

Tilburg University

How to measure the psychological contract? A critical criteria-based review of measures

Freese, C.; Schalk, R.

Published in:
South African Journal of Psychology

Publication date:
2008

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):
Freese, C., & Schalk, R. (2008). How to measure the psychological contract? A critical criteria-based review of measures. *South African Journal of Psychology, 38*(2), 269-286.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

How to measure the psychological contract? A critical criteria-based review of measures

Charissa Freese

Avans Hogeschool, Den Bosch, The Netherlands

René Schalk

Tilburg University, Tilburg, The Netherlands

m.j.d.schalk@uvt.nl

In this article we analyse the different ways in which psychological contracts are measured. On the basis of criteria for measurement and scale development psychological contract measurements are put to a test. The criteria are related to the way the measurement is developed and evaluated, and the specific conceptualisations of the content and evaluation of the psychological contract. Existing questionnaires to measure the psychological contract are evaluated. The use of psychological contract measurements of Freese and Schalk, Psycones, or Rousseau is recommended.

Keywords: measurement instruments; psychological contracts; review and evaluation

The psychological contract emerged as a concept in the psychological literature almost fifty years ago, as a footnote in *Understanding Organizational Behavior* (Argyris, 1960). The psychological contract refers to implicit ideas about the employee-organisation relationship. Menninger's (1958) concept of the 'psychotherapy contract', that ascribes the intangible aspects of the contractual relationship that exist between psychoanalysts and patients, was thus translated to the work setting.

The concept of the psychological contract gained increasing popularity in the 1980s and 1990s. These years were characterised by many large-scale and small-scale organisational changes. Because of these changes, the 'traditional' employment relationship was put to a test. Serious behavioural and attitudinal reactions among employees could be observed. The psychological contract was used to describe, analyse, and explain the consequences of these changes. Publications by Denise Rousseau (e.g. 1989, 1990, 1995) defined and limited the psychological contract to an employees' perception of the exchange of mutual promise-based obligations between the employee and the organisation.

Questionnaire surveys are the most commonly used method to examine the psychological contract (Conway & Briner, 2005). There are many different types of measurements of the psychological contract. In 1998 Rousseau and Tijoriwala stated: 'In the past 10 years, field research into the content and dynamics of psychological contracts in organisations has generated numerous published studies, with almost an equal number of somewhat distinct assessments' (p. 680). In the year 2005, no progress had been achieved in this respect, according to Conway and Briner: 'There are a variety of measures for assessing both breach and the contents of psychological contracts, showing there is no single, agreed upon measure of either of these constructs' (p. 94).

The aim in this article is therefore to analyse the different ways in which psychological contracts are measured and put these measurements to a test using criteria with which the value of these psychological contract measurements can be assessed. We use conceptual criteria related to the process of development of the measurement instrument. With respect to the results of application of the instruments it is assessed whether validity and reliability tests have been performed. A content analysis and description of the empirical results of, for example, factor analyses, are however outside the scope of this article. The central issue here is the evaluation of the conceptual validity of the instruments. First, we will discuss the different ways in which psychological contract measures are conceptualised and delimit the types of measures we put to a test here.

CONCEPTUALISING THE PSYCHOLOGICAL CONTRACT

There are many ways to conceptualise psychological contracts. An important distinction in this respect is the distinction between a unilateral and a bilateral perspective. In addition, the psychological contract is a multidimensional construct. Therefore, measures can have different foci. A distinction can be made between feature, content, and evaluation measures of the psychological contract. We will first go into the different conceptual approaches and foci of psychological contract measures.

Unilateral versus bilateral approaches

In the unilateral view, the psychological contract is an individual belief of the mutual expectations and obligations in the context of a relationship. This belief further shapes the relationship, and governs behaviour. This unilateral view mainly refers to the employee perspective on employee and organisational expectations and obligations, limiting the psychological contract to an intra-individual perception (Rousseau, 1990). The employers' perception of the employment relationship has long been neglected, and has received increasing attention in recent years (McClear, 1996; Coyle-Shapiro, & Kessler, 2000; Guest & Conway, 2002 and Tekleab & Taylor, 2003).

The bilateral view on psychological contracts considers the contract to be the whole of the employer as well as employee perceptions on exchanged obligations (e.g. Herriot & Pemberton, 1995; Levinson, Price, Munden, Mandl, and Solley, 1962; Schein, 1965). A bilateral approach is useful in organisational settings, for example, by clarifying differences in perspectives between employees and supervisors, which could resolve organisational conflicts and improve organisational performance.

For measurement of the psychological contract, in our view, a unilateral view is preferable because of the following reasons. First, a psychological contract is literally psychological. That is to say, it is by definition an individual perception. Furthermore, methodologically, a bilateral view of psychological contracts is problematic, because the side of the organisation consists of many actors (top management, supervisors, HR officers, colleagues) who do not necessarily communicate a uniform set of expectations (Freese & Schalk, 1993). It is rather a multiple collective of diverse and differing expectations held by a whole set of actors (see Rousseau, 1995, for an overview of contract makers). Second, the definition of psychological contracts implies that the psychological contract influences behaviour. It is hard to imagine, however, how employee behaviour can be affected by the whole of employee and employer perceptions of obligations of each other, when the employee is not aware of differences in perception. In addition, it is not clear what happens when organisational contract makers contradict each other: what would the psychological contract include in that case? Because of these reasons, we limit our discussion here to measures aimed at assessing employee perceptions from a unilateral perspective.

Feature, content, and evaluation measures of the psychological contract

In 1998 Rousseau and Tijoriwala reviewed assessments used in psychological contract research and proposed an organising framework for future research. They distinguished three forms of measurement of the psychological contract:

- a) *Feature-oriented*: comparing the contract to some attribute or dimension. Contracts can be characterised, for example, as short term, or having an extended scope and influence on non-work activities, as transactional (including mainly economic quid pro quo exchanges), and as flexible arrangements.
- b) *Content-oriented*: examining the specific terms of the contract. Contracts include specific obligations based on promises made by the employer and employee. Examples are the provision of opportunities for training, security, challenging tasks, flexible working hours; confidentiality,

working overtime when needed, and delivering good services.

- c) *Evaluation-oriented*: assessing the degree of fulfilment, change or violation experienced within the context of the contract. The fulfilment of, for example, the provision of training by the employer, or working overtime by the employee can be assessed.

With respect to the feature-oriented approach, the description of characteristics of working arrangements and the definition of resulting types of psychological contracts have been addressed in many studies. Psychological contracts have been called transactional, balanced, transitional, relational, team player, loyal, instrumental, weak, unattached, investing, or strong (Macneil, 1985; McFarlane Shore, & Tetrick, 1994; Rousseau & McLean Parks 1993; Rousseau & Wade Benzoni, 1994; McLean Parks, Kidder, & Gallagher, 1998; Rousseau & Tijoriwala, 1998; Van den Brande, 2002). One reason why research into features attracted much attention is the problems involved when studying the content of the psychological contract by trying to describe the terms included. Psychological contracts may contain hundreds of items, which can be very specific for a certain organisation or person. It is difficult to develop a standardised measure to study the content of psychological contracts. Many researchers, therefore, opted to describe features of psychological contracts. This, they supposed, would make it easier to compare psychological contracts across organisations and even countries.

Macneil (1985) introduced a distinction between two types of contracts, marking opposite ends of a continuum underlying contractual arrangements: transactional contracts and relational contracts. Rousseau (1990) described the distinctive features of both kinds of contracts in the work setting. Transactional and relational contracts have been argued to differ on five dimensions (Rousseau & McLean Parks, 1993): with respect to the focus of the contract, time frame, stability, scope and tangibility. Rousseau and Wade Benzoni (1994) developed strategic typologies that represent refinements of the transactional and relational contract, by adding two types of psychological contracts. Their typology uses the dimensions of duration and performance to create four types of contracts.

Other researchers added features to the characteristics of psychological contracts. McLean Parks and Smith (1998) put forward particularism and McLean Parks, Kidder, and Gallagher (1998) added multiple agency and volition as two additional features. Van den Brande, Janssens, Sels, and Overlaet (2002) identified exchange symmetry distance (power distance) and contract level (collective versus individualised). Bunderson (2001) created a variant of the transactional/relational distinction, introducing *administrative* and *professional* psychological contracts, referring to the different ideologies that surround administrative and professional work.

Despite or perhaps owing to all these refinements, the results of empirical research on these types of contracts still remain inconclusive and the results often do not cross-validate (Arnold, 1996, Raja, Johns, & Ntalianis, 2004). Arnold (1996) described the instability of the transactional and relational factors by giving the example of 'Training' loading on a transactional factor (together with high pay and performance) in a study of Rousseau (1990), whereas in a study by Robinson, Kraatz, and Rousseau (1994) 'Training' factored out not with pay but with (among other things) job security, which is a distinctly relational characteristic. Likewise, Raja, Johns, and Ntalianis (2004) could not replicate the Millward and Hopkins (1998) transactional and relational scales. Most typologies are mentioned in only one study, except for the 'unstable' relational/transactional types.

This situation might be due to the fact that existing empirical work tends to be exploratory and to rely heavily on post hoc rationalisation to make sense of findings (Conway & Briner, 2005). Often, feature typologies are ad hoc, created on the basis of the data and findings at hand. Exceptions are studies by Millward and Hopkins (1998) and Van den Brande (2002) which developed their feature scales prior to doing empirical research. Also the Psychological Contract Inventory (PCI: Rousseau, 2000) is a theoretically developed scale to measure transactional, relational, balanced and

transitional contracts. Despite all the empirical research that has been done, the question still remains whether transactional and relational contracts are generalisable across samples and over time (Ten Brink, 2004).

Although feature-approach researchers define the psychological contract as ‘an idiosyncratic set of reciprocal expectations held by employees concerning their obligations and their entitlements (McLean Parks, Kidder, & Gallagher, 1998, 700), the obligations and entitlements are not subject to study in this approach. The feature approach describes general characteristics of employment relationships. It does explain why different groups of employees perceive different obligations and inducements. It does not explain what these different obligations and inducements are. The transactional features of psychological contracts more closely resemble traditional labour contract features than the features of psychological contracts as a mental model of employee attitudes and behaviour. Or to use Guest’s words, ‘are the concrete explicit, public and transactional ends of the continua still usefully described as psychological contracts?’ (Guest, 1998, p. 653).

Because of the inconclusive results and the conceptual problems related to feature approaches of psychological contracts our conclusion is that feature-oriented measures are not the preferred way to measure psychological contracts. Therefore, we will focus on the content and evaluation (fulfilment or non-violation/violation) of the psychological contract. The content refers to the explicit and implicit promises made by both parties in their exchange agreement that are part of the psychological contract. An employer may, for example, explicitly promise a future pay raise or promotion, facilities for training, childcare, or flexibility in working hours. An employee often implicitly promises not to engage in theft or aggressive behaviour towards colleagues and clients at work. The evaluation refers to the perceived degree to which these promises were kept, by the employee as well as by the employer.

CRITERIA FOR MEASURING THE CONTENT AND EVALUATION OF THE PSYCHOLOGICAL CONTRACT

In this section, we outline criteria that ‘ideal’ measures of the content and evaluation of psychological contracts should meet. The criteria we use here are based on the general principles for assessing content and construct validity for scale development in psychological measurement (Cronbach & Meehl, 1955; Murphy & Davidshofer, 1988). A first principle is that the constructs to be measured have to be placed in a theory-based nomological net (Cronbach & Meehl, 1955). In addition the measure has to have content validity and construct validity. Content validity is the degree to which the measurement ‘provides an adequate sample of a particular content domain’ (Murphy & Davidshofer, 1988, p. 95). Construct validity refers to the question whether the scores on the measurement provide a good measure of the psychological contract (Murphy & Davidshofer, 1988, p. 101).

Based on these foundations, the general criteria for measuring are that a measurement has to be theory-based or inductively developed, and that a measurement should have content validity and construct validity. The content and construct validity of the measurement have to be assessed using empirical data. These general criteria will be elaborated below into six specific criteria that apply to psychological contract measurements.

Criterion 1: *A psychological contract measurement has to be theory-based or inductively developed (content as well as evaluation measures).*

Many different psychological contract measures have been developed to assess the content and evaluation of the psychological contract. The constituent structure of the content of the psychological contract is not generally agreed upon, with different researchers developing varying operationalisations on both theoretical and empirical foundations. Universal agreement about how the content

of the psychological contract should be measured is lacking (Rousseau & Tijoriwala, 1998; Conway & Briner, 2005).

Only a few researchers have accounted for where the items they use in their questionnaire theoretically or empirically stem from (e.g. Rousseau, 1990, Robinson & Rousseau, 1994, Freese & Schalk, 1996, Herriot, Manning, & Kidd, 1997, Thomas & Anderson, 1998, Robinson & Morrison, 2000). In many studies it remains unclear, however, where items were derived from and why items were added or removed from existing questionnaires.

Thomas and Anderson (1998) describe how empirical methods to measure the psychological contract have included interview research with personnel and human resource professionals (Rousseau, 1990), interviews with employee and employer representatives (Manning, 1993), and asking open-ended questions to employees in a survey (Rousseau, 1990; Robinson & Rousseau, 1994). Interviewing employees and then constructing a questionnaire is a solid theoretical method to construct a questionnaire. An alternative method is composing dimensions based on previous theoretical work. Schalk, Freese and Van den Bosch (1995) developed their items from work by Kotter (1973) and from Lofquist and Dawis' (1969) work values. Porter, Pearce, Tripoli, and Lewis (1998) designed the Work related Expectations Survey based (among other things) on items used by Kotter (1973), and Tannenbaum and Kuleck (1978).

Any instrument to measure the content and evaluation of the psychological contract should be grounded in theory or be based on a thorough inductive analysis of empirical data. Following a grounded theory approach (see for an overview Drasgow & Schmitt, 2002) data representing the psychological contract as directly reported by those individuals who experience it could be used for (further) theory development. Since there are thousands of items that can be part of the psychological contract, it has to be clear which choices have been made for the measurement instrument. This implies that the source of the content items needs to be identified, and that it has to be accounted for on which theory or theories, or what kind of inductive analysis, the composition of the items is based.

Criterion 2: *A psychological contract measurement should assess mutual obligations/promises (construct validity of content and evaluation measures).*

A second criterion for a measurement instrument for content and evaluation of the psychological contract is that the instrument should reflect the core and most important part of the definition of the psychological contract, which implies that the psychological contract consists of perceptions of 'mutual obligations/promises'. The psychological contract therefore consists of both perceived employer obligations and perceived employee obligations. A psychological contract measurement has to include items for both types of perceptions, and, of course, the results on both types of perceptions need to be reported.

In line with the definition of the psychological contract (Rousseau, 1995), terms similar to 'perceived obligations' or 'promises' need to be included in the response scales. Rousseau and Tijoriwala (1998) mention that assessments should focus on promises resulting in obligations and reciprocal exchanges. With respect to the concept of 'obligations' it should be noted that this concept does not have the same meaning in all languages: wording is an important issue in this respect. In Dutch or Afrikaans, for example, an assessment of either expectations or promises would have the same meaning as 'obligations'. In a psychological contract response scale either the words promise or obligation or the equivalent in other languages should be present. Several scales do not meet this criterion (e.g. the scales used by Schalk, Freese, & Van den Bosch, 1995, Thomas & Anderson, 1998, Porter, Pearce, Tripoli, & Lewis, 1998, and Ten Brink, Den Hartog, Koopman, & Van Muijen, 2002).

It is important to note that only asking how satisfied employees are with certain inducements or to which degree certain inducements are provided by the organisation is not sufficient to make that

instrument a psychological contract measure. For a psychological contract measure the inclusion of perceived promises or obligations is essential. Therefore, assessing for example organisational support is not equivalent to measuring the psychological contract. Studies examining the content (which terms are included in the psychological contract) usually ask questions such as: ‘to what extent do you expect X?’, or ‘to what extent do you believe your employer is obligated to provide X?’ (e.g. Rousseau, 1990, Robinson, 1996, Coyle-Shapiro & Kessler, 2000).

Summarised, the psychological contract consists of both perceived employer obligations and perceived employee obligations. Both scales need to be included in a measurement instrument. Only reporting the actual inducements as provided by the organisation is not sufficient, nor is measuring perceived organisation support an equivalent for measuring the psychological contract. The psychological contract includes actual inducements that were promised or that are implied obligations.

Criterion 3: *The psychometric properties of the psychological contract measurement and the appropriateness for the sample have to be assessed (content validity of content and evaluation measures)*

The third criterion refers to measurement and sampling issues. Since the content of the psychological contract can differ between different subgroups of employees or different contexts, the suitability of the content of the items for the sample under study needs to be assessed. If the questionnaire has not been used for a specific sample before, a pilot study has to be done. Simply adding or deleting a couple of items of an existing questionnaire is not an appropriate method. Furthermore, the psychometric properties of the instrument and subscales need to be provided when reporting the results.

Rousseau (1990)¹ developed her first questionnaire interviewing ‘more than a dozen’ (p. 393) HR managers to determine what factors were plausible types of obligations emerging during the recruitment of graduating masters’ students from a management school. The responses elicited form the basis for the list of obligations used in the Rousseau (1990) questionnaire. Recruits were asked open-ended questions at the end of the survey regarding what they believed they owed their employer and vice versa. The obligations the graduates mentioned, were, of course, influenced by their specific context of being young, highly educated, and graduate. This was reflected in items such as ‘spending a minimum of two years in the organisation’, ‘willingness to accept a transfer’ that directly reflect work-related aspects that are specific for this target group. Even though the list was probably appropriate for Rousseau’s sample, it cannot be used as a general measure without assessing the relevance of the items in other settings. However, according to Ten Brink (2004, p. 40) this is usually not done: ‘In empirical research, the majority of researchers have used or based their items on Rousseau’s questionnaire’. Researchers have, it seems, rather randomly added or removed several employer obligations to Rousseau’s (1990) items (Ten Brink, 2004).

The problem of generalisability in psychological contract research can be illustrated by looking at some examples of specific settings in which questionnaires were developed. For example, Guzzo, Noonan and Elron (1994) tried to assess the psychological contracts of expatriates. Expatriates could, for example, expect housing, domestic staff, spousal employment, currency protection, home-leave allowance, club membership, western-style family health care, and language instruction. Likewise, Thomas and Anderson (1998) developed a psychological contract questionnaire for the British Army, including specific items like accommodation and effects on family.

Herriot, Manning, and Kidd (1997) developed a list of general psychological contract items. This list was the result of a thorough study by Manning (1993), who interviewed 184 employees and 184 managers, randomly selected across a wide range of different jobs and organisations. He questioned them about their perceived view of the terms contained in psychological contracts. The respondents recounted 1 026 work-related incidents (incidents where the respondent was treated in a way that was below or beyond their expectation). These incidents were categorised into 12 main

expectations that employees hold of their employer organisations and seven that organisations expect of their employee members. By asking respondents to report either violations or over fulfilment of psychological contracts, Manning was able to distinguish aspects that are relevant for employees and managers. Unfortunately, this list has hardly been used as a basis to develop scales in subsequent studies on psychological contracts. An exception is a study in South Africa by Lee and Mohamed (2006). What is important to note about the study of Herriot, Manning, and Kidd (1997) is that they may be assessing the content of violations of psychological contracts, rather than merely the content of the psychological contract. This could be an important difference, because certain obligations that are seen as part of an employee's psychological contract may be overlooked or under-represented because they are infrequently violated or exceeded (De Vos, 2002). Although this argument is valid, the risk of missing items is probably not so great, as many items that were found by Manning, are also found in other studies.

Many psychological contract researchers constructed a psychological contract questionnaire by combining items from different previously developed psychological contract questionnaires (e.g. De Vos, 2002 from Coyle-Shapiro & Kessler, 1998; Freese & Schalk, 1996, 1997; Guest & Conway, 1997; Herriot, Manning, & Kidd, 1997; Ho, 1999, Millward & Brewerton, 1999; Rousseau, 1990). Many psychological contract questionnaires are based on other psychological contract questionnaires, and therefore completely new items seldom appear. The variation in questionnaires concerns mainly the number of items or the composition of the items in different scales. Exceptions are psychological contract questionnaires that are being designed for unique circumstances like serving in the army (Thomas & Anderson, 1998) or being expatriate (Guzzo, Noonan, & Elron, 1994).

Variation in items and scales that are used mainly exists with regard to employer obligations. Concerning employee obligations the list put up by Rousseau (1990) is widely accepted. However, most scholars have added or deleted some items, or slightly changed the wording of the items (De Vos, 2002). The items found by Herriot, Manning, and Kidd (1997) cover virtually the same areas.

With respect to the broad and universal characteristics that were distinguished in previous studies there is no general agreement on the characteristics constituting the psychological contract. Indeed, it seems to be the case that the characteristics may differ according to the organisational setting (Herriot, Manning, & Kidd, 1997) and may also differ according to the country setting (Rousseau & Schalk, 2000). The same is the case for specific items included in the psychological contract. Thomas and Anderson (1998), for example, demonstrate how in a U.S. study performance-related pay and rapid advancement was of importance, whilst a sample of British employees most frequently mentioned a safe working environment as an employer obligation (Herriot, Manning, & Kidd, 1997). Research by Huiskamp and Schalk (2001) on data of 1 331 employees employed within 27 organisations confirmed that there were great differences in psychological contracts across organisations.

The fundamental question of which items are to be included in a psychological contract content measure cannot only be answered by providing a standard list of items. It is more important to establish whether the list has been constructed in a methodologically sound way and whether the list of items suits the sample that is being assessed. Measuring both employee and employer obligations is essential, as a contract is an agreement on perceived mutual obligations. If the questionnaire has not been used for a specific sample before, preliminary research is necessary. Simply adding or deleting a couple of items is not the appropriate method. For example, Sens (2005) used the Tilburg Psychological Contract Questionnaire (TPCQ, Freese & Schalk, 1997) in a university setting, after establishing the usefulness of the items by interviewing supervisors, employees and HR professionals. Based on the interviews, a specific item 'image of the research group' which is relevant for university professors was added.

Criterion 4: *The evaluation of the psychological contract has to be assessed for separate items. Global measures of fulfilment or violation have to consist of multiple items to ensure the reliability of the measure (content validity of evaluation measurements).*

There is much variation in the types of answering scales being used to evaluate the psychological contract. Often, the response scales do not refer to promises or obligations. Following criterion 2, however, the wording of the evaluation should reflect that the psychological contract refers to promises/obligations. Another issue is the question of whether evaluation measures are a global assessment or an assessment for each of the items of the psychological contract, or both? In addition, is the assessment of the evaluation of the psychological contract done directly or indirectly (for example, by using difference scores), and is the importance of promises taken into account (or not)? And is a distinction made between violation and fulfilment of the psychological contract, and between breach and violation of the psychological contract?

To illustrate the different ways that are used to evaluate the psychological contract Table 1 includes an overview of different response scales that are used in evaluation-oriented psychological contract research.

The questions posed above will now be discussed in more depth, which results in additional criteria to evaluate existing measures. A first issue is how specific an evaluation measure of the psychological contract should be. Is simply asking an employee how (s)he appraises the relationship with the organisation sufficient or is it necessary to know the evaluation for each of the content items of the psychological contract? Some researchers measure the content of psychological contract on the item level, but evaluate the psychological contract in a global way (e.g. Robinson & Rousseau, 1994, Rousseau, 2000, Tekleab & Taylor, 2003, Robinson & Morrison, 2000). Most researchers use the following items: ‘How well has your employer fulfilled the obligations that you believe they owe you?’ (from ‘very poorly’ to ‘very well fulfilled’). Or ‘Has or had your employer ever failed to meet the obligations that were promised to you?’

Conway and Briner (2005) mention the main advantages and disadvantages of a specific item measure over a global evaluation. The advantage is that the specific item measure can identify which items are being fulfilled and which are not. The main disadvantages of specific item measures are that important psychological contract items may be omitted from the set of promises, and that the method of aggregating the items into a composite score by taking a simple average is unlikely to reflect how an employee psychologically aggregates experiences.

Because it reduces the length of the questionnaire, one could argue to simply forget about the specific measure. However, the problem is that using solely a global method will not yield specific information. De Vos and Buyens (2001) studied the development of the psychological contract of 333 newcomers during their first year of employment. The results showed that both employee promises as well as the perception of the organisational promises changed over time. De Vos and Buyens (2001) showed that the significance of the relationships between employees own promises and the perceived organisational promises (although all in the same direction) differed according to the underlying content. For example, the evaluation of obligations regarding job content, social atmosphere and work-life balance led to changes in perception, whereas the evaluation regarding financial rewards and career development did not. This finding demonstrates that the psychological contract construct consists of clusters of promises and obligations. De Vos and Buyens (2001) concluded that to understand the dynamics of psychological contract development, it is essential to look at those clusters and that the psychological contract should not be considered as a holistic, one-dimensional construct.

Therefore, the preferred way of measuring psychological contract fulfilment or violation is to measure on the subscale or item level, as is done in the questionnaires of Freese and Schalk (1997), Kickul, Lester, and Finkl, (2002), Coyle-Shapiro and Kessler (2002), Guest and Conway (2002) and

Table 1. Response scales in psychological contract measures

Author/Year	Response scale
Robinson & Rousseau (1994)	Please indicate how well your employer has fulfilled the promised obligations that they owed you (5 point scale: 1 = 'very poorly' to 5 = 'very well fulfilled'). Has your employer ever failed to meet the obligations that were promised to you? (dichotomous scale 'experienced no violation' or 'experienced violation').
Schalk, Freese & Van den Bosch (1995)	My organisation provides sufficiently for X (dichotomous, 'Yes' or 'No') My organisation should provide for X (dichotomous, 'Yes' or 'No')
Rousseau (2000)	To what extent has the organisation implicitly or explicitly promised to provide X? (5 point scale: 1 = 'not at all' to 5 = 'to a very great extent'). Overall, how well does your employer fulfill its commitments to you? (single item) (5 point scale: 1 = 'not at all' to 5 = 'to a very great extent'). In general, how well does your employer live up to its promises to you? (single item) (5 point scale: 1 = 'not at all', 5 = 'to a very great extent'). To what extent have you promised, implicitly or explicitly to provide each of the following? (1 = 'not at all obligated', 5 = 'very obligated'). Overall, how well have you fulfilled your commitments to organisation? Overall, how well have you fulfilled your promises to organisation? (1 = 'not at all', 5 = 'to a very great extent').
Freese & Schalk (1997)	Please, indicate to what extent the organisation meets your expectations concerning X? (7 point scale: 1 = 'much less than expected' to 7 = 'much more than expected') Please, indicate whether the degree of fulfillment of your expectations concerning X is acceptable to you (dichotomous: 'acceptable' or 'not acceptable').
Porter, Pearce, Tripoli, & Lewis (1998)	To what extent does the organisation give X? (5 point scale, 1 = 'minimally or not at all' to 5 = 'to a very large extent')
Thomas & Anderson (1998)	Did you expect X to be poor or good? (7 point scale: 1 = 'very poor' to 7 = 'very good'). How important is X to you (3 point scale 1 = 'not important' to 3 = 'very important').
Turnley & Feldman (1999)	'How important is X to you' (16 items) (10 point scale: 1 = 'not important', 10 = 'extremely important') 'Please, compare the amount of what you actually received to the amount that the organisation had committed to provide' (-2 = 'received much less than promised' to 2 = 'received much more than promised').
Robinson & Morrison (2000)	<i>Psychological contract breach</i> Almost all of the promises made by my employer during recruitment have been kept so far (Reversed) I feel that my employer has come through in fulfilling the promises made to me when I was hired (Reversed) So far my employer has done an excellent job of fulfilling its promises to me (Reversed) I have not received everything promised to me in exchange for my contributions My employer has broken many of its promises to me even though I've upheld my side of the deal

Table 1. Continued

Author/Year	Response scale
	<p><i>Psychological contract violation</i> I feel a great deal of anger toward my organisation I feel betrayed by my organisation I feel that my organisation has violated the contract between us I feel extremely frustrated by how I have been treated by my organisation (5 point scale: 1 = 'strongly disagree', 5 = 'strongly agree')</p>
Coyle-Shapiro & Kessler (2002)	<p>To what extent is the organisation obligated to provide X? (5 point scale: 1 = 'not at all' to 5 = 'to a very great extent' To what extent does the organisation provide X? (5 point scale: 1 = 'not at all' to 5 = 'to a very great extent'). To what extent does the organisation provide X? (5 point scale: 1 = 'not at all' to 5 = 'completely'). Is X sufficiently provided for by the organisation? (5 point scale: 1 = 'not at all' to 5 = 'completely').</p>
Kickul, Lester & Finkl (2002)	<p>Respondents first specify which of the presented promises had been made to them, then they rate on a 5 point Likert scale how well the organisation has fulfilled each promise (1 = 'not at all fulfilled'; 5 = 'very fulfilled')</p>
Conway & Briner (2002)	<p>Diary method: Respondents are asked: Has your organisation broken any explicit promises to you today? and Has your organisation broken any implicit promises to you today?</p>
Guest & Conway (2002)	<p>First indication of promises made regarding 13 items on a 4 point scale: 1 = 'no promise made', 2 = 'suggestion of a promise, nothing actually said or written down', 3 = 'strong suggestion of a promise, nothing actually said or written down', 4 = 'written or verbal promises have been made' Then the respondent is asked to indicate for the items he rated 3 or 4 'to what extent has the organisation met its promise or commitment?', 4 point scale: 1 = 'not met', 2 = 'met to some extent', 3 = 'met', 4 = 'exceeded'.</p>
Tekleab & Taylor (2003)	<p>(Company) has done a good job of meeting its obligations to me (Reversed). (Company) has repeatedly failed to meet its obligations to me (Company) has fulfilled the most important obligations to me (Reversed) I have done a good job of meeting my obligations to (company) (Reversed) I have fulfilled the most important obligations to (company) (Reversed). (5 point scale: 1 = 'strongly disagree', 5 = 'strongly agree')</p>
Ten Brink (2004)	<p>To what extent do you expect X from the organisation? (5 point scale: 1 = 'not at all' to 5 = 'completely'). To what extent has the organisation met X? (5 point scale: 1 = 'not at all' to 5 = 'completely').</p>
Psycones (2005)	<p>Has your organisation promised or committed itself to ...and Have you promised or committed yourself to... (6 point scale: 0 = 'No', 1 = 'yes, but promise not kept at all' to 7 = 'yes, and promise fully kept'. Looking overall at how far this organisation has or has not kept its promises and commitments, to what extent do you agree with the following statements? I feel happy, angry, pleased, violated, disappointed, grateful. (5 points scale: 1 = 'not at all', 5 = 'totally').</p>

Ten Brink (2004). This way of measuring can be combined, of course, with a global evaluation of contract violation or fulfilment.

Criterion 5: *In the evaluation of the psychological contract it should be assessed whether a certain item is important. In addition, the evaluation should be direct (construct validity of evaluation measures).*

To establish psychological contract fulfilment or violation at the item level two approaches are being used. Researchers either use a direct measure or an indirect measure. In the direct measure the respondent assesses the extent to which the perceived obligations are met. The indirect measure implies calculating the difference score of the discrepancy between perceived obligations and the actual inducements by the organisation (Ten Brink, 2004). The use of difference scores is often problematic. According to Johns (1981) difference scores are less reliable than their component variables. Peter, Churchill and Brown (1993) note that difference scores often have problems in the areas of discriminant validity, spurious correlations, and variance restriction. According to Edwards (2001) difference scores suffer from numerous methodological problems. Arnold (1996) discussed the reliability and validity problems related to the use of difference scores in psychological contracts. He recommends to use each scale separately. 'The separate components that are embedded with the concept of the psychological contract may have lives of their own' (p. 515). Using a 'gap' score, like Porter, Pearce, Tripoli and Lewis (1998) did, is therefore not a preferred technique to assess psychological contract violation. Moreover, when researchers subtract the perceived obligations from the actual inducements, the evaluation of a violation of the psychological contract is interpreted by the researcher, and not by the employee. This is not justified, because the psychological contract is an individual perception. Because of the psychological nature of the contract, the evaluation of the psychological contract needs to be established directly by the respondent and not by a researcher. For example, a difference between a perceived promise and the actual level of inducements of -1 could be considered by a researcher as an imbalance. In certain cases, however, an employee could not perceive this as an imbalance. For example, because the discrepancy is rather small, or the person has a low equity sensitivity, or the obligation is not important, or because there is only one imbalance in the psychological contract. In other cases a small imbalance might be the last drop that makes the 'cup run over'. The evaluation of whether there is a violation of the psychological contract therefore needs to be indicated by the respondent.

Ten Brink, Den Hartog, Koopman, and Van Muijen (2002) studied the separate and combined effects of commensurate measures for employees' actual experiences ('to what extent does the organisation provide X?') and their expectations or perceived obligations ('Is X sufficiently provided for by the organisation?'), both on 5-point scales). The question they addressed was, whether employees are capable of differentiating between 'subjective' expectations and 'objective' perceptions of inducements. These perceptions would probably be distorted by the evaluation of the received inducements. And this is, indeed, what Ten Brink *et al.* (2002) found. The scales correlated .90, which shows that they are measuring the same thing to a large degree. Ho (1999), Ten Brink *et al.* (2002), Ten Brink (2004), and Coyle-Shapiro and Conway (2005) found stronger relationships between employees' experiences and employees' attitudes in using actual experiences rather than using fulfilled promises. One could argue to just forget about the fulfilled promises scale. And indeed, this is what some researchers have done by looking at actual inducements delivered by organisations (e.g. Porter, Pearce, Tripoli, & Lewis, 1998). However, since this is not in line with the definition of a psychological contract, such a measure cannot be considered to be a measure of psychological contracts. The elements of expectations, promises or obligations need to be included in a psychological contract measure. Instruments only assessing actual inducements are in fact work satisfaction measures.

A related issue is that differences in the relevance of items are seldom measured. Exceptions are studies by Guest and Conway (2002), Kickul, Lester, and Finkl (2002), and Psycones (2005) who first established whether a promise had actually been made to the employee. Only for the promises that had been made, the employee had to rate the degree of fulfilment. However, also in these cases, it is not known whether the promises made are indeed considered as important by the employee. For example, picture the scene of an organisation that has shown their Internet site to the employee on which it is indicated that all employees are entitled to participate in certain training programmes. The organisation has not kept this promise. The employee, however, when not interested in participating in such a training program will not perceive a violation of the psychological contract. In their daily diary study of psychological contract breach, Conway and Briner (2002) found that breached promises of greater importance to the relationship resulted in stronger affective reactions. Thomas and Anderson (1998) acknowledged the relevance of the importance of promises by asking respondents 'How important is X to you?'. Turnley and Feldman (1999) asked respondents to indicate the importance of the listed promises, and the level of fulfilment of the perceived promises (ranging from 'received much less than promised' to 'received much more than promised'). In addition, they used the global assessment of psychological contract violation by Robinson and Rousseau (1994). It is necessary to establish whether a promise is important to the employee and also if an (implied) promise has been made to the employee.

Criterion 6: *Violation of the psychological contract has to be distinguished from fulfilment, and from contract breach (construct validity of evaluation measures).*

Contract violation is not the opposite of contract fulfilment, since employees can report both the existence of a violation while at the same time the organisation can be perceived as keeping some, although not all, of the contract's terms (Rousseau & Tijoriwala, 1998). Fulfilment is a matter of degree, whereas psychological contract violation usually refers to a discrete action. Two studies examine this issue. Both Conway and Briner (2002) and Lambert, Edwards, and Cable (2003) found support for treating breach and fulfilment as separate, rather than bipolar constructs.

When judging global assessments of fulfilment or violation of the psychological contract, a striking phenomenon can be observed. Some researchers used measures of psychological contract violation that were reversed scored items of psychological contract fulfilment. For instance, Robinson and Morrison (2000) measured psychological contract breach with reverse scored items like 'I feel that my employer has come through in fulfilling the promises made to me when I was hired' or 'So far my employer has done an excellent job of fulfilling its promises to me', and Tekleab and Taylor (2003) used items like '(Company) had fulfilled the most important obligations to me'. Measures of discrete contract violation and global contract fulfilment, though related, appear to measure different psychological experiences and are not interchangeable.

With respect to breach and violation of the psychological contract, the distinction between breach and violation of the psychological contract (Morrison & Robinson, 1997) has been widely accepted by researchers. Breach refers to the 'cognition that one's organisation has failed to meet one or more obligations within one's psychological contract in a manner commensurate with one's contributions' and violation refers to 'the emotional and affective state that may under certain conditions follow from the belief that one's organisation has failed to adequately maintain the psychological contract' (Robinson and Morrison, 2000, p. 230). However, this distinction is not always reflected in the existing psychological contract violation measures.

Robinson and Morrison (2000) developed a perceived breach scale and an emotional reaction scale, which measures psychological contract violation. An example of an item in this scale is 'I feel extremely frustrated by how I have been treated by my organisation'. This four-item scale is a good addition to the existing psychological contract scales. However, it should be taken into account that

the measurement moment has a strong influence on the results, since emotional reactions to a breach are likely to fluctuate over time (Conway & Briner, 2002, p. 299).

Another way to establish violation is to directly assess the evaluation of the level of fulfilment instead of trying to make a computation of expectations versus inducements and inferring the evaluation of the psychological contract. This was done by Robinson and Rousseau (1994) and Freese and Schalk (1997). Two scales are used: a degree of fulfilment scale, which permits an examination of the scope of contract completion while the violation dichotomy obtains the respondent's point of view as to whether the contract is actually violated. Freese and Schalk (1997) use an 'acceptable'/'not acceptable' scale. In the instructions this is defined as follows: Please indicate whether the level of fulfilment of the perceived obligation is acceptable or not acceptable to you. With 'not acceptable' we mean that you are really bothered by the level of fulfilment of this perceived obligation and that this level of fulfilment should absolutely change. An advantage of these response scales is that it is redundant to measure the relevance or importance of the items, as only breaking promises or obligations that are considered as important by the employee will result in feelings of violation.

Distinguishing between breach and violation of the contract is crucial. This can either be done with a scale measuring feelings of frustration, other intense emotions or at the item level by indicating the feeling that the level of fulfilment of the particular item is unacceptable to the employee. Another possibility is to assess the relevance and importance of the perceived promises.

CONCLUSION: THE ANALYSIS OF EXISTING PSYCHOLOGICAL CONTRACT MEASUREMENTS

Despite the enormous variation of psychological contract questionnaires, most questionnaires do not meet all of the criteria presented above. Table 2 summarises the results of an evaluation of several psychological contract scales.

Table 2 shows that several measurement instruments labelled as psychological contract scales are in fact not measurements of the psychological contract. The measurements of Guzzo *et al.* (1994), Schalk *et al.* (1995), Thomas and Anderson (1998), Kickul *et al.* (2002), Porter *et al.* (1998), and Ten Brink (2004) do not meet the criteria for a psychological contract measurement.

Other measures address specific aspects of the psychological contract: Robinson and Morrison (2000) provide a global assessment of organisational contract breach and violation, Millward and Hopkins (1998) address specific exchanges, and Guest and Conway (2002) assess the employer's view only.

A complete psychological contract measurement needs to be manifold: it needs to include perceived organisation obligations, perceived employee obligations, a breach and violation scale and a global assessment of fulfilment or violation. Recommended scales to use are therefore Rousseau (1990) for a short list of items, and Freese and Schalk (1997) for an extended list of items. Rousseau (2000) and Psycones (2005) provide scales with multiple usage opportunities.

DISCUSSION

Based on six criteria the content and construct validity of existing psychological contract measurements were assessed. Several instruments did not meet the criteria. Four measurements emerged as 'recommended' measurements from the analysis (Freese & Schalk, 1997; Psycones, 2005; Rousseau, 1990, 2000). These measurement instruments combine several scales to assess the content and evaluation of the psychological contract. Moreover, there are multi-language versions of these questionnaires available and they have been used in different contexts in different countries. It is perhaps an illusion to assume that there will ever be one standardised and fully accepted psychological contract questionnaire. Psychological contract questionnaires should reflect the organisation, sector,

Table 2. Evaluation of psychological contract measures

Author(s)	Development: Theory based or inductively developed?	Content: assesses mutual obligations and/or promises?	Validation: psychometric characteristics known and appro- priate for sample?	Measurement at an item level?	Direct assessment?	Distinction fulfilment, breach, violation?	Evaluation: recommended or not and for which purpose?
Rousseau, 1990	Inductive	Yes	Yes	Yes	No	Yes	Short list of items
Guzzo, Noonan, & Elron, 1994	Self developed	Employer practices	Yes	Yes	Yes	No	Not recommended
Schalk, Freese & Van den Bosch, 1995	Theory based	Employer obliga- tions	Yes	Yes	Yes	No	Not recommended
Freese & Schalk, 1997	Theory based	Yes	Yes	Yes	Yes	Yes	Extended list of items
Robinson & Morrison, 2000	Theory based	Organisational con- tract breach and violation	Yes	No	Yes	Yes	Global assessment of organisational contract breach and violation
Herriot, Manning, & Kidd, 1997	Inductive	Yes	No	Yes	Yes	Yes	A standard measurement instrument is not available
Thomas & Anderson, 1998	Theory based	Expectations on em- ployer obligations	Yes	Yes	Yes	No	Not recommended
Milward & Hopkins, 1998	Self developed	Indirectly	Yes	Yes	Yes	No	To assess specific changes
Porter, Pearce, Tripoli, & Lewis, 1998	Theory based	Employer obligations	Yes	Yes	No	No	Not recommended
Rousseau, 2000	Theory based	Yes	Yes	Yes	Yes	No	Extended list of items, link to a typology of contracts
Kickul, Lester, & Finkl, 2002	Self developed	Employer obligations	Yes	Yes	Yes	No	Not recommended
Guest & Conway, 2002 (employer's view)	Inductive	Employer obligations	Yes	Yes	Yes	No	To assess the employer's view
Ten Brink, 2004	Self developed	Employer inducements	Yes	Yes	Yes	No	Not recommended
Psycones, 2005	Theory based and inductive	Yes	Yes	Yes	Yes	Yes	Employer and employee perspective; measures for violation and overall evaluation

and cultural and economical situation. The fundamental question of which items are to be included in psychological contract content measures cannot be answered with a standardised list. It is rather a matter of establishing whether the list has been constructed in a methodologically thorough way and whether the list of items is suitable to the sample that is being assessed.

Measuring the psychological contract remains a difficult methodological problem. As stated earlier, there are unilateral and bilateral views on the psychological contract. In addition, different dimensions of the psychological contract can be measured: features, content, and evaluation. When reading the literature on psychological contracts, it is striking how often the psychological contract is measured with multiple response scales, whereas the authors choose to report the results on one scale only. How these response scales relate to each other should be methodologically tested, and still requires exploration. The relationship between perceived organisational obligations and perceived employee obligations is a research area that needs further attention. Reporting results on only one dimension of the psychological contract (mostly perceived organisation obligations), cannot be considered a study on psychological contracts. Psychological contracts are by definition exchange relationships, and both sides of the deal need to be researched and reported on.

Agreement on the response scales is needed in the context of the ongoing discussion on the psychological contract definition. Because response scales of the psychological contract questionnaires should reflect the definition, different definitions lead to different response scales. This definition problem has not been solved after 15 years of discussion. Therefore it is probably wiser to establish which questionnaire (for feature, content and evaluation) matches which definition best.

It should be emphasised, however, that the limitations of attempts to operationalise the psychological contract do not imply that the construct itself is problematic. This article is a first step to separate sheep from goats in psychological contract research. Further empirical and theoretical work is needed. Further examination of the factor structure of existing questionnaires and use in different cultural contexts (especially important in countries with many differences in cultures such as South Africa) is needed to further improve psychological contract measurement.

NOTE

1. Note that this questionnaire is not the later Psychological Contract Inventory (PCI), also by Rousseau (2000), which is a feature questionnaire. The PCI was especially developed to measure transactional, relational, balanced, and transactional contracts and is not discussed in this section, as a content approach is adopted here.

REFERENCES

- Argyris, C. (1960). *Understanding organizational behavior*. Homewood, IL: Dorsey Press.
- Arnold, J. (1996). The psychological contract. A concept in need of closer scrutiny? *European Journal of Work and Organizational Psychology*, 5, 511-521.
- Bunderson, J. S. (2001). How work ideologies shape psychological contracts of professional employees: Doctors' responses to perceived breach. *Journal of Organizational Behavior*, 22, 717-741.
- Conway, N., & Briner, R. B. (2002). A daily diary study of affective responses to psychological contract breach and exceeded promises. *Journal of Organizational Behavior*, 23, 287-302.
- Conway, N., & Briner, R. B. (2005). *Understanding psychological contracts at work. A critical evaluation of theory and research*. Oxford: Oxford University Press.
- Coyle-Shapiro, J., & Conway, N. (2005). Exchange relationships. Examining psychological contracts and perceived organizational support. *Journal of Applied Psychology*, 90, 774-781.
- Coyle-Shapiro, J., & Kessler, I. (1998). The psychological contract in the UK public sector: employer and employee obligations and contract fulfilment. Paper presented at the *Academy of Management Meeting*, San Diego.
- Coyle-Shapiro, J., & Kessler, I. (2000). Consequences of the psychological contract for the employment relationship: A large scale survey. *Journal of Management Studies*, 37, 903-930.

- Coyle-Shapiro, J., & Kessler, I. (2002). Exploring reciprocity through the lens of the psychological contract: employee and employer perspectives. *European Journal of Work and Organizational Psychology*, 11, 69-86.
- Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.
- De Vos, A. (2002). The individual antecedents and the development of newcomers' psychological contracts during the socialization process: a longitudinal study. Gent: PhD thesis, University of Ghent.
- De Vos, A., & Buyens, D. (2001). Veranderingen in het psychologisch contract tijdens de socialisatieperiode: aanpassing aan de realiteit en de invloed van wederkerigheid [Changes in the psychological contract during the socialization process: adaptation to reality and the influence of reciprocity]. *Gedrag en Organisatie*, 15, 386-414.
- Dragow, F., & Schmitt, N. (Eds.) (2002). *Measuring and analyzing behavior in organizations: Advances in measurement and data analysis*. San Francisco: Jossey-Bass/Pfeiffer.
- Edwards, J. R. (2001). Ten difference score myths. *Organizational Research Methods*, 4, 265-287.
- Freese, C., & Schalk, R. (1993). Het psychologisch contract [The psychological contract]. *Instroom van Personeel*, 1, 67-82.
- Freese, C., & Schalk, R. (1996). Implications of differences in psychological contracts for human resources management. *European Journal of Work and Organizational Psychology*, 5, 501-509.
- Freese, C., & Schalk, R. (1997). Tilburgse Psychologisch Contract Vragenlijst [Tilburg Psychological Contract Questionnaire]. Tilburg: Tilburg University. Unpublished.
- Guest, D. (1998). Is the psychological contract worth taking seriously? *Journal of Organizational Behavior*, 19, 649-664.
- Guest, D. E., & Conway, N. (1997). *Employee motivation and the psychological contract*. (Issues in People Management No. 21). London: Institute of Personnel and Development.
- Guest, D. E., & Conway, N. (2002). Communicating the psychological contract: An employer perspective. *Human Resource Management Journal*, 12, 22-39.
- Guzzo, R. A., Noonan, K. A., & Elron, E. (1994). Expatriate managers and the psychological contract. *Journal of Applied Psychology*, 79, 617-626.
- Herriot, P. & Pemberton, C. (1995). *New deals: The revolution in managerial careers*. Chichester: Wiley.
- Herriot, P., Manning, W. E. G., & Kidd, J. M. (1997). The content of the psychological contract. *British Journal of Management*, 8, 151-162.
- Ho, V. T. (1999). Psychological contract breach: A study of multiple bases of comparison. Paper presented at the *Academy of Management Meeting*, August, Chicago.
- Huiskamp, R., & Schalk, R. (2001). Psychologische contracten in arbeidsrelaties: de stand van zaken in Nederland [Psychological contracts in employment relationships: The state of affairs in the Netherlands]. *Gedrag en Organisatie*, 15, 370-385.
- Johns, G. (1981). Difference score measures of organizational variables: A critique. *Organizational Behavior and Human Performance*, 27, 443-463.
- Kickul, J., Lester, S. W., & Finkl, J. (2002). Promise breaking during radical organizational change: do justice interventions make a difference? *Journal of Organizational Behavior*, 23, 469-488.
- Kotter, J. P. (1973). The psychological contract. *California Management Review*, 15, 91-99.
- Lambert, L. S., Edwards, J. B., & Cable, D. M. (2003). Breach and fulfillment of the psychological contract: A comparison of traditional and expanded views. *Personnel Psychology*, 56, 895-934.
- Lee, G. J., & Mohamed, Y. (2006). Perceptions of workplace issues among blue-collar workers in South Africa's Gauteng province. *South African Journal of Psychology*, 36, 45-62.
- Levinson, H., Price, C. R., Munden, K. J., Mandl, H. J., & Solley, C.M. (1962). *Men, Management and Mental Health*. Cambridge: Harvard University Press.
- Lofquist, L., & Dawis, R. (1969). *Adjustment to work: A psychological view of man's problems in a work-oriented society*. New York: Appleton-Century-Crofts.
- Macneil, I. R. (1985). Relational contract: What we do and do not know. *Wisconsin Law Review*, 483-525.
- Manning, W. E. G. (1993). The content of the psychological contract between employees and organizations in Great Britain in the early 1990s. London: PhD thesis University of London.
- McClellan, K. L. (1996). A party for two: The employee and the organization as parties to the psychological

- contract. Paper presented at the *1996 Academy of Management Meeting*, Cincinnati.
- McFarlane Shore, L., & Tetrick, L. E. (1994). The psychological contract as an explanatory framework in the employment relationship, in C.L. Cooper and D.M. Rousseau, *Trends in Organizational Behavior*, 1, 91-109. London: Wiley.
- McLean Parks, J., Kidder, D. L., & Gallagher, D. G. (1998). Fitting square pegs into round holes: mapping the domain of contingent work arrangements onto the psychological contract. *Journal of Organizational Behavior*, 19, 697-730.
- McLean Parks, J., & Smith, F. (1998). Organizational contracting: 'a rational exchange?'. In: Halpern, J. and Stern, R. (eds). *Debating rationality: Non-rational elements of organizational decision making*, pp. 125-154. Ithaca: ILR Press.
- Menniger, K. (1958). *Theory of psychoanalytic technique*. New York: Basic books.
- Millward, L. J., & Brewerton, P. M. (1999). Contractors and their psychological contracts. *British Journal of Management*, 10, 253-274.
- Millward, L. J., & Hopkins, L. J. (1998). Psychological contracts, organizational and job commitment. *Journal of Applied Social Psychology*, 28, 1530-1556.
- Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: a model of how psychological contract violation develops. *Academy of Management Review*, 22, 226-256.
- Murphy, K. R., & Davidshofer, C. O. (1988). *Psychological testing. Principles and applications*. Englewood Cliffs, NJ: Prentice-Hall.
- Peter, J. P., Churchill, G. A., & Brown, T. J. (1993). Caution in the use of difference scores in consumer research. *The Journal of Consumer Research*, 19, 655-662.
- Porter, L. W., Pearce, J. L., Tripoli, A. M., & Lewis, K. M. (1998). Differential perceptions of employers' inducements: implications for psychological contracts. *Journal of Organizational Behavior*, 19, 769-782.
- Psycones (2005). www.uv.es/~psycon.
- Raja, U., Johns, G., & Ntalianis, F. (2004). The impact of personality on psychological contracts. *Academy of Management Journal*, 47, 350-367.
- Robinson, S.L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574-599.
- Robinson, S. A, Kraatz, M. S., & Rousseau, D. M. (1994). Changing obligations and the psychological contract: A longitudinal study. *Academy of Management Journal*, 37, 137-152.
- Robinson, S. L., & Morrison, E. W. (2000). The development of psychological contract breach and violation: a longitudinal study. *Journal of Organizational Behavior*, 21, 525-546.
- Robinson, S. L., & Rousseau, D. M. (1994). Violating the psychological contract: Not the exception but the norm. *Journal of Organizational Behavior*, 15, 245-259.
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2, 121-139.
- Rousseau, D. M. (1990). New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior*, 11, 389-400.
- Rousseau, D. M. (1995). *Psychological contracts in organizations*. Thousand Oaks: Sage.
- Rousseau, D. M. (2000). *Psychological Contract Inventory. Technical Report*. Pittsburgh, PA: Carnegie Mellon University.
- Rousseau, D. M. (2000). *Psychological contract inventory: Technical report*. Pittsburgh, PA: Carnegie Mellon University.
- Rousseau, D. M., & McLean Parks, J. (1993). The contracts of individuals and organizations. In L. L. Cummings and B. M. Staw (eds), *Research in Organizational Behavior*, 15, 1-47. Greenwich: JAI Press.
- Rousseau, D. M., & Schalk, R. (eds) (2000). *Psychological contracts in employment. Cross-national perspectives*. Thousand Oaks: Sage Publications.
- Rousseau, D. M., & Tijoriwala, S. A. (1998). Assessing psychological contracts: Issues, alternatives and measures. *Journal of Organizational Behavior*, 19, 679-695.
- Rousseau, D. M., & Wade Benzoni, K. A. (1994). Linking strategy and human resource practices: How employee and customer contracts are created. *Human Resource Management*, 33, 463-489.
- Schalk, R., Freese, C., & van den Bosch, J. (1995). Het psychologisch contract van part-timers en

- full-timers [The psychological contract of part-timers and full-timers]. *Gedrag en Organisatie*, 8, 307-317.
- Schein, E. H. (1965). *Organizational Psychology*. Englewood Cliffs: Prentice-Hall.
- Sens, T. (2005). *Naast woorden ook daden* [Next to words also deeds]. Heerlen: Internal report, Faculty of Psychologie, department HRM. Dutch Open University.
- Tannenbaum, A. S., & Kuleck, Jr., J. W. (1978). The effect on organization members of discrepancy between perceived and preferred rewards implicit in work. *Human Relations*, 31, 809-822.
- Tekleab, A. G., & Taylor, M. S. (2003). Aren't there two parties in an employment relationship? Antecedents and consequences of organization-employee agreement on contract obligations and violations. *Journal of Organizational Behavior*, 24, 585-608.
- ten Brink, B. E. H., den Hartog, D. N., Koopman, P. L., & van Muijen, J. J. (2002). Psychologisch contract: de impliciete ruilrelatie tussen werkgever en werknemer [Psychological contract: The implicit exchange relation between employer and employee]. *Gedrag en Organisatie*, 15, 415-435.
- ten Brink, B. E. H. (2004). *Psychological contract: a useful concept?* Amsterdam: PhD thesis, VU University.
- Thomas, H. D. C., & Anderson, N. (1998). Changes in newcomers' psychological contracts during organizational socialization: a study of recruits entering the British Army. *Journal of Organizational Behavior*, 19, 745-767.
- Turnley, W. H., & Feldman, D. C. (1999). The impact of psychological contract violations on exit, voice, loyalty and neglect. *Human Relations*, 52, 895-922.
- van den Brande, I. (2002). *Het psychologisch contract tussen werknemer en werkgever: een survey-onderzoek bij vlaamse werknemers* [The psychological contract between employee and employer: A survey study among Flemish employees]. Leuven: PhD thesis Katholieke Universiteit Leuven.
- van den Brande, I., Janssens, M., Sels, L., & Overlaet, B. (2002). Psychologische contracten in Vlaanderen: 'old deals'?! [Psychological contracts in Flanders: 'old deals'?!]. *Gedrag en Organisatie*, 15, 355-369.