Collective Turnover

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Abstract

This review builds from the last major narrative review of collective turnover
(Hausknecht & Trevor 2011) to identify theoretical and empirical advance-
ments in understanding the causes and consequences of turnover rates at the
team, group, work unit, and organizational levels. I discuss important devel-
opments in collective-level theorizing [including context-emergent turnover
(CET) and turnover capacity theory], meta-analytic summaries, longitudinal
investigations, and more. The review concludes with recommendations for
future collective turnover research.

INTRODUCTION

Collective turnover represents "the aggregate levels of employee departures that occur within groups, work units, or organizations" (Hausknecht & Trevor 2011, p. 353). To date, more than 150 articles have appeared in journals in management, psychology, sociology, labor relations, and economics. Interest in the causes and consequences of collective turnover arose from the recognition that rising turnover rates—and the mounting human and social capital losses associated therein—portend a range of negative outcomes such as poor customer service, reduced sales and profits, higher accident rates, lower efficiency, and higher counterproductivity (see Hancock et al. 2013, Heavey et al. 2013, Park & Shaw 2013). Studying employee turnover at the collective level contrasts with the long and rich history of individual-level research. The individual-level focus, which primarily addresses the psychology of leaving, spans more than a century (Hom et al. 2017), whereas the collective turnover literature has gained most of its momentum in the past two decades.

Briefly, individual-level research was catalyzed by March & Simon's (1958) theory of organizational equilibrium, which specified that two primary forces shape the decision to quit: the desirability of movement and the ease of movement. Operationally, these two dimensions have been measured as job satisfaction and perceived job alternatives, respectively, and both rank among the most commonly studied turnover predictors in individual-level research. More sophisticated models were developed in the 1970s and beyond that sought to refine the causal chain that leads to an individual's decision to quit (see Hom et al. 2017 for a review). More recently, theoretical developments brought about the unfolding model of turnover and the job embeddedness construct—the latter of which captures forces operating both within and outside the organization that compel people to stay with organizations (Mitchell et al. 2001).

Although the individual-level focus helps explain how and why people quit, such perspectives do not address the broader consequences of turnover for teams, work units, or organizations. As discussed above, turnover's implications can be substantial but fall outside the scope of examination at the individual level because the decision to quit itself serves as the terminal outcome. Individual-level perspectives also cannot explain the departures of cohorts of individuals who leave at or around the same time due to shared social processes (Bartunek et al. 2008) or contagion effects (Felps et al. 2009). Furthermore, scholars are beginning to theorize and find support for relationships that differ in sign when moving from the individual to the collective level. For instance, whereas losing a poor performer via involuntary turnover has long been thought to be functional from an individual-level vantage point, recent collective-level thinking suggests that even involuntary turnover rates negatively impact performance because of the disruption and socialization demands placed on remaining members (Hausknecht & Trevor 2011). For these reasons, scholars increasingly study turnover as a collective construct.

This review summarizes recent collective turnover research and highlights progress made since the last major narrative review (Hausknecht & Trevor 2011). Hausknecht & Trevor (2011) summarized collective turnover research according to five key areas: (*a*) measurement issues, (*b*) consequences, (*c*) curvilinear and interaction effects, (*d*) methodological and conceptual issues, and (*e*) antecedents. The review also outlined 10 broad directions for future research. In this update, I focus on the major theoretical developments and empirical contributions appearing since 2011 (which include the publication of multiple meta-analyses and numerous original articles), take stock of the progress made toward the suggested research agenda, and conclude with updated recommendations for future research. Although the review generally focuses on studies published since 2011, earlier articles are referenced as appropriate.

DEFINITIONS AND CONSTRUCT ISSUES

Authors have adopted a variety of labels for collective turnover including team turnover, unit-level turnover, organizational turnover, and turnover rates. Common to all of these terms is that researchers are studying individual decisions to quit aggregated to some higher level of analysis. The term collective turnover is thus the most versatile when discussing aggregated departures and coincides with broader theory surrounding the nature of collective constructs (Morgeson & Hofmann 1999). Collective turnover does not simply reflect the sum of individual turnover behaviors (i.e., it is not an isomorphic compositional construct). Rather, collective turnover is partially isomorphic with individual turnover (Nyberg & Ployhart 2013), originating in the lower-level behaviors but emerging at higher levels in response to member interaction, context, and sensemaking, all of which change the nature and meaning of the aggregated behaviors.

Collective turnover measurement has both a long history and, in some ways, is just getting started. The classic approach involves measuring the percentage of a total group that separates in a given period (e.g., observing 10 departures from a 50-person work unit over a one-year period yields a 20% turnover rate). This quantity-based measure has dominated collective turnover research, but as I discuss below, scholars have recently argued that classic measurement approaches fail to capture the characteristics or qualities of those who leave. For instance, Nyberg & Ployhart (2013) defined collective turnover as "the aggregate quantity and quality of employee knowledge, skills, abilities, and other characteristics (KSAOs) depleted from the unit" (p. 109), and argued that traditional measurement approaches capture little, if anything, relating to the KSAOs of those who depart. Hausknecht & Holwerda (2013) further argued for measuring both quantity and quality of departures, contending that "the same levels of turnover (i.e., identical turnover rates) can have very different meanings (and thus consequences) depending on the properties of departures as they take shape at higher levels" (p. 211). Both offered novel measurement strategies that capture both the quantity and quality of departures.

Finally, numerous variations and modifications of the collective turnover construct can be found, mainly to accommodate researchers' specific foci such as the turnover rates of particular employee groups (high versus average performers, full-time versus part-time employees) or to isolate effects stemming from different turnover types (e.g., voluntary versus involuntary). In these cases, researchers make choices about which employees (and/or which types of departures) count toward the numerator and denominator of the turnover rate. As always, research questions and theory should guide measurement choices, and in some cases an undifferentiated turnover rate may be justified. The sidebar Choosing a Collective Turnover Measure provides recommendations for choosing a suitable measure of collective turnover.

THEORETICAL ADVANCEMENTS

A key research objective specified in Hausknecht & Trevor's (2011) review was to develop collective-level theories of collective turnover. They argued, "Much of the collective turnover literature is predicated on individual-level theory and rationale . . . although such reasoning has merit, collective-level theory has been absent from much of the literature reviewed here" (Hausknecht & Trevor's 2011, p. 379). In response, two theories on collective turnover have been published: context-emergent turnover (CET) theory (Nyberg & Ployhart 2013) and turnover capacity theory (Hausknecht & Holwerda 2013). Both share similarities in drawing attention to the emergent nature of collective turnover, in defining both quantitative and qualitative aspects of the construct, and in offering novel suggestions for its measurement. Both focus on collective turnover's

CHOOSING A COLLECTIVE TURNOVER MEASURE

The traditional approach to measuring collective turnover involves computing a turnover rate. Most common is Price's (1977) separation rate. The numerator represents the number of leavers over the period. The denominator indicates group size. While the numerator is easily measured (typically from company records), the group size indicator can vary, sometimes significantly, over the period of interest (e.g., when vacated positions are not backfilled). Some authors use the size at the beginning, middle, or end of the period. Another option is to average periodic size estimates (e.g., monthly values), which is an approach that the US Bureau of Labor Statistics adopts when estimating turnover for the American workforce.

Less common, but also with precedent, is to calculate an instability rate (Price 1977). Here, a starting cohort is identified (e.g., all active employees as of January 1). Then, at the end of a given period (e.g., December 31), researchers determine who on the list is no longer employed. The instability rate is calculated as the number of leavers divided by original cohort size. Under this approach, instability rates cannot exceed 100%, turnover among replacement employees is ignored, and turnover voluntariness cannot be addressed. For an example study using instability rates, see George & Bettenhausen (1990).

Both separation and instability rates are useful when tracking turnover quantity, but neither is well suited to tracking turnover qualities. Fortunately, new methods of measuring both quantitative and qualitative aspects have emerged. For details, see Hausknecht & Holwerda's (2013) formulation of a capacity index and Nyberg & Ployhart's (2013) suggestions for incorporating quality measures into collective turnover research.

relationship with performance rather than its antecedents. CET theory is grounded within human capital resource theory and emphasizes issues of emergence, context, and time. Turnover capacity theory draws from group process and organizational learning theories to outline five collective turnover properties that, when investigated, would better predict whether and when turnover affects unit performance.

Context-Emergent Turnover Theory

Beginning with Nyberg & Ployhart (2013), and as quoted above, CET theory defines collective turnover in terms of aggregated KSAO depletion from the unit. It includes both a quantitative component, in terms of the percentage of employees who leave a unit, as well as a qualitative component that represents the types and amounts of KSAOs lost. Importantly, CET theory allows for positive, negative, or no effects of collective turnover on human capital resources and unit performance. This arises because replacement quality and quantity can (*a*) exceed that of departures (resulting in a net positive for the unit), (*b*) fall below that of departures (net negative effect), or (*c*) mirror that of departures (net neutral effect). Nyberg & Ployhart position collective turnover as distinct from (and not the obverse of) human capital resources, the latter of which they define as "intangible unit-level constructs that can possess the characteristics needed to influence unit performance and competitive advantage" (p. 113). In other words, a unit may have any level of collective turnover and, independently, maintain any level of human capital resources (i.e., KSAO stocks may remain stable in the presence or absence of collective turnover; the net effect depends on the magnitude and mix of losses and replacements). They take this reasoning several steps further to outline a model where collective turnover can affect unit performance directly (via the loss of high-quality employees), indirectly (via its effect on human capital resources), or as a moderator (via diverting human capital resources to newcomer training rather than performance, for instance).

CET theory heavily emphasizes how temporal dynamics shape collective turnover emergence and, in turn, unit performance. Considering stocks and flows of people as they enter and exit units over time helps explain both positive and negative effects on unit performance depending on the quantity and quality of those moving in and out of the unit. This replacement emphasis is often overlooked in collective turnover research; however, it is central to both CET and capacity theories. Framing collective turnover as a dynamic construct redirects the focus away from the absolute level of turnover toward its change over time and highlights the value of examining trajectories rather than static turnover levels.

CET theory also pays explicit attention to context, conceptualized in terms of climate and environmental complexity. Climate—the shared sense of what is rewarded, supported, and viewed as important within a unit—can buffer or exacerbate collective turnover's effects. For example, Nyberg & Ployhart (2013) suggest that a strong climate for teamwork could ease turnover's effects on unit performance because remaining members would be more likely to cover for the expanded responsibilities associated with mass departures. Environmental complexity, which they discuss in terms of the "nature of interconnections and interdependence required by unit task demands" (p. 120), is also theorized as a moderator of turnover-performance effects. In highly complex environments that require greater coordination, communication, and interdependence, turnover would be more damaging to unit performance because of the disruptions to unit function. In low complexity situations, however, turnover may be less impactful because employee departures have minimal effect on remaining members.

In sum, CET theory advances understanding of collective turnover by (*a*) defining its emergence as a collective construct (that is only partially isomorphic with individual-level behaviors); (*b*) outlining how it relates to human capital resources (correlated, yet conceptually distinct); (*c*) linking it to KSAOs, human capital resources, and unit performance (including direct, indirect, and moderated effects); (*d*) specifying the important role of replacement quality and quantity (leading to possible positive and negative effects); and (*e*) describing how climate and environmental complexity condition its impact on unit performance (to predict when turnover effects are likely strongest).

Turnover Capacity

Hausknecht & Holwerda's (2013) turnover capacity perspective also aims to enrich collective-level turnover theory. Similar to Nyberg & Ployhart (2013), Hausknecht & Holwerda view collective turnover as an emergent construct that "takes on meaning beyond the simple aggregation of individual departures" and that has "influence that is independent from the acts that give rise to it" (p. 210). Next, starting from the assertion that nearly all research to date reflects a quantity focus (both theoretically and operationally), the authors develop five turnover properties (i.e., qualities) that help explain when turnover is more or less problematic for unit performance. These include (*a*) leaver proficiencies (i.e., to what extent is the unit losing novice versus experienced members?), (*b*) time dispersion (i.e., to what extent are departures concentrated versus distributed over time?), (*c*) positional distribution (i.e., to what extent are people leaving from the same versus different positions within the unit?), (*d*) remaining member proficiencies (i.e., to what extent are remaining members novice versus experienced?), and (*e*) newcomer proficiencies (i.e., to what extent are replacements novice versus experienced?). They argue that classic formulations miss all five of these properties because all leavers are considered equal and no attention is given to timing; positions; or the proficiencies of leavers, remaining members, or replacements. Similar to Nyberg & Ployhart (2013), Hausknecht & Holwerda specify conditions under which greater attention to qualitative aspects will better reveal collective turnover's impact on unit performance.

According to their logic, and in keeping with the five properties, turnover will be more damaging to performance when (*a*) leavers are more proficient than novice, (*b*) departures are more concentrated/time-restricted, (*c*) departures are distributed across different positions, (*d*) remaining members are more novice than proficient, and (*e*) human capital of replacements falls short of leavers' human and social capital. Important to their theorizing is that these five properties are time-bound and inextricably linked; at any given point, a unit has a specific configuration of member proficiencies that is determined by the pacing, sequencing, and qualities of departures, as well as by characteristics of replacements and remaining members.

To illustrate the five properties, consider two different project teams at a large consulting firm, each with 25 members. Assume that both experience 10 departures (i.e., 40% turnover) across a given year. Following the turnover capacity logic, despite having identical turnover rates, the two teams could have very different abilities (or capacity) to perform their work. One unit may have lost mostly the newest (most novice) hires from the same position (e.g., entry-level analysts), experienced the turnover occasionally over time (leaving minimal staffing gaps), hired replacements who were just as skilled as (or more skilled than) those leaving, and retained a stable core of remaining members who were themselves fully proficient in their roles. Conversely, the other unit, also experiencing 10 departures, may have lost its most proficient members, from multiple positions (e.g., team leader, managers, analysts) at nearly the same time, had difficulty finding equally skilled replacements, and found itself with remaining members who themselves had not yet become fully proficient in their roles. In this scenario, the former unit is clearly better positioned to stave off the coordination challenges and disruption associated with the departures (and hence meet project demands), whereas the latter unit would be almost fully depleted of its capacity to operate in the face of the sudden and widespread departures.

The scenarios described above show how quantity-based approaches conceal variation in some of the most important aspects of collective turnover—those that affect the composition of a work unit and govern its capacity to meet performance demands. The perspective incorporates the time-to-proficiency concept to recognize that even highly skilled newcomers need time to become fully proficient in their roles (perhaps substantial time, such as with the semiconductor engineers described by Hatch & Dyer 2004). Without allowances for these properties, scholars are left to assume that all leavers are equal, a position quickly becoming untenable given the obvious variability in what members contribute, both individually and relative to others inside and outside of a unit.

RECENT EMPIRICAL CONTRIBUTIONS

Shortly after narrative reviews of the collective turnover literature emerged (e.g., Hausknecht & Trevor 2011, Shaw 2011), four meta-analyses and several original articles appeared in the literature. The meta-analyses provide quantitative summaries of antecedent-turnover and/or turnover-outcome relationships, whereas the original articles extend collective turnover research by examining contextual moderators, addressing novel occupations or industries, explicitly addressing time, and more. These developments are summarized in the following sections.

Meta-Analyses

Two of the four meta-analytic summaries (Hancock et al. 2013, Park & Shaw 2013) were focused exclusively on turnover-performance relationships, whereas the other two (Hancock et al. 2016, Heavey et al. 2013) addressed both causes and consequences. A main focus of the Hancock et al. (2013) meta-analysis was on the turnover-consequence portion of the collective turnover framework presented in Hausknecht & Trevor (2011). Building from the logic that turnover increases

costs and depletes human and social capital, Hancock et al. hypothesized an overall negative turnover-performance effect; however, they argued that effect sizes would be sensitive to a variety of moderators. In particular, they predicted larger negative effects in (*a*) industries characterized by higher knowledge and skill requirements, (*b*) regions with higher labor costs such as the United States and Europe, (*c*) individualistic cultures, (*d*) liberal versus coordinated market economies, (*e*) samples containing managers, (*f*) small- to medium-sized organizations, (*g*) studies where turnover is entirely voluntary rather than a mix of types, and (*h*) studies where the dependent variable is more proximal (e.g., customer satisfaction) than distal (e.g., financial performance). They also contended that the turnover-performance relationship would be curvilinear, arguing that organizations have an optimal level of turnover that balances negative effects with potential positive effects such as innovation and net improvements to social capital that stem from better-networked replacements.

Underlying these predictions is the logic that certain characteristics either buffer the negative impact of turnover (e.g., large organizations have more plentiful resources to combat turnover; liberal market economies have greater cooperation and coordination to sustain performance following turnover) or lessen the importance of human capital as a driver of organizational performance (e.g., replacements in food and retail organizations can become fully proficient in a much shorter period than those in financial services). The rationale for other moderators is more methodological—for instance, that turnover-performance relationships should be stronger when the turnover measure does not include terminations or when outcome variables are more directly under the control of unit members (e.g., productivity) rather than dependent on multiple inputs (e.g., profits).

Hancock et al. (2013) included studies at the unit and organizational levels (thus excluding group-level studies) and located 157 effect size estimates from 48 independent samples. They categorized organizational performance measures into four types: (*a*) labor productivity, (*b*) financial performance, (*c*) customer service, and (*d*) quality/safety. They first derived an estimate of the overall relationship between turnover and organizational performance (collapsing across all performance types) and found an average relationship of $-.03$, but with substantial heterogeneity around the average effect ($SD_r = 0.05$). Thus, the overall effect was negative, statistically different from zero, and likely shaped by offsetting contextual factors. Moderator analyses indeed revealed that effect sizes were larger in high-skill-dominated industries, liberal market economies, manager-represented samples, and when outcomes were proximal rather than distal. Regarding this latter factor, for instance, quality/safety effects were strongest (average $r = 0.12$), followed by customer service ($r = -.10$), labor productivity ($r = -.04$), and financial performance ($r = 0.00$). Hypotheses were unsupported regarding the role of firm size, location, turnover type, and regional labor costs. Finally, evidence for a weak, positive curvilinear relationship was reported, as was support for a mediated model whereby turnover affects financial performance indirectly via quality and safety.

The Hancock et al. (2013) meta-analysis shows the clear context dependence of turnover-performance relationships. Furthermore, although the overall effect size may seem small, the consequences become substantial when framed in terms of the practical impact on firm financial performance. For instance, they estimate that a one-standard-deviation reduction in turnover rates could be associated with tens or hundreds of millions of dollars in profit depending on an organization's size. Hancock et al. conclude with numerous directions for future research such as further studying conditions under which turnover may be beneficial, investigating other potential moderators, and conducting research in more diverse cultural and economic environments.

Park & Shaw's (2013) meta-analysis also focused on estimating overall turnover-performance effects, but examined a complementary set of potential moderators and located data from a set

of 110 independent samples. Extending Hancock et al. (2013), Park & Shaw also focused more directly on testing curvilinear effects. They offered three competing hypotheses, each of which specifies a different logic for the functional form of the turnover-performance relationship. The first view (i.e., linear negative) is grounded in human and social capital theories and suggests that any level of turnover is costly because it reflects loss of accumulated knowledge, skills, and social relationships. In this case, the relationship between turnover and performance is negative and linear. The second perspective (i.e., attenuated negative) draws from organizational learning theory to suggest that at higher levels of employee turnover, additional turnover has lesser impact on performance because the organization has little to lose in terms of accumulated human and social capital. Under this view, for instance, the difference between 10 and 30% turnover is qualitatively different—and more harmful than—the difference between 80 and 100% turnover. Empirically, this curvilinear effect would show a relationship that starts out strongly negative at low levels of turnover and then tapers off (becomes flatter) at high levels. A third take on the relationship (i.e., inverted-U) predicts that rising turnover has functional consequences up to some inflection point, after which rising turnover erodes performance. The thought is that at low levels, turnover has benefits that exceed its costs—for instance, organizations would save on compensation costs and bring fresh perspectives and current skills into the organization. Beyond some optimal level, however, costs begin to exceed benefits and the relationship becomes negative.

Park & Shaw (2013) first reported an overall turnover-performance effect size, corrected for predictor and criterion measurement error, of −.15. They then tested the three competing views by regressing the overall turnover-performance correlations on the sample-level average turnover rates. Effects became more strongly negative as average turnover levels increased, and in no case did they find evidence for positive turnover-performance effects. The authors cautioned that these are not direct tests of the three competing views because they are not strictly derived from a between-organization design, but concluded that there was evidence to contradict both the linear negative view (because effects were not constant across average turnover levels) and the inverted-U functional form (because effects were never positive). Results were less clear when testing the attenuated negative perspective given range restriction in the average turnover rate (in no case did it exceed 50%). Taken together, however, the findings unequivocally support the view that rising turnover damages organizational performance.

Extending the Hancock et al. (2013) study, Park & Shaw (2013) considered three sets of moderators: (a) turnover rate type, (b) organizational performance type, and (c) organizational contexts and characteristics. Turnover rate type refers to the practice of partitioning leavers (and thus turnover rates) based on departure reasons, with voluntary, involuntary, and reduction in force (RIF) among the most common. Total turnover rates, which make no such distinctions, include leavers of all types. Park & Shaw, like Hancock et al. (2013), implied that voluntary turnover rates would negatively relate to performance, whereas relationships between involuntary/RIF and performance would be less clear. On one hand, involuntary and RIF turnover are presumptive remedies for poor performance or redundant labor, which would yield performance benefits. On the other hand, researchers have questioned the proposed benefits, arguing that turnover of any type disrupts operations, severs social connections, and challenges coordination. Furthermore, in the case of involuntary turnover, there are no guarantees that the labor market can supply replacements with skills superior to those who were terminated (Hausknecht & Trevor 2011). Following from this logic, Park & Shaw predicted negative associations between turnover rates of all types with organizational performance. Findings were generally supportive, as average effect size estimates were consistent across total, voluntary, and RIF types (range = −.17 to −.14). Involuntary turnover rates were also negatively related to performance (−.01), but the confidence interval included zero and the overall estimate was based on only five samples.

Park & Shaw (2013) also segmented organizational performance by dimension and proximity to turnover. Performance dimensions included workforce productivity, financial performance, customer satisfaction, work attitudes, and quality. Similar to Hancock et al. (2013), results showed the strongest negative effects for dimensions of customer satisfaction (−.28) and quality (−.26), followed by work attitudes (−.19), productivity (−.13), and financial performance (−.11). Performance was also classified as either proximal, moderately proximal, or distal. As expected, stronger effects were found for proximal measures (−.25) versus moderately proximal (−.15) or distal measures (−.11).

The final set of moderators involved testing whether contextual (e.g., industry, region) or methodological factors (e.g., unit of analysis, study design) explain heterogeneity in the overall effect. Among the more notable findings, stronger effects were found when (a) employees were managed under a primary versus secondary employment system, (b) organizations were smaller in size, (c) studies were conducted in North America versus Europe or Asia, and (d) lagged versus cross-sectional designs were used. Adding to the growing consensus in this literature, Park & Shaw show that turnover effects are magnified in situations where human capital is of primary importance and where organizations lack alternative means of managing rising departure levels.

Park & Shaw conclude by discussing the practical impact of a −.15 meta-analytic estimate of the turnover-performance relationship. Applying the result to a large cross-industry study included in their meta-analysis, they estimated that a one-standard-deviation increase in turnover rates (i.e., moving from 12 to 22% in that study) would be associated with a 40% reduction in firm sales growth and a 26% reduction in firm profitability. They also note that turnover affects financial performance (a distal outcome) through workforce performance, which is consistent with path model results from Hancock et al. (2013). On this point, Park & Shaw suggest, "turnover researchers should cautiously use financial performance as an organizational outcome measure because other confounding factors weaken turnover's direct effects" (p. 282).

The Heavey et al. (2013) meta-analysis complements the other two by focusing on collective turnover antecedents as well as outcomes. The authors tie their approach to the Hausknecht & Trevor (2011) framework and identify several classes of antecedents, moderators, and consequences. They organize 40 different antecedents from previous studies into six categories: (a) human resource management (HRM) inducements and investments, (b) HRM expectation-enhancing practices, (c) shared attitudes, (d) quality of work group and supervisory relations, (e) job alternative signals, and (f) job embeddedness signals. The authors reasoned that turnover would be lower, for example, when organizations adopt HR practices that convey investments in human capital (e.g., better pay, training, involvement), avoid close employee oversight and control, promote favorable shared attitudes, and have more effective supervisory/group relations. They also addressed structural characteristics that would signal the degree to which employees have viable job alternatives and/or may be deeply embedded in their current jobs. In all, the authors identified 694 effect sizes meeting the criteria for study inclusion.

Results show that organizations have many turnover control levers to pull. For instance, lower turnover rates were associated with greater investments in high-commitment HR systems (−.23), greater opportunities for internal mobility (−.25), higher relative pay (−.13), better group cohesiveness (−.16), and greater union concentration (−.21). However, higher turnover is to be expected among younger (−.26) and less experienced (−.25) workforces, and when organizations offer routine work (0.36) or monitor employees electronically (0.18). Heavey et al. (2013) developed and tested moderator hypotheses to determine whether antecedent-turnover effects would be sensitive to factors such as the firm-specificity of training (i.e., general training should increase mobility, whereas firm-specific training should be less valuable externally), actual versus espoused emphasis on internal promotion, as well as industry and group size. Of these predictions, the

strongest support was found for the firm-specificity of training where they found no relation-ship between general training and turnover (0.01), but a sizable negative relationship between firm-specific training and turnover (−.40).

Turnover-consequence relationships were similar to those reported by Hancock et al. (2013) and Park & Shaw (2013). Relationships were strongest for counterproductivity (0.27), customer satisfaction (−.22) and production efficiency (−.22), but relatively weaker and/or not statistically different from zero when considering financial performance metrics such as return on equity, op-erating profit, and sales growth. Moderator analyses confirmed stronger effects for distal outcomes and within-organization (versus between-organization) studies.

Hancock et al. (2016) expanded and updated the meta-analytic database of collective turnover relationships. They included all published studies found in the three 2013 meta-analyses as well as any newer studies, yielding 150 articles and more than 2,000 effect sizes. This effort thus provides a comprehensive analysis of antecedents, consequences, moderators, and curvilinearity that brings together (while comparing/contrasting) the findings from the three 2013 meta-analyses. Results generally endorse conclusions made previously, but the larger database allows for a more detailed examination of moderators and reduces the likelihood of second-order sampling error for those relationships that previously lacked a sufficient number of studies.

Some may view the publication of four collective turnover meta-analyses as a signal that the area has matured and that "we already know about these relationships," but closer examination suggests that our understanding is still in the formative stages. For instance, we know relatively little about how different turnover types (e.g., voluntary, involuntary, RIF) affect organizational performance. The majority of the studies in these meta-analyses used total turnover rates and only a handful include both voluntary and involuntary rates in the same study. A second consideration is that most of the effect sizes summarized here were not the original authors' primary focus. For instance, nearly half of the turnover-performance relationships Park & Shaw (2013) included were not hypothesized by the original authors (turnover rates are often used as a control variable or included as one of several performance outcomes). This leaves ample opportunity to study numerous process and content factors that could impact turnover rates and/or alter the effects on organizational performance. Third, as the authors note, many of the relationships summarized across the meta-analyses are based on a small number of studies—small enough to preclude moderator analysis or any analysis at all (e.g., safety outcomes; Park & Shaw 2013). Fourth, although meta-analysis is valuable for taking stock of bivariate effects, it remains ill-suited to teasing apart issues of causality, temporal patterning, or within-study moderation/mediation, nor can it easily address confounds that could provide alternative explanations for observed relationships. Fifth, meta-analyses such as these are not ideal for revealing the effects of interventions on turnover rates. Much more is known about the factors associated with higher or lower turnover rates than the interventions that actually cause them to rise or fall.

Original Articles

Alongside the meta-analyses, several original contributions to collective turnover research have emerged since the 2011 review. Several of these studies are grounded in CET theory and/or capacity theory and directly address temporal issues associated with collective turnover and its effects (Call et al. 2015, Hale et al. 2016, Reilly et al. 2014). For instance, Hale et al. (2016) focused on the collective-level consequences of an individual turnover event, arguing that the loss of a unit member—particularly from a core position—would negatively affect unit performance. They developed and tested a two-phase longitudinal model using a sample of 524 bank branches. The first phase of their model is the disruption period in which turnover events redirect unit

members' attention toward building new relationships and work routines (not to mention assume additional responsibilities while newcomers adapt to their role). They hypothesize further that although any turnover event will bring about disruption, the effects would be particularly acute when managers versus regular employees depart and when members are highly interdependent in their work. As a consequence of turnover events in their banking context, customers of the branch would experience longer wait times and less efficient service, which would translate into lost sales that the bank would otherwise be able to pursue if operating at full capacity. The second phase of their model is the recovery period, defined as the rate of change in branch performance after the turnover event. Hale et al. (2016) argue that performance after turnover steadily rebounds, noting "the recovery is gradual because employees that remain will now be required to adapt or develop different collective states and processes (e.g., coordination, routines) to effectively accommodate expanded responsibilities and workloads" (p. 911). Once again, they predicted that although unit performance would gradually improve after both employee and manager turnover events, recovery would be slower following the departure of a manager because of the position's centrality to unit function. Results largely supported the two-phase model. Unit performance (i.e., monthly branch-level sales) dropped by 4.7% after an employee turnover event and by 6.2% after a manager departure. Furthermore, as expected, performance recovery following an employee turnover event was positive, whereas postdeparture slopes following a manager turnover event remained flat, persisting for up to 11 months.

The Hale et al. (2016) study contributes to the collective turnover literature in several ways. First, the study is among the first that theorizes and models intraunit change in turnover rates over time. Through this two-phase model, the authors show that turnover-performance effects (both initially and over time) are more pronounced depending on exactly who leaves, a finding that supports the logic found in turnover capacity theory (Hausknecht & Holwerda 2013). Second, they advance a flexible theoretical and analytical framework that future researchers can use to study the effects of turnover on performance over time (or the effects of interventions on turnover). By isolating immediate and gradual effects, the framework provides researchers a means by which to measure the duration and magnitude of turnover's consequences. Hale et al. discovered that their interdependence moderator had different effects in the disruption and recovery phases. Third, their theoretical perspective builds upon the groups and teams literature to outline process mechanisms that are likely affected by turnover events as they occur over time. In contrast to organization-level perspectives, the study begins to identify the specific group dynamics that are affected by employee departures, opening the door for future work to measure these factors firsthand.

Reilly et al. (2014) also adopted a dynamic systems view of collective turnover, focusing explicitly on how human capital flows (i.e., turnover, hiring, and transfers) affected patient satisfaction among a sample of nursing units. Consistent with CET theory, they argued that turnover's consequences could be offset by attempts at hiring (or transferring in) qualified replacements. Similar to Hale et al. (2016), they sought to understand the relative immediacy and duration of inflows/outflows by modeling these constructs longitudinally. They also investigated job demands—the amount of work facing employees—as a key mediator that links collective turnover with patient satisfaction. An interesting and rare addition to the literature was their ability to track transfers, or those who join the unit from another part of the organization. Based on the logic that transfers would have greater firm-specific knowledge than outside replacements, they hypothesized that transfers into the unit would have a more immediate effect on patient satisfaction than would external hires.

Also novel to their investigation was the use of an econometric modeling tool—panel vector autoregressive modeling—that simultaneously evaluates both immediate and long-term relationships of each variable with every other in the system. These models estimate the effects of an exogenous one-standard-deviation increase in a single variable on other variables "to forecast the

effects of a simulated spike in one variable on each other variable during several subsequent time periods as the system responds to the change" (Reilly et al. 2014, p. 776). Among other findings, results supported predictions that job demands partially mediate the negative effects of both turnover rates and transfers-out on patient satisfaction. They also found that turnover's effects on patient satisfaction persisted beyond the effects of transfers-out, presumably because transfers are more predictable and controllable. They conclude, "taken holistically, the findings suggest that a substantial portion of the effects of spikes in voluntary turnover, hiring, and transfer rates on patient satisfaction are driven by their impact on job demands" (Reilly et al. 2014, p. 782).

Similar to Hale et al. (2016), Reilly et al. (2014) make several novel contributions. It is unique in modeling both human capital outflows and inflows over time to understand offsetting effects on unit performance. The dynamic systems approach allows for estimating the effects of employee movement on job demands, a key mediator that is often discussed but not measured in past work. Finally, the study sheds light on the practical challenges that leaders face in managing human capital flows. In this setting, for instance, hospital administrators used transfers "to smooth workflow and offset the less controllable effects of voluntary turnover" (Reilly et al. 2014, p. 784). As with other studies (Hausknecht et al. 2009), this adds to our understanding of contextual factors that buffer the usual negative impacts of turnover.

Continuing the theme of testing collective turnover theory in a dynamic/longitudinal context, Call et al. (2015) studied turnover-performance relationships over time using data from 988 locations of a major US retail chain. Aspects of their investigation are grounded in CET theory, such as simultaneously modeling changes in both turnover and replacement quantity and quality. They also draw from turnover capacity theory to examine replacement quality and the time dispersion of turnover events. They distinguish between turnover rates (absolute levels) and turnover rate changes (within-unit change over time), arguing that although the two are similar, they also differ in important ways. For instance, steady turnover levels allow units to develop coping strategies, whereas rising turnover rates compound the challenges associated with any given turnover level. To this end, they found that turnover rate change was negatively associated with unit performance (i.e., adjusted profits) after controlling for turnover rate levels. Furthermore, they provided empirical support for the attenuated negative curvilinear effect discussed in Park & Shaw (2013), although the effect was of modest magnitude. Finally, Call et al. found that the negative effects of turnover rate change on unit performance became stronger as the quality of departures increased, estimating an additional 45% loss in unit profits when departure quality was high. They also showed that time dispersion of turnover events matters, finding that performance losses were smaller when turnover events were scattered over time.

Call et al. (2015) provide evidence that distinguishes turnover rates from turnover rate change and show that each explains unique variance in unit performance. They also add nuance to the modeling of turnover events, showing that the degree of departure concentration has different meaning and consequences for work units. Finally, they demonstrate the additional negative impact associated with losing high-quality employees, signaling again the value of tracking both turnover qualities and quantities.

Alongside papers aimed at testing CET or capacity theories, others have contributed by testing the reach of collective turnover theory and research to different industries. Two such studies investigate collective turnover antecedents within the public sector. Selden et al. (2013) examined how high-performance work systems (HPWS)—bundles of human resource practices believed to influence motivation, knowledge, and involvement—affect new hire turnover rates in 42 US state governments. They argue that turnover theory is implicitly private-sector focused and may not generalize to government agencies because of differences in public sector practices such as hiring, training, and compensation. Interestingly, they note that certain state governments have actively

moved away from traditional civil service systems toward HR systems that are more aligned with the principles of HPWS. Their findings showed that certain HR practices were indeed associated with lower turnover (e.g., centralized college recruitment, pay level, group bonuses), whereas others were not (e.g., use of signing bonuses, training amount spent per employee). Also investigating the public sector, Cohen et al. (2016) sampled 180 US federal agencies and found that aggregate satisfaction with pay and advancement opportunity were each negatively related to turnover rates. They also reported that an aggregate turnover intentions variable explained less than 5% of the variance in actual turnover rates, urging caution to researchers who may want to consider using intentions as a proxy for actual turnover.

Other recent studies examine collective turnover relationships for particular occupational groups, address mediation, and/or test contextual factors that may buffer turnover's effects. Mitchell & Zatzick (2015) studied 191 groups in a professional service firm and found that skill underutilization, which occurs when individuals take on work that is "mundane, could be done by employees at lower levels, and is tangential to core job tasks" (p. 788), was positively and significantly related to collective turnover. In particular, a one-standard-deviation increase in skill underutilization was associated with a 15% increase in turnover. Eckardt et al. (2014) found some support for the idea that service and manufacturing organizations are differentially affected by the loss of production managers versus production workers. They also showed that having high levels of organizational capital—i.e., knowledge that organizations codify in databases, routines, and systems—offset negative turnover effects. Also in keeping with the buffering logic, Pee et al. (2014) found that turnover was less damaging to performance among information systems teams when they made greater use of knowledge repositories and succession planning. Kuypers et al. (2017) investigated turnover and task conflict over time among a sample of 74 work units in the healthcare industry. Results showed that team turnover was especially problematic (i.e., was associated with higher team conflict) when team-level organizational tenure was low. Finally, Subramony & Holtom (2012) studied 64 business units of a temporary help services firm and found that rising voluntary turnover rates negatively affected customers' brand image. Those declines were further associated with weaker unit profits. Other work by Holtom & Burch (2016) builds from this study and others to propose a model of turnover-based disruption in customer services. They outline a causal chain that links turnover to service outcomes via disruptions in relational, human, and social capital. The model contains numerous process and context factors that help explain when and why turnover would be more strongly associated with customer dimensions including satisfaction, service quality, and efficiency.

FUTURE RESEARCH NEEDS

The collective turnover research agenda in 2011 focused on ten key areas (Hausknecht & Trevor 2011): (*a*) developing collective-level theory, (*b*) clarifying construct issues, (*c*) addressing process mechanisms, (*d*) studying collective turnover in a longitudinal context, (*e*) examining positive consequences of turnover, (*f*) continuing to evaluate turnover-performance curvilinearity, (*g*) examining alternative measurements, (*h*) documenting boundary conditions, (*i*) addressing leaver characteristics, and (*j*) studying collective turnover interventions. As summarized above, progress has indeed been made on several of these dimensions. Two collective-level theory papers have emerged (Hausknecht & Holwerda 2013, Nyberg & Ployhart 2013), which have served as the foundation for a handful of recent empirical investigations. Other studies have made inroads toward addressing process mechanisms (Reilly et al. 2014), studying turnover longitudinally (Call et al. 2015, Hale et al. 2016, Reilly et al. 2014), evaluating curvilinearity (Hancock et al. 2013, Park & Shaw 2013), and addressing leaver characteristics (Call et al. 2015). Furthermore, many of the

FIFTEEN PROMISING RESEARCH QUESTIONS FOR FUTURE COLLECTIVE TURNOVER RESEARCH

1. How important are turnover qualities relative to the usual focus on turnover quantities?
2. What is the meaning of involuntary turnover at the collective level and how does it affect performance?
3. What group/unit process variables could be tracked to better understand how turnover affects unit function and subsequent performance?
4. What events precipitate a spike or drop in collective turnover (e.g., managerial departures, loss of a star employee, layoffs)?
5. How does variation in the timing, clustering, and sequencing of turnover events affect turnover's relationship with unit performance?
6. How are collective turnover processes and outcomes similar/different at the team, work unit, and organizational levels?
7. Under what conditions is collective turnover more or less problematic for performance?
8. Are there any demonstrable benefits of collective turnover?
9. What types of turnover interventions are effective, and why?
10. What measurement approaches best forecast the effects of turnover on performance?
11. How do external factors such as the local labor market affect an organization's or unit's ability to manage collective turnover?
12. Under what conditions are curvilinear turnover-performance effects likely to emerge?
13. What is the meaning and importance of collective turnover outside of the United States?
14. Does turnover "spread" throughout a work unit or organization, and if so, how and why?
15. How well do collective turnover theories and findings generalize across industries, job levels, and different employee subpopulations?

recent articles were aimed at documenting boundary conditions of turnover-performance effects (e.g., Eckardt et al. 2014, Kuypers et al. 2017, Pee et al. 2014). Although this progress is notable, much remains to be learned on these issues, and several items from the list remain unstudied. Furthermore, several new questions have surfaced that could benefit from additional research. Thus, in the sidebar Fifteen Promising Research Questions for Future Collective Turnover Research, I provide recommendations for propelling this area forward. As discussed next, these research questions tend to cluster around several key themes.

Expand the Study of Context (Research Questions 7, 8, 12, 13, and 15)

Given the multiple meta-analyses now in print, it is probably time to move beyond simple main effects for some of the more obvious antecedents and consequences of collective turnover. We know that turnover clearly matters for organizational performance and have discovered numerous antecedents that reliably predict turnover rates. To extend this work, researchers should address the conditions under which relatively stronger or weaker relationships will be found. Such a focus on moderation and context would yield interesting insights as to when rising turnover rates are relatively inconsequential and/or severely damaging (e.g., in the latter case, empirical attention to the practice of "lift-outs"—acquiring intact subgroups of high-performing members—would be valuable; see Groysberg & Abrahams 2006). Another research direction is to expand the types of dependent variables measured—it is likely that turnover indeed has benefits for certain outcomes (e.g., innovation, labor cost control)—but most of these remain unstudied. As another example,

some unit leaders intentionally dismantle existing team structures (e.g., managers and coaches in professional sports) via both terminations and other practices that could cause spikes in voluntary turnover. Researchers could track whether any short-term negative effects reverse course over the long run. Related to this is the issue of identifying whether and when curvilinear relationships are likely to emerge. On the basis of meta-analytic reviews discussed previously, the magnitude of the effects discovered to date (when found) is small, but perhaps this is reflective of the settings and samples that researchers have been able to access to date more than anything else.

Move Beyond the United States (Research Questions 2, 6, 11, 13, and 15)

Given that most collective turnover studies have been conducted in the United States (Park & Shaw 2013), we know very little about turnover in different countries and cultures. This is a missed opportunity because the meaning, magnitude, and impact of collective turnover may vary considerably in other regions. For instance, according to the Bureau of Labor Statistics data, US quarterly turnover rates hovered around 10–12% in the past 10 years or so, but were half as large in countries such as Estonia and nearly double in others such as New Zealand. Such variability is likely the complex product of differences in employment systems, culture, history, local labor laws, and more. Referring to potential cross-cultural differences, Hancock et al. (2013, p. 580) noted, "turnover may be more disruptive in more individualistic contexts, such as the United States, the United Kingdom, and the Netherlands, because work processes are more likely to be dependent on unique human and social capital resources associated with particular individuals," and "In more collective cultures such as China, Japan, and Korea, where individuals are expected to function in complementary ways within the group, it may be simpler to find and integrate replacements into group functioning." Supporting this logic, and noting somewhat stronger turnover-performance relationships for studies conducted with North American samples, Park & Shaw (2013, p. 283) stated, "organizations in individualistic cultures may have more difficulty finding internal replacements than those in collective cultures because existing employees will feel less peer pressure to complete the tasks of the departing individual." Along with studying cross-cultural differences, there is ample opportunity to further examine specific industries and occupational groups, both within the United States and beyond. Many studies to date focus on retail, hospitality, banking, and related sectors where turnover is relatively high and average skill requirements are relatively low. Expanding the scope of collective turnover to cover a more representative sample of the global workforce would be a plus.

Examine Events and Interventions (Research Questions 4, 5, 9, and 11)

Recent studies have been better able to pinpoint how certain events such as downsizing (Trevor & Nyberg 2008) or manager departures (Hale et al. 2016) affect subsequent turnover rates; however, this research stream is still nascent. Given researcher access to the methodological and analytical tools to model events and interventions over time, such studies would help show the costs and benefits associated with specific organizational events rather than (or in addition to) the relationships commonly studied around general employee attitudes or perceptions. The study of events also provides an opportunity to model qualities of collective turnover discussed in CET and capacity theories. For instance, certain events may be expected to produce spikes of concentrated departures (which are perhaps more damaging to unit outcomes, such as a pay cut), whereas others lead to gradual, time-dispersed turnover as employees make sense of the ramification of a given organizational change (which could be less severe, such as a job reclassification).

Measure Process (Research Questions 3, 6, and 14)

The collective turnover literature is remarkably devoid of measures of the hypothesized process mechanisms that presumably transmit the influence of turnover to unit performance. Most of the arguments surrounding operational disruption, human/social capital loss, and other intervening mechanisms are most often assumed rather than measured. The factors routinely mentioned in collective level theorizing—coordination, communication, teamwork, climate, knowledge, relationships—if studied more carefully, could yield both theoretical insights as well as practical implications. For instance, if turnover is found mainly to disrupt communication patterns, interventions could be designed to promote operational continuity as a unit continues to move employees in and out of key positions. It also seems likely that the processes by which turnover affects performance differs across team, unit, and firm levels. At present, the field does not have adequate theory or measures to address this possibility. Related to this, there is little work that examines the processes by which turnover can spread throughout a unit (Felps et al. 2009), suggesting overall that attention to process factors ranks high on the list of research needs.

Expand, Validate, and Refine Measures (Research Questions 1, 2, 5, and 10)

Apparent from this review is the ample opportunity to test and refine collective turnover measures. The key challenge is to identify ways to track the hypothesized characteristics or "qualities" of departures that are perhaps more indicative of turnover's consequences than a simple quantitative count. Researchers have made initial inroads in outlining how these measures could work (Hausknecht & Holwerda 2013, Nyberg & Ployhart 2013), but the door is open for validation and extension of alternative metrics that move beyond simple rates. Studying different turnover types continues to offer opportunities, as we also still know relatively little about involuntary turnover at the collective level, and preliminary evidence shows somewhat counterintuitive negative effects on unit performance.

CONCLUSION

Despite enduring interest at the individual level in why people quit, there is now growing concern for understanding the causes and consequences of collective turnover. Since the publication of the last major narrative review, four different meta-analyses and numerous original articles have appeared. Although much of this work has been predicated on individual-level rationale, this is changing given developments in collective-level theorizing. Furthermore, several recent papers provide a more granular view into the qualities and quantities of turnover and how they change over time in affecting unit performance. Other work continues to show how various factors buffer turnover's often negative performance effects. Although recent progress has been noteworthy, there is a clear need to continue investigation to understand the conditions under which collective turnover develops, changes, and affects unit and organizational performance.

DISCLOSURE STATEMENT

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Contents

Errata

An online log of corrections to *Annual Review of Organizational Psychology and Organizational Behavior* articles may be found at http://www.annualreviews.org/errata/orgpsych