THE TEAM CAUSES AND CONSEQUENCES OF TEAM MEMBERSHIP CHANGE: A TEMPORAL PERSPECTIVE

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Membership change—adding, replacing, and losing members—is a common phenomenon in work teams and charts a different theoretical space from prior team research that has assumed stable team membership and shared team properties. Based on a comprehensive review of 133 empirical studies on team membership change since 1948, we propose a temporal framework pertaining to the causes and consequences of membership change. Three key theoretical insights emerge from our evidence-based integration: (a) Membership change first disrupts team cognitive, behavioral, and interpersonal processes and states (e.g., transactive memory systems, coordination) but can benefit team performance after teams adapt to form new processes and states; (b) whether and to what extent team performance benefits from membership change is contingent on the magnitude of membership change, requirements of team communication, member adaptation-related attributes, change in team knowledge, skills, abilities, and other characteristics (KSAOs), and team knowledge work; and (c) poor team experiences motivate member departure and may make it challenging for newcomers to join and teams to adapt to membership change. Our review moves team research into new avenues that do not presume stable team membership and shared team properties in understanding team functioning and performance, and outlines key directions to advance integrative theory.

Most team research has built on the implicit assumption that team membership does not change over time. As a result, most knowledge from team research—how team inputs, processes, and emergent states contribute to team effectiveness (Kozlowski & Ilgen, 2006; Mathieu, Gallagher, Domingo, & Klock, 2018)—has not spoken to team membership change. However, teams are open, dynamic systems. The reality of teams in organizations is that for the topics of interest in team research, membership change may be as common as membership stability (Arrow & McGrath, 1995; Mathieu, Tannenbaum, Dansbach, & Alliger, 2014) and may introduce changes in team processes, states, and performance that warrant study in their own right. These issues cannot be easily captured by cross-sectional comparisons of team compositional differences, because such comparisons can lead to erroneous conclusions about the effects of intrateam change (Beersma, Hollenbeck, Conlon, Humphrey, Moon, & Ilgen, 2009; Hollenbeck, Ellis, Humphrey, Garza, & Ilgen, 2011; Johnson, Hollenbeck, Humphrey, Ilgen, Jundt, & Meyer, 2006; Moon, Hollenbeck, Humphrey, Ilgen, West, & Porter, 2004). Therefore, developing theory about the dynamics of team membership change should be a key focus for team research.

We address this issue through an integrative review of the evidence from team membership change research, drawing on empirical studies on the team causes and consequences of adding, replacing, and losing team members in the management and psychology literatures. Traditionally, research on team membership change has been scattered in the streams of dynamic team composition (e.g., Arrow & McGrath, 1995; Ziller, 1965), newcomer socialization and performance (e.g., Chen, 2005; Rink, Kane, Ellemers, & van der Vegt, 2013), leader replacement and succession (e.g., Ballinger, Schoorman, & Lehman, 2009; Zhao, Seibert, Taylor, Lee, & Lam, 2016), and team downsizing and turnover (e.g., DeRue, Hollenbeck, Johnson, Ilgen, & Jundt, 2008; Nishii, 2013; van der Vegt, Bunderson, & Kuipers, 2010). Our aim in this review is to
integrate these separate streams of research and develop an evidence-based theoretical framework to capture the team causes and consequences of membership change. Our interest here is in team dynamics as the proximal causes and consequences of membership change, and we do not review research on team membership change that does not include measures of team dynamics (e.g., we exclude studies on employee turnover that take a purely individual-level focus and studies on top management team turnover that only take a firm or national focus).

Research on team membership change seems to have evolved in a rather separate manner for the study of the causes as compared with the consequences of membership change. Research on the consequences probably started with the influential work of Ziller and colleagues in the 1960s (e.g., Ziller, 1965; Ziller & Behringer, 1960; Ziller, Behringer, & Goodchilds, 1960; Ziller, Behringer, & Goodchilds, 1962). Here, the two central questions are whether open groups with changed membership outperform or underperform closed groups with stable membership, and whether such performance advantage or disadvantage of open groups is caused by newcomer characteristics such as competence and ethnic backgrounds. Research following this seminal work has been predominantly experimental. The next development in this stream of research is credited to a series of theoretical and empirical studies by McGrath and colleagues in the 1990s. With this body of work, research on the consequences of membership change developed into a paradigm with well-grounded theory that postulated how membership change affected team structures, processes, and performance and identified contingencies that further influenced these effects (e.g., Arrow & McGrath, 1993; Arrow & McGrath, 1995; Hollingshead, McGrath, & O’Connor, 1993; O’Connor, Gruenfeld, & McGrath, 1993). Research following this development has mostly been conducted in controlled settings, comprising experiments as well as small-scale (longitudinal) laboratory studies with teams in training programs or course work. The most recent notable development in the field started around 2005 and has been evolving till the present day. In this development, this stream of research has started to expand and flourish in multiple dimensions. In terms of research questions, studies have delved into team processes and psychological states as potential mediators between membership change and performance outcomes. Newcomer research has focused on how newcomers affect team processes, states, and thereby performance. In terms of research methods and samples, the field has substantially branched out to field studies and employed case studies, (multi-wave) surveys, and archive data across a variety of team types and industries.

Research on the causes of membership change has almost exclusively concerned the causes of member departure (i.e., as opposed to causes of member addition or replacement). This stream of research has focused on member characteristics and team characteristics in predicting member departure either as an individual-level outcome or a team-level outcome. In this respect, the focus on team-level departure is much more recent than the long-standing individual-level focus. Research on the causes of member departure has predominantly comprised field studies, especially in team types that have high turnover rates, such as professional sports teams, nurse teams or units, and teams in hospitality, retailing, or service industries.

Our evidence-based integration results in a theoretical framework of team membership change that revolves around three novel insights: (a) Membership change initially disrupts team cognitive, behavioral, and interpersonal processes and states, and as a result negative performance effects may initially dominate; as teams adapt to form new shared processes and states following membership change, positive performance effects may gradually emerge; (b) whether, and to what extent, team performance initially suffers from membership change and then benefits from membership change as teams adapt to the change is contingent on (i) factors that affect mostly the extent to which membership change is disruptive (i.e., magnitude of membership change, requirement of team communication), (ii) member attributes related to their ability to adapt to change, and (iii) the extent to which membership change is associated with increases in team knowledge, skills, abilities, and other characteristics (KSAOs) in knowledge work; and (c) poor team experiences cause membership change and influence its impact on team performance via disruption and adaptation. In combination, these insights form the basis for an integrative framework that captures the dynamics of team membership change over time and guides future research.

By integrating the evidence from separate streams of research, our review results in an overarching framework to capture the causes and consequences of team membership change. This integration is important to provide a strong theoretical basis for the study of team membership change—a research focus that is valuable in complementing the dominant focus in team research in which team membership stability is implicitly assumed. Theoretical insights into the contingencies and causes of team membership change.
are also important in developing actionable knowledge for practitioners to smoothly navigate through team membership change.

REVIEW METHODOLOGY

We used a two-step approach in searching for and selecting studies for our review. The source for our literature search comprised 2,292 peer-reviewed management and psychology journals indexed in PsycINFO at the time of the review. In the first step, we searched studies using 94 combinations of keywords in the abstract (see Table 1). These combinations of keywords were, for example, team, composition, and change; team and replacement; and group and turnover. Generally, the first keyword was the broad entity (i.e., team or group), the second was the fine-tuned entity (i.e., composition or membership, member or leader), and the third was the content-related word (including time, temporal, temporality, change, changing, dynamic, dynamics, dynamism, stable, stability, fluid, fluidity, malleable, malleability, longitudinal, replace, replacement, substitute, substitution, succeed, succession, new, newcomer, downsize, downsizing, exit, depart, departure, leave, leaving, and turnover). Note that by using both team and group as keywords, we rely on a broad definition of teams as interdependent, interacting groups of individuals that share the responsibility for a collective performance outcome (Kozlowski & Bell, 2003). Our search reached back to the starting year of an indexed journal (the oldest journals have been indexed since the 1880s). This first step yielded about 14,000 studies for further study selection.

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a Team is interchangeable with group.
b Membership is interchangeable with composition.
c Member is interchangeable with leader.
In the second step, we selected studies for the in-depth analysis of the evidence. Aiming at evidence-based integration, we focused on empirical studies in analyzing the evidence, while considering relevant conceptual and methodological work (e.g., Arrow & McGrath, 1995; Dineen & Noe, 2003) in developing the review. Overall, our selection was on empirical studies that involved adding, replacing, and losing members in work teams, and we used the following criteria in the selection. First, we excluded studies that examined proxies of membership change rather than the actual change itself. These proxies were, for example, anticipation of newcomers, turnover intention, willingness to exit, team tenure, team previous working or training experiences, absenteeism, and group loyalty. We did, however, include studies with subjective measures of actual membership change, such as team leader’s assessment of membership stability and change (e.g., Bartel & Saavedra, 2000; Hirst, 2009). Second, we excluded studies with samples that did not resemble organizational teams, work groups, or units. These samples comprised, for example, social groups, church congregations, leisure groups, and youth sports teams. We did include studies of membership change in sports teams that fit our definition of work teams; however, we included only studies that focused on membership change in the whole team (the so-called standing team [McGrath, 1984]) and excluded studies in which substitutions took place between bench players in the standing team and the team that played the match at a given time point (the so-called acting team [McGrath, 1984]). The reason for this selection is that the entire standing team works together to prepare for match performance (even when only a subset of the standing team can actually play the match at a given point in time)—this preparation includes the preparation for membership change in the acting team with bench members, and thus such membership change in the acting team does not constitute membership change as in the entire “team system” or equate with membership change in other types of work teams. Third, we excluded studies that did not provide information about measures of membership change or combined measures of membership change with other types of team changes. Fourth, we excluded four studies for which the full text was not available in PsycINFO or other databases. Fifth, as a mild quality cut-off in the study selection we excluded studies from journals that did not have impact factors. Altogether, these criteria yielded 133 empirical studies.

We then looked at the results sections of these 133 empirical studies and coded the findings pertaining to team membership change. Following Dwertmann and van Knippenberg (2021), we explored which attributes of the studies would allow us to capture similarities and differences in the findings across studies and thus provide us with anchors to integrate the evidence. We started with attributes that directly and obviously followed from theory and common sense. First, we differentiated between studies of the causes of membership change and studies of the consequences of membership change. This is also the primary structure we impose on the review outlined in the following sections. Next, we differentiated evidence among member addition, member replacement, and member departure, as well as a fourth category that did not separate these three forms of membership change. Although this differentiation among the forms of membership change will add value as evidence amasses, for this review it did not seem to be pertinent in terms of achieving theoretical integration and thus did not play a major role in structuring the evidence. Then, for the consequences of membership change, we differentiated positive from negative effects, performance from processes and psychological states as outcomes of membership change, and studies that tested mediation from studies that did not. Note that team processes and states can be considered as potential mediators of the effects of membership change on team performance, and studies that do not directly test mediation can still yield findings that are consistent with a broad mediation framework. Finally, further categorizations were driven by the eclectic sets of effects in which content clusters could arguably be identified within, first, the causes of membership change, and, second, moderators of the effects of membership change. All these categorizations are reflected in the structuring of the evidence outlined in the following sections.

Among these 133 empirical studies, 44 (33.1%) were laboratory studies, 87 (65.4%) were field studies, and two (1.5%) were multimethod studies with both laboratory and field research. The 46 laboratory studies (including the two with a multimethod setup) involved a variety of team tasks, such as decision-making (e.g., DeRue et al., 2008; Summers, Humphrey, & Ferris, 2012), idea generation (e.g., Choi & Thompson, 2005; Hu & Liden, 2015), (creative) problem-solving or production (Argote, Aven, & Kush, 2018; Argote, Insko, Yovetich, & Romero, 1995), coordination (Gorman & Cooke, 2011; Gorman, Cooke, Amazeen, & Fouse, 2012), and so forth. While most laboratory studies lasted a few hours at most (with a single or multiple sessions), a few studies comprised multiple laboratory tasks or sessions spread over more than 10 weeks (e.g.,...
CAUSES OF TEAM MEMBERSHIP CHANGE

The evidence concerning causes of team membership change mostly pertains to member departure. The broader-ranging conclusion here is that poor team experiences motivate members to leave and good team experiences motivate members to stay.

Experiences motivating members to leave include dissatisfaction with the team and work (Alexander, Lichtenstein, Oh, & Ullman, 1998; Fleischer, 1985; Wang, Dong, Si, & Dou, 2017), and skill under-utilization that can provoke an unpleasant work experience (more so among professionals than non-professionals [Mitchell & Zatzick, 2015; see also Marrow, 1948; Staggs & Dunton, 2012]). Situational constraints on team performance, which can cause frustration, also motivate member departure (O’Connor, Peters, Pooayan, Weekley, Frank, & Erenkrantz, 1984; on the presumably constraining nature of leader initiating structure for performance, see Fleishman & Harris, 1962). Conversely, factors that can be understood to reflect positive work experiences, or the opposite end to the factors listed above, can reduce member departure. Such factors include fit with the team, supervisor and organizational support (Kirchmeyer, 1995; Meyer, Morin, & Vandenbergh, 2015; see also McFadden & Demetriou, 1993; Moen et al., 2017; Paul & Gross, 1981), and leader consideration (Fleishman & Harris, 1962; Taunton, Boyle, Woods, Hansen, & Bott, 1997).

Related evidence has shown that member sense of ownership (e.g., perceptions of decision-making participation and pay equity [Rhodes & Steers, 1981]) and organizational interventions that could foster such positive experiences of ownership (e.g., feedback, supervisory skills, participative decision-making [Boss, Dunford, Boss, & McConkie, 2010; Glisson, Dukes, & Green, 2006; Hautaluoma & Gavin, 1975; Selden, Schimmoller, & Thompson, 2013]) could also reduce member departure. Also speaking to the issue of participative decision-making, team-level voice (a way to influence team decisions and actions) is negatively related to member departure, but only to the extent that team leaders participate in organizational decision-making or have access to organizational resources; without such factors that reflect team leaders’ ability to act on team voice, team voice is actually positively related to member departure (presumably because voicing without seeing an impact of the team’s voice is frustrating [McCLean, Burris, & Detert, 2013]). In a related vein, while members may depart from a team in response to the free-riding of others, such departure may be reduced by the possibility of members’ mutual monitoring and sanctioning free-riding behaviors (and more so in Japan than in the United States [Yamagishi, 1988]).

Closely aligned with the notion of good team experiences, indicators of positive team climates are negatively related to member departure, whereas indicators of negative team climate are positively...
related to member departure. Positive team climate and culture (Glisson & James, 2002; Zhu, Wholey, Cain, & Natafgi, 2017), team cohesion (Sheridan, 1985), team cooperation (Tjosvold, Chen, Huang, & Xu, 2012), team satisfaction (Nishii, 2013), team support (via enhanced morale and communication [Weiner & Caldwell, 1984]), and leader positive mood (George & Bettenhausen, 1990) are all negatively related to member departure. In a related vein, factors that enhance team climate, such as the leader’s power, coordination, personnel resources, and structuring expectation, have been found to reduce member departure (mediated by enhanced team cohesion and commitment as found by Taunton et al. [1997]; however, note that the effect of leader structure expectation or initiating they found was inconsistent with that in Fleishman and Harris [1962], and suggested potential moderating influences). In a related vein, team prosocial motivation was also found to reduce member departure (mediated by enhanced team viability) and this effect was stronger when team task interdependence was higher (i.e., when the team was more “teamy” [Hu & Liden, 2015]).

Factors associated with member or team social integration also affect member departure. Demographic dissimilarity (associated with a more socially isolated position within the team) is positively related to member departure (O’Reilly, Caldwell, & Barnett, 1989). Complementing this finding, positive work experiences are more motivating for women than men to stay in the team (i.e., women may find social integration more challenging than men in a male-dominated environment, see also Guillaume, Brodbeck, & Riketta, 2012) and also for ethnic minority than majority members (Kirchmeyer, 1995). Further, team size is positively related to member departure, presumably because social integration is more challenging in larger teams (Calsyn & Becker, 1976). Inadequate induction for newcomers, poor (team) communication, and ill-defined leadership—as factors that presumably hinder social integration—are all positively related to member departure (van der Merwe & Miller, 1973).

The departure of others that would make the team less attractive could also motivate member departure. This includes the departure of esteemed coworkers and friends in the team (Miller & Labovitz, 1973), and anticipation of coworker departure (as captured by shared passion to start a new business [Wang, Dong, Si, & Dou, 2017]). Conversely, the job embeddedness of coworkers (which makes coworkers less likely to leave) is negatively related to member departure (Felps, Mitchell, Hekman, Lee, Holton, & Harman, 2009).

Evidence is less clear on the role of within-team differentiation, which could be seen as both an indicator of negative team climates and a way to recognize differential member contributions to the team. There is evidence that individual-based pay (which would incentivize competition between members at the expense of team climate) is positively related to member departure, whereas team-based pay is negatively related to member departure (Tremblay & Cheynevert, 2008; see also Peterson & Luthans, 2006; Selden et al., 2013). In counterpoint to this, Park, Ofori-Dankwa, and Bishop (1994) found that team incentives stimulated departure for higher-performing members, who might feel that their larger contributions to the team have not been recognized fairly (see also the effects of pay equity in Rhodes & Steers, 1981). Seo et al., (2018) found that within-team differentiation in leader-member exchange (LMX) was positively related to member departure when LMX differentiation was bimodal (which created two subgroups and then likely intergroup tensions), but negatively when LMX differentiation was evenly spread or when only one member deviated in LMX (which would not create subgroups and might speak to concerns with recognition of differential member contributions). Interpretations here are thus consistent with the understanding that poor team experiences motivate members to leave and good team experiences motivate members to stay—though they are ambiguous as to when within-team differentiation results in good or poor team experiences.

Other evidence concerning the causes of team membership change has not differentiated between member addition and departure; however, it can be understood to be consistent with the above conclusion about good and poor team experiences. Procedures that foster interpersonal relationships reduce membership change (van Zelst, 1952), as does high-quality leadership (in terms of both task and relationship leadership [Sellgren, Kajermo, Ekvall, & Tomson, 2009]). Note that these findings for relationship leadership are consistent with those for leader consideration and support as discussed above (e.g., Fleishman & Harris, 1962; Taunton et al., 1997), and that the findings for task leadership are consistent with some findings for leader structure initiating (e.g., Taunton et al., 1997) but not others (e.g., Fleishman & Harris, 1962)—which presumably reflects that relationship leadership is more unambiguously positive than is task leadership.
Finally, two studies speak to member-team relationships after departure. Ray and Mackie (2009) found that former members’ desire to rejoin the team is positively predicted by their commitment to the team, and this commitment is further positively affected by their perceptions of the team’s commitment to them (i.e., positive prior team experiences make it more likely that members rejoin the team). Kulik, Rae, Sardeshmukh, and Perera (2014) looked into different motives for member departure and its implications for post-departure relationships between departing members and teams, and found that it was more challenging for teams to maintain good relationships with members who had left the team for internal reasons (e.g., problems within the employment relationship) than with members who had left for external reasons (e.g., to pursue a program of study).

**Integrative Conclusions about the Causes of Team Membership Change**

In sum, the evidence quite consistently supports a straightforward conclusion: When members have unpleasant experiences in the team because of the work itself, team climate, team leadership, social integration, or the (anticipated) departure of valued others, members are more likely to leave the team. Conversely, the more positive experiences members have in the team, the less likely they are to leave the team. A qualitative study by Bartunek, Huang, and Walsh (2008) further suggested that team processes may enhance the influence of such negative team experiences on collective member departure from the team. In a sensemaking process, team members may mutually reinforce each other’s understanding of their experiences in the team and thus create a shared understanding of these experiences, especially in more cohesive teams. Sharedness of understanding increases the tendency to act on such understanding (Salas & Fiore, 2004) and may thus boost the impact of shared experiences in the team on member departure.

The evidence here is heavily slanted toward member departure; no studies have specifically targeted member replacement or addition. It seems reasonable to propose, however, that when there is better access to information to indicate what working in the team will be like, prospective members will also be more motivated to join the team given anticipated positive team experiences. This would then suggest that teams with worse member experiences not only are more likely to lose members, but may also find it harder to attract new members. Moreover, findings for dissimilarity have suggested that whereas teams are more likely to lose dissimilar members, they may find it harder to add dissimilar members—in other words, teams may become more homogeneous over time (see also attraction—selection—attrition for organizational homogenization in Schneider, 1987) if they cannot intentionally change this “natural” dynamic of losing dissimilar members or adding similar members (see also Kirchmeyer, 1995).

What remains unclear in all this is the role of “team agency.” The above findings concerning the causes of team membership change clearly put the emphasis on negative motives for membership change (i.e., poor team experiences). These findings seem to fit with what is more broadly known as individual agency in turnover rather than team agency in inducing membership change, even though the evidence does not unambiguously concern voluntary departure. In counterpoint to this emphasis on departure from unpleasant experiences and (somewhat more equivocally) on the agency of departing members, it would be highly worthwhile for future research to more systematically explore the active role teams may play in seeking to remove, add, or replace members, and in recruiting additions and replacements. This may include the team’s responses to negative team experiences—a greater desire to change team composition when team experiences are more negative; however, it may also include unexplored team decisions that concern potential value in team composition change (e.g., with a focus on member KSAOs). Even though most teams may not have the latitude to engender such value-driven decisions and actions about membership change themselves, some teams do, and others may at least seek to influence such decisions and actions through those with authority (e.g., senior management). Team dynamics that drive value-driven decisions and actions about membership change remain unexplored.

Presaging things to come, we note that insights into the team causes of membership change can be integrated with insights into the team consequences of membership change. The observations that teams with worse experiences are more likely to lose members and that teams are more likely to lose dissimilar members will be revisited after we review, in the next section, the evidence concerning the consequences of membership change.
CONSEQUENCES OF TEAM MEMBERSHIP CHANGE

The first insight emerging from the evidence about the consequences of team membership change pertains to the main effects of membership change. The evidence suggests both positive and negative effects of membership change on teams. A straightforward integration is to view this evidence through a temporal lens and to propose that initially disruption processes dominate after membership change, thus yielding predominantly negative effects; later on, as teams increasingly adapt to membership change and reduce disruptive influences over time, positive effects of membership change are likely to materialize. It is important to stress that we do not see this shifting dominance from disruption to adaptation as following different “phases” or “stages.” Rather, disruption and adaptation processes are likely to overlap with each other in time; it is the disruption that asks for adaptation and as long as the team has not fully adapted to membership change, disruption and its negative effects may be evident. Therefore, we suggest that initially disruption processes will be the dominant influence in teams after membership change and, over time, adaptation processes will gradually become the dominant influence on team processes, states, and performance. Building toward this integration, we first discuss the evidence for the negative disruptive effects of membership change and then the evidence for its positive adaptive effects.

Change and Disruption

A first stream of evidence speaks to the negative effects of team membership change on team processes, shared psychological states, and performance. Member replacement has been found to disrupt team transactive memory systems (i.e., collective cognition in teams for encoding, storing, and retrieving information [Argote et al., 2018]), shared taskwork and teamwork knowledge, member interactions (Gorman & Cooke, 2011), team coordination (Summers et al., 2012), and as a result team performance. Other evidence has suggested that member departure reduces team task flexibility and learning, and thereby team effectiveness (van der Vegt et al., 2010; see also Bae, Mark, & Fried, 2010). Not differentiating between replacement and departure, membership change has been found to disrupt open discussion and thereby team performance in long-serving R&D teams (Hirst, 2009). Speaking to the same effect, member replacement has been found to disrupt team coordination and performance less when knowledge is transferred (vs. not transferred) between the replaced and replacing member (Summers et al., 2012).

Some studies have reported team membership change effects on team performance without mediating evidence. Member replacement has been found to negatively affect team performance (Argote et al., 1995), and employee and manager departure—separately and jointly—to negatively affect the sales performance of bank branches (Hale et al., 2016). Teams with both former leader departure and external new leader appointment (i.e., leader replacement as in our definition) have been found to perform worse than those with the former leader staying as a member and internal new leader appointment (i.e., within-team leader rotation [Worchel, Jenner, & Hebl, 1998]). In National Hockey League (NHL) teams, teams with coach or general manager replacement within a season performed worse in that season than teams without such replacement and teams with such replacement between the current and previous season (Rowe, Cannella, Rankin, & Gorman, 2005). In college football teams, teams with coach replacement performed worse than teams without coach replacement (Adler, Berry, & Doherty, 2013). In lobbyist teams (and firms), departing members often take clients with them to the new team (and firm). In this context, relationship exclusiveness between a member and a client has been found to increase the likelihood of client transfer (which implies a performance disadvantage to the team) with member departure, and this effect is stronger when expertise specialization in the team is higher (Raffiee, 2017).

Other studies have focused not on performance effects but on the disruption to team processes and states, and provided evidence that is consistent with a negative effect on team performance. Member replacement has been found to reduce team cooperation (Arrow & Crosson, 2003; also between-team cooperation [Schopler et al., 1994]), collaboration, and cohesion (Reeves, 2008). Member departure has been found to reduce team participation (Woltmann et al., 2008) and social integration (van der Vegt et al., 2010), and to lead the remaining members to experience anxiety and feel negatively about the team (Astrachan, 1995). When leader departure conveyed a sense of team disbanding, members, and especially high-status members, have been found to reject and define a member as deviant so as to increase team solidarity (Lauderdale, Smith-Cunnien, Parker, & Inverarity, 1984). Without differentiating among addition, replacement, and departure, membership
change has been found to reduce mood convergence (Bartel & Saavedra, 2000) and peer leadership, support, and facilitation (Fine, 1971). In other evidence, membership change (member addition and departure) weakens the positive effect of psychological safety on the development of interprofessional teamwork (O’Leary, 2016), of joint decision-making on team creativity (Guo & Wang, 2017), and of a climate for involvement on team performance (Smith, Wallace, Vandenberge, & Mondere, 2016).

Based on this evidence of the negative disruptive effects of team membership change, we propose that membership change initially disrupts team cognitive, behavioral, and interpersonal processes and states (e.g., transactive memory systems, coordination) and lowers team performance as a consequence of such disruption. Team research has well-documented how team performance depends on member shared understanding, interaction patterns, and socioemotional bonds that are captured as team cognitive, behavioral, and interpersonal processes and states, respectively (Kozlowski & Ilgen, 2006; Mathieu et al., 2018). Team processes and states are shared team properties that require member interactions in order to develop and be sustained. It takes time for members to develop such sharedness in the team. Accordingly, membership change causes disruption to these key elements of team functioning when members who are part of this sharedness leave, when new members join who are not yet part of team sharedness, or both. Thus, membership change is disruptive to team performance, at least initially, by disrupting shared team processes and states that drive team performance.

**Change and Adaptation**

In contrast to the evidence of the negative effects of team membership change, there is evidence that membership change can have positive effects on team processes, states, and performance. O’Connor et al., (1993) found that member replacement reduced team conflict and thus enhanced team task performance and well-being. DeRue et al., (2008) observed that member departure stimulated task behaviors and, as a result, enhanced team performance. Without differentiating between replacement and departure, Hirst (2009) reported that membership change stimulated open discussion and thus enhanced team performance in a newly founded R&D team. Directly linking to team performance, member replacement and overall membership change (without differentiating among addition, replacement, and departure) have been found to enhance team performance in creative tasks (Choi & Thompson, 2005; Ziller et al., 1962). White, Persad, and Gee (2007) found that in NHL teams, within-season coach replacement improved team performance in the current and next season.

Some studies have considered not the performance effects but rather the benefit of team membership change to team processes and states, which provides evidence that is consistent with a positive effect on team performance. Member replacement has been found to reduce rigidity in team communication and interaction (Gorman et al., 2012), stimulate member task effort (Lount, Park, Kerr, Messe, & Seok, 2008), and shift team decision-making norms from seniority rule to majority rule (Nielsen & Miller, 1997). Worcel et al., (1998) found that leader replacement enhanced member attraction to the team, and Wykes, Stevens, and Everitt (1997) found that member departure enhanced team-level sense of personal accomplishment. Curseu, Schrujer, and Boros (2007) reported that for teams with minority dissents (i.e., a few members whose ideas and opinions deviated from those of the majority), departure of dissenting members led to higher cognitive complexity, higher psychological safety, and lower relationship conflict in the team than did remaining by dissenting members. Galinsky and Schopler (1985) found that membership change prompted teams to develop and use systematic procedures for membership change and these procedures (designed to speed up member integration and maintain team stability) fed back to the team and offered guidance to cope with ongoing and often unpredictable membership change.

Directly speaking to the integration we propose—that is, that negative effects manifest earlier than positive effects after membership change—some studies have shown this temporal ordering of the valence of effects. Gorman and Cooke (2011) found that, after initial disruption, member replacement enhanced shared knowledge, member interactions, and thus team performance. Rowe et al., (2005) found that in NHL, teams with coach or manager replacement within a season performed better in the next season than teams without such replacement, despite the initial performance disadvantage in the season in which such replacement took place (see also Hale et al., 2016).

**Integration of Disruption and Adaptation: Temporal Dynamics**

We propose that the negative and positive effects of membership change can best be understood with
temporal dynamics at the core of an integrative framework. It is reasonable to conclude that it takes time for teams to adapt to the disruption caused by membership change and that, accordingly, the negative effect of disruption is the stronger influence on teams directly following membership change, while the potential positive influence of membership change takes more time to materialize as the team adapts to the new situation and moves beyond the disruption. This is not to say that disruption and adaptation are sequential processes. Rather, they are likely to overlap in time in that disruption sparks adaptation—the more the disruptive effects of membership change disappear over time as a result of adaptation processes, the less there will be a push for the team to adapt and the more the team can settle into a new “steady state.” Thus, the issue as we see it as follows: Because it takes time to adapt and because adaptation is the process through which disruptive effects are reduced, there will be a shift over time from disruptive influences being dominant earlier on to adaptive influences being dominant later on.

In this proposition, “earlier on” and “later on” are relative terms and there is no fixed timeline for how long it will take teams to move from predominantly disruptive influences to being fully adapted to the new situation. Indeed, influences on how disruptive membership change is and how smoothly teams can adapt to membership change are important to consider. We turn to this issue shortly. First, however, we consider why it takes time to move beyond the initial disruption of membership change and why membership change can have positive influences once the team has adapted to membership change.

As documented by some research on the negative effects of team membership change, membership change can disrupt key elements of team functioning: shared understanding, interaction patterns, and interpersonal relationships. The value of organizing team-based work relies on teams at least to some extent being self-leading and able to drive their own processes rather than being closely monitored and directed every step along the way. Such teamwork relies on a team cognition (Salas & Fiore, 2004)—a shared understanding of team objectives, of different roles and expertise of members, and of how to mobilize contributions of different members in team interaction to achieve team objectives. Closely intertwined with this shared understanding is the enactment of it in team interaction processes. Put differently, key team interaction processes such as cooperation, coordination, and communication rely on members’ shared understanding of what is expected of them and what to expect of fellow members. Members’ interpersonal relationships are also tied into such shared understanding, which form the “social lubricant” that helps members to smoothly address issues not fully covered by their shared understanding and interaction patterns.

These three core and interrelated aspects of team functioning—that is, team cognition, interaction patterns, and interpersonal relationships—are directly affected by team membership change. Whether it is adding, replacing, or losing members, when team membership changes, team cognition has to be updated to capture the implications of the new team composition, new interaction patterns have to be developed, and new interpersonal relationships have to be formed with new members or among existing ones to adapt to the fact that one or more members leave (i.e., member interpersonal relationships do not exist in isolation but are embedded in a relational network that involves all members and is affected by membership change). New members in particular will have to adapt in all these respects, but, as per the above, membership change affects the entire team and not just newcomers.

Such team adaptations take time. It takes time to figure out how to smoothly operate without the contributions of departing members. It takes time to get to know newcomers and develop an understanding of how to smoothly operate with the knowledge, skills, ability, experiences, and personality newcomers bring to the team. It also takes time for newcomers to grow into their new roles and develop new relationships with other members in the team. Until such new team cognition, interaction patterns, and member relationships are substantially formed, team functioning can suffer from disruptions in the collective work, and so can team performance. These considerations have been corroborated by research on membership change that has shown that incumbents need time to get to know newcomers (Moreland, 1985) and newcomers need time to learn how to effectively perform within the team (Chen, 2005; De La Torre-Ruiz & Aragón-Correa, 2012). Other evidence has shown that time is necessary when the issue is not about newcomers to the team but is solely about member departure: Astrachan (1995) found that the remaining members might need time to resocialize with each other and rebuild positive feelings about the team. Thus, there seems to be a strong case that the effects of membership change are more disruptive early on than later on.
Importantly, the evidence has also suggested that once the team has adapted, it does not necessarily return to the prechange level of functioning—rather, team performance can improve as a result of membership change. As outlined above, effective team performance depends on shared team cognition, interaction patterns, and interpersonal relationships (Kozlowski & Ilgen, 2006; Mathieu et al., 2018). Membership change disrupts such shared team properties, and after membership change the team needs to rebuild them. This need to rebuild is sparked by disruption—as per the above—but also creates an opportunity for teams to update and improve their cognitive, behavioral, and interpersonal processes and states. This is not to say that teams cannot do so with stable membership, but teams with stable membership are less likely to engage in such a process of updating and improvement than are teams undergoing membership change. This is because membership change invites reflection and a refocus of member attention on these core elements of team functioning, which is less salient with stable membership. More specifically, the disruption caused by membership change may create the impetus for teams to reconsider their cognitive, behavioral, and interpersonal processes and states; without such disruption, there may be less motivation for teams to reconsider, and thus to improve, the core elements of team functioning (corroborating this notion of being in flux, Fine [1971] found that teams undergoing membership change were more open to the influence of top management on team coordination, communication, motivation, decision-making participation, and conflict handling than were stable teams).

Moreover, no two individuals are identical, and when members leave or new members join the team, fresh perspectives may emerge from the new combination of individual members in the team. This may also invite the team to reconsider, and thus to improve, their cognitive, behavioral, and interpersonal processes and states. Once teams have adapted to membership change and moved beyond the initial disruption, the newly developed team cognition, interaction patterns, and interpersonal relationships may include improvements compared with the prechange state of affairs. As a consequence, teams may perform better as a result of membership change later on. Such performance improvement is not guaranteed, however, and the extent to which teams are able to be more effective post-change than prechange will depend on the contingencies of disruption and adaptation we turn to next.

**Contingencies of the Disruption–Adaptation Process**

The temporal perspective on disruption and adaptation suggests that potential moderating influences may take at least three forms. First, team membership changes may differ in how pervasive they are, which affects both how disruptive membership changes are to team processes, states, and performance and how difficult it is for teams to adapt to membership changes (i.e., team ability to benefit from membership change). Second, some teams may be better able to adapt to a given membership change than others (and thus, presumably, more able to benefit from it). Third, some membership changes may introduce greater improvements to team composition than others. Altogether, the available evidence does not allow us to make fine-grained distinctions as to where in the disruption–adaptation process different moderators exercise their influences; however, these considerations provide a useful conceptual backdrop for us to integrate the evidence. In the following, we review the evidence concerning moderators in the effects of membership change. This evidence can be grouped into six categories: magnitude of membership change, requirement of team communication, member adaptation-related attributes, team KSAO change, team knowledge work, and a miscellaneous set of studies (labeled as “other findings”) that are less connected to the overall integrative conclusions. As we outline in the following sections, magnitude of membership change and requirement of team communication primarily speak to what makes membership change more disruptive (and thus more difficult to adapt to), member adaptation-related attributes speak to differences between teams in how well they are able to deal with similar disruptions, and KSAO change and knowledge work speak to what may make membership change more beneficial.

**Magnitude of membership change.** A first stream of evidence speaks to what we refer to as magnitude of membership change. We understand such magnitude as consisting of two aspects of membership change: the proportion of members being changed and, for teams with role differentiation, centrality of members being changed (i.e., the extent to which membership change involves more core or more peripheral members). The proportion and centrality of members being changed can, to a substantial degree, be independent from each other. Our intention to group them as indicators of magnitude of membership change is not to suggest that they are
both reflect directly the extent to which the “new” team differs from the “old” team—more so with a greater proportion of members changed and with core rather than peripheral members changed. To a substantial degree, magnitude of membership change is independent of the extent to which membership change involves a change to team KSAOs (an issue that has different implications for the consequences of membership change, as we discuss below).

Research in this respect has shown that disruption to team processes, states, and (initial) performance are greater when more members are replaced (Trow, 1960), when strategical core (vs. peripheral) members are replaced (via flux in team coordination [Summers et al., 2012]), and when member departure coincides with leader departure than when it does not (Hale et al., 2016). Subsequent recovery in team performance is smaller and slower for leader departure than member departure (Hale et al., 2016). From this evidence, it seems a straightforward conclusion that membership change of greater magnitude causes both greater disruption and greater difficulty for teams to adapt to membership change.

Because all members contribute to developing shared understanding, interaction patterns, and interpersonal relationships in the team, change of a larger part of the team implies greater disruption to shared team properties and greater difficulty for the team to adapt to form new sharedness. In a related vein, because individual contributions to developing shared team properties may not be equal, changing members with more core roles in the team causes greater disruption to team processes and states and greater difficulty for teams to adapt to membership change.

**Requirement of team communication.** A second set of studies concerns what we refer to as the requirement of team communication, that is, the extent to which team or task characteristics require communication between members. The issue addressed here is straightforward: How does the communication intensity that teamwork relies on influence the effect of membership change? Research has captured the requirement of team communication in various ways.

Argote et al., (2018) focused on communication structure and found that team transactive memory systems and performance were disrupted more by member replacement when team communication structures were fully connected than when they were fully centralized. Hollingshead et al., (1993) compared face-to-face and computer-mediated communication—where the former was associated with higher-volume communication—and observed that face-to-face teams were less satisfied with team performance following member replacement than were teams with computer-mediated communication. Higher team task interdependence (i.e., the extent to which members’ task performance relies on the input from and coordination with others [Pettigrew, 1998; Shea & Guzzo, 1987]) is associated with a higher need for team communication; in this respect, Hale et al., (2016) and Naylor and Briggs (1965) found that team performance benefited less (in terms of recovery speed and post-change level) from member departure or member replacement with higher task interdependence. Team size is also associated with the requirement of team communication in that smaller teams are more likely to rely on frequent communication between all or most members; in this respect, Palla, Barabási, and Vicsek (2007) found that membership change (without differentiating between addition, replacement, and departure) decreased the likelihood that smaller teams would survive in competition.

These findings support the conclusion that teamwork that relies on a higher volume of communication between members is more disrupted by, and benefits less from, membership change. We consider this conclusion to be consistent with the notion that teamwork is guided by team cognition, interaction patterns, and interpersonal relationships, in that these key elements of team functioning play a more important role when the communication requirements of teamwork are higher. Accordingly, disruption to such shared understanding, interaction patterns, and interpersonal relationships by membership change is more impactful for the team when more intense communication is required for teamwork.

**Member adaptation-related attributes.** Studies on the magnitude of membership change and the requirement of team communication have primarily spoken to what makes membership change more or less disruptive (and thus more or less difficult to adapt to). Two studies have also pointed to another important category of moderating influences: member adaptation-related attributes. Such attributes concern member characteristics that make the team better able to deal with a given disruption. Kuypers, Guenter, and van Emmerik (2018) focused on the team tenure of the remaining members after member departure, and found that less task conflict followed member departure when the mean team tenure of the
remaining members was higher. DeRue et al. (2008) focused on team member mean emotional stability and extraversion and found that team performance after member departure that introduced a change to team hierarchy was higher for teams higher in emotional stability and for teams higher in extraversion.

The commonality we see between these findings is that tenure, emotional stability, and extraversion are all assets for teams to constructively deal with the disruption introduced by membership change. Longer experience working together positions teams to better adapt to membership changes, because it gives members more common teamwork knowledge and interpersonal knowledge to draw on in adapting to the new situation; higher emotional stability is associated with less anxiety induced by membership change that can get in the way of constructively responding to membership change, and higher extraversion can be associated with higher volume of interaction efforts to establish post-change ways of working. While we do not intend to overly emphasize the evidence from only two studies, we do think that these studies point to an important underlying theoretical consideration: What (team) member attributes position teams to better respond to disruption and adapt to membership change?

**Team KSAO change.** A number of studies have spoken to what we refer to as team KSAO change: the extent to which membership change involves a change to team KSAOs. We understand KSAO change to include both changes in the level (team average) of a KSAO (e.g., an increase in members’ average task experience or a decrease in members’ average conscientiousness) and changes in the distribution of these KSAOs among members (e.g., in the diversity, minimum, or maximum of a KSAO). Because no two individuals are identical, and because losing members without adding new members can also change the level or distribution of attributes in the team (Li, Meyer, Shemla, & Wegge, 2018), any membership change would imply some change to team KSAOs. The issue here is the direction (i.e., increase vs. decrease) and degree of these KSAO changes. Note that KSAO change and magnitude of membership change (i.e., proportion and centrality of members changed) can be positively correlated—it may require a greater magnitude of membership change to achieve a larger KSAO change. They are conceptually independent from each other, however, and can be expected to have different effects, as per the following review.

The available evidence has consistently supported the conclusion that team membership change has less negative, or more positive, effects when membership change constitutes a greater increase in team KSAO level or diversity. Research has shown that team performance suffers less or benefits more from member addition or replacement when new members or new leaders have higher abilities, competencies, or skills (Bunderson, Van der Vegt, & Sparrowe, 2014; Cannella & Rowe, 1995; Maynard, Resick, Cunningham, & DiRenzio, 2017; Naylor & Briggs, 1965; Trow, 1960). It has also shown that a greater increase in KSAO levels is associated with smaller disruption in shared team properties such as coordination (Summers et al., 2012; Zhang, Liang, & Fan, 2017; a qualification added by Zhang et al. [2017] here is that when KSAO change increases diversity faultlines within the team—that is, when differences on diversity attributes converge to emphasize subgroup distinctions—these benefits are attenuated). Speaking to team functioning through implications for member relationships, and consistent with the team-level evidence, other research has shown that more-competent (vs. less-competent) newcomers are more preferred as coworkers in the team (Fromkin, Klimoski, & Flanagan, 1972) and newcomers with higher competence than incumbents are perceived as more pleasant to work with than are incumbents (but only in case of team failure and not in case of team success [Ziller & Behringer, 1960]).

Research has also shown that team performance suffers less, or benefits more, from member addition or replacement when new members or new leaders are more professionally or ethnically dissimilar from the team and thus increase team KSAO diversity (Choi & Thompson, 2005; Phillips, Liljenquist, & Neale, 2009). In a study of National Basketball Association teams, teams with newcomers hired via manager ties to prior employers performed worse than teams with newcomers not hired via such ties (Brandes, Brechot, & Franck, 2015). Because prior ties can be understood to be a proxy for similarity (i.e., people who have worked together previously may be more similar than people who have not), this too can be understood in terms of KSAO diversity change (i.e., greater increase in the absence of prior ties). In a similar vein, Phillips et al. (2009) found that team performance benefited more from the joining of more dissimilar newcomers, despite greater (initial) disruption to shared team properties (e.g., team confidence in performance, team perception of interaction effectiveness). Evidence from research on team responses to newcomers is consistent with these studies on team performance, showing that
rational minority newcomers are more preferred coworkers than are incumbents (in failing teams but not in successful teams [Fromkin et al., 1972]) and perceived as more pleasant to work with than are racial majority newcomers (Ziller et al., 1960).

The findings reviewed here are closely aligned with the notion that team KSAOs reflect team resources from which teams can benefit in their performance. This holds for both the level (team average) of KSAOs—as an amount of resources to draw on—and KSAO diversity—as a source of diverse information and perspectives (i.e., KSAO diversity may boost the quality of decision-making, problem-solving, and creativity, and thus overall team performance [van Knippenberg, De Dreu, & Homan, 2004]). The findings that membership change increasing KSAO level has less negative or more positive effects directly follow from the former: Increases in the amount of team resources benefit the team. The findings that the extent to which membership change is associated with an increase in KSAO diversity directly follow from the latter: When diversity is an informational resource, increases in KSAO diversity imply increases in the team’s informational resources and thus benefit the team.

What is noteworthy here is that the evidence has suggested not just that teams perform better with greater increases in KSAO level and diversity but also that teams more easily adapt to increases than to decreases in KSAO level and diversity. With only one exception (i.e., Phillips et al., 2009), the evidence that incumbents respond more positively to newcomers who introduce a greater increase in team KSAOs suggests that incumbents recognize the value that such newcomers bring to the team and that incumbents’ positive attitude in approaching such newcomers facilitates developing new team cognition, interaction patterns, and relationships that include newcomers. Because adaptation is also a matter of making the effort to adapt, with a more positive attitude toward newcomers, incumbents may make more of such an effort in adapting to the new situation sooner. Because newcomers can be expected to reciprocate the welcome they receive, this would likely lead to a self-improvement process for the team that may further lead to smoother adaptation.

**Team knowledge work.** Closely tied in with the team KSAO change evidence, another stream of evidence pertains to the characteristics of team tasks in determining whether and to what extent membership change positively or negatively affects team performance. The primary task characteristic we identify in this respect is the extent to which the team is involved in knowledge work—work that requires the team to integrate knowledge or information, solve problems, and be creative (De Dreu, Nijstad, & van Knippenberg, 2008; Hinsz, Tindale, & Vollrath, 1997). In a nutshell, the evidence has suggested that team performance suffers less, or benefits more, from membership change when the team is more involved in knowledge work.

There is evidence that team performance suffers from membership change in production, sales, and implementation tasks (Argote et al., 1995; Hale et al., 2016; Woltmann et al., 2008) but benefits from membership change in creative tasks (Choi & Thompson, 2005; Curseu et al., 2007; Ziller et al., 1962). Team performance also suffers less or benefits more from membership change in complex tasks than in simple tasks (Argote et al., 1995; Naylor & Briggs, 1965) and in tasks that require member reflection on team processes than in other task types (Arrow & McGrath, 1993). A study by Hirst (2009) referred to the phase of team operation and showed that the performance of R&D teams benefited from membership change (mediated by open discussion) when teams were in a phase to develop goals, task strategies, and plans (i.e., for newly formed teams) but suffered from membership change (mediated by open discussion) when teams were in a phase with established task routines and social norms (i.e., for long-serving teams).

All this evidence is consistent with the notion that team performance benefits more from diversity of perspectives when the team task has stronger demands for information integration, problem-solving, and creativity (van Knippenberg et al., 2004). As we noted earlier, membership change can be expected to stimulate teams to rethink their teamwork and to develop new perspectives in shared cognition, interaction patterns, and interpersonal relationships. Benefits from such reconsideration and redevelopment of teamwork arguably occur to the degree that the task revolves around such careful and creative reconsideration and redevelopment. That is, the more the team task requires knowledge integration and the less it is simple, routine, and scripted, the more membership change adds value to teamwork and team performance via adaptation. This conclusion is important: First, it identifies an important contingency for the negative and positive effects of membership change; second, it corroborates that the positive effects of membership change are caused by the fresh perspective on the team, the team task, and teamwork that the membership
change may give rise to—through the introduction of new members or by stimulating a reconsideration and redevelopment of team cognition, interaction patterns, and interpersonal relationships.

**Other findings.** Finally, some studies have highlighted influences that we see as less connected to the main thrust of the evidence and that seem to stand alone more than be readily integrated into overarching conclusions. Without more research to substantiate such one-study findings, it is not clear how much would be gained by such integration. We review these studies here for the sake of completeness but do not integrate them further into our theoretical framework (see also Dwertmann & van Knippenberg, 2021).

Matthews, Whittaker, Moran, Helsley, and Judge (2012) found that team membership change negatively affected team goal setting and maintenance, but less so for teams with more interrelationships with other teams. Guastello, Johnson, and Rieke (1999) found that team performance was less disrupted by member departure in middle-management teams than in lower-level teams and top-level teams. Grieco, Faillo, and Zarri (2017) observed that when the team was set up in such a way that a member needed to be the highest contributor in the team to earn the right to sanction others, replacement of the top contributor led to team cooperation and welfare. Hilbe, Hagel, and Milinski (2016) reported that when only one member had the power to replace another member, and did so, this promoted team cooperation; however, the consequent payoff distribution reflected the underlying power structure. Baer, Leenders, Oldham, and Vadera (2010) found that member replacement benefited team collaboration and creativity when interteam competition was high or low but harmed them when interteam competition was moderate. Armstrong-Stassen, Wagar, and Cattaneo (2004) found that when teams received new members during organizational downsizing, teams with a moderate level of member addition reported a greater increase in satisfaction and performance (despite a greater increase in workload) and less decline in perceived interactional justice and informational support from the beginning to the end of organizational downsizing than did intact teams and teams with a minor level of member addition. Finally, Rink and Ellemers (2009) reported that newcomers who were known to stay with the team for an indefinite time period caused less conflict and more identification in the team than did temporary newcomers.

**Integrative Conclusions about the Consequences of Team Membership Change**

Our integration of the evidence of the consequences of team membership change results in a temporal framework in which the effects of membership change gradually shift from disruptive to adaptive over time, and in which, all other things being equal, membership change is associated with a reconsideration and redevelopment of team cognition, interaction patterns, and interpersonal relationships that can boost team performance. The integration also captures key influences on the extent to which membership change is disruptive, on how smoothly teams adapt to membership change, and on the performance effects of membership change after teams move beyond the initial disruption. In this respect, we identified three categories of influences: factors that primarily make membership change more disruptive (magnitude of membership change, requirement of team communication), member attributes that position teams better to adapt to the disruption, and factors associated with increases in team KSAOs in knowledge work (KSAO change, the extent to which team work is knowledge work).

The evidence does not allow us to unambiguously link these moderating influences to disruption processes, adaptation processes, or both. Greater increases in team KSAOs may require greater magnitude of membership change, for example. While magnitude of membership change is mostly associated with greater disruption, team KSAO increase is mostly associated with easier adaptation and more positive post-change performance effects. In a related vein, while a greater requirement of team communication is mostly associated with greater disruption, arguably the greater benefits from team KSAO improvements could also be reaped by knowledge teams with higher communication requirements—this is because in such teams, the performance benefits from higher levels and greater diversity of team KSAOs (e.g., for decision quality, problem-solving, creativity, and innovation) are realized through knowledge integration processes that require more intensive communication (van Knippenberg, 2017; van Knippenberg et al., 2004).

What our integration of the evidence brings to the fore is that the current state of the science in research on the consequences of team membership change is well-aligned with the conceptualization of teams as information processing systems (Hinsz et al., 1997). This conceptualization revolves around the recognition that a primary reason for the team-based
Organization of work is teams' information processing capability, and that team performance often strongly depends on the team's ability to integrate task-relevant information, as underscored by the evidence that information integration is the key process driving the performance benefits of diversity (van Knippenberg & Mäntylä, 2016) and team innovation (van Knippenberg, 2017), and a key process leading to team performance more generally (Mesmer-Magnus & DeChurch, 2009). Teams can bring together more KSAOs than the individual-based organization of work ever could. Moreover, in contrast to bigger social systems such as organizations, teams are small enough to allow for the intensive team information integration process so that it can effectuate to benefit performance. As a result, teamwork can be the most effective mechanism for such tasks as complex decision-making, complex problem-solving, creativity, and innovation (De Dreu et al., 2008; Hinsz et al., 1997; van Knippenberg, 2017).

This information processing perspective is well-aligned with the conclusion that team membership change has less negative or more positive effects on team performance when membership change constitutes a greater increase in team KSAO levels and diversity and when the team task involves more knowledge work. The information processing perspective also fits well with the notion that teams may benefit from membership change per se, because membership change may stimulate teams to reconsider team cognition, interaction patterns, and interpersonal relationships. Such reconsideration is a form of team learning—and team learning a form of team information processing—in which a more deliberate focus on the three core elements of team functioning may lead to improvements that would not occur otherwise without triggers of team reflection (West, 1996). The role of requirement of team communication can also be understood from this information processing perspective, because information processing can only be a team process through team member communication. The evidence that the performance effects of membership change are mediated by transactive memory systems (key to team information processing), team learning, and open discussion (reflecting team information processing) also speaks to the alignment with the information processing perspective. At its core, then, our integration of the evidence revolves around how membership change can disrupt team information processing, can stimulate team reflection upon and learning about team functioning, and can alter team KSAOs on which the team draws for its work through the integration of different member contributions. Conclusions regarding magnitude of membership change and member adaptation-relevant attributes clearly also are commensurate with the information processing perspective.

What this integration highlights is that future research on the consequences of team membership change would benefit from more explicitly embracing the team information processing perspective. This would, for example, suggest a need to consider moderating factors such as team reflexivity (West, 1996) that could lead teams to deliberately engage in team learning process and thus make the adaptation to membership change faster and more effective. It would also be valuable to extend the consideration of team processes influenced by membership change to include team information elaboration (i.e., exchange, discussion, and integration of task-relevant information and perspectives [van Knippenberg et al., 2004]), given that it is the key process in the team information processing perspective.

**Causes and Consequences of Team Membership Change: Integration**

Now we have reviewed and integrated the evidence concerning the causes of membership change and the evidence concerning the consequences of membership change, we can bring the two pillars of the review together. Doing so allows us to identify ways in which the current state of the science suggests how the causes of membership change may tie into the consequences of membership change.

The most straightforward proposition in this respect is that, to the extent that membership change is caused by negative team experiences, factors leading to member departure may feed into more disruptive and more negative effects of membership change. The core conclusion regarding the causes of membership change is that member departure (which may subsequently instigate member addition to replace the departing members) is caused by poor experiences with the team and the work and that such poor experiences are also associated with a lower desire to join the team. This means that members are more likely to leave the team, that more members are likely to leave the team (i.e., magnitude of membership change), and that finding good replacements is more challenging (i.e., the team may have to settle for members with lower KSAOs), when member experiences in the team are poorer. Importantly, part of such poor experiences is being dissimilar to the team, suggesting that member departure
also tends to reduce team KSAO diversity. Thus, member replacement instigated by member departure may be more disruptive than simply member departure or addition due to the greater magnitude of membership change; it may also have a more negative impact on team performance due to reduced team KSAO diversity and possibly reduced team KSAO levels. Such disruptive and performance-decreasing effects likely imply sustained negative team experiences over time and thus a self-reinforcing “downward” trend in which a team with member departure in response to poor team experiences may find it difficult to turn things around (for how firm deterioration can cause top management team deterioration, and vice versa, which send teams and firms into a downward spiral over time, see Hambrick & D’Aveni, 1992). By implication—but not part of our evidence base—membership change that increases team KSAO levels and diversity, and its potential positive effects are more likely instigated by other causes than poor team experiences that spark (voluntary) member departure. Such other causes include, for example, management’s investment in the team.

The integration of the causes and consequences of team membership change also directly ties into how the causes of membership change relate to team adaptation-related attributes. Our conclusions here are somewhat more tentative as this link is less directly implied by the evidence. It seems consistent with the evidence, however, to propose that more positive team experiences also better position the team to adapt to membership change. As per our review of the causes of membership change, the quality of team experiences is reflected in such factors as team climate, cohesion, satisfaction, and support. Such factors may influence the extent to which the team approaches membership change with confidence or anxiety, and the extent to which members can work together to adapt to membership change. Thus, here too the conclusion would be (albeit with a bit more caution as it follows less directly from the evidence) that factors that reduce member departure may also increase the ease with which teams adapt to membership change. Accordingly, this hints at a self-reinforcing “upward” trend over time in which positive team experiences tend to continue from before to after membership change.

What this integration highlights is that there is particular value in combining study of the causes and consequences of team membership change to test whether the causes of membership change indeed affect its consequences. The current integration also points to the fact that research on the causes of membership change seems slanted toward those circumstances in which membership change is more likely to have negative effects. Accordingly, it would be valuable for future research to complement the current focus on member departure and its associated negative causes and effects with research into membership change that can be expected to have positive causes and effects (e.g., change that increases team KSAOs).

**NEWCOMER DYNAMICS AFTER TEAM MEMBERSHIP CHANGE**

Whereas most studies have taken a team perspective in studying the consequences of team membership change and focused on effects on team processes, states, and performance outcomes, a smaller number of studies have focused on the interplay of newcomers and incumbents following member addition or replacement. In these studies we identify two categories of evidence based on the outcome variables: newcomer socialization and newcomer influence. Whereas these studies have not focused on the team-level variables of primary interest in our review, they provide building blocks in understanding the process through which the joining of newcomers in the team may affect team processes, states, and performance.

**Newcomer Socialization**

Newcomers have to adapt to be part of the team, and socialization captures the process through which incumbents actively try to influence such newcomer adaptation. Research has shown that newcomers actively engage in team discussion and primarily seek information in team communication, and incumbents primarily provide information (Ahuja & Galvin, 2003), while incumbents’ cognitive, affective, and behavioral biases toward newcomers diminish over time (Moreland, 1985). A study of leader replacement by Ballinger et al. (2009) suggested that the adaptation process may take time, particularly when a new leader succeeds an old leader with whom members have a good relationship—as evidenced, more negative affective reactions to leader replacement come from members who have a better relationship with the departing leader.

Most evidence in newcomer socialization has spoken to how newcomer and team characteristics facilitate (or hinder) newcomer socialization. Newcomer characteristics that facilitate newcomer socialization
include prior knowledge of the job, proactive person-
ality, perceived incumbent influence (Kammeyer-
Mueller & Wanberg, 2003); perceived similarity with
incumbents in education, gender, and work styles,
but dissimilarity in age (Kammeyer-Mueller, Living-
ston, & Liao, 2011); relationship building with leader
and coworkers (Korte, 2009, 2010); use of integrating
pronouns (e.g., we) rather than differentiating ones
(e.g., I, you, for permanent newcomers but not tem-
porary newcomers [Kane & Rink, 2015, 2016]). In a
related vein, newcomer development of favorable
relationships with supervisors or coworkers allevi-
ates the negative impact of the newcomer failing to
meet (incumbent) expectations on newcomer sociali-
zation (Major, Kozlowski, Chao, & Gardner, 1995).

Team characteristics that facilitate newcomer
socialization include a cooperative team climate
(Chen, Lu, Tjosvold, & Lin, 2008); team values for
open discussion and social relationships (mediated
by newcomer cooperative goals and integrative in-
teractions with incumbents [Chen, Tjosvold, Huang,
& Xu, 2011]); team providing social cues, support,
and role models to newcomers (Lu & Tjosvold,
2013); incumbents providing behavioral examples
(Coultas, 2004); transformational leadership (medi-
ated by newcomer information-seeking and espe-
cially in organically structured teams [Zou, Tian,
& Liu, 2015]; but for validity concerns with the trans-
formational leadership concept, see van Knippen-
berg & Sitkin, 2013). In a related vein, computer-
mediated newcomer orientation (i.e., no face-to-face
communication between newcomers and incum-
bents) hinders newcomer socialization in terms of
socially rich content about organizational values,
people, and politics but not in terms of informa-
tionally dense content about (organizational)
language, history, and performance proficiency
(Wesson & Gogus, 2005). Focusing on leader change,
Manderscheid and Ardichvili (2008) found that
an intervention for the new leader and the team fa-
cilitated leader feedback-seeking and leader–team
dialogue, which> accelerated leader and team learn-
ing, leader adaptation, and relationship building
between the leader and the team. In sum, a hospita-
ble team environment (e.g., a cooperative team atmo-
sphere, incumbent support)—which is independent
of membership change and fosters communication
(i.e., information flow and socioemotional sup-
port) from incumbents to newcomers—facilitates
newcomer socialization.

Other evidence that can also be understood
through the lens of newcomer socialization has refer-
enced newcomer performance and its implications
for team performance. A number of studies can be
understood to have examined newcomer KSAOs
and how newcomer KSAOs positively predict the
newcomer’s initial performance or performance
improvement in the team. Such newcomer KSAOs
include newcomer work experience (Beus, Jarrett,
Taylor, & Wiese, 2014), prior performance (Chen,
2005; De La Torre-Ruiz & Aragón-Correa, 2012), self-
efficacy (Chen & Klimoski, 2003), and strength of
workplace social ties (Jokisaari, 2013). These studies
have also captured mediating evidence that relates
newcomer KSAOs to newcomer socialization, such
as newcomer social exchange and newcomer
empowerment, and the consequential evidence that
newcomer performance predicts team performance
(Chen, 2005). Consistent with the notion that the
influence of newcomer KSAOs is a matter of the
extent to which their joining the team increases or
decreases team KSAOs, there is also evidence that
the influence of newcomer performance on team per-
formance is enhanced by the performance of other
newcomers but reduced by the performance of incum-
bents (De La Torre-Ruiz & Aragón-Correa,
2012). Related to the notion that some member attrib-
utes can position teams to better adapt, there is also
evidence that newcomers with prior experience trans-
itioning into a new team have faster performance
improvement (Beus et al., 2014).

Three issues highlighted by this evidence on new-
comer socialization and adaptation clearly connect
with our integration of the evidence in the team
causes and consequences of membership change.
First, evidence on newcomer socialization is well-
aligned with the earlier conclusions regarding the
need for teams to develop new team cognition, inter-
action patterns, and interpersonal relationships in
that newcomer socialization is an integral part of
making newcomers part of these shared team prop-
ties. Moreover, the newcomer socialization process
is clearly aligned with the earlier conclusions about
team learning and team information processing in
that socialization is in effect newcomer learning.
Second, conditions that support newcomer sociali-
zation have clear parallels with factors associated
with member departure. That is, conditions that
facilitate newcomer socialization seem similar to
positive team experiences that reduce member
departure—put differently, negative team experi-
ences that motivate member departure presumably
make it difficult for newcomers to integrate within
the team. This conclusion is aligned with our earlier
conclusion that negative team experiences that moti-
vate member departure may invite a downward
spiral over time. Not only may such factors make it difficult to attract new members and invite further member departure, but they may also make it difficult to socialize and integrate new members in the team. These two conclusions also align well with another earlier conclusion that negative team experiences that motivate member departure may be negatively related to the team’s ability to adapt to membership change. The finding that newcomer socialization is more effective in more supportive team climates suggests that team adaptation to membership change may also be more effective under more supportive team climates. Third, the evidence regarding newcomer expertise and competence has clear parallels with the evidence regarding team KSAO change. The finding that more expert and competent newcomers more easily integrate and better perform in the team aligns well with the evidence that membership change that increases team KSAOs results in smoother adaptation and better team performance.

Newcomer socialization reflects the team’s (i.e., incumbents’) influence on newcomers. The natural counterpart to this is newcomers’ influence on the team (i.e., incumbents). Developing new team cognition, interaction patterns, and interpersonal relationships is a process in which incumbents and newcomers mutually influence each other (Tan, 2015), and we turn to the issue of considering newcomer influence next.

Newcomer Influence

A series of studies have focused on newcomers as agents that influence incumbents. Some of this evidence can be seen as complementing evidence on the team consequences of membership change. Newcomers who are more competent than incumbents have shown higher creative performance themselves and inspired higher creative performance in incumbents (Choi & Thompson, 2005) and been perceived as more influential (Ziller & Behringer, 1960). Newcomer influence is stronger when the team performs more poorly (Choi & Levine, 2004; Ziller & Behringer, 1960). In a related vein, Hansen and Levine (2009) observed greater newcomer influence when optimism about team performance was moderate as compared to high (but also as compared to low, which suggests that when team efficacy is too low, newcomer influence reduces).

These findings too seem to be in line with the evidence that teams benefit from membership change that introduces an increase in team KSAO levels. Earlier, we reviewed evidence that team adaptation to membership change is smoother when membership change increases the level of team KSAOs. The newcomer evidence reviewed here reveals that this may be due in part to the fact that incumbents recognize the value that more competent newcomers bring to the team and thus are more open to such newcomers’ influence—especially when team performance still has room to improve.

Also related to the issue of team KSAO change is the evidence pertaining to newcomer dissimilarity. There is evidence that racial minority newcomers are perceived to be more influential than racial majority newcomers (Ziller et al., 1960) and are more open-minded, and that their task contributions are considered as more useful than those of both racial majority newcomers and incumbents (Craig, 1996). Choi and Levine (2004) found that newcomers with ideas that were more dissimilar to those of the team were more influential when teams were assigned rather than chose their task strategies, or when such strategies failed rather than succeeded. Gruenfeld et al. (2000) observed that although task contributions of newcomers with more novel expertise were recognized and utilized less than those of incumbents, such newcomers were perceived as more engaged and argumentative than incumbents, produced more unique ideas than incumbents, and thus stimulated more creativity in the team. Thus, like the evidence for newcomer expertise and competence, the evidence for newcomer dissimilarity suggests that part of the process—through which membership change that increases KSAO diversity benefits team performance—comprises teams’ recognition of the value that more dissimilar newcomers bring to the team and the influence such newcomers can have within the team.

Other studies have connected less obviously with the team information processing perspective associated with team and newcomer KSAOs. Kane and Rink (2015, 2016) and Rink and Ellemers (2009) focused on the influence of expectations about how long newcomers would stay with the team and found that newcomers who were expected to stay for a shorter period were perceived to be more involved in team decision-making and to share more unique knowledge that enhanced team decision quality, presumably because they felt less restrained in speaking their mind. Maynard et al. (2017) similarly found that the performance benefit of functional leadership of interim new leaders was stronger than that of permanent new leaders. Also with reference to leader replacement, Koch (1978) found that replacing a
support-oriented leader with a task-oriented leader had negative effects on member support-oriented behaviors, team motivation and adaptability, and member satisfaction with work, colleagues, rewards, and promotion. Lam, Lee, Taylor, and Zhao (2018) found that a new leader who was closer to the team in proactive personality than the departing leader experienced members’ better shared identification, and better shared identification with, behavioral engagement in, and voice for his or her change agenda.

Thus, although a few newcomer influence studies seem to stand relatively apart from the main body of research on the team consequences of membership change, some studies have supported the notion that teams recognize that team KSAO increase introduced by newcomers and teams’ greater openness to the influence of such newcomers helps teams adapt to membership change and reap the benefits of it.

Other Findings

Two studies on newcomer dynamics seem to stand alone and not to connect to the integration that emerges from the evidence. We review them here to recognize that they are part of the evidence base, but currently seen with little suitability for integration. Celik and Ince-Yenilmaz (2017) reported that for change from one Major League Soccer team to another, the number of matches players play as a substitute has a negative effect on the changing players’ salaries. Rogers, Vardaman, Allen, Muslin, and Baskin (2016) found that departing players in Major League Baseball with declining performance at leaving saw an increase in their performance in the new team and their performance remained stable through a subsequent season, while departing players with increasing performance at leaving suffered a performance drop-off in the new team.

Newcomer Dynamics and Team Consequences of Membership Change: Integration

The evidence concerning newcomer socialization and influence seems by and large to be in line with the evidence concerning team consequences of membership change. What it adds to those team-level conclusions is a reason why teams adapt better to membership change that increases team KSAOs: Teams tend to recognize the value that more competent and dissimilar newcomers bring to the team, and are more open to their influences. As a result, such newcomers show faster adaptation to the team (indicated by both socialization-related outcomes and steeper performance improvement), which feeds into team performance overall. This evidence regarding KSAO–performance relationships, as well as the role of newcomer influence, fits well with the team information processing perspective that provides the backbone for understanding most evidence related to the team consequences of membership change.

The evidence concerning team factors facilitating socialization also aligns well with the evidence on team antecedents of member departure. The conclusion here seems straightforward: Teams that can provide their members with more positive membership experience are both better able to prevent member departure and better able to integrate new members. This corroborates our earlier conclusion that teams may find themselves in a “downward spiral” where negative team experiences invite member departure, make it more challenging to attract qualified new members, and thus contribute to further obstacles in team adaptation to membership change and even further member departure. Conversely, teams with supportive climates that provide members with positive membership experiences are better positioned to retain members, to attract qualified new members, and to integrate them in the team, thus sustaining their ability to provide members with a positive team experience.

While we do not intend to make too much out of limited evidence, a noteworthy finding is that newcomers with prior experience transitioning into a new team will experience faster performance improvement (Beus et al., 2014). Tentatively, we may suggest that this prior experience effect should not be limited to newcomers but should apply to the team as a whole. That is, teams with greater experience with membership change may be better able to adapt to membership change (see also Galinsky & Schopler, 1985). This would suggest a temporal framework in which teams grow increasingly skillful at adapting to membership change as they gain more experience with membership change through successive change events. Clearly, this entails extrapolating from newcomer evidence to the team as a whole. It would be valuable for future research to test this proposition and advance understanding of these temporal dynamics.

AN INTEGRATIVE FRAMEWORK AND FUTURE RESEARCH DIRECTIONS

Our integration of the evidence suggests a temporal framework in which the initial effect of team
Membership change is disruptive, but as the team adapts to membership change, the potential of membership change to boost team performance can be realized. The disruptive effect of membership change is stronger for teams with a greater magnitude of membership change and for teams that rely more on intensive communication between members; teams adapt more smoothly to membership change, and benefit more from it, when membership change introduces greater increases in team KSAOs (in terms of both level and diversity) and when the team’s work is more knowledge-based. In addition, member attributes affect the team’s ability to adapt to (membership) change. Integrating evidence concerning the team causes and consequences of membership change, we also see indications that negative team experiences that motivate member departure may make it difficult for teams to “turn around,” thus potentially creating downward spirals; and, vice versa, that positive team experiences may make it easy to improve team functioning and performance via membership change. We present this integrative framework in Figure 1.

Our integration is firmly rooted in the evidence. The framework also relies on some integrative conclusions that are evidence-driven in the sense that they integrate the evidence but are not directly supported by the evidence. Accordingly, an important implication for future research is to prioritize research on those conclusions that are integral to our framework but still require direct tests (Dwertmann & van Knippenberg, 2021). We consider these next.

**Temporal Dynamics of Team Membership Change**

A first important direction for future research is to more firmly establish the temporal dynamics of team membership change reflected in our integration. This concerns the gradual shift from disruption to adaptation following membership change, how causes of membership change may affect its consequences, and how consequences of membership change may feed back into causes of membership change to create self-reinforcing spirals. Mapping the shift from the dominance of disruption to the dominance of adaptation and to a more stable state post-adaptation would also motivate research to develop a better sense of timelines here: How long does it take teams to make these shifts and what factors would influence the speed with which these shifts are made? To test any temporal framework or

**FIGURE 1**

A Temporal Framework of Team Membership Change

Notes: Even though membership change can be thought of as a categorical event, and magnitude of membership change and team KSAO change can be thought of as moderators of effects of membership change, we model the latter two as part of membership change because they cannot be considered independent of membership change. The dashed arrow from adaptation to disruption indicates that disruption can decrease as adaptation increases over time.

* indicates disruption as the dominant process and disruptive effects to be seen, or adaptation as the dominant process and adaptive effects to be seen.
model, it is important to have a sense of the temporal characteristics of teams to be able to design a study (i.e., to not space out measurements so much or to not space out measurements enough that shifts are not captured [see also Zaheer, Albert, & Zaheer, 1999]). Future research to capture these temporal dynamics would by necessity yield valuable insights into team membership change.

Further establishing this temporal integration would also bring into sharper focus the study of the team causes of membership change, which has previously been limited to the factors motivating member departure. Our integration that suggests potential self-reinforcing negative effects of member departure suggests that there may be self-reinforcing positive effects of membership change that are positively motivated (e.g., conscious attempts to improve the functioning of a well-performing team by increasing its KSAOs). Thus, future research that complements the study of the “negative” causes of membership change with the study of “positive” causes of membership change (i.e., changes that are not inspired by negative team experiences) would be particularly valuable in providing more balance in the study of the team causes and consequences of membership change.

Team Information Processing Perspective on Team Membership Change

A second important direction for future research is to more explicitly develop the team information processing perspective on team membership change. As our integration of the evidence outlines, a number of influences on the consequences of membership change tie into understanding teams as information processing systems: first and foremost, the evidence concerning the value of increases of team KSAO levels and diversity to team performance, the moderating role of the extent to which the team is involved in knowledge work and team communication is required, the negative performance effect via disruption to team transactive memory system and team learning, and the positive performance effect via stimulation of open discussion. What seems to be missing so far from this evidence base, however, and what would most directly speak to the merits of the team information processing perspective on the effects of membership change, is more explicit study of how team information processing is affected by membership change. Future research that includes measurement of team information elaboration (i.e., exchange and integration of knowledge and information [van Knippenberg et al., 2004]) would be particularly valuable to empirically link the influences of team membership change as currently identified to team information processing.

Related to this is the possibility that team member attributes that reflect their ability to cope with membership change and smoothly adapt to membership change can also be viewed from a team information processing perspective. Theoretical and empirical considerations of team information processing have established, for example, that such traits as learning goal orientation, openness to experience, and need for cognition that reflect member openness to and interest in learning from new experiences (e.g., new and more dissimilar perspectives) all positively influence team information processing (De Dreu et al., 2008; Homan, Hollenbeck, Humphrey, van Knippenberg, Ilgen, & Van Kleef, 2008; Kearney, Gebert, & Voelpel, 2009; Nederveen Pieterse, van Knippenberg, & van Dierendonck, 2013; van Knippenberg et al., 2004). Adopting the team information processing perspective on team membership change may suggest that teams with members who possess such attributes to a greater extent may more easily adapt and benefit more from membership change. Developing this argument further in future research is important not only because it is valuable to know more about member attributes that affect team adaptation to membership change but also because it would allow for more firmly establishing the merits of the team information processing perspective on team membership change.

From Moderation to Intervention

A last direction we highlight as important for future research is to develop the understanding of moderating influences to more explicitly capture how teams and organizations can better prepare teams for membership change and guide them through it. That is, how can the moderation knowledge be developed into intervention knowledge?

The current moderation evidence cannot simply be translated into conclusions regarding the management of team membership change. For example, it is not so helpful to conclude that organizations should avoid membership change of greater magnitude in teams with higher communication requirement, and in teams with members that are less inclined to adapt to new situations, and should implement membership change only in knowledge work teams and for the purpose of team KSAO increase. All these moderation insights are valuable, but from the perspective
of actionable knowledge they beg questions that have not yet been addressed in the evidence base, such as how membership change of greater magnitude or with a decrease of team KSAOs can be managed. One of our more tentative conclusions is that there can be downward spirals in membership change (i.e., negative team experiences that result in membership change can put teams onto a further downward trajectory [see also Hambrick & D’Aveni, 1992]). Thus, it would be particularly important for future research to explore how negative influences of unavoidable situations (e.g., membership change of greater magnitude) can be managed.

Methodological Considerations: Longitudinal Research on Team Membership Change

A key methodological consideration to corroborate the core elements in our integrative framework is to follow teams over time (especially after membership change) and employ longitudinal research designs. As discussed above, (a) disruption and adaptation are intertwined over time in a complex way—they may take place simultaneously yet the disruptive detriments of membership change precede the adaptive benefits of it; and (b) causes of membership change not only determine characteristics of membership change (e.g., magnitude of membership change, team KSAO change) but can also affect how well teams adapt to membership change. Such propositions call for longitudinal research designs in which teams are followed over time and focal team properties are repeatedly measured.

Two design features in longitudinal research are particularly relevant in testing our integrative framework: temporal units (i.e., how long the basic unit of observation and analysis needs to) and temporal lengths (i.e., how long the research needs to be to address and uncover both disruptive and adaptive effects). We draw from work on episodic team performance (Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Marks, Mathieu, & Zaccaro, 2001), temporal scales in organizational research (Zaheer et al., 1999), and a within-team change logic (e.g., Matusik, Hollenbeck, Matta, & Oh, 2019; Post, Lokshin, & Boone, 2020) to make suggestions for these design features in future longitudinal research.

Temporal units are ideally as long as team performance episodes (i.e., distinguishable periods in which team performance accrues and feedback is available [Kozlowski et al., 1996; Marks et al., 2001; see also Mathieu & Button, 1992]), and temporal lengths (of research) depend on team types. From a temporal perspective, teams often operate and perform over time in episodes, and team types differ in the typical duration in which they operate and perform, ranging from hours for laboratory task groups, weeks to months for ad hoc project teams, and years for service and management teams (Hollenbeck, Beersma, & Schouten, 2012; see also Zaheer et al., 1999). If focal team properties are measured repeatedly over time, and if membership change takes place in one team performance episode, the disruptive detriments of membership change are more likely seen in the earlier than later episodes after membership change, and the adaptive benefits in the later than earlier episodes. When (i.e., in which subsequent performance episode) the dominance of disruption starts to shift into dominance of adaptation, and disruptive detriments into adaptive benefits, is an interesting and important empirical question to address and uncover across team types with different typical lengths of operation and performance. Moreover, in line with the within-team change logic (e.g., Matusik et al., 2019; Post et al., 2020), if membership change takes place over multiple episodes, not only does membership change in one episode have impacts on team processes, states, and performance in the subsequent episodes, but team processes, states, and performance in one episode are cumulatively affected by membership change in the preceding episodes. Altogether, although longitudinal team research is empirically demanding, and although cross-sectional research can also address some aspects of our integrative framework, the important directions for future research as discussed above are likely to be best addressed with longitudinal team research.

CONCLUSIONS

We propose an integrative framework to understand the team causes and consequences of team membership change. The framework we propose highlights the temporal dynamics in understanding team membership change and thus puts a premium on studying the team before, during, and after membership change. Our integration is important not only in providing a framework to capture the core mechanisms of membership change but also in suggesting that research on membership change should shift its focus to a temporal perspective that captures the process from the instigation of, disruption by, adaptation to, and later performance benefit of membership change.
Studying membership change is fundamentally important for team research because the open boundaries of teams challenge the implicit assumption underlying most team research—that team membership remains stable over time (Humphrey & Aime, 2014). By articulating the theoretical linkage of membership change with team processes, states, context, and performance, our review responds to the advocacy for the open systems perspective of teams (Mathieu, Hollenbeck, van Knippenberg, & Ilgen, 2017; McGrath, Arrow, & Berdahl, 2000). It extends team research into a novel direction that does not presume stable physical boundary and stable shared properties of teams to understand team functioning and performance.

REFERENCES


Korte, R. F. 2009. How newcomers learn the social norms of an organization: A case study of the socialization of


McFadden, M., & Demetriou, E. 1993. The role of immediate work environment factors in the turnover process.


van Knippenberg, D., & Mell, J. N. 2016. Past, present, and potential future of team diversity research: From compositional diversity to emergent diversity.


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