Developing multiple identifications through different social interactions at work


DOI
10.1080/1359432X.2016.1185099

Publication date
2016

Document Version
Final published version

Published in
European Journal of Work and Organizational Psychology

License
Article 25fa Dutch Copyright Act

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Developing multiple identifications through different social interactions at work

Christiane A. L. Horstmeier, Astrid C. Homan, Doris Rosenauer and Sven C. Voelpel

Jacobs University Bremen, School of Humanities and Social Sciences, Campus Ring 1, 28759 Bremen, Germany; Department of Work and Organizational Psychology, University of Amsterdam, Weesperplein 4, 1018 XA Amsterdam, The Netherlands

(Received 15 September 2014; accepted 18 April 2016)

The question of how employees’ identifications with various foci at work (e.g., team, supervisor, or profession) develop and how they can be managed actively still remains largely unanswered. This is surprising, given the previously demonstrated benefits of employees’ identifications for organizational outcomes. Building on the social validation framework, we propose that changes in different social interactions (social support and effective feedback from supervisors and co-workers) over time are apt to socially validate different provisional selves and thereby differentially foster identification with the supervisor, the team, and the profession. In a longitudinal study of 212 apprentices, who are newcomers to both the organization and the profession, we test this idea using latent change scores in a structural equation modelling approach. Supporting our hypotheses, we show that changes in social support from supervisors and co-workers are related to changes in supervisor and team identification. Increased feedback from co-workers, but not from supervisors, predicted increased professional identification.

Keywords: social identification; identity development; social information; social validation; structural equation modelling (SEM)

Employee identification—perceived oneness with or belongingness to a variety of entities within the organization—provides organizations with competitive advantages perceived oneness with or...
by consistent and useful information or criticism that is provided in order to improve task-related performance (Steelman, Levy, & Snell, 2004). We argue that changes in emotional social support and effective feedback provided by the supervisor and co-workers will relate to changes in identification, such that an increase (decrease) in specific social interactions will be associated with specific increases (decreases) in identification with the team, supervisor, and profession. The investigated latent change model is illustrated in Figure 1.

In response to a call to study identification development with different foci (Smith, Amiot, Smith, Callan, & Terry, 2013), we intend to make the following contributions. First, we combine several elements of earlier research to propose a general process underlying identity development (Ashforth, 1998; Burke, 1950/1969; Ibarra, 1999; Reichers, 1987; Smith et al., 2013). In this respect, we build on socialization and social validation research to suggest that newcomers, whose social and relational identities are malleable and rather situated (Meyer, Becker, & Van Dick, 2006), use the development of their social interactions over time to inform the development of their still malleable identities. More specifically, we argue that changes in these social interactions over time guide changes in identifications with different foci.

Second, we concentrate on the development of social interactions as proximal drivers of identification development rather than more global antecedents of identification such as prestige or climates addressed in previous research (e.g., Bartels, Pruyn, De Jong, & Joustra, 2007; Olkkonen & Lipponen, 2006; Wan-Huggins, Riordan, & Griffeth, 1998). In this respect, we propose that the development of different social interactions should nurture the development of identifications with different foci. In this respect, we argue that changes in social support and feedback from supervisors and co-workers are differentially associated with changes in identifications with the supervisor, team, and profession. We therefore examine the parallel development of multiple foci of identification.

Identity development

People’s self-concept is partially defined by the multiple relationships or groups they belong to, such as a work team, the profession, or the supervisor–subordinate relationship (Brewer & Gardner, 1996; Tajfel & Turner, 1986). These different social identities develop and change over time, depending on situational cues (Harter, 1999; Labouvrie-Vief, Chiodo, Goguen, Diehl, & Orwoll, 1995; Meyer et al., 2006). Hence, identification or identity development refers to the dynamic process of deepening and/or adjusting one’s identification with a particular focus over time, which results in the integration of a person or group into the self-concept (Meyer et al., 2006; Pratt, 1998). As such, team identification refers to integrating one’s work team into the self-concept, identification with the supervisor is the extent to which employees integrate their relationship with their supervisor into the self-concept (Sluss & Ashforth, 2007), and professional identification involves the integration of the profession, for which one is formally trained during apprenticeship (e.g., electrician).

Identity development might be especially evident during transitions (Ibarra & Barbulescu, 2010). When entering a new organization or starting a new job, the social self (i.e., the relational or collective identity; Brewer & Gardner, 1996; Pratt, 1998; Sluss & Ashforth, 2007) is called into question. As part of the socialization process—the process of organizational outsiders becoming organizational insiders (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007)—individuals are likely to adapt their social self to the new situation (Ashforth, 1998; Ibarra, 2004; Ibarra & Barbulescu, 2010). Effective socialization should therefore enable the integration of new aspects of the social environment into the self (Amiot et al., 2007; Bauer et al., 2007; Jones, 1986; Van Maanen & Schein, 1979).

Recently, researchers have outlined identity development in socialization in more detail: When entering a new group or relationship, employees initially behave as if they were already identified with the group or relationship. Different scholars have used different terms to refer to this process as “situated identity” (Meyer et al., 2006), “anticipatory identification” (Ashforth, 1998, p. 217), “tentative identity claims” (Ashforth, 1998, p. 217), or “provisional selves” (Ibarra, 1999, p. 764). These situated
identities are then iteratively evaluated “against internal and external standards” (Ibarra, 1999, p. 773) to determine whether they will become more stable. This evaluation is likely to be informed by the development of social interactions with others (Burke, 1950/1969; Reichers, 1987; Stephens & Dailey, 2012), which provide the individual with insights into the adequacy and applicability of the situated identity.

In the socialization period, changes in social validation can help to confirm or weaken a situated identity (Ashforth, 1998). Social validation entails feedback and support from colleagues or supervisors that affirm behaviours that are considered desirable and appropriate (Gioia & Chittipeddi, 1991; Smith et al., 2013). As such, social validation offers identity cues that are “descriptive and normative information about the group […] identity; about what a typical group member thinks, feels and does” (Ashforth et al., 2008, p. 332; see also Festinger, 1954; Wittenbaum & Bowman, 2004), and may thus provide identity affirmation from insiders (Jones, 1986; Postmes, Haslam, & Swaab, 2005). The more (less) validating interactions newcomers experience over time, the more (less) they will perceive their behaviour and beliefs to be appropriate for the group or relationship they have tentatively identified with (e.g., Smith, Amiot, Callan, Terry, & Smith, 2012).

In sum, we argue that identity development occurs through the experiences of employees’ interaction with their work environment (Kammeyer-Mueller & Wanberg, 2003; Riketta, Van Dick, & Rousseau, 2006; Rousseau, 1998). More specifically, we propose that if newcomers experience an increase in social validation through social interactions over time, the strength of the still malleable identity will also increase. However, if newcomers experience a decline in social validation through social interactions over time, they will also experience a decrease in their tentative identity strength (see also Smith et al., 2013).

Differential effects of social interactions on identity development

Socialization involves onboarding with respect to the organization’s social domain (e.g., co-workers and supervisors) as well as the job’s professional domain (Kammeyer-Mueller & Wanberg, 2003). In this regard, identification with the team and supervisor are part of the newcomer’s successful social transition, whereas identification with the profession represents successful onboarding in the task domain. Importantly, different social interactions should differentially validate identifications with different foci.

Social interactions are characterized by two aspects: the interaction content and the interaction partner. The interaction content can either be social-emotional or task-related behaviour (Hare, 1960), which resembles the dichotomy of social and task transitions outlined earlier.

We operationalize these two categories of interaction content as emotional social support and effective feedback. Regarding the interaction partner, our study focuses on supervisors and co-workers, as both shape the individual’s work experience on a daily basis and are important agents in newcomer socialization (e.g., Kammeyer-Mueller & Wanberg, 2003; Morrison, 1993b; Rousseau & Aubé, 2010; Saks & Ashforth, 1997).

To link the different forms of social interaction with the different foci of identification, we build on the correspondence of focus principle (Van Dick et al., 2004). Van Dick et al. (2004) argued and showed that identification-outcome relationships are strongest when the focus of identification and the outcome correspond in their focus. Extending this principle to antecedents of identification, we propose that changes in social interactions that share the same focus as the targeted identification should be most influential in developing that specific identification. We argue that changes in social support from supervisors and co-workers, which is a social-emotional behaviour, inform about the particular relationship to the elicitor of the support behaviour (T. Allen, Eby, Poteet, Lentz, & Lima, 2004) and thus will be related to changes in identifications with the supervisor and co-workers. Conversely, feedback is a task behaviour, which focuses on employees’ professional behaviour and should therefore feed into the professional self-concept and foster professional identification.

Changes in social support driving changes in identification with the supervisor and team

The expression of concern for an individual has been advocated as a strategy to enhance identification (Pratt, 1998). Emotional social support is characterized as concern for the other as a person (Ducharme & Martin, 2000) and involves behaviours that signal encouragement, empathy, care, and acceptance (Ng & Sorensen, 2008). Consequently, social support can be interpreted as a signal of being a “deserving member” (D. Allen & Shanock, 2013, p. 353) and feeds into the “strong need to relate to, and be accepted by, others” (Meyer et al., 2006, p. 671). The development of social support over time could provide up-to-date information about one’s position within the team or one’s relationship with a supervisor, such that with increased social support, one’s position within the team or a relationship becomes more salient and more central to one’s self-concept (Amiot, Terry, Wirawan, & Grice, 2010; Harter, 1999). Conversely, if one experiences reduced social support over time, the team or the person is less likely to become a part of the individual’s self-concept, which will result in a decrease in identification. We therefore propose changes in social support to be associated with changes in identifications.

However, we propose that changes in social support will not be uniformly associated with changes in any
identification, but rather that these have differential effects on changes in team identification and identification with the supervisor, depending on the source of social support (the supervisor or co-workers). Changes in social support from the supervisor convey information on acceptance and caring by the supervisor, which feeds into the development of identification with the supervisor. A positive (negative) change in social support from a supervisor should therefore be conducive to an increase (decrease) in the newcomer’s identification with the supervisor over time (i.e., positive/negative change in identification with the supervisor). We therefore expect a positive statistical relationship between changes in supervisor social support and changes in supervisor identification.

In contrast, changes in social support from co-workers convey information with respect to the team–employee relationship and should be conducive to identification with the team. We therefore predict a positive statistical relationship between changes in interactions and identifications in that an increase (i.e., a positive change) in co-workers’ social support is related to an increase (i.e., positive change) in team identification, whereas a decrease (i.e., a negative change) in co-worker social support will be associated with a decrease (i.e., a negative change) in team identification.

**Hypothesis 1:** Change in social support from the supervisor is positively related to change in identification with the supervisor.

**Hypothesis 2:** Change in social support from co-workers is positively related to change in identification with the team.

**Changes in feedback driving changes in identification with the profession**

Effective feedback requires that the provider is a credible source of feedback, such as supervisors and experienced co-workers, and has to bring both moments of success and moments of failure to the newcomer’s attention. Furthermore, the feedback needs to help newcomers to learn how to adequately or better perform their jobs (Steelman et al., 2004). As such, effective feedback aims to support newcomers in their professional task mastery and has been described as providing “helpful or valuable information that enables the employees to learn, develop, and make improvements on the job” (Zhou, 2003, p. 415).

As effective feedback pertains to an employee’s professional work behaviour, effective feedback can validate newcomers with respect to their situated professional self and could foster professional identification (Shrauger & Schoeneman, 1979). Effective feedback has the potential to build efficacy about one’s social position in the professional group (Erez & Earley, 1993; Ouwerkerk & Ellemers, 2002). Especially for professional newcomers, who need to learn the ropes of their profession from scratch, it is essential to receive effective feedback to reduce uncertainties regarding their profession (Morrison, 1993a) and to perceive themselves as competent members of their professional group. In this respect, empirical work has illustrated that feedback is conducive to competency building (Ilgen, Fisher, & Taylor, 1979), allows realistic self-assessment (Locke, Cartledge, & Koeppel, 1968), and fosters self-efficacy (Bandura, 1986; Fisher, 1986).

Using the social validation framework, we argue that receiving increased effective feedback over time assures newcomers that they are learning to behave appropriately in the profession (e.g., Smith et al., 2012), which should motivate further positive engagement with the new profession and tasks. We thus propose that the development of feedback should facilitate a gradual colonization of “the domain of their targeted identity” (Ashforth, 1998, p. 219), and help to develop the professional identification. Consequently, increased effective feedback should relate to a heightened professional identification. Conversely, when a newcomer experiences decreases in effective feedback over time, self-efficacy in the new profession is less likely to develop and competence building is hindered. This should be associated with lowered professional identification over time.

Feedback can be obtained from different sources, with supervisors and co-workers being among the most important socialization agents who provide task-related information to an equal extent (Kammeyer-Mueller & Wanberg, 2003; Ostroff & Kozlowski, 1992). Moreover, these interaction partners are most likely to be able to provide effective feedback due to their proximity to the newcomer (Li, Harris, Boswell, & Xie, 2011; Morrison, 1993a). As supervisors and co-workers provide employees with “unique, non-overlapping information” (Li et al., 2011, p. 3), both can be expected to contribute uniquely to identification with the profession. Hence, we propose that changes in feedback from the supervisor and co-workers are associated with changes in professional identification. In this respect, we predict that more effective feedback (a positive change) over time will lead to an increase in professional identification (a positive change), whereas professional identification decreases over time, if levels of effective feedback diminish (negative changes).

**Hypothesis 3:** Change in effective feedback from the supervisor is positively related to change in identification with the profession.

**Hypothesis 4:** Change in effective feedback from co-workers is positively related to change in identification with the profession.
**Method**

**Sample and procedure**

We applied a longitudinal design (Menard, 2002), in which we collected data on all relevant measures from the same apprentices at two measurement points and analysed the respective changes through a latent change model (McArdle, 2009; Schnabel, 1996). We surveyed apprentices of a large German facility management company. Apprenticeship is a unique vocational training system in Germany, which focuses on professional training for skilled crafts and trades (as opposed to academic training). The core of apprenticeships is practical training in a specific profession through working at a company over the course of three to four years, which is complemented by theoretical education at vocational schools.

Data were collected as part of a larger organizational survey project from apprentices during working hours via paper-and-pencil-questionnaires at two measurement points in late fall and late spring, six months apart. Previous research showed that similar time intervals (three to six months) are adequate to capture identity development over time (e.g., Amiot, Blanchard, & Gaudreau, 2008; Amiot et al., 2010; Schaubroeck, Peng, & Hannah, 2013; Smith et al., 2013).

After two researchers explained the purpose of the study at a regular apprentices’ meeting, apprentices voluntarily participated in the survey. At the first measurement point, 343 of the company’s 443 apprentices were present (71%), of whom 93% participated in the survey (n = 318). At the second measurement point, 277 of the company’s 346 apprentices attended the meetings (78%), of whom 267 apprentices (96%) participated in the study. The smaller overall number of apprentices at time 2 results from some apprentices finishing their apprenticeship after 3.5 years. Unfortunately, no further demographic information of non-participants was available due to strict data protection regulations. However, at both measurement points the participants were representative of the company’s overall apprentices in terms of training profession (t1: χ2 [5] = 1.41, p = .92, t2: χ2 [5] = 1.77, p = .88) and year of apprenticeship (t1: χ2 [3] = 3.64, p = .30, t2: χ2 [3] = 1.23, p = .75).

Of all participants, we retained only those who completed questionnaires at both measurement points, resulting in 212 participants for the final sample. While most apprentices were trained in technical professions (67%), 28% were trained to become building cleaners, and 5% to become administrative staff. Overall, 87% of the apprentices in the sample were male. At the first measurement point, the average age was 19.51 years (SD = 2.65) and most apprentices were in their first or second year of apprenticeship (Year 1: 47%, Year 2: 33%, Year 3: 20%, Year 4: 1%). Additionally, we conducted a series of t-tests to check for systematic differences between the participants in our sample and the overall participants. Both series of t-tests indicated that participants included in the final sample (n = 212) did not differ from those who had participated either only at the first (t1, n = 106) or second measurement point (t2, n = 55) on any of the variables under study (t1: all ts[194–226] ≤ 1.61, all ps ≥ .11; t2: all ts [73–88] ≤ 0.59, all ps ≥ .56). Given that we were testing for existing differences, we decided not to apply the often suggested, more conservative, Bonferroni–Holm correction for multiple testing (Abdi, 2010), which renders the detection of differences less likely.

**Measures**

All measures were included among other scales in a large survey project at both measurement points and were presented in German. The items were translated from English to German using the translation-back translation technique (Brislin, 1970). All items were rated on a five-point scale ranging from 1 “strongly disagree” to 5 “strongly agree”.

**Identification**

Identification with each focus was measured with five items from Mael and Ashforth (1992, see appendix for the full scale). We replaced the referent of the items to represent the respective foci (i.e., the supervisor, the team, or the profession; for a similar approach see Johnson, Morgeson, Ilgen, Meyer, & Lloyd, 2006). Sample items are “The successes of my supervisor/team/profession are my successes” and “When I talk about my supervisor/team/profession, I usually say ‘we’ rather than ‘they’.” Based on preliminary analyses, on which we elaborate in more detail later, we had to eliminate two items each from the supervisor identification (Items 1 and 2) and the team identification scale (Items 1 and 5) in order to reach at least scalar invariance for all scales (see measurement equivalence section; Vandenbroucke & Lance, 2000). All resulting Cronbach’s alpha reliabilities were good (team identification: t1: α = .76, t2: α = .78; supervisor identification: t1: α = .81, t2: α = .83; professional identification: t1: α = .88, t2: α = .89).

**Social support from supervisors and co-workers**

We measured supervisors’ and co-workers’ emotional social support using four items each (Snyder, 2009), inserting the respective target. A sample item is “My supervisor/co-workers show genuine concern for my problems.” Both scales exhibited good Cronbach’s alpha reliabilities (supervisor support: t1: α = .85, t2: α = .86; co-workers support: t1: α = .85, t2: α = .88).

**Effective feedback from supervisors and co-workers**

We employed a scale by Steelman et al. (2004), using ten items each to measure effective feedback from the
supervisor and the co-workers respectively. This scale assesses aspects of valence of feedback, feedback source credibility, and feedback quality with items like “The feedback I receive from my supervisor/co-workers helps me do my job.” Overall, the scales showed excellent internal consistencies (supervisor feedback t1: $\alpha = .90$, t2: $\alpha = .92$; co-worker feedback t1: $\alpha = .91$, t2: $\alpha = .92$).

**Control variables**

Apprentices reported their age, gender, profession, and year of apprenticeship as demographic information at the end of the questionnaire. We obtained the distribution of apprentices per year and profession of apprenticeship from company records.

**Data independence**

We checked whether our data structure supported analyses on the individual level, given that we obtained data from 212 apprentices, who were led by 73 supervisors (most supervisors were responsible for one to three apprentices; only six supervisors attended to six or more apprentices). Agreement statistics illustrate that ICC(1) ranged from −0.01 to 0.26 and ICC(2) ranged from −0.02 and 0.50 for variables at t1 and t2. The corresponding F-tests for changes in identifications and social interactions were not significant (all $F$s[64–71; 116–134] $\leq 1.38$, all $ps \geq .07$), except for changes in supervisor feedback ($F[64; 114] = 2.11$, $p < .001$). Additionally, the obtained mean $R_{wg(j)}$s in the current sample range from 0.23 to 0.60 (.37 and .42 for supervisor feedback at t1 and t2, respectively), which is clearly below the agreement cut-off point of .70 (George, 1990; James, Demaree, & Wolf, 1984). Together, these analyses support the current data analysis approach on the individual level (Bliese, 2000; Klein & Kozlowski, 2000).

**Results**

Table 1 presents the means, standard deviations, Cronbach’s alpha coefficients, and zero-order correlations of all the studied variables. Even though the correlations between the foci of identification at Time 1 and Time 2 are positive and significant ($r = .49$ for team identification, $r = .34$ for supervisor identification, and $r = .50$ for professional identification), the strength of correlations is moderate, which indicates that change over time was possible. The data were analysed with MPlus, using latent change scores based on structural equation modelling (SEM). This approach enables the researcher to simultaneously test relationships between multiple intercorrelated independent and dependent variables, while also accounting for measurement error of the constructs (Geiser, 2010).

**Preliminary analyses**

**Item parcelling for feedback scale**

To facilitate model estimation, Little, Cunningham, Shahar, and Widaman (2002) recommended using item parcelling for large scales to avoid under-identification and to provide parsimonious models. We applied this technique on the ten items of the feedback scales. Exploratory factor analyses demonstrated that both feedback scales measured unidimensional constructs as all items loaded on a single factor. Following Little et al.’s (Little et al., 2002) recommendations, we created three parallel random parcels for each scale at each measurement point, thereby also reducing further sources of measurement or sampling error (Bandalos, 2002). Parcelling was not deemed adequate for the other, shorter scales.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supervisor identification t1</td>
<td>2.67</td>
<td>.97</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Team identification t1</td>
<td>3.90</td>
<td>.89</td>
<td>.24</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Profession identification t1</td>
<td>3.41</td>
<td>.92</td>
<td>.31</td>
<td>.52</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Social support supervisor t1</td>
<td>3.29</td>
<td>.94</td>
<td>.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Social support co-worker t1</td>
<td>3.69</td>
<td>.90</td>
<td>.06</td>
<td>.59</td>
<td>.34</td>
<td>.04</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Feedback supervisor t1</td>
<td>3.34</td>
<td>.83</td>
<td>.37</td>
<td>.07</td>
<td>.08</td>
<td>.73</td>
<td>.07</td>
<td>.37</td>
<td>.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Feedback co-worker t1</td>
<td>3.72</td>
<td>.70</td>
<td>.04</td>
<td>.58</td>
<td>.39</td>
<td>.05</td>
<td>.72</td>
<td>.26</td>
<td>.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Supervisor identification t2</td>
<td>2.55</td>
<td>.96</td>
<td>.34</td>
<td>.32</td>
<td>.56</td>
<td>.22</td>
<td>.21</td>
<td>.29</td>
<td>.24</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Team identification t2</td>
<td>3.82</td>
<td>.90</td>
<td>.21</td>
<td>.49</td>
<td>.37</td>
<td>.09</td>
<td>.30</td>
<td>.17</td>
<td>.37</td>
<td>.33</td>
<td>.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Profession identification t2</td>
<td>3.36</td>
<td>.99</td>
<td>.27</td>
<td>.36</td>
<td>.50</td>
<td>.12</td>
<td>.21</td>
<td>.12</td>
<td>.29</td>
<td>.43</td>
<td>.52</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Social support supervisor t2</td>
<td>3.27</td>
<td>.90</td>
<td>.07</td>
<td>.14</td>
<td>.34</td>
<td>.34</td>
<td>.19</td>
<td>.39</td>
<td>.22</td>
<td>.40</td>
<td>.25</td>
<td>.12</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Social support co-worker t2</td>
<td>3.68</td>
<td>.85</td>
<td>.06</td>
<td>.35</td>
<td>.24</td>
<td>.14</td>
<td>.50</td>
<td>.16</td>
<td>.44</td>
<td>.17</td>
<td>.67</td>
<td>.34</td>
<td>.30</td>
<td>.88</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Feedback supervisor t2</td>
<td>3.26</td>
<td>.80</td>
<td>.23</td>
<td>.18</td>
<td>.15</td>
<td>.40</td>
<td>.18</td>
<td>.52</td>
<td>.25</td>
<td>.42</td>
<td>.35</td>
<td>.18</td>
<td>.73</td>
<td>.31</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>14. Feedback co-worker t2</td>
<td>3.69</td>
<td>.73</td>
<td>.15</td>
<td>.39</td>
<td>.28</td>
<td>.13</td>
<td>.48</td>
<td>.26</td>
<td>.61</td>
<td>.18</td>
<td>.51</td>
<td>.37</td>
<td>.24</td>
<td>.69</td>
<td>.32</td>
<td>.92</td>
</tr>
</tbody>
</table>

Note: $N = 212$.
Cronbach’s alpha coefficients in the diagonal; for all correlations greater than .15, $p < .05$, for all correlations greater than .18, $p < .01$. 

European Journal of Work and Organizational Psychology
Table 2. Model fit indices for confirmatory factor analyses of exogenous and endogenous variables.

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \chi^2/df )</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
<th>TLI</th>
<th>( \Delta\chi^2/\Delta df )</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exogenous variables, t1 and t2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) 1 factor: identification</td>
<td>977.47</td>
<td>208</td>
<td>4.70</td>
<td>.13</td>
<td>.10</td>
<td>.68</td>
<td>.64</td>
<td>51.81</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>(2) 2 factors: collective vs. relational identification</td>
<td>718.40</td>
<td>203</td>
<td>3.54</td>
<td>.11</td>
<td>.08</td>
<td>.79</td>
<td>.76</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>(3) 3 factors: team, supervisor, and professional identification</td>
<td>426.92</td>
<td>194</td>
<td>2.20</td>
<td>.08</td>
<td>.06</td>
<td>.90</td>
<td>.88</td>
<td>32.39</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>Endogenous variables, t1 and t2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) 1 factor: all predictors</td>
<td>2630.19</td>
<td>349</td>
<td>7.54</td>
<td>.18</td>
<td>.21</td>
<td>.45</td>
<td>.40</td>
<td>27.03</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>(2) 2 factors: supervisor vs. co-worker</td>
<td>1028.66</td>
<td>344</td>
<td>2.99</td>
<td>.10</td>
<td>.07</td>
<td>.84</td>
<td>.82</td>
<td>320.31</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>(3) 2 factors: social support vs. feedback</td>
<td>2495.04</td>
<td>344</td>
<td>7.25</td>
<td>.17</td>
<td>.21</td>
<td>.48</td>
<td>.43</td>
<td>27.03</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>(4) 4 factors: social support and feedback from supervisor and co-workers</td>
<td>629.28</td>
<td>322</td>
<td>1.95</td>
<td>.07</td>
<td>.05</td>
<td>.93</td>
<td>.91</td>
<td>18.15</td>
<td>1993</td>
</tr>
<tr>
<td></td>
<td>84.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2  &lt; .001</td>
<td></td>
</tr>
</tbody>
</table>

Note: RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; * \( p < .05 \). 1 Comparison to model (2). 2 Comparison of model (3).

**Confirmatory factor analyses**

We conducted separate confirmatory factor analyses (CFAs) for the endogenous and exogenous variables to assert the distinctiveness of the constructs. Table 2 presents the fit indices pertaining to the final set of items used for the following analyses after establishing at least scalar invariance for each construct (for further information see the section that follows). For the exogenous variables, we propose a three-factor model conceptualizing identification with the supervisor, team, and profession as three linked, yet distinct constructs. Alternatively, we tested a one-factor model, representing an overall social identity construct, and a two-factor model that distinguishes relational identity (identification with the supervisor) from collective identity (identification with the team and profession). The results indicate that the three-factor model fits the data best.

Similarly, in a second set of CFAs we investigated the structure of the endogenous variables. Our hypothesized four-factor model, which distinguishes social support and feedback from supervisors and co-workers, was superior to all of the alternative models that either collapsed interaction content regardless of their source or interaction source regardless of the interaction content.

**Measurement equivalence**

We examined scale equivalence for all scales by assessing the measurement invariance properties of each scale in a confirmatory factor analysis framework using nested model comparisons with chi-square difference tests (Vandenberg & Lance, 2000). Measurement invariance refers to whether “under different conditions of observing and studying phenomena, measurement operations yield measures of the same attribute” (Horn & McArdle, 1992, p. 117). Only by demonstrating measurement invariance can a scale be labelled to measure the same attribute across time points. In this respect, scalar invariance assesses whether the factor loadings and intercepts are equal across time points, and evidence of scalar invariance is required to make mean comparisons across time points (Meredith, 1993).

Such empirical testing of measurement equivalence has been strongly advocated before testing substantive hypotheses, as longitudinal data analysis requires at least scalar invariance (i.e., strong factorial invariance) across measurement points in order to be interpreted meaningfully (Geiser, 2010; Vandenberg & Lance, 2000). If items fail to meet the standards of scalar invariance, researchers can never be certain whether an observed change in a scale is due to altered measurement properties of the respective items or due to true changes in the underlying construct, which they aim to assess. Hence, following recommendations by Vandenberg and Lance (2000), when single items violated the measurement invariance assumption of at least scalar invariance, they were removed from further analyses.

More specifically, we first established a baseline measurement model per construct for both measurement points without any concerns for invariance. Subsequently, further measurement constraints are introduced to represent the different levels of measurement invariance (e.g., weak, strong, or strict factorial invariance). If these constrains do not lead to a significantly worse model fit, the data does not provide evidence that the invariance assumption is violated and invariance is accepted (for a more detailed description of the procedure, see Vandenberg, 2002; Vandenberg & Lance, 2000). As noted previously, two items of the supervisor and team identification scale each significantly worsened the measurement model and consequently had to be excluded for the main analyses. Thereby, at least scalar invariance was established for all constructs of the identity development model. Due to space limitations, the results of the model fit and fit comparisons to establish measurement equivalence are not reported here. These findings can be requested from the first author.
Identity development model
Overall model fit and hypotheses testing

For our main analyses, we used latent change scores to test the proposed paths from changes in aspects of social interaction to changes in identifications from the first to the second measurement point. Latent change scores have recently gained popularity in applied research (e.g., Roberts, Caspi, & Moffitt, 2001; Smith et al., 2013), as they allow the research to model the true intraindividual change over time (Geiser, 2010; Schnabel, 1996; Steyer, Partchev, & Shanahan, 2000). This is an important advantage over modelling observed changes (i.e., differences in manifest variables), which may as much reflect fluctuations of measurement error as changes in the concept of interest (Steyer et al., 2000).

To this end, latent variable scores for each construct and measurement point are first calculated to decompose the observed values into true components and measurement error like in any structural equation model (Steyer et al., 2000). These latent variables, which capture the true values of each measure at the first and second measurement points (t1 and t2) separately, are then used to create the true intraindividual change variable by expressing the true t2 variable as the sum of the true t1 variable and the true intraindividual change (i.e., the latent change score; Geiser, 2010; Schnabel, 1996). Thereby, the latent change scores directly capture the direction and magnitude of the intraindividual change over time (Selig & Preacher, 2009). Subsequently, these intraindividual change scores can be used as any latent variable in structural models (Geiser, 2010; McArdle, 2009).

For the current research, the procedure described earlier resulted in seven latent change scores: four latent change scores representing changes in social support and feedback from supervisors and co-workers and three latent change scores representing changes in identifications with the different foci. Table 3 presents correlations among the true latent change scores. Furthermore, applying a latent change score technique enabled us to separately model changes in the predictor and the absolute level of the predictor at Time 1 and thus to explore potential effects of the absolute level (besides changes) in predictor variables as drivers of identity development (also see Smith et al., 2013).

As depicted in Figure 2, the proposed identity development model contained all four paths from latent changes in social interactions to latent changes in identifications in correspondence with our hypotheses. This proposed model had a good overall model fit ($\chi^2 = 1717.86$, $df = 1141$, $\chi^2/df = 1.51$, RMSEA = .05, SRMR = .06, CFI = .92, TLI = .91). As indicated by the model results, most of our hypotheses were supported. In support of Hypotheses 1 and 2, we found positive path coefficients for the path from changes in supervisors’ social support to changes in identification with the supervisor ($\gamma_{111} = .44; p < .001$) as well as for the path from changes in co-workers’ social support to changes in team identification ($\gamma_{112} = .76; p < .001$). Both effect sizes indicate a large effect according to the analyses of Bosco, Aguinis, Singh, Field, and Pierce (2015).

Furthermore, the hypotheses pertaining to the relationship between changes in feedback and changes in professional identification were only partially supported: We found a positive path coefficient for the relationship between changes in co-workers’ feedback and changes in professional identification ($\gamma_{114} = .30; p < .001$), confirming Hypothesis 4 and indicating a medium effect size (Bosco et al., 2015). However, the path coefficient leading from changes in supervisor’s feedback to changes in professional identification was not significant ($\gamma_{113} = .01; p = .90$). Therefore, Hypothesis 3 had to be rejected.

Including control variables

We investigated whether the pattern of the results remained stable when adding control variables to the model. Recently, Becker (2005) recommended excluding impotent control variables in order to preserve power. Hence, we first explored the relationships between each control variable (i.e., age, gender, profession, and year of apprenticeship) and the outcome variables and retained only those which were significantly related to at least one outcome (Kraimer, Seibert, Wayne, Liden, & Bravo, 2011). Following this approach, we added year of apprenticeship, representing the apprentices’ tenure, and gender variables as drivers of identity development.

Table 3. Correlations of latent change scores.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ Supervisor identification                      -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Team identification    .05        -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Professional identification       .14** .31** -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Social support supervisor         .44** .00 .03 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Social support co-worker           .00 .76** .21** .00 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Feedback supervisor              .33** .08 .04 .75** .11 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Feedback co-worker               −.05 .52** .31** .12 .69** .10 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $N = 212$. * $p < .05$; ** $p < .01$. 

References...
as manifest control variables into the model. None of these added paths turned out to be significant and adding the control variables to the model did not alter the pattern of results.

We further obtained objective data regarding the number of weeks each apprentice spent at the company at each measurement point, as apprentices also spend some time in school and in trainings outside of the organization. When adding the total number of weeks spent at the company at Time 1 or the time each individual effectively spent at the organization between the measurement points as control variables, none of these additional paths turned out to be significant and the pattern of results remained unchanged.

**Alternative models**

In addition to the proposed model, we tested alternative models to enhance the confidence in our results. In a first alternative model, we added direct paths from predictors at Time 1 to the changes in identifications. The results revealed that only paths from changes in predictors to changes in identifications emerge as significant (all significant $\gamma$s $\geq .30$, all significant $p$s $\leq .001$), whereas the path coefficients from absolute levels of predictors at Time 1 to changes in identifications fail to reach significance (all $\gamma$s $\leq .19$, all $p$s $\geq .06$).

For the second alternative model, we added two paths from changes in feedback from the supervisor and co-workers to changes in identification with the supervisor and the team, respectively, as feedback might also serve to validate the tentative identity with the source of feedback. A third alternative model included all other potential paths from changes in predictors to the changes in identifications, thus also paths from changes in predictors to changes in identifications that we had not predicted based on the social validation model were included in the model.

Table 4 presents an overview of the tested models and their respective fit indices. The results show that the initially proposed model fits the data best: None of the alternative models exhibited a superior model fit in comparison to the proposed model ($\Delta \chi^2/\Delta df \leq 1.62$, all $p$s $\geq .20$), indicating that adding the respective paths did not explain additional variance in the data.

We also tested a model in which the reversed relationships were proposed (i.e., from changes in identification to changes in social support and effective feedback). Model fit indices indicated that the model including paths from changes in identification to changes in social interactions ($\chi^2 = 1893.86$, $df = 1153$, $\chi^2/df = 1.64$, RMSEA = .06 SRMR = .07, CFI = .89, TLI = .88) fit the data worse than the proposed model ($\chi^2 = 1717.86$, $df = 1141$, $\chi^2/df = 1.51$, RMSEA = .05, SRMR = .06, CFI = .92, TLI = .91) and fail to reach accepted cut-off criteria (Vandenberg & Lance, 2000).

**Discussion**

We investigated how development in social interactions over time informs the development of identifications with multiple foci over time. We built on social validation reasoning to put forward specific workplace actions that can be used to actively manage identifications. Supporting
a correspondence in focus reasoning, our results show that changes in different social interactions are indeed positively related to changes in identification with the corresponding foci. More specifically, changes in social support from the supervisor were associated with changes in identification with the supervisor, whereas changes in social support from co-workers were related to changes in team identification. Furthermore, we found a positive path coefficient from changes in effective feedback from co-workers, but not from supervisors, to changes in professional identification. Thus, changes in co-workers’ feedback seem to drive professional identification development in newcomers, while changes in feedback from the supervisor did not contribute to professional identification development in our study. A potential reason might be that apprentices are at an early stage of their professional development and refer more to experienced co-workers to infer information about their professional standing and—in comparison—learn less from their supervisor in this regard.

**Theoretical implications**

Our research contributes to the identification literature in various ways. First, we respond to Ashforth et al.’s (2008) long-standing call to study how identities develop over time and add to the still limited organizational research on identity development. To do so, we proposed a general process underlying newcomers’ identity development and argued that changes in social validation (Smith et al., 2013) of situated identities (Ashforth, 1998; Ibarra, 1999) received in social interaction (Burke, 1950/1969; Reichers, 1987) guide newcomers’ development of social identities (both relational and collective identities). Our results suggest that the development of relational and collective identities is not as different as some scholars have suggested (Sluss & Ashforth, 2007), but follows the same underlying process. Our findings imply that when studying identifications over time, changes in social interactions provide information about and validate one’s standing in a group (profession or team) or in a relationship (with the supervisor), which are in turn related to intraindividual changes in identification.

Second, our study sheds light on proximal drivers of identification, which can be directly applied in managerial practices. In this respect, we find that changes in social support and feedback from supervisors and co-workers might indeed be relevant workplace behaviours to shape newcomers’ identities over time, as they might serve to initiate social validation processes. Thereby, our findings demonstrate that common social interactions in daily working routines offer a more proximal way to shape identifications compared to more static and distal antecedents such as external images, prestige, or communication climate (Bartels et al., 2007; Wan-Huggins et al., 1998).

Third and relatedly, we distinguished several social interactions as manageable antecedents of the parallel development of identifications with multiple foci, depending on the content and the partner of the interaction. Thereby, we complement prior research which has predominantly focused on studying the development of identification with one focus at a time (Amiot et al., 2010; Gibson, 2003; Ibarra, 1999; Smith et al., 2013). Whereas previous research asked respondents whether they felt validated by their team members or supervisor (i.e., focused on perceptions of validation; Smith et al., 2012, 2013), we extended this research by examining specific workplace interactions that trigger social validation processes. Our results suggest that the development of social interactions can facilitate social validation for newcomers in order to shape a specific identification focus. More specifically, we find that changes in social support

### Table 4. Model fit indices for structural models of identity development using latent change scores t1–t2.

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2$/df</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
<th>TLI</th>
<th>$\Delta \chi^2$/df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proposed model:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta$ socsup superv $\rightarrow \Delta$ supervisor identification $\Delta$ socsup cowo $\rightarrow \Delta$ team identification $\Delta$ fb superv $\rightarrow \Delta$ professional identification $\Delta$ fb cowo $\rightarrow \Delta$ professional identification</td>
<td>1717.86</td>
<td>1141</td>
<td>1.51</td>
<td>.05</td>
<td>.06</td>
<td>.92</td>
<td>.91</td>
<td>1.04</td>
<td>.31</td>
</tr>
<tr>
<td><strong>Alternative Model 1:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>absolute level of predictors at t1 added</td>
<td>1713.69</td>
<td>1137</td>
<td>1.51</td>
<td>.05</td>
<td>.06</td>
<td>.92</td>
<td>.91</td>
<td>1.04</td>
<td>.31</td>
</tr>
<tr>
<td><strong>Alternative Model 2:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta$ fb superv $\rightarrow \Delta$ supervisor identification and $\Delta$ fb cowo $\rightarrow \Delta$ team identification added</td>
<td>1715.91</td>
<td>1139</td>
<td>1.51</td>
<td>.05</td>
<td>.06</td>
<td>.92</td>
<td>.91</td>
<td>0.98</td>
<td>.32</td>
</tr>
<tr>
<td><strong>Alternative Model 3:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all other paths from changes in predictors added</td>
<td>1704.90</td>
<td>1133</td>
<td>1.50</td>
<td>.05</td>
<td>.06</td>
<td>.92</td>
<td>.91</td>
<td>1.62</td>
<td>.20</td>
</tr>
<tr>
<td><strong>Proposed model + controls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1893.04</td>
<td>1235</td>
<td>1.53</td>
<td>.05</td>
<td>.06</td>
<td>.91</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: socsup = social support; fb = feedback; superv = supervisor; cowo = co-worker; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; * $p < .05$. The proposed model serves as reference model for all nested model comparisons.
from supervisors and co-workers are associated with changes in identification with the supervisor and team, respectively, whereas changes in co-worker feedback are related to changes in professional identification. In this regard, our results parallel findings on newcomer socialization, suggesting that appraisal information (e.g., effective feedback) is predominantly important for task mastery, whereas relational information (e.g., social support) leads to social acceptance (Miller & Jablin, 1991).

Our research also adds to a growing body of research separating identification according to its focus (e.g., Bartels et al., 2007; Van Dick et al., 2004; Van Dick, Wagner, Stellmacher, & Christ, 2005; Van Knippenberg & Van Schie, 2000). In this respect, our study corroborates Olkonnen and Lipponen’s (2006) conclusion that identification is a multi-foci construct: We find that identification with the supervisor, team, and profession are related, yet distinct constructs, which are each influenced by different antecedents. In this respect, most previous research on multiple identifications has focused on differential consequences (e.g., Liu, Zhu, & Yang, 2010) and established the correspondence of focus principle for identification–outcome relationships: effects on outcomes are strongest when identification and outcome share the same focus (Van Dick et al., 2004). Extending the scope to antecedent–identification relationships, our study demonstrates that this principle also applies to antecedents of identifications.

Finally, our finding that both supervisors and co-workers contribute uniquely to identity development coincides with previous findings pointing to supervisors and co-workers as important socialization agents for newcomers (Kammeyer-Mueller & Wanberg, 2003; Morrison, 1993b). Our data illustrate that developments in social support and feedback of supervisors and co-workers can inform identity development of newcomers. These results are in line with a more general trend to consider co-workers (besides supervisors) as important interaction partners who shape employees’ work experiences (e.g., Chiaburu & Harrison, 2008). This implies that supervisors’ behaviours might not be sufficient to evoke desirable outcomes on their own, but that others in the social environment are also necessary to create favourable results. Therefore, we encourage further research to explore how interactions with both supervisors and co-workers contribute (equally or differentially) to establish desirable work outcomes like identification.

**Practical implications**

Given less stable career patterns with many adults changing jobs and organizations frequently (Bauer et al., 2007; Rollag, Parise, & Cross, 2005), the active promotion of newcomers’ identifications with different foci becomes a managerial task of increasing importance (Cappelli, 2009; Ellemers, 2001). In this respect, our study guides managers how they can shape new employees’ identifications. Our research supports the idea that identifications are shaped by developments in social interactions at work, which serve to validate situated identities. Applying our findings directly, managers could provide employees with possibilities to receive social support and feedback from supervisors and co-workers, for example by creating a positive work climate, organizing work in a way that facilitates social interactions, or having regular feedback rounds during team meetings. On a broader scale, but awaiting future research, managers might deduce further potential antecedents that inform the various foci of identification. For example, choosing an employee to represent the team in interactions with external partners may serve to validate this employee’s identification with the team.

Our findings also suggest that identification is not a uniform construct that is fostered through uniform antecedents, but that different actions are required to foster identifications with different foci. Thus, managers may choose specific tools in order to boost the particular identification that is most appropriate to meet the organization’s needs. For instance, team identification might be especially important in times of organizational change to provide employees with a sense of identity continuity (see also Ullrich, Wieseke, & Van Dick, 2005), whereas professional identification might prevent employees from displaying unethical practices that harm their profession’s image (Dukerich, Golden, & Shortell, 2002).

Finally, we corroborate Ashforth’s (1998) idea that major changes in the work environment, such as an organizational entry, enable identification development by showing that apprentices’ identifications can change over time. Our research thereby also tentatively hints at the right timing for shaping employee identification: Transformation situations, such as organizational entries or transitions, require an adaptation of the self (Amiot et al., 2007; Ibarra & Barbulescu, 2010) and might make employees especially receptive to social information regarding their social identities at work. Unfortunately, our data does not provide us with the opportunity to include different levels of disruptive organizational experiences, which constitutes an important boundary condition of our findings. However, our results show that apprentices’ identifications are influenced by changes in social interactions with others. Yet, we would expect that other drastic alterations such as a new supervisor (calling an employee’s identification with the supervisor into question), restructuring initiatives, or mergers and acquisitions would similarly require an adjustment of an employee’s identity through the underlying process outlined above. Future research could offer further insights by investigating different situations of transitions in the work environment or by comparing employees who experience different degrees of alterations.
Limitations and further research

We used a longitudinal design and applied latent change scores to represent the true intraindividual change in social interactions and identifications to adequately capture development. Future research may collect data at three measurement points for an even more conservative longitudinal design in order to replicate the findings over two different time intervals or investigate cross-lagged effects of development (Ployhart & Vandenberg, 2010). However, our results align with previous findings over similar time intervals (e.g., Amiot et al., 2010; Smith et al., 2013), contributing to the trustworthiness of our findings.

Furthermore, we used apprentices’ self-ratings to measure perceptions and cognitions of workplace behaviours and internal states, which are best assessed through self-reports (Markoczy, 1997). We therefore need to consider the possibility that same source/common method bias, both of which usually inflate observed correlations, might have caused our findings (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003; Spector, 2006). Importantly, however, two reasons indicate that our findings are likely not merely artefacts: First, common method bias should systematically affect all correlations, yet we found several non-significant zero-order correlations. Second, we focused on differential effects of the development in various social interactions, which makes it unlikely that a general inflation of correlations caused our results. Additionally, some researchers have argued that a common referent of items, such as the supervisor, might also enhance common method bias by inflating all correlations specifically related to this target. Debilitating this concern, our results show differential effects for behaviours exhibited by the same interaction partner. In this respect, we find that changes in social support, but not changes in feedback, from supervisors relate to changes in identification with the supervisor, which provides evidence against common method bias as the primary driver of our results.

Even though longitudinal research designs provide researchers with major advantages (such as insights into the development of constructs), they do not allow us to assess causality (Kelloway & Francis, 2013). Nevertheless, our theorizing would more strongly support the proposed directionality from changes in social support and feedback to changes in identifications than the opposite direction (i.e., changes in identifications to changes in social support and feedback). That is, the apprentices are likely to first experience and search for feedback and support, which helps them understand and develop their place in the organization and the profession. Some exploratory analyses testing reversed directionality seem to support this reasoning.

As we were interested in the development of identifications with various foci, we chose participants without any prior experience with the organization or the profession. The current sample of apprentices was therefore well-suited to test our research model. Apprentices are usually at the beginning of their career without any former experience as employees. This rather homogenous group of participants enabled us to study the development of identifications with several foci, while minimizing the chances that previous work experiences distorted these relationships. Unfortunately, working with a single company under fairly stable conditions limited the available participants. Although a larger sample would have been desirable for such a complex model, our sample size is in line with other papers reporting similar research (e.g., Amiot et al., 2010; Ashforth & Saks, 2000). Additionally, smaller samples are generally associated with a lower statistical power, making our research a conservative test of our hypotheses (Kline, 2011).

While our sample of newcomers to the profession and the organization might be a useful setting to study initial identity development, the question arises whether these processes may generalize to employees who have already established identifications with their supervisor, team, or profession. Although the proposed process (i.e., identity development through the development of social interactions, which serve to validate situated identities) should apply to employees in general, previous experiences might influence future identifications. Previous experiences might serve, for instance, as a frame of reference, causing employees to interpret social support and feedback differently. In this regard, development of feedback from co-workers might be the most important social interaction to shape apprentices’ professional identification. For more senior employees, changes in supervisor feedback might emerge to be more powerful in fine-tuning professional identification (cf. Gibson, 2003).

Moreover, situations of change such as job transitions might render identifications more malleable again (Ibarra & Barbulescu, 2010). In this respect, the context of transition may differentially influence different kinds of identifications. For instance, executing a similar job in a different organization could be expected to affect team and supervisor identification more than professional identification, whereas an occupational change within the same company might challenge professional identification more than other foci of identification.

Further research could also explore whether identification is indeed easier to influence and shape during sensitive phases of transitions as previously proposed (Amiot et al., 2007; Ashforth, 1998; Ibarra, 2004; Ibarra & Barbulescu, 2010), and include other change situations besides the newcomer experience, such as restructuring or mergers. It is thus important to test our ideas in other samples of employees under different and other levels of change, to see whether the presented mechanism is universal across different settings and occasions.
There might also be some interesting moderators of the currently obtained results that were outside the scope of this work. Regarding feedback, for instance, it would be interesting to examine whether other operationalizations of feedback result in similar outcomes. Our questionnaire focused on effective feedback (whether the receiver perceived the feedback as meaningful), but not on feedback quantity. It is possible that positive changes in the mere quantity of (positive/negative) feedback might better foster the development of a professional identification compared to changes in effective feedback. Similarly, regarding support we focused on the development of emotional social support only, whereas other types of support could also be relevant in identity development (House, 1981). For instance, development of instrumental support, which entails providing resources such as providing contacts, materials, or money, might be more closely related to the development of professional identification than to identification with the team or supervisor.

Another issue that was not addressed in this research was the prototypicality of the source of social support and feedback. Previous work on the social identity theory of leadership (Hogg, 2001) has illustrated that prototypical leaders—those who epitomize what the group stands for—are more effective in influencing subordinates (e.g., Van Knippenberg & Hogg, 2003). As such, changes in social support provided by supervisors who are more prototypical of the group might be more strongly related to changes in supervisor identification than changes in social support provided by less prototypical supervisors. Additionally, changes in social support from a supervisor who is more prototypical for the team might also inform changes in team identification, next to co-worker social support. Similarly, the prototypicality of co-workers might strengthen the effects of social support and feedback. Future research could include prototypicality of the source as a variable of interest.

Finally, the presented model is somewhat static in that we are looking at newcomers’ identification development at two specific points in time and how this is influenced by the development in social interactions with supervisors and co-workers. Although the study design matches the scope of this article, we acknowledge that identity development might be much more complex when tracing individual dynamics over time. In this regard, identification is likely not only shaped by others’ behaviours towards the newcomer, but also by the newcomer’s characteristics and proactive behaviour (Harrison, Sluss, & Ashforth, 2011; Mignerey, Rubin, & Gorden, 1995; Morrison, 1993a, 1993b; Reio, Jr. & Callahan, 2004). Future research could investigate what newcomers (proactively) do to obtain validating information and how identification is established in multiple iterations of interactions.

Conclusion

We examined how identifications with multiple foci (i.e., the supervisor, team, and profession) develop in the workplace. In this respect, we demonstrate that changes in social support and effective feedback from supervisors and co-workers are proximal antecedents of changes in identifications. We combine several previous notions on identity development and suggest that identity develops over time through social validation of situated identities. Further research should validate whether the presented underlying process of identity development also applies to different samples under different circumstances. Practitioners can build both on the specific findings and the proposed mechanism in their attempt to actively foster identification.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This research was financially supported by the cooperating company and the WISE Demographic Network (WDN).

References


practices, and recommendations for organizational research. *Organizational Research Methods*, 3, 4–70. doi:10.1177/109442810031002


**Appendix**

Items to measure identification (Mael & Ashforth, 1992) with the referent adopted accordingly:

1. When someone criticizes my supervisor/team/profession, it feels like a personal insult.
2. I am very interested in what others think about my supervisor/team/profession.
3. When I talk about this supervisor/team/profession, I usually say “we” rather than “he/she/they.”
4. This supervisor’s/team’s/profession’s successes are my successes.
5. When someone praises my supervisor/team/profession, it feels like a personal compliment.