose how they do their work and the flexibility they have in this respect. Item 11 then concerns the directive dimension as it points to goals' instructive potential while flexibility refers to the goal attribute specificity (in this case to its negation, vagueness).

Table 2 Initial items goal ambiguity

1	Mijn doelen kunnen op meer dan één manier uitgelegd worden
2	De formulering van mijn doelen is breed en abstract
3	Mijn doelen kennen meerdere dimensies
4	Mijn doelen zijn strak gedefinieerd
5	Mijn doelen zijn niet expliciet vastgelegd
6	Voor mij is het niet helder wat mijn doelen precies inhouden
7	Mijn doelen bieden houvast in het uitvoeren van mijn taken
8	Voor mij is het duidelijk hoe ik mijn doelen kan realiseren
9	De doelen waar ik mee werk geven richting aan hoe ik mijn werk doe
10	Ik heb specifieke richtlijnen gekregen om mijn doelen te behalen
11	Mijn doelen bieden flexibiliteit in hoe ik mijn werk aanpak
12	Ik heb ruimte om te kunnen werken aan verschillende dimensies van mijn doelen
13	Ik heb ruimte om keuzes te maken in de manier waarop ik mijn werk doe om mijn doelen te bereiken
14	In mijn doelen is een tijdsbestek vastgelegd
15	Mijn doelen geven mij een duidelijk beeld van wat er van mij verwacht wordt
16	Wat ik moet presteren is vaag
17	Mijn doelen geven mij duidelijkheid over wat ik moet doen om binnen de organisatie gewaardeerd te worden
18	Mijn doelen zijn meetbaar
19	Het is voor mij niet helder welke dimensies van mijn doelen worden gewaardeerd bij mijn evaluatie
20	De normen waaraan ik moet voldoen zijn formeel vastgelegd
21	De verwachtingen ten aanzien van mijn prestaties zijn realistisch

4.4.2 Managerial goal setting strategies

Both mechanisms through which goal setting by managers could be done were visible in the data. Although the interviews and focus groups showed that the performance system in which the participants and their supervisors operate is very important for the extent to which supervisors have room for manoeuvre in setting goals for employees, the data reveal that supervisors do differ in their approach to goal setting for their employees. The prepared items are presented in table 3.

Concerning the first mechanism, translation, participants related different experiences. It is relevant to consider that participants spoke about this rather indirectly: instead of saying that their supervisor gave them freedom to interpret broadly formulated goals, they said that they had this freedom to interpret. However, from the assertion that the participant as an employee has the opportunity to

make choices it can be deduced that the supervisor has provided such leeway. Indirectly this shows a supervisor's strategy in goal setting with regard to the leeway for interpretation that is left for an employee. In general, the experiences with this type of strategy that were shared by participants reveal that there is quite a lot of freedom to do 'good research' or give 'good education': supervisors do not impose what such broad goals imply as to what employees should do. For example, several participants told that they enjoy a lot of freedom in doing research because they meet the minimum quantitative requirements: what valuable research contributions are or what activities are involved in doing valuable research is to a large extent up to the employee to decide, as long as they publish in international peer-reviewed journals. One participant said that he thinks publishing in professional journals is an important part of his work as an academic, although this is less pronounced in his goals and is an interpretation that he gives to doing 'good research'. One participant with a supervisory role also told that his approach in leaving such interpretive leeway depends on the person: some employees need more direction than others. The level of translation could then be seen as deliberately variable depending on what supervisors deem suitable for their employees and could be seen as a goal setting strategy. Items 1-6 concern the translation mechanism.

Differences with regard to how much freedom participants have in deciding what their goals are were visible as well and are captured in items 7-12 (table 3). Several participants talked about the opportunities that they have to take initiative to propose goals. One participant indicated that she prepares a list of wishes or ideas regarding next year's ambitions for the annual performance appraisal conversation with her supervisor. This shows that employees can have a considerable say in setting their goals and is connected to the participation mechanism. Other participants said that they negotiate with their supervisors about what they will focus on or what they should achieve, whereby participation is still present, but to a lesser extent than in the previous example. Finally, some participants stated that the goals are ultimately decided by their supervisors: in some cases, participation took place before the decision, in others, the supervisor just decides. However, the latter situation was by many participants not attributed to a choice of their supervisors, but to the department's system that prescribes particular performance norms for each job level. In many instances when participants said their supervisors decide, it related to performance agreements and quantitative specifications of goals rather than the more abstract goals themselves. The importance of the broader system in which supervisors operate becomes clear here. Nevertheless, variation in what supervisors do is present in the participants' accounts and developing a measurement instrument for this goal setting strategy is useful. It seems essential to take organisational context factors such as the performance system into account when studying managerial goal setting.

Table 3 Initial items managerial goal setting strategies

1	Mijn leidinggevende laat ruimte om breed geformuleerde doelen zelf in te vullen
2	Mijn leidinggevende maakt duidelijk hoe mijn doelen bijdragen aan de doelen van deze afdeling/faculteit
3	Mijn leidinggevende maakt voor mijn werk een concrete uitwerking van de doelen van mijn afdeling/faculteit
4	Mijn leidinggevende vertaalt de doelen van mijn afdeling/faculteit naar specifieke doelen voor mijn individuele werk
5	Mijn leidinggevende richt zich meer op het vertellen van het verhaal achter een doel dan op de specifieke uitwerking van dat doel
6	Bij het stellen van mijn doelen biedt mijn leidinggevende mij een inspirerend kader zonder de doelen te operationaliseren
7	Mijn leidinggevende betreft mij bij het bepalen van mijn doelen
8	Mijn doelen worden in samenspraak met mijn leidinggevende vastgesteld
9	Welke doelen ik moet bereiken wordt door mijn leidinggevende bepaald
10	Mijn leidinggevende biedt ruimte zodat ik initiatief kan nemen voor het bepalen van mijn doelen
11	Ik heb geen invloed op de doelen waaraan ik moet werken
12	Wanneer mijn leidinggevende mij een doel oplegt, legt hij/zij uit waarom ik aan dat doel moet werken

5. Study 2: Item adjustment

5.1 Data collection

After items had been formulated, these were tested in cognitive interviews. This served to test whether questions were understood in the same way by participants as intended by the researcher. The cognitive interviews focused mostly on question wording and meaning, but also on introductions (do participants read them? Are they clear?), and the order of questions (is it logical? Does it contain problems/difficulties for participants?). A thinking out loud approach was used, whereby participants were asked to read and answer the items and verbalise their thoughts in answering the questions to the researcher (Willis, 1999). In addition, prepared probes in line with the verbal probing technique were used to get more information about a participant's considerations or a better understanding of a participant's interpretation of the question (Willis, 1999). The interviews were recorded, which together with notes taken during the interviews served as the input for item improvement. During the process, a logbook was kept in which important problems and solutions were recorded to be able to trace decisions with regard to changes to the questionnaire.

5.2 Sample

Different researchers than in study 1 participated in the cognitive interviews to test whether the expressions and perspectives from the qualitative data resonated with others as well. In total four PhD candidates, one assistant professor, and one full professor from social science disciplines within

Table 4 Composition sample study 2

		Cognitive interviews (n = 6)	Comments on introduction (n = 4)
Position	PhD candidates	4	1
	Assistant/associate/full professors (with management tasks)	2	3
Gender	Men	2	2
	Women	4	2

the same university in the Netherlands were interviewed. These sessions lasted between 35 and 85 minutes and took place at the university. In addition, a PhD candidate, an assistant professor, and an associate professor participated in a short session to test only the first introduction and question; a full professor provided his comments through email. In the previous cognitive interviews, these parts appeared to be particularly problematic, while the item statements were understood well by participants. The first introduction and accompanying question needed more testing, however, and therefore only this part of the questionnaire was discussed a few extra times. The cognitive testing was done between May 26 and June 10.

5.3 Results

In general, individual items were well understood and the considerations of participants connected well with the intentions of the items. Participants pointed to similarities between a number of items, which became particularly visible when similar items were presented directly after each other. This was seen as a reason to change the order of some items to avoid that respondents would give the same answer to similar items just because they follow each other directly and the similarity is too apparent: acquiescence bias (De Vaus, 2014; DeVellis, 2016; Fowler, 2014). In addition, some items initially contained two parts to which respondents would have to respond, such as item 2 about goal ambiguity and item 6 and item 12 of the goal setting strategies items, causing ambiguity in interpreting the answers. Therefore, it was made sure that all items contained only one component (De Vaus, 2014; DeVellis, 2016; Fowler, 2014). Despite general clarity, one item was particularly difficult, as it referred to different dimensions within goals (goal ambiguity item 3). Although the term ‘dimensions’ was taken from the interview and focus group data, the participants in the cognitive interviews did not understand the term in the same way as was intended. Several synonyms were tried, without success. In the end, the item was replaced by an item with equal meaning, but referring to ‘sub goals’ instead of dimensions.

Another issue stood out in particular. The concept of ‘goals’ –what goals are, what is meant when you talk about your ‘goals’– appeared to be a very difficult concept. People use the concept in their

everyday lives and everyone has an understanding of what it means. The difficulty, however, is in the level of abstraction that people attach to 'goals' and making the distinction between 'goals' and related concepts such as 'missions' and 'targets'. A mission is at a very high level of abstraction and refers mostly to broad ambitions and values. Goals are operationalisations of the values or motivation underlying them. Targets specify the desired end state more concretely (Locke & Latham, 1990). The intention here was to get respondents to think about this second concept –goals, for example providing challenging education to students or doing leading research within the discipline– and not about overarching missions (e.g. contributing to society) or specific targets (e.g. a performance agreement to publish a certain number of articles in international peer-reviewed journals). During the cognitive interviews, the introduction of what was meant by 'goals' in this study and the accompanying first question about the respondent's goals turned out to be major stumbling blocks. After hearing the participants' train of thought in answering the first question and explaining what was intended, the participants pointed to the mismatch between the intention and the message conveyed by the instructions. Several adaptations were made to this introduction, which was subsequently tested with new participants. Each time the solution to the previous flaw appeared to induce a new misunderstanding. The final solution tried to incorporate all fixes including a few examples in order to make clear what level of abstraction was sought. The cognitive interviews showed that this point, which is critical for getting respondents on the right track for answering the questions about their goals, is very difficult and resembles the difficulties that are faced in practice when managers try to make goals concrete: the concept of 'goals' is very slippery.

On the next pages, the adjusted version of the first introduction with the accompanying open question as well as the adjusted items for both concepts are presented.

Box 2 Final opening question

Het werken met doelen staat centraal in dit onderzoek. Waar wij in geïnteresseerd zijn, zijn de doelstellingen die u vanuit de organisatie meekrijgt en waar u als medewerker aan werkt. Daarbij beperkt dit onderzoek zich tot de doelen die verbonden zijn aan de taken die horen bij uw functie. Het betreft niet de taken zelf of prestatieafspraken, maar de doelstellingen die daarbij horen. Hierbij kunt u denken aan uitdagend onderwijs geven, toonaangevend onderzoek doen of nieuwe ideeën en kennis binnen uw vakgebied creëren.

Kunt u aangeven welke doelen dit voor u zijn?

.....

Houdt u bij de beantwoording van de volgende vragen de doelen die u zojuist genoemd heeft in gedachten.

Table 5 Final items goal ambiguity

1	Mijn doelen kunnen op meer dan één manier uitgelegd worden
2	De formulering van mijn doelen is breed
3	Mijn doelen zijn op te delen in verschillende subdoelen
4	Mijn doelen zijn strak gedefinieerd
5	Voor mij is het onduidelijk wat mijn doelen precies inhouden
6	Mijn doelen zijn expliciet vastgelegd
7	Mijn doelen bieden houvast in het uitvoeren van mijn taken
8	Voor mij is het duidelijk hoe ik mijn doelen kan realiseren
9	De doelen waar ik mee werk geven richting aan hoe ik mijn werk doe
10	Ik heb specifieke richtlijnen gekregen om mijn doelen te behalen
11	Mijn doelen bieden flexibiliteit in hoe ik mijn werk aanpak
12	In de formuleringen van mijn doelen zijn afspraken gemaakt over het moment waarop deze behaald moeten zijn
13	Ik heb ruimte om keuzes te maken in de manier waarop ik mijn werk doe
14	Mijn doelen geven mij een helder beeld van wat er van mij verwacht wordt
15	Welke prestaties ik moet leveren is vaag
16	Mijn doelen geven mij duidelijkheid over wat ik moet doen om positief beoordeeld te worden
17	Mijn doelen zijn meetbaar
18	In mijn doelen zijn kwaliteitsaspecten van mijn werk vastgelegd
19	Het is voor mij onduidelijk welke aspecten van mijn doelen positief worden gewaardeerd bij mijn evaluatie
20	De eisen waaraan ik moet voldoen zijn formeel vastgelegd
21	Mijn doelen kunnen op meer dan één manier uitgelegd worden

Table 6 Final items managerial goal setting strategies

1	Mijn leidinggevende maakt duidelijk hoe mijn doelen bijdragen aan de doelen van deze afdeling/faculteit
2	Mijn leidinggevende maakt voor mijn werk een concrete uitwerking van de doelen van mijn afdeling/faculteit
3	Mijn leidinggevende benadrukt het verhaal achter een doel
4	Mijn leidinggevende vertaalt de doelen van mijn afdeling/faculteit naar specifieke doelen voor mijn individuele werk
5	Mijn leidinggevende geeft mij de ruimte om brede, algemene doelen van de afdeling/faculteit zelf te interpreteren in mijn eigen werk
6	Bij het stellen van mijn doelen biedt mijn leidinggevende mij een inspirerend kader
7	Mijn leidinggevende operationaliseert mijn doelen specifiek
8	Mijn leidinggevende legt uit waarom ik aan een doel moet werken
9	Mijn leidinggevende betreft mij bij het opstellen van mijn doelen
10	Welke doelen ik moet bereiken wordt door mijn leidinggevende bepaald
11	Mijn doelen worden in samenspraak met mijn leidinggevende vastgesteld
12	Mijn leidinggevende biedt mij ruimte om voorstellen te doen voor het opstellen van mijn doelen
13	Mijn leidinggevende geeft mij <u>geen</u> invloed op de doelen waaraan ik moet werken
14	Mijn doelen worden door mijn leidinggevende opgelegd

6. Study 3: Scale validation

6.1 Data collection and sample

To test the new scales, a pilot survey was conducted. The items to measure goal ambiguity and managerial goal setting strategies presented above formed the core of the questionnaire. The rating scale for these items is a 5-point Likert scale, ranging from 1 'Totally disagree' to 5 'Totally agree'.¹ In order to test the validity of the new measurements several other concepts were included: goal conflict, participative and directive leadership, job satisfaction, and work engagement. These scales are discussed in more detail below. In addition, a number of questions concerning respondents' background characteristics were included, such as job level, employing university, gender, age, and type of contract. The full questionnaire, including the email invitation, can be found in the appendix.

¹ Despite benefits of a 7-point scale (De Vaus, 2014; DeVellis, 2016; Fowler, 2014), a smaller scale was chosen. Before data collection started, the analysis plan included modelling the data with Item Response Theory (IRT) techniques. IRT takes a different approach to test theory, whereby individual items rather than measurement scales are of central interest and more test information can be obtained (Embretson & Reise, 2000). IRT requires heterogeneous, large samples to make sure to have all response categories for all items and all response patterns covered in the data to be able to estimate model parameters. Having a large number of answer categories per item increases the risk that too many categories or patterns are not present in the data, posing problems for the analysis. A 5-point scale was therefore preferred for the new items.

Like study 1 and 2, this study was conducted among academic staff (PhD candidates, assistant professors, associate professors, full professors, post docs, researchers, lecturers). A pragmatic approach to sampling was adopted to be able to start the research in time. Therefore, the coordinators from four universities² involved in the Research Master programme in Public Administration and Organisational Science were asked to help in obtaining permission to distribute the survey in their faculties. In two cases permission was obtained to include all departments of the faculty, in one case two departments were willing to participate, and in one case only one department could be involved. All participating faculties and departments are in the social sciences and law.

An email invitation explained the topic and goal of the study, without mentioning goal ambiguity and goal setting strategies and contained a note for non-Dutch speaking staff that the survey was only in Dutch. An anonymous link to the online questionnaire was provided in the invitation. The questionnaire was programmed with and hosted by Qualtrics. After an informed consent statement, which respondents had to approve first, the questionnaire started. Because of privacy concerns, the universities were not willing to provide the email addresses of academic staff. Instead, an invitation was sent in my name by the faculty or department administration; a reminder was distributed in the same way after 8 days to increase response. Therefore, the questionnaire link was the same for everyone and response could only be tracked when the link was clicked, which appeared as a response in progress in Qualtrics. The invitation was sent on June 13 and asked respondents to finish their questionnaires by June 27, allowing two weeks to participate.

Information about the total number of academic employees targeted was provided by the faculty or department administrations and supplemented by information from departments' websites. Based on this information it is estimated that 639 academic employees in total were targeted in this sample (table 5), although it is unclear whether this is the actual number of recipients since the invitation was sent indirectly³. Some contamination of the sample became visible considering that three non-academic employees filled out the questionnaire as demonstrated by their answer to the question about job level. The number of respondents working in an academic position filling in the

² These four are different ones than the university participating in study 1 and 2.

³ My contact person at the secretariat at the Faculty of Social Sciences, VU Amsterdam, indicated that the mailing list that had been used to distribute my invitation contained 732 recipients, but also contained a large number of non-academic staff and personnel that was not working at the organisation anymore. I received an estimate about the number of non-academic and former employees within this list, on which the estimate in table 7 is based. In Tilburg, my contact person at the faculty board office sent the invitation to the heads of the different departments. For this reason, she could not tell me the exact number of academic staff and I am not certain that all department heads spread my invitation among their staff. For these two organisations, the number of employees who were invited are therefore estimates.

Table 7 Composition sample study 3 - online questionnaire

	(Estimated) number of employees reached	Completed questionnaires reached
Utrecht University	83	12 (1 excluded)
Tilburg University	300 (estimate)	9
VU Amsterdam	206 (estimate)	16 (3 excluded)
Radboud University Nijmegen	50	6
Total	639 (estimate)	43 (4 excluded)

questionnaire is 40, which amounts to a response rate of 6%. One respondent indicated that he completed the questionnaire to make sure his comments would be received, but that he did not answer the questions seriously and that his responses should be left out of the analyses. Despite the already small number of respondents, this respondent was not included in the analyses because it could bias the results, so 39 useful online responses are used.

After two weeks response had not reached a sufficient level, for which several possible reasons could be given. Firstly, academics have to deal with high demands and face high work pressure, so that they probably did not have time to participate in this study. In addition, the time of year (June-July) marks the end of the academic year, so staff involved in teaching in this period are likely to have a lot of work from various student examinations, which reduces available time for participation. Moreover, the low response may have been (partially) attributable to random errors in the survey software. Although the Qualtrics helpdesk could not detect this issue as one respondent had reported, this could have been a problem, since insight in responses in progress showed that a substantial number of respondents had submitted a serious answer to the first question (as the answer was at the right level of abstraction and the timer question linked to this first question showed respondents took some time to formulate this answer), but that the second page had not been displayed to them.

To generate sufficient response, two other departments within the social sciences at different universities than the four already participating were included in the study. One department is part of the university at which the qualitative data were collected⁴; the other department is part of the university to which this study's supervisor is affiliated. Again permission was obtained from the department boards. A paper version was used to avoid the (potential) problem of software errors. It is recognised that switching the mode of data collection could affect the data and therefore a variable has been created in the dataset that codes whether a respondent participated in the online

⁴ In the qualitative study, only one participant was working in this department. During the distribution of the paper questionnaire, this participant was not present and was not asked to fill in the questionnaire.

Table 8 Composition sample study 3 - paper version questionnaire

	Total number of employees	Distributed questionnaires	Rejected questionnaires	Completed questionnaires
Leiden University	51	22	0	13
Erasmus University Rotterdam	73	22	4	7 (2 excluded)
Total	124	44	4	20 (2 excluded)

or paper version of the questionnaire that could be used to check for differences in response patterns. Because of this extra step the period of data collection was extended to July 5. This resulted in an additional 42 targeted academic employees, of which 18 (43%) responded. Taking the respondents from the online and paper version together, the sample consists of 57 academic employees.

Of the total sample, 28 respondents were male (49%), 28 female (49%), and one respondent did not provide an answer. The median age of respondents is 35-39 years while most respondents fell within the age group of 25-29 years. Table 9 below shows the sample’s composition in terms of job level. The respondents choosing the ‘other’ category, indicated to be dean, post doc researcher as well as associate professor, lecturer with research responsibilities, and researcher/lecturer with management responsibilities. The average time in years that respondent are working in their current job, organisation, and in academia are respectively 5.6 (SD = 6.4), 8.1 (SD = 8.4), and 14.4 (SD = 9.7).⁵

Table 9 Sample by job level (n = 57)

	Frequency	%
Full professor	7	12.3
Endowed professor	2	3.5
Associate professor	8	14.0
Assistant professor	16	28.1
Post doc researcher	2	3.5
PhD candidate	12	21.1
Researcher	2	3.5
Lecturer	3	5.3
Other	4	7.0
Not answered	1	1.8
Total	57	100.0

⁵ One respondent did not answer those questions while another respondent answered 75 years for all three questions, which is a mistake given that this respondent indicates to work as a PhD candidate and falls within the age group of 25-29 years; these respondents are not included in these calculations.

6.2 Analysis

To analyse the survey data, exploratory factor analysis (EFA) was performed in SPSS 20 using the approach of principal component analysis (PCA). Due to the small sample size, splitting the sample to be able to complement the EFA with confirmatory factor analysis (CFA) was not possible (Byrne, 2010). Descriptive statistics, bivariate correlations, and PCA results –the Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity, eigenvalues, unrotated and rotated component matrices– were reviewed to evaluate the factor structure of the proposed measurement scales for goal ambiguity and managerial goal setting strategies. Components were allowed to correlate (oblimin rotation), for it could be assumed on the basis of theory that the concepts in the analyses are related. Latent components were selected based on Kaiser's criterion (eigenvalues ≥ 1) (Field, 2013). Decisions of item retention were based on the rotated solution in the pattern matrix, whereby a minimal loading of 0.6 was applied, together with Cronbach's alpha reliability values and the effect of item deletion (DeVellis, 2016). When items were deleted for their weak loading on the expected factor or for a high loading on a different concept than it was theoretically associated with, the analyses were repeated to check whether the component structure was stable (Field, 2013).

Two forms of construct validity were assessed: a) discriminant validity by looking at correlations with measurements of similar variables and b) predictive validity by evaluating the correlations and factor structures of the proposed scales together with variables that are theoretically associated.

a) A concept's measurement has discriminant validity when it is clearly distinct from a variable that has a different meaning (Campbell & Fiske, 1959; DeVellis, 2016). Goal conflict (Locke, Smith, Erez, Chah & Schafer, 1994; Staniok, 2014) and participative and directive leadership (Harris & Ogbonna, 2001) were measured to analyse whether goal ambiguity and the two types of goal setting strategies respectively formed separate constructs, since these existing and newly proposed measurements are close in meaning but are thought to be distinct. Goal conflict was measured using a single item ('In welke mate ervaart u conflict tussen uw werkdoelen?') that respondents could answer on an 11-point scale ranging from 0 ('No conflict at all') to 10 ('A very large extent of conflict') adapted from Locke and colleagues (1994) and Staniok (2014). This measure was chosen as this direct question is commonly used in the literature, measures the concept efficiently, and shows good face validity. Participative and directive leadership were measured using two 7-point scales, ranging from 1 'Never' to 7 'Always', each addressing one of these two forms of leadership (Harris & Ogbonna, 2001). The scales have been widely used and are in general regarded as good instruments to study how employees perceive their supervisors' leadership style and behaviour (Harris & Ogbonna, 2001). Since these scales are used to assess the scale properties of the managerial goal setting strategies scales, the results of PCA and reliability analysis of the existing scales are presented below.

b) Predictive validity is present when the tested scales behave as can be expected from theory: that is, the new scales show relationships with variables that should be influenced by the tested construct (DeVellis, 2016; Neuman, 2004). From the literature it is expected that goal ambiguity and managerial goal setting strategies have an impact on performance (Chun & Rainey, 2005a, 2005b; Colbert et al., 2008; Jung, 2011, 2014a, 2014b; Latham et al., 2008; Locke & Latham, 1990, 2013; Moynihan, Pandey & Wright, 2012; Moynihan, Wright & Pandey, 2012; Perry et al., 2006; Staniok, 2015; Wright et al., 2012). Instead of performance –which was not used here because there are arguments against measuring performance with the same instrument as the independent variables as it may result in common method bias (Meier & O’Toole, 2013)– two predictors of performance are used: job satisfaction (Nagy, 2002; Tummers, 2012) and work engagement (Schaufeli & Bakker, 2004). These two variables are found to have an effect on performance (Rainey, 2014; Steijn & Groeneveld, 2013) and therefore serve as proxies in this study. Job satisfaction was measured using one item (‘Over het algemeen ben ik tevreden met mijn baan’) which respondents could rate on a 11-point scale ranging from 0 ‘Totally disagree’ to 10 ‘Totally agree’. This one-item measure was adopted, since it is a very efficient way to ask about job satisfaction and covers the essence of the concept very well giving it high face validity (Nagy, 2002; Tummers, 2012). Work engagement was measured using the validated 9-item short version of the Utrecht Work Engagement Scale, with response options ranging from 1 (‘Never’) to 7 (‘Daily’) (Schaufeli & Bakker, 2004). This scale has been validated and used extensively in empirical studies on work engagement. A single component solution in PCA of the scale fits quite well with the data as all loadings are above 0.6, except the ninth item (loading = 0.58). Since the scale’s reliability is excellent with Cronbach’s alpha = 0.90 and previous research has validated the scale extensively, all items were retained.

6.3 Results

The analyses of the survey data are reported in two sections: first the results with regard to the goal ambiguity construct are presented, followed by the findings for managerial goal setting strategies.

6.3.1 Goal ambiguity

6.3.1.1 Item correlations

Looking at the bivariate correlations between items, it becomes clear that the proposed clustering of items around the distinguished dimensions does not fully hold. In table 10, there appear to be two clusters of items within the group of items intended to measure goal ambiguity in general: items 1, 2 and 3 form one group and items 4, 5 and 6 another. Between the items on the directive dimension there are particularly few significant correlations, which poses serious concerns for the tenability of this dimension’s measurement. The items in the evaluative dimension, however, perform much better. Despite some weak and insignificant correlations, items 14 through 18 seem to belong

Table 10 Bivariate correlations items goal ambiguity (n = 55)⁶

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1																				
2	.50**																			
3	.33*	.29*																		
4	-.39**	-.36**	-.08																	
5	.24°	-.05	-.02	-.30*																
6	-.25°	-.16	.08	.62**	-.34*															
7	.24°	.09	.19	.04	-.03	.04														
8	.02	.02	.03	.21	-.17	.19	.18													
9	.28*	.10	.15	.11	.04	.10	.57**	.37**												
10	.00	-.13	.11	.34*	-.20	.45**	.22	.00	.12											
11	-.11	.35**	.05	-.19	-.12	-.07	-.07	.08	-.05	-.21										
12	.17	-.14	.06	.06	-.04	.24°	.21	.21	.22	.25	-.16									
13	.07	.20	.15	-.18	.07	-.10	.13	-.07	-.07	-.12	.52**	-.08								
14	-.12	-.00	.13	.16	-.21	.16	.35**	.15	.14	.34*	.01	.11	-.04							
15	.25°	.11	-.08	-.34*	.31*	-.32*	-.16	-.22	.12	-.17	.11	-.02	-.05	-.51**						
16	-.18	.09	.21	.25°	-.34*	.47**	.16	.34*	.17	.18	.09	.13	.05	.56**	-.37**					
17	-.41**	-.28*	-.05	.24°	.02	.18	.02	-.02	.00	.13	-.18	.20	-.03	.34*	-.38**	.38**				
18	-.02	-.07	.06	.24°	-.23°	.18	.20	-.12	-.02	.16	-.20	.09	.02	.36**	-.41**	.24°	.21			
19	.09	-.04	-.13	-.01	.27*	-.06	-.04	.03	.04	.01	-.02	-.08	-.33*	-.13	.38**	-.43**	-.27*	-.26°		
20	-.15	.15	.04	.12	-.21	.33*	.12	.34*	.05	.25°	.14	.04	-.11	.38**	-.11	.38**	0.00	.06	.04	
21	-.25°	-.02	.16	.18	-.08	.22	.04	.15	.05	.09	.22	.05	.14	.42**	-.16	.48**	.26°	.07	-.13	.21

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

° Correlation is significant at the 0.10 level (2-tailed).

⁶ Because missing data were present for a small number of goal ambiguity items, listwise deletion of cases with missing data was used, resulting in 55 respondents with complete data.

together. Looking at correlations between items intended for all three dimensions together, items 4, 5 and 6 seem to correlate with the evaluative dimension's items to some extent. The items that were proposed under the directive dimension show only very few significant correlations with items from the other dimensions, which could be seen as a signal that these items will not do well at all in the PCA. The correlation matrices provide reason for serious concern, which will be further investigated in the next section.

6.3.1.2 EFA

A PCA with all 21 goal ambiguity items and the goal conflict item was run to evaluate the new items' factor structure and to check for discriminant validity. Seven factors based on Kaiser's criterion were generated in the rotated solution (Field, 2013). As expected from the inter-item correlations, many items had very weak loadings on all factors. In line with the correlations, items 4, 5 and 6 form a factor with loadings above 0.6. Another factor with loadings above 0.6 is formed by items 7, 8 and 9. A third factor with loadings above this threshold value consists of items 11, 21 and the goal conflict item. Items 13 and 19 also cluster together with sufficient loadings. The rest of the items does not load strongly on any of the factors or is the only item on that factor (item 14).

To try to improve the factor solution, several steps have been taken. Items with very weak loadings and inter-item correlations were dropped to see whether the factor structure improved. Moreover, several solutions with a limited number of factors was forced onto the data to find out whether interpretation improved when the number of factors equalled the number of dimensions or goal attributes distinguished earlier. Besides the PCA in which the goal conflict measure was included, a PCA without this measure was conducted. In line with the concerns raised above, none of those fixes seemed to result in a stable, meaningful solution.⁷ The clustering of items changed extensively when items were dropped or a solution with less factors was imposed: the items that grouped together in one solution, loaded onto very different factors in another solution. The clusters that arose could also not be interpreted along the suggested lines of dimensions or goal attributes of goal ambiguity, nor did other interpretations of the item clusters that would be meaningful with respect to goal ambiguity fit with the results. It has therefore been decided that the data are not stable enough to extract scales.

⁷ A final attempt to obtain a meaningful result was made by using analytical techniques from the IRT framework. Given IRT's focus on individual items, IRT modelling could provide additional insight in item functioning and thereby detect difficulties with particular items (Embretson & Reise, 2000). However, due to limitations of the data set, the IRT models that are particularly useful for analysing Likert-type survey data (Rating Scale Model, (modified) Graded Response Model; Embretson & Reise, 2000) could not be estimated: not every response category for each item had been selected by the respondents, so that the model could not be computed. Unfortunately, IRT could then not offer additional insight.

6.3.2 Managerial goal setting strategies

6.3.2.1 Item correlations

The correlations between the managerial goal setting strategies items in table 11 show some interesting points. Within the proposed scales, item correlations are generally significant, which supports combining them as proposed. Only goal setting strategies item 5 (translation strategies) has no significant correlations at all with other items of the translation mechanism, which suggests that this item does not fit in the scale. Item 10 only correlates significantly with item 14 (both participation strategies), which is also reason for suspicion and should be inspected more closely in the EFA. Furthermore, the negative signs of the correlations of items 5, 10, 13 and 14 are in line with the expectations formed during item formulation, although the negative sign is not present in every correlation between these items and the other items in their suggested scales.

6.3.2.2 EFA

To investigate the factor structure of the goal setting strategies items and to test whether the new measures are different from directive and participative leadership (Harris & Ogbonna, 2001), a PCA was conducted including all new items and the items from the existing scales. The rotated solution yielded six factors based on Kaiser's criterion (Field, 2013). Strikingly, item 5 loaded on a separate factor and items 10 and 14 formed a factor as well. The other items behaved as expected. No cross-loadings were found, indicating that the directive and participative leadership scales are based on different constructs than the studied goal setting strategies. The participative leadership scale has high factor loadings above 0.8, while the directive leadership scale has two weak loadings below 0.5.

Table 11 Bivariate correlations items managerial goal setting strategies (n = 57)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1													
2	.66**												
3	.62**	.63**											
4	.62**	.59**	.43**										
5	.05	-.06	.09	.02									
6	.49**	.40**	.55**	.37**	.13								
7	.45**	.57**	.49**	.58**	-.22°	.44**							
8	.69**	.60**	.63**	.55**	-.05	.59**	.58**						
9	.17	.18	.28*	.37**	.02	.41**	.38**	.31*					
10	.06	.25°	.24°	-.06	-.25°	.06	.05	.07	-.07				
11	.24°	.27*	.35**	.17	-.08	.51**	.28*	.41**	.52**	.06			
12	.18	.16	.20	.08	.14	.40**	.17	.31*	.53**	-.13	.75**		
13	-.20	-.10	-.09	-.07	-.20	-.27*	-.13	-.22°	-.38**	.30*	-.56**	-.72**	
14	-.09	.10	-.02	-.06	-.17	-.22	-.00	-.10	-.15	.52**	-.33*	-.30*	.46**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

° . Correlation is significant at the 0.10 level (2-tailed).

Given the lack of correlation of item 5 with the other translation items, this item was removed. A new PCA resulted in five factors: one for the translation mechanism, one for the participation mechanism, two factors for participative and directive leadership, and one containing two items that refer to one's supervisor deciding and imposing goals. During item formulation it was thought that these two items would be the opposite end of the same continuum of the participation mechanism. Now it appears that whether or not a supervisor decides on the goals of the employee is not a matter of more or less participation, but rather that it is a separate dimension. It can be argued that an employee has a say in the formulation of his or her goals, but that the supervisor ultimately decides. It is therefore reasonable to retain the five-factor structure with this last factor labelled 'direction'.

In this solution, the factor loadings for items 6 and 9 stayed just below 0.6. Reliability analysis supports removal of both items as Cronbach's alpha for the translation as well as the participation mechanism scale would slightly improve. The weak directive leadership items did not reach a sufficient factor loading, so the weakest directive leadership item (item 3) was dropped. This resulted in a five-factor solution with good factor loadings for all items except for the second weak directive leadership item (item 1, loading = -0.56). Since the scale's reliability would decrease substantially when this item would be removed and the factor loading is only just below 0.6, item 1 is retained to stay as close as possible to the original measurement.

The final factor solution is presented in table 12, for which the KMO measure of sampling adequacy (0.75) and Bartlett's test of sphericity ($p = .000$) are in the appropriate range (Field, 2013). A further look at the results indicates that this solution is stable despite the small sample size. The items' communalities exceed 0.6, with the exception of one directive leadership item, and all but two even exceed 0.7, which support the findings' reliability (Field, 2013; MacCallum, Widaman, Zhang & Hong, 1999). In addition, all but one of the factor loadings is above 0.6, which also supports the solution's stability (Field, 2013; Guadagnoli & Velicer, 1988).⁸

⁸ Although the small sample size does not allow splitting the sample to check the EFA solution with CFA (Byrne, 2010), a CFA was run on the same sample just to try what would happen, as an indication in case more data would be collected. The original model with all items for goal setting strategies and the leadership scales did not show good model fit (Chi-square = 331.278, $df = 224$, $p = .000$; CFI = .845; RMSEA = .095 [LO 90 = .073, HI 90 = .116]) with a number of weak factor loadings. Adjusting the model in line with the EFA results gave better results: factor loadings were good and model fit improved (Chi-square = 219.774, $df = 160$, $p = .001$; CFI = .907; RMSEA = .084 [LO 90 = .054, HI 90 = .110]) although the model was still highly unlikely to be present in the data as seen in the highly significant Chi-square. Inspecting the output further indicates that leaving the third goal setting strategies scale (direction) out of the analysis would lead to model improvement. Indeed, this model showed the best fit in comparison with the other models (Chi-square = 164.581, $df = 129$, $p = .019$; CFI = .940; RMSEA = .072 [LO 90 = .031, HI 90 = .103]). Even though these analyses cannot be interpreted as they are performed on a sample that is too small and which has also been used for the EFA, it is hopeful that the factor structure and discriminant validity (see next paragraph) of managerial goal setting strategies scales found in the EFA are also supported by more strict analyses. This strengthens the recommendation that the scales developed here should be used and validated in further research.

Table 12 Summary of PCA - goal setting strategies and leadership scales (pattern matrix) (n = 55)⁹

	Component				
	Translation	Participation	Direction	Participative leadership	Directive leadership
Mijn leidinggevende maakt duidelijk hoe mijn doelen bijdragen aan de doelen van deze afdeling/faculteit	.76				
Mijn leidinggevende maakt voor mijn werk een concrete uitwerking van de doelen van mijn afdeling/faculteit	.82				
Mijn leidinggevende benadrukt het verhaal achter een doel	.61				
Mijn leidinggevende vertaalt de doelen van mijn afdeling/faculteit naar specifieke doelen voor mijn individuele werk	.90				
Mijn leidinggevende operationaliseert mijn doelen specifiek	.84				
Mijn leidinggevende legt uit waarom ik aan een doel moet werken	.77				
Mijn doelen worden in samenspraak met mijn leidinggevende vastgesteld		.87			
Mijn leidinggevende biedt mij ruimte om voorstellen te doen voor het opstellen van mijn doelen		.91			
Mijn leidinggevende geeft mij <u>geen</u> invloed op de doelen waaraan ik moet werken (<i>reverse coded</i>)		.78			
Welke doelen ik moet bereiken wordt door mijn leidinggevende bepaald			.89		
Mijn doelen worden door mijn leidinggevende opgelegd			.73		
Voorafgaand aan het nemen van een besluit neemt mijn leidinggevende de mening van zijn/haar medewerkers in overweging				.87	
Mijn leidinggevende raadpleegt zijn/haar medewerkers voordat hij/zij actie onderneemt				.89	
Wanneer zich een probleem voordoet, raadpleegt mijn leidinggevende zijn/haar medewerkers				.96	
Mijn leidinggevende vraagt zijn/haar medewerkers om suggesties				.80	
Mijn leidinggevende luistert naar het advies van medewerkers over welke activiteiten gedaan zouden moeten worden				.94	
Mijn leidinggevende legt uit op welke manier taken uitgevoerd moeten worden					-.56
Mijn leidinggevende beslist welke dingen en hoe dingen gedaan moeten worden					-.90
Mijn leidinggevende plant het werk dat gedaan moet worden					-.70
Eigenvalues	3.30	2.52	1.26	5.98	1.48
% of variance	17.38	13.26	6.65	31.46	7.79
Cronbach's alpha	0.89	0.86	0.69	0.94	0.71

Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.

⁹ Because missing data were present for a small number of leadership items, listwise deletion of cases with missing data was used, resulting in 55 respondents with complete data.

Table 13 Descriptive statistics and bivariate correlations goal setting strategies (GSS), leadership, job satisfaction, and work engagement (n = 54)¹⁰

	Nr. of items	Cronbach's alpha	Mean ¹¹	SD	(1)	(2)	(3)	(4)	(5)	(6)
(1) GSS translation	5	0.89	2.89	.858						
(2) GSS participation	3	0.86	3.93	.812	.25 ^o					
(3) GSS direction	2	0.69	2.20	.827	.03	-.36 [*]				
(4) Participative leadership	5	0.94	4.49	1.259	.34 [*]	.11	-.02			
(5) Directive leadership	3	0.71	3.28	1.190	.33 [*]	-.09	-.02	.42 ^{**}		
(6) Job satisfaction	1	n.a.	8.00	1.082	.27 ^o	.34 [*]	-.14	.33 [*]	.19	
(7) Work engagement	9	0.90	5.67	.975	.23	.21	.08	.32 [*]	.13	.66 ^{**}

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

^o . Correlation is significant at the 0.10 level (2-tailed).

6.3.2.3 Reliability and validity

Table 13 shows descriptive statistics, reliability statistics, and bivariate correlations for the goal setting strategies, leadership, job satisfaction, and work engagement scales. All scales show good reliability, with Cronbach's alpha in most cases exceeding 0.7 (DeVellis, 2016; Field, 2013). Alpha's value of 0.69 for the direction goal setting strategy scale should not be considered as deficient, since this statistic is sensitive to the number of items in a scale, whereby more items result in higher reliability estimates, and the value is only slightly below the commonly desired 0.7 (DeVellis, 2016).

As expected from the factor analysis, the goal setting strategies scales show discriminant validity, because these scales do not correlate or only moderately correlate with the leadership scales (DeVellis, 2016). The focus on setting goals in the new scales is then substantially different from Harris' and Ogbonna's (2001) leadership styles, despite the similarity in terms of containing participative and more directive strategies or styles. This means that strategies that managers employ for setting goals for or with their employees cannot be seen as just part of leadership behaviour; instead, these strategies should be studied as separate variables.

To investigate the predictive validity, reviewing the bivariate correlations is complemented by multiple regression analysis with job satisfaction and work engagement as dependent variables (DeVellis, 2016). The correlations between the goal setting strategies scales and job satisfaction as well as work engagement are insignificant. These findings are confirmed by the regression analyses

¹⁰ Because missing data were present for a small number of leadership and work engagement items, listwise deletion of cases with missing data was used, resulting in 54 respondents with complete data.

¹¹ To test whether the mode of data collection influenced the answers of respondents, the means on these scales of the groups of respondents filling in the online or hardcopy version of the questionnaire have been compared using ANOVA. Since the F-statistic for each of the reported scales is highly insignificant, it can be concluded that the mode of data collection has not biased the data.

for both dependent variables. In the first model, only control variables (gender, age group, and job level) were entered, after which the new scales were entered step by step: in model 2 the translation scale was added, in model 3 the participation scale was included, and in model 4 the direction scale was entered. The analysis of variance (ANOVA), which tests the significance of the regression model, is insignificant for all four models for both job satisfaction and work engagement (see tables 14 and 15). Based on these results, the predictive validity of the goal setting strategies scales cannot be supported. It should be noted, however, that the results of these analyses should be seen in light of the small sample size. The lack of a large number of respondents can be a source of bias towards marking relationships insignificant (DeVellis, 2016; Field, 2013). More data should be collected to be able to draw robust conclusions about the scales' validity.

Table 14 ANOVA: Job satisfaction (n = 54)¹²

Model		Sum of Squares	df	Mean Square	F	p
1	Regression	.97	3	.33	.28	.841
	Residual	59.57	51	1.17		
	Total	60.55	54			
2	Regression	4.84	4	1.21	1.09	.373
	Residual	55.70	50	1.11		
	Total	60.55	54			
3	Regression	9.61	5	1.92	1.85	.121
	Residual	50.93	49	1.04		
	Total	60.55	54			
4	Regression	10.18	6	1.70	1.62	.163
	Residual	50.36	48	1.05		
	Total	60.55	54			

Table 15 ANOVA: Work engagement (n = 53)¹³

Model		Sum of Squares	df	Mean Square	F	p
1	Regression	.32	3	.11	.10	.959
	Residual	52.53	50	1.05		
	Total	52.85	53			
2	Regression	2.39	4	.60	.58	.679
	Residual	50.46	49	1.03		
	Total	52.85	53			
3	Regression	3.49	5	.70	.68	.641
	Residual	49.36	48	1.03		
	Total	52.85	53			
4	Regression	4.40	6	.73	.71	.642
	Residual	48.45	47	1.03		
	Total	52.85	53			

¹² Because one respondent did not answer the background questions and there were missing data for a small number of leadership items, only 54 respondents are included.

¹³ In addition to footnote 12, one respondent did not answer all work engagement items, resulting in a lower number of respondents.

7. Discussion and conclusion

This study has tried to answer the question *What are goal ambiguity and managerial goal setting strategies and how can those concepts be measured?* and develop survey instruments that can be used in research on goal setting, goal ambiguity, and performance management in the public sector. Starting with conceptualisations based on the literature, three empirical studies have been conducted in the sector of higher education. Data for these studies were collected among academic staff at several universities in The Netherlands using both qualitative and quantitative methods. First, focus groups and interviews were held to find out how academics understand goal ambiguity and which managerial goal setting strategies they talk about. This material was used to develop questionnaire items, which were tested in the second study: cognitive interviews were conducted to discover problems in the items so improvements could be made. The third study was a pilot test of the formulated items to investigate whether together they measured the concepts of interest in a valid and reliable way.

The results were mixed: for goal ambiguity, the qualitative data show that goal ambiguity is experienced by employees at universities and the findings are in line with the conceptualisation developed based on the literature. The data also confirm the utility of considering both dimensions and goal attributes related to goal ambiguity. However, the survey data did not yield satisfying scales based on the items. The concept of 'goals' itself is a very slippery concept; trying to catch an even more difficult construct like goal ambiguity is even harder. Participants in the cognitive interviews experienced difficulties in answering questions about their goals, since many different things could be thought of in the context of goals. The open comment sections in the pilot survey revealed similar concerns of respondents: they indicated that it was really hard to put their finger on their goals and answering the questions was therefore very challenging. This could be explained by the comments that goals are not explicitly discussed or that awareness of specific performance indicators is higher than of the goals to which these targets contribute, as some respondents indicated. Participants in the focus groups and interviews also told that their goals are sometimes rather implicit. The PCA of the goal ambiguity items did not provide a solution in line with the expectations about the concept with which the items had been formulated, nor did it result in a different yet meaningful solution.

Since goals and goal ambiguity are so difficult for respondents to answer questions about, it can be questioned whether the concept is suitable to study in surveys using questionnaires. The concept is very real as the remarks of participants in study 1 show, but standardising its measurement may not provide enough sensitivity to the complexity of the concept. The level of abstraction sought in the measurement of goal ambiguity may not be in line with the level of abstraction of goals that academics encounter in their own work. The operationalisation of goals into performance measures

may be so strongly present in practice, that goals as such are not so important –at least if we look at what people talk and think about– and therefore difficult to measure. The context in which this research has been conducted may then have had a strong influence on the results. Nonetheless, studying goal ambiguity remains relevant and further research should continue to find ways to measure goal ambiguity in the perception of employees.

For the managerial goal setting strategies the story is more straightforward. Despite the small sample, the analyses revealed three valid and reliable scales that were close to the expectations based on theory and the qualitative data. Although the items for the participative mechanism showed two dimensions instead of one as expected, the second dimension –direction, the items of which were thought to be on the opposite side of the continuum of participation in goal setting– was meaningful and was therefore retained. Discriminant validity of the scales was also found by correlating the goal setting strategies scales with two leadership scales. The analysis showed that goal setting strategies belong to a truly different concept than leadership, which is broader in scope than the specific strategies. This is in favour of studying goal setting strategies of supervisors as a separate concept, for which the measurements developed here seem suitable. The scales need further validation as the current sample only allowed exploratory analyses, but researchers are encouraged to include the presented scales in their research projects. Managerial goal setting strategies are important within the context of performance management, since goals are central to managing towards good performance. Studying how such strategies influence public performance could deepen our theoretical understanding and contribute to practice.

Some limitations should be kept in mind though. Despite good efforts to reach a large number of respondents for the survey, only a very low response rate resulting in a small sample was obtained. This had several consequences. Firstly, only exploratory factor analysis was possible, since there were not enough respondents to split the sample in two to do confirmatory factor analysis as well. Validation of the developed scales is therefore still required. Secondly, the correlational analyses to test the scales' validity are not robust, since such analyses depend on larger numbers to produce unbiased calculations. A small sample is therefore reason to be cautious about the significance testing related to these correlations. Although patterns may be present, the numbers are too small to draw robust conclusions. Thirdly, the sample may have been even too small to detect existing patterns within the data. This risk is specifically relevant for the exploratory factor analysis of the ambiguity items. Since there were 21 ambiguity items and no stable factor solution could be obtained, it could be imagined that there were not enough responses to find consistent patterns within the data. It could even be questioned whether measuring goal ambiguity is suitable for measuring quantitatively in survey research using questionnaires. After all, goals, and goal ambiguity

even more, is a very slippery concept as the qualitative studies show which is very hard to capture in standardised measurements. However, no definite answer could be given based on this study due to the possibility that no meaningful findings were obtained because of the small sample size. Further research is therefore needed to learn more about how to measure goal ambiguity.

Problems to response may have also occurred as a result of the order of concepts in the questionnaire. Because of the difficulty of answering questions about goals, respondents may have dropped out relatively early, before reaching the items about managerial goal setting strategies. Some respondents mentioned in the open comment space after the goal setting questions that these were easier for them to answer than the ambiguity items. This may be the case because respondents start to think about the goals they discuss with their supervisors in concrete situations, while the first part of the questionnaire is more abstract. Had the order of the concepts been reversed, higher response may have been obtained, because respondents would have started with easier questions whereby they would have given more directed thought to what their goals are.

However, this change in concept order would have posed other problems with regard to the validity of the measurement: given universities' strong performance orientation in which quantitative output targets take a central place (Beerkens, 2013; Broucker et al., 2015; Jacobsen & Andersen, 2014), the chance would be substantial that respondents would have focused on performance agreements rather than on the more abstract, overarching goals, which were intended to be measured. One respondent also remarked in the open comment section that she knew better what to respond when items contained terms referring to targets or performance levels than to goals. Such remarks can be seen as indications that academics are more familiar with the more specified performance targets than with the broader goals. This had also been found in study 1, where one interview participant stated that she was not aware of the exact goals of the organisation to which her work contributed, while she could tell exactly how many papers she had to publish or how many students she had to supervise each year. Although the ambiguity items were perhaps too difficult to start the questionnaire with, it was important from the perspective of validity of measurement of both concepts.

Two other problems with regard to the goal ambiguity items may have prevented the emergence of meaningful scales. Reflecting on the items and the new conceptualisation of goal ambiguity the items should measure, it can be thought that the link between sub dimensions and measurement is not as clear as DeVellis (2016) recommends. Although the dimensions that have been discerned in previous research and in the qualitative study of this project were clearly represented in the items, the connection with the diverse goal attributes may have been too implicit. Terms referring to the goal

attributes have been incorporated in the items. Combinations between dimensions and attributes have been derived from the qualitative data, but have not been specifically defined. A larger item pool in which each combination of dimension and attribute would be represented in multiple items could have avoided the unproductive item clustering (DeVellis, 2016).

In addition, the contextualisation by respondents may have been too broad to focus respondents' attention to answer the goal ambiguity items. Since academic staff usually have tasks in multiple areas (research, teaching, management/organisation), the items referring to the respondents' goals could be hard to interpret. Respondents may have experienced difficulties in deciding which answer would be appropriate, because this may differ for their research and teaching goals, for example. Nevertheless, inspecting responses per item does not show that respondents had a strong tendency to choose the middle response category. Further research about measuring goal ambiguity should take a different approach to contextualising the items by being more specific about what respondents have to think about when asked about their goals, so that it becomes easier for respondents how to answer the questions.

A final limitation is that the existing survey scales for goal ambiguity as discussed in the theoretical framework have not been included in the survey. Had it been possible to correlate existing scales with the new measurements, criterion validity could have been tested (De Vaus, 2014; DeVellis, 2016). However, given the criticisms against the three-item scale that is used most frequently concerning its validity, it could be questioned whether the results of such analysis would be meaningful (De Vaus, 2014; DeVellis, 2016).

Summing up, the main contributions of this study are twofold. On the one hand, the attempt to conceptualise goal ambiguity and develop an accompanying survey measurement has confirmed our earlier confusion about the construct, but provided an empirical basis to this situation. Further research about how goal ambiguity can be measured is therefore required. On the other hand, three reliable survey scales have been developed to study managerial goal setting strategies: managers could take away interpretive leeway or let employees more room for interpretation of broad goals (translation strategies, 5 items); managers could invite employees to come up with their own goals or allow less influence in goal setting (participation strategies, 3 items); and managers could impose goals on their employees or let their employees decide for themselves (direction strategies, 2 items). This research thereby fills in a gap in the field of performance management research in the public sector. Further research should be done to build from this study and improve our understanding of how goal setting can influence performance within public organisations.

References

- Berg, B.L. & Lune, H. (2012). *Qualitative research methods for the social sciences* (8th ed.). Boston: Pearson Education.
- Beerkens, M. (2013). Facts and fads in academic research management: The effect of management practices on research productivity in Australia. *Research Policy*, 42(9), 1679-1693.
- Boeije, H.R. (2010). *Analysis in qualitative research*. London: Sage.
- Breaugh, J.A., & Colihan, J.P. (1994). Measuring facets of job ambiguity: Construct validity evidence. *Journal of Applied Psychology*, 79(2), 191.
- Broucker, B., De Wit, K., & Leisyte, L. (2015, August/September). *An evaluation of new public management in higher education: Same rationale, different implementation*. Paper presented at the EAIR 37th Annual Forum in Krems, Austria.
- Bryman, A. (2006). Integrating quantitative and qualitative research: How is it done? *Qualitative Research*, 6(1), 97-113.
- Byrne, B.M. (2010). *Structural Equation Modelling with AMOS. Basic concepts, applications and programming* (2nd ed.). New York/London: Routledge.
- Calciolari, S., Cantù, E., & Fattore, G. (2011). Performance management and goal ambiguity: Managerial implications in a single payer system. *Health Care Management Review*, 36(2), 164-174.
- Campbell, D.T. & Fiske, D.W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.
- Chun, Y.H. & Rainey, H.G. (2005a). Goal ambiguity and organizational performance in US federal agencies. *Journal of Public Administration Research and Theory*, 15(4), 529-557.
- Chun, Y.H. & Rainey, H.G. (2005b). Goal ambiguity in U.S. federal agencies. *Journal of Public Administration Research and Theory*, 15(1), 1-30.
- Colbert, A.E., Kristof-Brown, A.L., Bradley, B.H., & Barrick, M.R. (2008). CEO transformational leadership: The role of goal importance congruence in top management teams. *Academy of Management Journal*, 51(1), 81-96.
- Davis, R.S. & Stazyk, E.C. (2015). Developing and testing a new goal taxonomy: Accounting for the complexity of ambiguity and political support. *Journal of Public Administration Research and Theory*, 25(3), 751-775.
- DeVellis, R.F. (2016). *Scale development: Theory and applications* (4th ed.). Thousand Oaks, California: SAGE Publications, Inc.
- Diefenbach, T. (2009). New Public Management in public sector organizations: The dark sides of managerialistic 'enlightenment'. *Public Administration*, 87(4), 892-909.

- Embretson, S.E. & Reise, S.P. (2000). *Item response theory for psychologists*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc., Publishers.
- Erez, M. (1986). The congruence of goal-setting strategies with socio-cultural values and its effect on performance. *Journal of Management*, 12(4), 585-592.
- Erez, M. & Arad, R. (1986). Participative goal-setting: Social, motivational, and cognitive factors. *Journal of Applied Psychology*, 71(4), 591-597.
- Erez, M. & Earley, P.C. (1987). Comparative analysis of goal-setting strategies across cultures. *Journal of Applied Psychology*, 72(4), 658-665.
- Field, A. (2013). *Discovering statistics using IBM SPSS Statistics* (4th ed.). London: Sage Publications.
- Fowler, F.J. (2014). *Survey research methods* (5th ed.). London: Sage.
- Guadagnoli, E. & Velicer, W.F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin*, 103(2), 265-275.
- Harris, L.C. & Ogbonna, E. (2001). Leadership style and market orientation: An empirical study. *European Journal of Marketing*, 35(5/6), 744-764.
- Hood, C. (1991). A public management for all seasons? *Public Administration*, 19(1), 3-19.
- Hughes, O.E. (2012). *Public management and administration. An introduction* (4th ed.). Basingstoke: Palgrave Macmillan.
- Jacobsen, C.B. & Andersen, L.B. (2014). Performance management for academic researchers: How publication command systems affect individual behavior. *Review of Public Personnel Administration*, 34(2), 84-107.
- Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of Management Review*, 31(2), 386-408.
- Jung, C.S. (2012). Developing and validating new concepts and measures of program goal ambiguity in the U.S. federal government. *Administration & Society*, 44(6), 675-701.
- Jung, C.S. (2014a). Organizational goal ambiguity and job satisfaction in the public sector. *Journal of Public Administration Research and Theory*, 24(4), 955-981.
- Jung, C.S. (2014b). Why are goals important in the public sector? Exploring the benefits of goal clarity for reducing turnover intention. *Journal of Public Administration Research and Theory*, 24(1), 209-234.
- Jung, C.S. (2011). Organizational goal ambiguity and performance: Conceptualization, measurement, and relationships. *International Public Management Journal*, 14(2), 193-217.
- Krueger, R.A. & Casey, M.A. (2015). *Focus groups: A practical guide for applied research* (5th ed.). Thousand Oaks, California: SAGE Publications, Inc.

- Latham, G.P., Borgogni, L., & Petitta, L. (2008). Goal setting and performance management in the public sector. *International Public Management Journal*, 11(4), 385-403.
- Latham, G.P., Erez, M., & Locke, E.A. (1988). Resolving scientific disputes by the joint design of crucial experiments by the antagonists: Application to the Erez–Latham dispute regarding participation in goal setting. *Journal of Applied Psychology*, 73(4), 753-772.
- Lee, T.W., Locke, E.A., & Latham, G.P. (1989). Goal setting theory and job performance. In L.A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 291-326). Hillsdale, NJ: Erlbaum.
- Locke, E.A. & Latham, G.P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- Locke, E.A. & Latham, G.P. (Eds.) (2013). *New developments in goal setting and task performance*. New York and London: Routledge.
- Locke, E.A., Smith, K.G., Erez, M., Chah, D.O., & Schafer, A. (1994). The effects of intra-individual goal conflict on performance. *Journal of Management*, 20(1), 67-91.
- MacCallum, R.C., Widaman, K.F., Zhang, S., & Hong, S. (1999). Sample size in factor analysis. *Psychological Methods*, 4(1), 84-99.
- March, J.G. & Olsen, J.P. (1979). *Ambiguity and choice in organizations* (2nd ed.). Bergen: Universitetsforlaget.
- Meier, K. J. & O’Toole, L. J. (2013). Subjective organizational performance and measurement error: Common source bias and spurious relationships. *Journal of Public Administration Research and Theory* 23(2), 429-456.
- Moynihan, D.P., Pandey, S.K., & Wright, B.E. (2012). Setting the table: How transformational leadership fosters performance information use. *Journal of Public Administration Research and Theory*, 22(1), 143–164.
- Moynihan, D.P., Wright, B.E., & Pandey, S.K. (2012). Working within constraints: Can transformational leaders alter the experience of red tape? *International Public Management Journal*, 15(3), 315-336.
- Nagy, M.S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology*, 75(1), 77-86.
- Neuman, W.L. (2004). Chapter 5: Qualitative and quantitative measurement. In W.L. Neuman (Ed.), *Basics of social research: Quantitative and qualitative approaches. International Edition* (pp. 105-130). Boston: Pearson.
- Pandey, S.K. & Rainey, H.G. (2006). Public managers' perceptions of organizational goal ambiguity: Analyzing alternative models. *International Public Management Journal*, 9(2), 85-112.
- Pandey, S.K. & Wright, B.E. (2006). Connecting the dots in public management: Political environment, organizational goal ambiguity, and the public manager’s role ambiguity. *Journal of Public Administration Research and Theory*, 16(4), 511-532.

- Perry, J.L., Mesch, D., & Paarlberg, L. (2006). Motivating employees in a New Governance era: The performance paradigm revisited. *Public Administration Review*, 66(4), 505-514.
- Pollitt, C. & Bouckaert, G. (2011). *Public management reform. An international comparison* (3rd ed.). Oxford : Oxford University Press.
- Rainey, H.G. (2014). *Understanding and managing public organizations* (5th ed.). San Francisco: Jossey-Bass.
- Rainey, H.G. & Bozeman, B. (2000). Comparing public and private organizations: Empirical research and the power of the a priori. *Journal of Public Administration Research and Theory*, 10(2), 447-469.
- Rainey, H.G. & Jung, C.S. (2015). A conceptual framework for analysis of goal ambiguity in public organizations. *Journal of Public Administration Research and Theory*, 25(1), 71-99.
- Rainey, H.G., Pandey, S.K., & Bozeman, B. (1995). Research note: Public and private managers' perceptions of red tape. *Public Administration Review*, 55(6), 567-574.
- Schaufeli, W.B. & Bakker, A.B. (2004). Bevlogenheid: Een begrip gemeten [Work engagement: The measurement of a concept]. *Gedrag & Organisatie*, 17(2), 89-112.
- Staniok, C.D. (2014). *Goal prioritization and commitment in public organizations: Exploring the effects of goal conflict* (Study Paper No. 73). Copenhagen: The Rockwool Foundation Research Unit.
- Staniok, C.D. (2015, June). Performance implications of goal prioritization and commitment: An empirical test of the link between internal management and organizational performance. Paper presented at the 11th Trans-Atlantic Dialogue Conference in Boston, USA.
- Steijn, B. & Groeneveld, S.M. (Eds.) (2013). *Strategisch HRM in de publieke sector [Strategic HRM in the public sector]* (2de ed.). Assen: Koninklijke Van Gorcum.
- Sun, R., Peng, S., & Pandey, S.K. (2014). Testing the effect of person-environment fit on employee perceptions of organizational goal ambiguity. *Public Performance & Management Review*, 37(3), 465-495.
- Thiel, S. van. & Leeuw, F.L. (2002). The performance paradox in the public sector. *Public Performance & Management Review*, 25(3), 267-281.
- Tummers, L. (2012). *Policy alienation. Analyzing the experiences of public professionals with new policies*. Rotterdam: Erasmus University Rotterdam.
- Vaus, D. de. (2014). *Surveys in social research* (6th ed.). London: Routledge.
- Willis, G.B. (1999). *Cognitive interviewing: A how to guide*. Research Triangle Institute.
- Wright, B.E. (2004). The role of work context in work motivation: A public sector application of goal and social cognition theories. *Journal of Public Administration Research and Theory*, 14(1), 59-78.

Wright, B.E., Moynihan, D.P., & Pandey, S.K. (2012). Pulling the levers: Transformational leadership, public service motivation, and mission valence. *Public Administration Review*, 72(2), 206-215.

Appendix 1: Manual focus groups

Introductie: Hartelijk dank voor jullie aanwezigheid. In mijn uitnodiging aan jullie heb ik al een en ander verteld over de reden waarom jullie hier zijn, waar mijn onderzoek over gaat: het werken met doelen in de wetenschap. Omdat jullie allemaal op deze universiteit werkzaam zijn als [promovendi/UD/UHD] heb ik jullie gevraagd om jullie ervaringen te komen delen. Ik ben dus vooral benieuwd naar jullie eigen inzichten, meningen en ervaringen.

Regels: Om het gesprek goed te laten verlopen heb ik een aantal regels.

- Allereerst: praat alsjeblief niet door elkaar; dat maakt het niet duidelijker. Daarbij: heb respect voor de andere deelnemers.
- Daarnaast wil ik jullie vragen je bijdrage steeds kort, to-the-point te houden, zodat het gesprek goed te volgen blijft en niet in lange monologen verzandt.
- En tot slot: willen jullie alsjeblieft je telefoon uitschakelen mocht je dat nog niet gedaan hebben. Als iedereen dit in acht neemt, kan iedereen zijn of haar zegje doen en kan ik wat van jullie leren.

Hebben jullie al de kans gehad om je aan elkaar voor te stellen? Om een beetje een idee te krijgen van elkaar: **Openingsvraag:** Kun je vertellen wie je bent, bij welke faculteit/vakgroep je werkt en wat je graag doet als je niet aan het werk bent/waarom je meedoet aan dit onderzoek?

Dan zou ik nu graag beginnen met de **eerste vraag:**

- Kun je iets vertellen over de doelen die je in je werk hebt en wat je van die doelen vindt?
- Hoe vind je het om met die doelen te werken?
- Wat zijn in jouw optiek goede doelen/hoe zouden doelen er uit moeten zien in jouw ogen?
 - o Wat vind je daar [beschrijving deelnemer] aan?
 - o Wanneer merk je dat?
 - o Is dat positief/negatief?
 - o Kun je dat toelichten/uitleggen?
 - o Heb je daar een voorbeeld van?

- In discussies hoor ik vaak dat doelen op universiteiten niet zo eenduidig zijn, bijvoorbeeld wat goed onderzoek of onderwijs betekent. Hoe zijn jullie ervaringen daarmee?
 - o Is dat positief/negatief?
 - o Kun je dat toelichten/uitleggen?
 - o Hoe ga je daar mee om?
- Hoe komen jouw werkdoelen tot stand?
 - o Heeft iemand hier andere ervaringen mee?
- Wat is de rol van je leidinggevende in de totstandkoming van je doelen?
- Of: Wat is jouw rol in de totstandkoming van de doelen van je medewerkers?
 - o Heeft iemand hier andere ervaringen mee?
- **Samenvattingsvraag:** [na korte samenvatting] Komt dit beeld overeen met wat er hier besproken is?
- **Laatste vraag:** Is er iets waar we het niet over gehad hebben, maar wel zouden moeten bespreken?

Afsluiting: iedereen bedanken. Met deze informatie ga ik nu aan de slag om vragen op te stellen voor een vragenlijst, die in een later stadium gebruikt kan worden. Deze vragen wil ik graag testen bij de doelgroep. Vragen of iemand nog bereid is om over een aantal weken (tweede helft mei, begin juni) mee te werken aan een cognitief interview.

Mogelijkheid geven om op de hoogte gebracht te worden over het onderzoek op een later moment.

Appendix 2: Manual interviews

Hartelijk dank dat je aan mijn onderzoek wil deelnemen. In mijn uitnodiging heb ik al een en ander verteld over waar mijn onderzoek over gaat: het werken met doelen in de wetenschap. Hiervoor ben ik op zoek naar hoe wetenschappers naar hun doelen kijken en er mee werken. Ik ben dus vooral benieuwd naar je eigen inzichten, meningen en ervaringen.

- Als eerste zou ik je willen vragen of je iets kunt vertellen over je taken en de doelen die je in je werk hebt?
- Wat vind je van die doelen?
- Hoe vind je het om met die doelen te werken?
 - o Wat vind je daar [beschrijving deelnemer] aan?
 - o Wanneer merk je dat?
- Wat zijn in jouw optiek goede doelen/hoe zouden doelen er uit moeten zien in jouw ogen?
 - o Heb je daar een voorbeeld van?
- In discussies hoor ik vaak dat doelen op universiteiten niet zo eenduidig zijn, bijvoorbeeld wat goed onderzoek of onderwijs betekent. Hoe zijn jouw ervaringen daarmee?
 - o Wanneer merk je dat?
 - o Is dat positief/negatief?
 - o Hoe ga je daar mee om?
- Hoe komen jouw werkdoelen tot stand?
- Wat is de rol van je leidinggevende in de totstandkoming van je doelen?
- Of: Wat is jouw rol in de totstandkoming van de doelen van je medewerkers?

Probes:

- o Is dat positief/negatief?
- o Kun je dat toelichten/uitleggen?
- o Hoe ga je daar mee om?
- **Laatste vraag:** Is er iets waar we het niet over gehad hebben, maar waar je wel graag iets over wil zeggen?

Afsluiting: deelnemer bedanken en mogelijkheid geven om op de hoogte gebracht te worden over het onderzoek op een later moment. Met deze informatie ga ik nu aan de slag om vragen op te stellen voor een vragenlijst, die in een later stadium gebruikt kan worden.

Doelambiguïteit

- Missie
- Directive
- Evaluatie/target
- Prioriteiten
- Tijdlijn
- ...

Appendix 3: Codes and indicators

- **Directive** = code/node
 - o Aanpak = indicator

Goal ambiguity: Dimensions

- **Directive**
 - o Aanpak
 - o Richtlijnen
 - o Aansturing
 - o Instructies
 - o Kaders scheppend
 - o Prioriteiten stellend (of juist ruimte/noodzaak om dat zelf te doen)
 - o Afgesproken
 - o Subdoelen geformuleerd
 - o Protocollen
 - o Sturing gedrag
 - o Richtinggevend
 - o Rondzwemmen (geen idee waar mee bezig, er alleen voor staan, zelf proces maar bedenken)
 - o Houvast bieden
- **Evaluative**
 - o Afrekenen
 - o Beoordelen
 - o Evalueren
 - o Meten
 - o Resultaten
 - o Voortgang
 - o Prestaties
 - o Minimumeis
 - o Waarde erkennen

- Hoog in het vaandel staan
- Onder druk staan (dus niet gewaardeerd worden in evaluatie)
- Graadmeter hebben

Goal ambiguity: Goal attributes

- **Specificity**

- Tijdsbestek
- Kwantitatief
- Concreet
- Geoperationaliseerd
- Gedefinieerd

- **Vagueness**

- Algemeen
- Breed
- Flexibel
- Abstract

- **Measurability**

- Indicatoren
- Aantallen
- Minimumeis
- Normen
- Aflezen

- **Tangibility**

- In doelen vatbaar
- Formeel vastgelegd
- Impliciet (niet tastbaar/vastgelegd)
- Geprotocolleerd

- **Clarity**

- Helder
- Bewust van
- Eenduidig

- **Complexity (meervoudigheid)**
 - Verschillende dimensies/subdoelen
 - Plat
- **Conflict (this is actually not part of goal ambiguity, but is a separate concept; it is therefore not integrated in the items)**
 - Spanning
 - Botsing
 - Alles moeten kunnen/schaap met de vijf poten
 - Onder druk
- **Feasibility**
 - Haalbaar
 - Logisch
 - Subdoelen/tussenstappen

Goal setting strategies

- **Participation**
 - Samenspraak
 - Overleg
 - Onderhandeling
 - Discussie
 - Opleggen
 - Zelf doelen stellen/vertalen
 - Zelf prioriteiten stellen
 - Leidinggevende stuurt bij
 - Zelf touwtjes in handen nemen/krijgen
 - Al vastliggen
 - Eigen invulling geven
 - Eisen gesteld
 - Top down/bottom up

- **Translation**

- Koppeling met afdelings-/organisatiedoelen
- Verhaal achter doel uitleggen
- Afdelings-/organisatiedoelen specifieker maken
- Doelen verduidelijken
- Ruimte voor eigen invulling/interpretatie laten bestaan
- Doelen (niet) vertalen naar het individu

Appendix 4: Questionnaire

[NOTE FOR NON-DUTCH SPEAKING STAFF: Since this study is conducted in Dutch only, this message is only in Dutch as well]

Geachte medewerker,

Uitdagend onderwijs geven, toonaangevend onderzoek doen, nieuwe ideeën en kennis binnen uw vakgebied creëren...

Welke doelen heeft u in uw werk? En wat vindt u daarvan?

Graag nodig ik u uit voor deelname aan mijn onderzoek naar werken met doelen op de universiteit, uitgevoerd in het kader van mijn masterscriptie bij de master Research in Public Administration and Organisational Science, een programma dat door de Universiteit Utrecht, Erasmus Universiteit Rotterdam, Tilburg University, de Radboud Universiteit Nijmegen, de Vrije Universiteit Amsterdam en Universiteit Twente wordt aangeboden. Dit afstudeeronderzoek wordt begeleid door prof. dr. Sandra Groeneveld, hoogleraar Publiek Management aan de Universiteit Leiden, en dr. Lars Tummers, universitair hoofddocent Publiek Management aan de Universiteit Utrecht.

U ontvangt deze uitnodiging omdat u verbonden bent aan de [vakgroep/faculteit] van de [universiteit]. [] heeft goedkeuring gegeven aan dit onderzoek en beveelt deelname aan. Hierbij wil ik u dan ook vragen deze korte vragenlijst over uw ervaringen met doelen in uw werk in te vullen.

Dit onderzoek is een pilot studie, waarin u een aantal vragen en stellingen wordt voorgelegd over de doelen waar u aan werkt. Met uw deelname aan deze pilot studie draagt u bij aan het testen van een vragenlijst die als basis dient voor verder onderzoek naar management en doelgericht werken in de wetenschap, om daarmee tot verbetervoorstellen te komen.

Deelname aan de vragenlijst vraagt ongeveer 10 minuten van uw tijd. Voordat u de vragenlijst invult, wordt u een informed consent verklaring voorgelegd. Hiermee wordt gegarandeerd dat uw antwoorden volstrekt vertrouwelijk behandeld worden en dat de resultaten alleen op geheel anonieme basis worden gerapporteerd. Antwoorden zijn niet te herleiden naar specifieke respondenten.

Voor deelname aan de vragenlijst kunt u gebruik maken van de volgende link:

https://usbo.az1.qualtrics.com/SE/?SID=SV_dhutBJd2Le3HtBP

Via deze link krijgt u toegang tot de vragenlijst. Indien u de vragenlijst tussentijds sluit, kunt u deze via de link op een later tijdstip weer openen in dezelfde browser. U kunt dan automatisch verder gaan met de vragen waar u was gebleven.

Ik verzoek u vriendelijk de vragenlijst **uiterlijk maandag 27 juni** in te vullen. Na deze datum sluit de vragenlijst om de resultaten op tijd beschikbaar te hebben.

Hiermee hoop ik u voldoende geïnformeerd te hebben. Mocht u vragen of opmerkingen hebben, dan kunt u contact met mij opnemen (m.a.vanderhoek@students.uu.nl).

Ik wil u, mede namens prof. dr. Sandra Groeneveld en dr. Lars Tummers, hartelijk bedanken voor uw waardevolle bijdrage aan dit onderzoek.

Met vriendelijke groet,

Marieke van der Hoek

Student Research Master in Public Administration & Organisational Science

Pilot studie: Werken met doelen op universiteiten

Welkom in de vragenlijst naar werken met doelen op universiteiten. In deze vragenlijst leggen wij u stellingen voor die ingaan op verschillende aspecten van het werken met doelen. U kunt telkens de antwoordcategorie aanvinken die uw mening het beste benadert.

Deze vragenlijst bestaat uit 3 delen. Aan het einde van de vragenlijst volgen nog enkele achtergrondvragen naar uw geslacht, leeftijd en dergelijke. De balk bovenin het scherm geeft weer hoe ver u gevorderd bent met de vragenlijst.

We benadrukken dat de wij zorgvuldig en vertrouwelijk omgaan met uw antwoorden. Uw anonimiteit blijft gewaarborgd.

Met uw deelname levert u een waardevolle bijdrage aan het ontwikkelen van deze vragenlijst voor vervolgonderzoek naar management en doelgericht werken in de wetenschap.

Bij voorbaat hartelijk dank voor uw deelname!

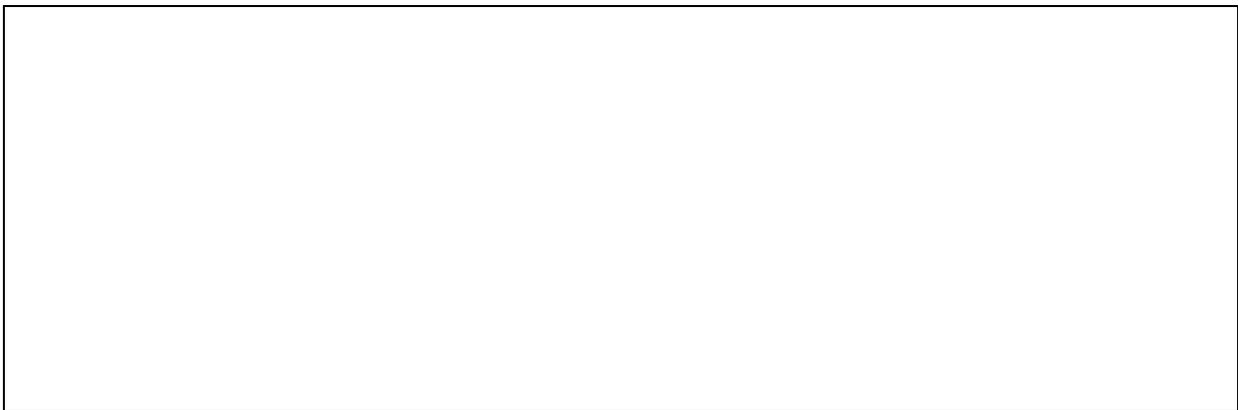
Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard en methode van het onderzoek, zoals uiteengezet in de uitnodiging voor dit onderzoek. Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud daarbij het recht deze instemming weer in te trekken zonder dat ik daarvoor een reden hoeft op te geven. Ik besef dat ik op elk moment mag stoppen met het onderzoek. Als mijn onderzoeksresultaten worden gebruikt in wetenschappelijke publicaties, of op een andere manier openbaar worden gemaakt, dan zal dit volledig geanonimiseerd gebeuren. Mijn persoonsgegevens worden niet door derden ingezien zonder mijn uitdrukkelijke toestemming. Als ik meer informatie wil, nu of in de toekomst, dan kan ik me wenden tot Marieke van der Hoek (m.a.vanderhoek@students.uu.nl).

- Ik begrijp de bovenstaande tekst en ga akkoord met deelname aan het onderzoek
- Ik ga niet akkoord met deelname aan het onderzoek

DEEL 1

Het werken met doelen staat centraal in dit onderzoek. Waar wij in geïnteresseerd zijn, zijn de doelstellingen die u vanuit de organisatie meekrijgt en waar u als medewerker aan werkt. Daarbij beperkt dit onderzoek zich tot de doelen die verbonden zijn aan de taken die horen bij uw functie. Het betreft niet de taken zelf of prestatieafspraken, maar de doelstellingen die daarbij horen. Hierbij kunt u denken aan uitdagend onderwijs geven, toonaangevend onderzoek doen of nieuwe ideeën en kennis binnen uw vakgebied creëren.

Kunt u aangeven welke doelen dit voor u zijn?



Houdt u bij de beantwoording van de volgende vragen de doelen die u zojuist genoemd heeft in gedachten.

Hieronder ziet u een aantal stellingen over uw beleving van de doelen in uw werk. Elke stelling heeft betrekking op een ander aspect van uw doelen. Beantwoordt u bij iedere stelling steeds de twee onderstaande vragen. **GOAL AMBIGUITY; FUTURE STATE; NIEUW**

1) Allereerst zijn we benieuwd hoe uw doelen eruit zien. Kunt u dit aangeven door aan te vinken in welke mate u het met iedere stelling eens bent?

2) Vervolgens willen we weten wat u daarvan vindt in het doen van uw werk. Kunt dit u waarderen als negatief, neutraal of positief?

	1) Kunt u aangeven in welke mate u het met de stellingen eens bent?					2) Bij het uitvoeren van mijn taken vind ik dit...		
	Helemaal mee oneens	Mee oneens	Niet mee oneens, niet mee eens	Mee eens	Helemaal mee eens	Negatief	Neutraal	Positief
Mijn doelen kunnen op meer dan één manier uitgelegd worden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De formulering van mijn doelen is breed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen zijn op te delen in verschillende subdoelen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen zijn strak gedefinieerd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voor mij is het onduidelijk wat mijn doelen precies inhouden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen zijn expliciet vastgelegd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hier ziet u een aantal stellingen die gaan over hoe uw doelen u helpen bij de inrichting van uw werk. **Beantwoordt u per stelling steeds vraag 1 en vraag 2. [GOAL AMBIGUITY; DIRECTIVE; NIEUW]**

	1) Kunt u aangeven in welke mate u het met de stellingen eens bent?					2) Bij het uitvoeren van mijn taken vind ik dit...		
	Helemaal mee oneens	Mee oneens	Niet mee oneens, niet mee eens	Mee eens	Helemaal mee eens	Negatief	Neutraal	Positief
Mijn doelen bieden houvast in het uitvoeren van mijn taken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Voor mij is het duidelijk hoe ik mijn doelen kan realiseren	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De doelen waar ik mee werk geven richting aan hoe ik mijn werk doe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb specifieke richtlijnen gekregen om mijn doelen te behalen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen bieden flexibiliteit in hoe ik mijn werk aanpak	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In de formuleringen van mijn doelen zijn afspraken gemaakt over het moment waarop deze behaald moeten zijn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb ruimte om keuzes te maken in de manier waarop ik mijn werk doe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Nu ziet u een aantal stellingen die betrekking hebben op hoe uw doelen inzicht geven in de evaluatie van uw werk. **Beantwoordt u per stelling steeds vraag 1 en vraag 2. [GOAL AMBIGUITY; EVALUATIVE; NIEUW]**

	1) Kunt u aangeven in welke mate u het met de stellingen eens bent?					2) Bij het uitvoeren van mijn taken vind ik dit...		
	Helemaal mee oneens	Mee oneens	Niet mee oneens, niet mee eens	Mee eens	Helemaal mee eens	Negatief	Neutraal	Positief
Mijn doelen geven mij een helder beeld van wat er van mij verwacht wordt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Welke prestaties ik moet leveren is vaag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen geven mij duidelijkheid over wat ik moet doen om positief beoordeeld te worden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen zijn meetbaar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In mijn doelen zijn kwaliteitsaspecten van mijn werk vastgelegd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het is voor mij onduidelijk welke aspecten van mijn doelen positief worden gewaardeerd bij mijn evaluatie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De eisen waaraan ik moet voldoen zijn formeel vastgelegd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen creëren realistische verwachtingen ten aanzien van mijn prestaties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In welke mate ervaart u conflict tussen uw werkdoelen? Hierbij staat 0 voor helemaal geen conflict en 10 voor heel veel conflict. [GOAL

CONFLICT; STANIOK, 2014; LOCKE, SMITH, EREZ, CHAH & SCHAFFER, 1994]

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Als u opmerkingen heeft, kunt u deze hier weergeven.

DEEL 2

De volgende vragen gaan over het contact dat u heeft met uw leidinggevende over uw doelen die u in uw werk moet realiseren. Voor promovendi geldt hier de (hoofd)promotor als leidinggevende.

Op welke momenten spreekt u met uw leidinggevende over uw doelen? U kunt meerdere antwoorden aanvinken.

- Tijdens de formele functionerings- en beoordelingsgesprekken
- Tijdens werkbesprekingen
- Tijdens informele gesprekken
- Anders, namelijk
- Ik spreek nooit met mijn leidinggevende over mijn doelen

Heeft u op andere manieren contact met uw leidinggevende over uw doelen? U kunt meerdere antwoorden aanvinken.

- Ja, via email
- Ja, via telefoon
- Ja, op een andere manier, namelijk
- Nee, ik heb alleen contact met mijn leidinggevende over mijn doelen in face-to-face gesprekken
- Nee, ik heb nooit contact met mijn leidinggevende over mijn doelen

Hoe vaak heeft u contact met uw leidinggevende over uw doelen?

- Dagelijks
- Wekelijks
- Maandelijks
- Halfjaarlijks
- Jaarlijks
- Nooit

Onderstaande stellingen gaan over hoe uw leidinggevende omgaat met het stellen van doelen. In hoeverre bent u het eens met deze stellingen? **GOAL SETTING STRATEGIES; TRANSLATION; NIEUW**

	Helemaal mee oneens	Mee oneens	Niet mee oneens, niet mee eens	Mee eens	Helemaal mee eens
Mijn leidinggevende maakt duidelijk hoe mijn doelen bijdragen aan de doelen van deze afdeling/faculteit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende maakt voor mijn werk een concrete uitwerking van de doelen van mijn afdeling/faculteit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende benadrukt het verhaal achter een doel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende vertaalt de doelen van mijn afdeling/faculteit naar specifieke doelen voor mijn individuele werk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende geeft mij de ruimte om brede, algemene doelen van de afdeling/faculteit zelf te interpreteren in mijn eigen werk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bij het stellen van mijn doelen biedt mijn leidinggevende mij een inspirerend kader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende operationaliseert mijn doelen specifiek	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende legt uit waarom ik aan een doel moet werken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deze stellingen gaan over hoe uw leidinggevende omgaat met het stellen van doelen. In hoeverre bent u het eens met deze stellingen? **[GOAL SETTING STRATEGIES; PARTICIPATION; NIEUW]**

	Helemaal mee oneens	Mee oneens	Niet mee oneens, niet mee eens	Mee eens	Helemaal mee eens
Mijn leidinggevende betreft mij bij het opstellen van mijn doelen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Welke doelen ik moet bereiken wordt door mijn leidinggevende bepaald	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen worden in samenspraak met mijn leidinggevende vastgesteld	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende biedt mij ruimte om voorstellen te doen voor het opstellen van mijn doelen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn leidinggevende geeft mij <u>geen</u> invloed op de doelen waaraan ik moet werken	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn doelen worden door mijn leidinggevende opgelegd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Als u opmerkingen heeft, kunt u deze hier weergeven.

DEEL 3

De stellingen die u nu ziet gaan over het beeld dat u van uw leidinggevende hebt.

Hoe vaak zijn deze uitspraken van toepassing op uw leidinggevende? **[PARTICIPATIVE + DIRECTIVE LEADERSHIP; HARRIS & OGBONNA 2001]**

	Nooit	Sporadisch	Af en toe	Regelmatig	Dikwijls	Zeer dikwijls	Altijd
Voorafgaand aan het nemen van een besluit neemt mijn leidinggevende de mening van zijn/haar medewerkers in overweging	<input type="radio"/>						
Mijn leidinggevende legt uit op welke manier taken uitgevoerd moeten worden	<input type="radio"/>						
Wanneer zich een probleem voordoet, raadpleegt mijn leidinggevende zijn/haar medewerkers	<input type="radio"/>						
Mijn leidinggevende beslist welke dingen en hoe dingen gedaan moeten worden	<input type="radio"/>						
Mijn leidinggevende vraagt zijn/haar medewerkers om suggesties	<input type="radio"/>						

Onderstaande uitspraken gaan over het beeld dat u van uw leidinggevende hebt.

Hoe vaak zijn de volgende uitspraken van toepassing op uw leidinggevende? **[PARTICIPATIVE + DIRECTIVE LEADERSHIP; HARRIS & OGBONNA 2001]**

	Nooit	Sporadisch	Af en toe	Regelmatig	Dikwijls	Zeer dikwijls	Altijd
Mijn leidinggevende raadpleegt zijn/haar medewerkers voordat hij/zij actie onderneemt	<input type="radio"/>						
Mijn leidinggevende luistert naar het advies van medewerkers over welke activiteiten gedaan zouden moeten worden	<input type="radio"/>						
Mijn leidinggevende hanteert absolute prestatiecriteria	<input type="radio"/>						
Mijn leidinggevende plant het werk dat gedaan moet worden	<input type="radio"/>						

De volgende uitspraken hebben betrekking op hoe u uw werk beleeft en hoe u zich daarbij voelt. **[BEVLOGENHEID KORT; SCHAUFELI & BAKKER, 2004]**

Wilt u aangeven hoe vaak iedere uitspraak op u van toepassing is door steeds de best passende antwoordmogelijkheid aan te vinken.

	Nooit	Een paar keer per jaar of minder	Eens per maand of minder	Een paar keer per maand	Eens per week	Een paar keer per week	Dagelijks
Op mijn werk bruis ik van energie	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Als ik werk voel ik me fit en sterk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben enthousiast over mijn baan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn werk inspireert mij	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Als ik 's morgens opsta heb ik zin om aan het werk te gaan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wanneer ik heel intensief aan het werk ben, voel ik mij gelukkig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben trots op het werk dat ik doe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ga helemaal op in mijn werk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mijn werk brengt mij in vervoering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Kunt u aangeven in hoeverre u het eens bent met onderstaande stelling? Hierbij staat 0 voor helemaal niet mee eens en 10 voor helemaal mee eens. **[JOB SATISFACTION; TUMMERS, 2012; NAGY, 2002]**

Over het algemeen ben ik tevreden met mijn baan.

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Tot slot volgen nog enkele achtergrondvragen.

Wat is uw functie?

- Hoogleraar
- Bijzonder hoogleraar
- Universitair hoofddocent
- Universitair docent
- Post doc onderzoeker
- PhD kandidaat
- Onderzoeker
- Docent
- Anders, namelijk _____

Wat is voor u de officiële verhouding in beschikbare tijd tussen uw verschillende taken?

- _____ % Onderwijs
- _____ % Onderzoek
- _____ % Bestuurlijke taken
- _____ % Eigen opleiding
- _____ % Anders, namelijk _____
- _____ Weet ik niet (vult u dan 100 in)

Hoe lang werkt u binnen uw huidige functie?

_____ Jaar

Hoe lang werkt u binnen uw huidige organisatie?

_____ Jaar

Hoe lang werkt u binnen de wetenschap?

_____ Jaar

Aan welke universiteit bent u werkzaam?

- Radboud Universiteit Nijmegen
- Tilburg University
- Universiteit Utrecht
- Vrije Universiteit Amsterdam
- Erasmus Universiteit Rotterdam
- Universiteit Leiden
- Anders, namelijk _____

Bent u?

- Man
- Vrouw

Tot welke leeftijdsgroep behoort u?

- 20-24 jaar
- 25-29 jaar
- 30-34 jaar
- 35-39 jaar
- 40-44 jaar
- 45-49 jaar
- 50-54 jaar
- 55-59 jaar
- 60 jaar en ouder

Wat voor soort contract heeft u bij uw organisatie?

- Een vast contract
- Een tijdelijk contract
- Een tenure track contract
- Een tijdelijk contract via een uitzendbureau of detacheringsbureau
- Anders, namelijk _____

Als u opmerkingen heeft, kunt u deze hier weergeven.

U bent nu aan het einde gekomen van deze vragenlijst: uw antwoorden zijn geregistreerd en u kunt dit venster sluiten. Hartelijk dank voor uw deelname aan ons onderzoek!

Voor vragen en opmerkingen over de vragenlijst of over het onderzoek in het algemeen kunt u zich wenden tot Marieke van der Hoek (m.a.vanderhoek@students.uu.nl).

Bent u geïnteresseerd in de resultaten van dit onderzoek? Ook dan kunt u een e-mail sturen (m.a.vanderhoek@students.uu.nl), waarin u kenbaar maakt dat u van het onderzoek op de hoogte gehouden wil worden.

