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Ksenia Usanova & Mickaël Géraudel

To cite this article: Ksenia Usanova & Mickaël Géraudel (2023): Talent turnover and the contagion effect: the case of the aerospace industry, Human Resource Development International, DOI: [10.1080/13678868.2023.2238247](https://doi.org/10.1080/13678868.2023.2238247)

To link to this article: <https://doi.org/10.1080/13678868.2023.2238247>



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Published online: 21 Jul 2023.



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# Talent turnover and the contagion effect: the case of the aerospace industry

Ksenia Usanova  and Mickaël Géraudel 

## ABSTRACT

This study takes a talent turnover perspective that relies on the contagion effect. It focuses on the role of the perceived organisational commitment of co-workers in the relationship between organisational commitment and intention to quit of focal talent. Organizational commitment is one of the major predictors of intention to quit, yet it has barely been studied as a research construct in examining this contagion effect. Drawing on the emotional contagion literature and proposing a new variable, we find that the perceived organisational commitment of co-workers has an indirect effect on intention to quit through organisational commitment. This study is based on the survey responses of 56 highly knowledgeable and skilled employees, identified as talent, from the aerospace industry in Luxembourg. It contributes to the turnover contagion literature by empirically highlighting the important role of co-workers' organisational commitment in the generation of focal talent's thoughts on quitting. It also has implications for the talent management literature and human resource management practitioners.

## ARTICLE HISTORY

Received 18 November 2022  
Accepted 12 July 2023

## KEYWORDS

talent retention; contagion effect; organisational commitment; intention to quit; perceived co-workers' organisational commitment

## Introduction

Employee turnover has significant importance for organisations, as it incurs tangible costs such as performance risks and the need for employee replacements (Chung, Kim, and Kim 2022; Hom et al. 2017; Winterton 2004). The costs associated with hiring a new employee can vary from three to four times a position's salary (SHRM 2022). Currently, it is a particularly sensitive issue for high technology (high-tech) companies that, on the one hand, heavily invest in talent development and, on the other hand, experience downsizing that might lead to an even greater turnover of valuable employees (The Economist 2023). Turnover contagion is the transmission of quitting behaviours among co-workers, resulting in a spillover effect (Felps et al. 2009; Sunder et al. 2017). In other words, it is when 'turnover itself causes more turnover' (Krackhardt and Porter 1986, 50; cited by; Porter and Rigby 2021, 213). To manage it effectively, identifying instances of turnover contagion and understanding the underlying mechanisms in this process are crucial (Cascio 2014; De Winne et al. 2019; Porter and Rigby 2021).

The literature on turnover contagion has approached this phenomenon from various perspectives. While most studies have focused on the contagion of actual quitting

**CONTACT** Ksenia Usanova  [ksenia.y.usanova@gmail.com](mailto:ksenia.y.usanova@gmail.com)

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behaviours (Felps et al. 2009), recent studies have started to examine the preceding phase, delving into the psychological processes involved (Gardner, Van Iddekinge, and Hom 2018; Porter and Rigby 2021). Specifically, researchers have started to investigate how emotional prequitting cues exhibited by co-workers influence the thoughts and decisions of a focal employee, ultimately impacting their actual turnover (Pustovit 2019; Wang et al. 2017). For example, how the job satisfaction of co-workers influences the quitting decision of a focal employee (Wang et al. 2017). As a result, Porter and Rigby (2021) proposed an improved definition of turnover contagion, highlighting that it is not only turnover-related behaviours that spread among employees but also turnover-related thoughts and feelings. However, the predominant focus of existing literature is still co-workers' *behavioural* prequitting cues. Researchers study co-workers' job search activities and interview invitations, with only a few exceptions exploring the co-workers' *psychological* cues affecting an employee's decision to quit (Wang et al. 2017). These psychological prequitting cues by co-workers could include factors such as engagement, job satisfaction, or organisational commitment.

In this study, we investigate the role of co-workers' organisational commitment as a significant psychological cue preceding a focal employee's decision to quit. Organizational commitment holds particular importance, as it has been consistently identified as one of the strongest predictors of quitting thoughts among both regular employees and individuals recognised as valuable talent within organisations (Hom et al. 2017; Redondo, Sparrow, and Hernández-Lechuga 2021; Zimmerman, Swider, and Boswell 2019). Commitment is defined 'as a volitional psychological bond reflecting dedication to and responsibility for a particular target' (Klein, Molloy, and Brinsfield 2012, 137). Similarly, in HRM studies, commitment to an organisation is often conceptualised as affective commitment, representing an emotional construct (Van Rossenberg, Cross, and Swart 2022).

The primary research question guiding this study is to comprehend the role of co-workers' organisational commitment in relation to the quitting thoughts of focal employees through their own organisational commitment. Building upon the principles of emotional contagion theory (Hatfield, Cacioppo, and Rapson 1994), we contend that individual commitment does not exist in isolation but is a relative concept influenced by the commitment of others. Specifically, we focus on the *perception* of co-workers' organisational commitment, as it is an individual perception that shapes subsequent quitting feelings, thoughts, and behaviours (e.g. Griffeth, Hom, and Gaertner 2000). Hence, our hypotheses posit a contagious effect of perceived organisational commitment of co-workers (POCC) on an individual's own organisational commitment (OC) and subsequent quitting thoughts (intention to quit (IQ)) of focal employees. While several types of OC exist, such as affective, continuous, and normative commitment (explained in detail later), our emphasis here is on the affective OC (Marsden, Kalleberg, and Cook 1993; Mowday, Porter, and Steers 1982; Van Rossenberg, Cross, and Swart 2022).

To test these hypotheses, we conduct an empirical survey-based study utilising a specific sample of high-tech talent from the aerospace industry in Luxembourg. The characteristics of this sample render it particularly suitable for this study.

High-tech talent in the aerospace industry in Luxembourg can be regarded as an elite group. First, this industry presents itself as an enticing industry with ambitious missions and engaging job tasks focused on research and development. It requires

highly skilled specialists and often offers above-average salaries (Deloitte 2020). Recognizing its potential as a European space hub and with the aim of strengthening Luxembourg's economy, the government provides extensive support to this industry (Luxembourg Space Agency 2022). In 2020, the fund received 70 million EUR to attract new enterprises, develop talent, and sponsor research in this area (Deloitte 2020). Consequently, working in the space industry is considered challenging and prestigious.

Second, employees identified as valuable talent (Collings and Mellahi 2009; Dries 2013) represent an exclusive subgroup of high-tech workers within this domain. As Swailes, Downs, and Orr (2014) noticed, identifying key employees is an 'inevitable' process – be it conscious or unconscious (p. 533). High-tech talent are defined as exceptional experts and high performers who make more significant contributions to their organisations than other workers (Downs and Swailes 2013; Iles, Preece, and Chuai 2010; Shet 2020; Sparrow and Makram 2015; Swailes, Downs, and Orr 2014). Furthermore, they are often identified as having high potential for leadership positions (De Winne et al. 2019; Dries 2013). According to Dries (2013, 279), a significant proportion, up to 90%, of organisational resources can be allocated to these selected few talented individuals. Such allocation may encompass various forms, such as financial incentives, nonmonetary rewards, investments in training, and opportunities for promotion.

Considering these distinctive characteristics, this unique sample of high-tech talent provides an ideal opportunity to investigate the contagion effect of perceived co-workers' organisational commitment. On the one hand, Luxembourg's space industry can be seen as a cohesive environment where emotions easily spread among co-workers (Dong and Wang 2022; Vijayalakshmi and Bhattacharyya 2012). As Jung and Yoon (2019) state, 'human emotions are particularly contagious when people belong to the same social environment and maintain close relationships' (p. 738). This is particularly evident in high-tech work, such as in space organisations, as it involves working on complex tasks and, consequently, building trust among co-workers to overcome those challenges (Burke and Moore 2004). Therefore, the contagion effect is expected. On the other hand, the differentiation of these highly valued employees creates a situation where talent may feel special and distinct from the majority of the workforce (Van Zelderren, Dries, and Marescaux 2022), potentially resulting in a degree of immunity to the emotions of others. Thus, focusing on this specific group can offer nuanced insights into the presence and dynamics of the contagion effect.

Based on the statistical analysis of the 56 responses from talent of space industry in Luxembourg, we confirmed the contagion effect and discovered an indirect effect of perceived co-workers' organisational commitment on the quitting thoughts of talented individuals through their own organisational commitment. First, this study makes a valuable contribution to the research on turnover contagion. Surprisingly, although organisational commitment has been widely acknowledged as a key predictor of intention to quit (Winterton 2004; Zimmerman, Swider, and Boswell 2019), it has rarely been examined as a subject of contagious effects (Porter et al. 2022). Previous studies have predominantly focused on the spillover of behaviours deemed 'negative' or 'undesirable' (Gino, Ayal, and Ariely 2009), while the extent to which co-workers' positive (or

negative) attitudes, such as organisational commitment, spill over to other employees' intentions to quit and how those attitudes affect intentions remain relatively unexplored.

Second, by specifically concentrating on a distinct group of talent, the findings of this study contribute to the literature on talent management. Despite recent efforts in the talent management literature to emphasise that talent does not operate in isolation (Ghosh, Reio, and Bang 2013; McDonnell et al. 2021), most studies have maintained a narrow focus on examining talent as independent actors within an 'elite' group (Al Ariss, Cascio, and Paauwe 2014; Thunnissen and Gallardo-Gallardo 2019; Vaiman et al. 2021). Consequently, by exploring the relationship between talent and the broader work group, this study provides insights into whether their perceived special status affects their susceptibility to the emotions of others or whether they exhibit a certain degree of immunity regarding co-workers' emotions towards organisation (e.g. Van Zelderren, Dries, and Marescaux 2022).

Third, this study contributes to the human resource development literature. Considering the substantial investments made globally in the development of high-tech talent (Milton 2003; STEM Learning 2018), studies recognise that retention is an important issue in maximising the returns on these development efforts. However, as highlighted by Winterton (2004) and Shet (2020), limited attention has been given to this aspect. Therefore, this study redirects attention in this domain towards talent turnover, shedding light on strategies to retain employees who have received substantial investments in their development, thereby ensuring that these development efforts are not squandered. This holds particular significance for Luxembourg's space industry because of Luxembourg's substantial support for the industry, including talent development (LSA 2022). Moreover, the implications extend beyond the space industry and are relevant for broader Luxembourgish society. Notably, the European Investment Bank has recognised Luxembourg's higher level of investment in talent development on a national level than that of other European countries (Brutcher 2019).

The remainder of the paper is organised as follows. In the next section, we discuss the theoretical background, focusing on the social contagion effect approach. Then, we develop hypotheses to investigate the relationships among POCC, OC, and IQ. Subsequently, we present our methods and findings. Finally, we discuss the results within the literature context before concluding the paper.

## **Theoretical background**

### ***Social contagion effect***

The social contagion effect literature can be categorised into behavioural and emotional groups. Although the turnover contagion literature is usually based on behavioural studies and thus refers to social information processing theory, in this study, we are interested in the emotional contagion effect. The emotional contagion effect describes the spillover of both emotions and attitudes among groups of people (Doherty et al. 1995; Hatfield, Cacioppo, and Rapson 1994). People automatically mimic each other either unconsciously, as it is 'an innate adaptive function' (Doherty et al. 1995, 188), or consciously, to compare themselves with others and, thus, better understand themselves (Doherty et al. 1995) and the reality around them (Degoey 2000).

OC is often defined as ‘the relative strength of an individual’s identification with and involvement in a particular organisation’ (Mowday, Porter, and Steers 1982, 27). Furthermore, Meyer and Allen (1991) distinguish the following three types of OC: affective, continuance and normative. The first involves emotional attachment, the second involves the costs associated with severing the employer-employee relationship, and the third involves the moral obligations that reduce employees’ motivation to leave their employer (Meyer and Allen 1991). However, Solinger et al. (2008) criticised Meyer and Allen’s (1991) understanding of OC for its conceptual confusion (e.g. affective commitment is directed towards the organisation, while continuance and normative commitment are directed towards actions/behaviours). Later, Klein, Molloy, and Brinsfield (2012) revised commitment conceptualisation and suggested a more general definition of commitment ‘as a volitional psychological bond reflecting dedication to and responsibility for a particular target’ (p. 137). Although research on OC continues to evolve and many nuances have been revealed (related to, e.g. dimensionality and the different ‘targets’ of commitment (Van Rossenberg, Cross, and Swart 2022), the evolution of OC due to the rise of technology, globalisation (Chauhan, Howe, and Nachmias 2022) and new generations (Zarwi et al. 2022)), the importance of OC remains stable (Klein, Brinsfield, and Cooper 2021). In HRM studies, OC is often defined as an affective commitment (Van Rossenberg, Cross, and Swart 2022). This means that it represents an emotional attachment towards organisations. Indeed, OC is one of the most important facets for organisations. It is often studied as a dependent variable or as a mediator to understand how organisational efforts generate certain outcomes (Van Rossenberg, Cross, and Swart 2022; Weng et al. 2018).

Therefore, regarding OC, such an emotional contagion effect can be seen in situations when individuals hear co-workers complaining about their organisation’s employees and thus come to develop similar attitudes themselves. In contrast, when co-workers are visibly enthusiastic, happy, and engaged in organisations’ initiatives, offering new solutions, smiling, and talking positively about their employer, it spreads positive emotions about the organisation. This positive attitude can also spill over to other co-workers. Indeed, Neumann and Strack (2000), through experiments, confirmed that people tend to unintentionally align their mood with the expressed emotions of others. A recent study by Ho, Garg, and Rogelberg (2021) showed that employees’ passion is linked to the passion of the co-workers they trust. Other examples, although they sometimes focus on the emotional spillover from a leader to subordinates rather than that between equal team members, present similar results. For example, Cardon (2008) studied how passionate entrepreneurs spread their passion among their employees and confirmed this effect. O’Neill et al. (2009) came to similar conclusions by showing that the positive moods of leaders inspire their followers, and, in contrast, the negative moods of leaders discourage their followers. Thus, there is a high possibility that organisational commitment could spill over to valuable talent from co-workers.

### ***Contagion turnover effect***

Studies have shown that when one employee leaves, others become more likely to leave (e.g. Krackhardt and Porter 1986; Felps et al. 2009; Wang et al. 2017; Sunder et al. 2017). In the turnover literature, the concept of ‘turnover contagion’ was first

introduced by Felps et al. (2009), who used the metaphor of illness to explain why employees leave when co-workers leave. Recently, this term was nuanced by Porter and Rigby (2021), who defined it “as a process whereby co-workers’ turnover-related thoughts, feelings, and/or behaviours spread among employees” (p. 214). In fact, it is not only the actual quitting of co-workers that influences individuals’ decisions to leave but also their prequitting behaviours (Gardner, Van Iddekinge, and Hom 2018) and prequitting cues, such as their expressed thoughts and feelings (Porter and Rigby 2021). However, empirical studies on the turnover contagion effect mainly test and prove such an effect based on behavioural outcomes, thus removing focus from the psychological process (Lee et al. 2017). For example, Sunder et al. (2017) found that salespeople are more likely to leave a firm when their peers leave. Felps et al. (2009) found that minor actions of co-workers such as looking through job listings and mentioning job interviews increased the turnover rate of their colleagues. Thus, with only a few exceptions regarding the spillover of emotional predictors of turnover (see Wang et al. 2017), studies focus mainly on contagious behaviours. Indeed, OC has been widely confirmed to be one of the most important predictors of employees’ intentions to quit (Hausknecht, Rodda, and Howard 2009; Mathieu et al. 2016; Tett and Meyer 1993) among those who are viewed as key employees (talent) (Redondo, Sparrow, and Hernández-Lechuga 2021); however, OC has not yet been a focus of turnover contagion research.

Drawing on emotional contagion theory and empirical studies on employee and talent turnover, we hypothesise how the OC of high-tech talent depends on POCC and influences the IQ of such talent. Considering that the space industry entails demanding tasks and relies on trustworthy collaborations (Vijayalakshmi and Bhattacharyya 2012), we posit that talented individuals, in general, should cultivate trustful relationships with the majority of their colleagues. Consequently, employees, identified as talent, would be receptive to their co-workers’ emotions and attitudes.

### ***Organizational commitment (OC) and intention to quit (IQ)***

The link between OC and IQ is well reported across sectors and job positions (e.g. Carmeli and Weisberg 2006; Griffeth, Hom, and Gaertner 2000; Mathieu et al. 2016; Weng et al. 2018). This link was again clearly established, specifically for high-tech specialists (Calisir, Gumussoy, and Iskin 2011) and employees identified as talented (Redondo et al. 2020). Redondo and colleagues (2020) found that talented employees are less likely to think about leaving their employer than other types of employees. Indeed, skilled talent is often valued in the labour market (Wei 2015). As Wei (2015) pointed out, talented individuals often have more job offers from potential employers than regular employees (Ott, Tolentino, and Michailova 2018; Wei 2015). Consequently, when they choose employers, they make a purposeful decision, and thus, the link between OC and IQ should be particularly strong (Redondo et al. 2020). Indeed, Dries, Van Acker, and Verbruggen (2012) found that talented employees have higher OC than other types of employees, and, recently, Kanabar and Fletcher (2022) found that they have higher organisation-based self-esteem that should, in turn, increase their OC. Therefore, we hypothesise the following:

**H1:** OC has a direct and negative effect on IQ.

### ***Perceived organisational commitment of co-workers and organisational commitment***

The relationship between POCC and OC has not been directly investigated in previous studies. Instead, alternative variables such as collective commitment or team commitment have been used (e.g. Neiningger et al. 2010), which do not capture individual employees' *perceptions* of their co-workers' level of commitment. However, Mowday (1981) discovered that individuals tend to mentally transfer their own OC level to their co-workers, indicating that if an individual has a high level of OC, they also perceive their co-workers' OC to be high. Additionally, the influence of OC on POCC may work in the opposite direction, where OC might depend on POCC. Emotional contagion theory (Hatfield, Cacioppo, and Rapson 1994) suggests that people tend to mimic the emotions and attitudes of others, a notion supported by empirical findings. For instance, Bartunek, Huang, and Walsh (2008) observed that emotions spread within cohesive teams, leading to the development of shared understanding and collective perceptions of organisational reality. Similarly, Ho, Garg, and Rogelberg (2021) found that individuals adopt the emotions of the co-workers they trust. These two studies highlight the contextual importance of emotional contagion. Indeed, Vijayalakshmi and Bhattacharyya (2012) concluded that the level of emotional contagion depends on individual, interpersonal and contextual factors. In that sense, the high-tech industry represents a specific context that embraces both contextual and sequentially interpersonal factors. The high-tech industry, especially regarding its startups, is viewed as comprising organisations with flat structures lacking hierarchies (Krishnan and Scullion 2017), which would presumably increase team spirit and thus improve interpersonal factors, such as 'cohesiveness', 'interpersonal trust' and 'congruence' (Vijayalakshmi and Bhattacharyya 2012, 370). Additionally, this industry fosters positive emotions due to inspiring missions and rapid startup growth, potentially increasing the likelihood of emotional contagion and mood congruence (Totterdell 2000). Of course, there is another level of influence on the speed of emotional spread, which is that of individual factors.<sup>1</sup> However, we are particularly interested in the high-tech industry, where the combination of contextual and interpersonal factors suggests a significant and relatively high level of emotional contagion, regardless of differentiated statuses co-workers might have (being identified as 'talent' or not). Therefore, we hypothesise the following:

**H2:** POCC has a positive and direct effect on OC.

### ***Perceived organisational commitment of co-workers and intention to quit***

POCC (in the form of collective commitment or related constructs) has been examined in previous research, yielding conflicting findings. For instance, Mowday (1981) investigated the relationship between individuals' OC levels and their perceptions of co-workers' reasons for quitting. Individuals with high OC claimed that their co-workers who left did so for alternative opportunities rather than due to dissatisfaction (Mowday



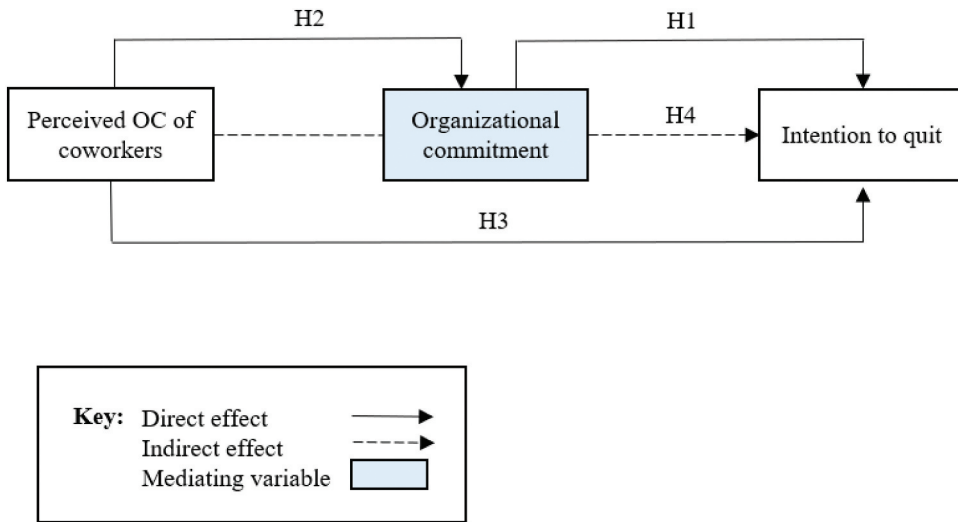
1981). Conversely, those with lower OC levels perceived their co-workers as lacking commitment and satisfaction with the employer. Similarly, Krackhardt and Porter (1986) discovered that employees who remained in the organisation after their colleagues' departure exhibited even higher levels of OC. Furthermore, Felps et al. (2009) did not find a significant connection between co-workers' OC and an individual's actual turnover.

However, Neining et al. (2010) conducted a recent study in the automotive industry and found that team commitment influenced individuals' intention to quit, although the impact was weaker than the effect of individual OC on IQ. This aligns with the work of Porter and Rigby (2021), who suggested that prequitting cues from co-workers can impact employees' decisions to quit. Considering the specific environment in which high-tech talent operates, we posit that POCC should have a similar negative impact on IQ among talented individuals. First, the aerospace industry is renowned as an innovative field with shared inspiration, such as exploring other planets. Consequently, team spirit and emotional congruence are expected to be high (Totterdell 2000). Second, this industry requires highly educated and knowledgeable employees, leading to better alignment of perspectives among employees, even when there is workforce differentiation (Jung and Yoon 2019). Moreover, individuals are inclined to align with the majority when they observe unified thoughts and activities (Hatfield, Cacioppo, and Rapson 1994; Neumann and Strack 2000). Therefore, talented individuals' intentions to quit may be influenced by POCC. Based on these reasons, we hypothesise the following:

**H3:** POCC has a negative effect on IQ.

### ***An integrated model: organisational commitment, intention to quit and the perceived organisational commitment of co-workers***

In addition to the effect of POCC on IQ, it is crucial to better understand how exactly POCC influences IQ. As indicated earlier, on the one hand, POCC should affect IQ (cf. Hypothesis 3), as Neining et al. (2010) showed that a team's commitment affects individuals' decisions to leave. On the other hand, according to turnover theory (Lee et al. 1999), which is supported by vast empirical evidence (e.g. Mathieu et al. 2016; Weng et al. 2018), individuals' OC is one of the major predictors of IQ (cf. Hypothesis 1). Furthermore, Neining et al. (2010) found that individuals' OC was a stronger predictor of IQ than collective OC. Indeed, the quitting thoughts of high-tech talent are influenced by the attitudes and feelings of their co-workers (Porter and Rigby 2021), but they also rely on their own attitudes and feelings (Lee et al. 1999). Considering that talent are employees whose knowledge and skills are needed on the market, they often feel confident and special due to the value that they bring to their organisation compared to that brought by other employees (Ott, Tolentino, and Michailova 2018) and therefore should rely more heavily on their personal level of organisational commitment. In other words, talent's IQ responds favourably to POCC to the extent that focal talent is committed to their organisation. In that vein, we suggest that talent who are committed to their organisations will be less likely to develop quitting intentions as driven by their perceptions of their co-workers' levels of commitment. Therefore, combining our hypotheses



**Figure 1.** POCC-OC-IQ model.

based on emotional contagion (Hatfield, Cacioppo, and Rapson 1994) with turnover theories (Lee et al. 1999) and the above arguments, we suggest that the POCC-IQ relationship should be mediated by OC (see Figure 1). Therefore, our final hypothesis is as follows:

**H4:** POCC has negative indirect effects on IQ through OC.

## Methods

### Research design

Given the positivist nature of our research question, which aims to discover causal relationships between theoretical constructs, we utilise survey-based methods and quantitative analysis (Saunders, Lewis, and Thornhill 2009). This approach is particularly appropriate for studying contagion effects, allowing precise measurement of relationships and supporting statistical analysis to establish causal links between variables.

### Sample and data collection

We used purposeful sampling to select organisations. We focused on aerospace companies in Luxembourg. As mentioned earlier, Luxembourg serves as a European Space Hub and actively supports the development of the aerospace sector via startup programs and other financial aid for space organisations (LSA 2022). To gather our data, we reached out to the LSA and requested introductions to the aerospace companies located there. We then selected organisations that met the following criteria: (i) They conduct aerospace-related activities (e.g. robotics for aerospace, artificial intelligence for aerospace, and others) and (ii) are registered and operate in Luxembourg. In total, 26 aerospace companies in Luxembourg participated in the study.

The survey was conducted online and distributed by the leaders of the chosen organisations, following Dillman's (1978). First, we had conversations with the CEOs and HR directors of these organisations to understand how they define talent. Then, we asked them to send the survey to their key high-tech employees who are deemed talented in their organisation. Indeed, the choice of respondents was the organisations' (see the similar approach of Redondo et al. 2020). However, we ensured that organisations selected the key employees who contributed most to the strategic goals of their organisation (Al Ariss, Cascio, and Paauwe 2014). We mentioned to the organisations that high-tech talent can be highly knowledgeable specialists (e.g. key experts), high performers and/or have high potential to become a key expert or a manager (e.g. Dries 2013; Dries, Van Acker, and Verbruggen 2012; Gallardo-Gallardo et al. 2015). Consequently, in the absence of formal talent management (TM), we targeted those employees who were informally identified as talent (Swales, Downs, and Orr 2014).

The survey includes an introduction in which respondents are informed of the objectives of our study. It contains questions about POCC, OC, IQ, and control variables. We also asked respondents whether they were part of a formal TM program (e.g. an associate program/high potential program/or other program where certain employees receive a disproportionately larger investment from their employing organisation). The goal of this question was to ensure that if aerospace companies did have programs for the formal identification of talent, then they used these programs to select their key talent for our survey.

Almost all the questions were mandatory, and at the end of the survey, one could request an emailed summary of the results. First, we received 63 completed surveys. Second, we carefully reviewed each survey and recontacted the respondents to clarify any missing or incomplete answers. We then removed those that were either incomplete (if we could not reach the respondent) or did not meet our criteria. Indeed, some of the respondents listed their email addresses (this question was not mandatory), and we thus had an opportunity to recontact them, while others preferred to stay unreachable. Therefore, of the 63 completed surveys, we excluded three incomplete surveys that did not afford the possibility of clarification and others that did not meet our sample criteria. As a final sample, we used data from 56 completed surveys for the analysis of the aerospace industry in Luxembourg. Considering the small size of the country and its aerospace industry – only 50 space companies existed with less than 800 workers at the time of conducting the study (LSA 2022) – and our focus on talented individuals (who often represent only 5 to 10% of all workers in large organisations (Collings and Mellahi 2009) and a larger percent in smaller firms (Krishnan and Scullion 2017), the sample is viewed as reliable.

### ***Measures and demographic information***

First, to measure OC, we used Marsden, Kalleberg and Cook (1993) scale, which is similar to that of Mowday, Porter, and Steers (1982, 221). It contains six statements, including 'I would take almost any job to keep working for this organisation'. We purposefully chose a scale that uses general statements since we did not want respondents to concentrate on specific aspects of the organisation but rather report on their general feeling regarding their employer. In addition, we did not want respondents to get fatigued

**Table 1.** Demographic characteristics.

	All talents (N = 56)
Sex	
Female (%)	18 (32.14)
Male (%)	38 (67.86)
Age	
Minimum	24
Maximum	63
Mean (SD)	33.66 (9.04)
Education	
Master's degree (%)	38 (67.86)
PhD or MBA (%)	18 (32.14)
Mean (SD)	3.54 (0.97)
Position	
Executive level (%)	3 (5.4)
Managerial level (%)	14 (25)
General staff (%)	39 (69.6)
Mean (SD)	1.36 (0.58)
Salary(log)	
Minimum	4.43
Maximum	5.08
Mean (SD)	4.65 (0.17)

by a long survey (see the similar approach of Klein, Brinsfield, and Cooper 2021). Second, for POCC, we adopted the Marsden, Kalleberg, and Cook (1993) scale and added the clause ‘I think the majority of my colleagues . . . ’ to all six statements of the initial version, for instance, ‘I think the majority of my colleagues would take almost any job to keep working for this organisation’. Third, IQ was measured using Bluedorn’s (1982) scale, which uses exemplary statements such as ‘I often think of changing my job’. Finally, to control for the potential impact of demographic characteristics, we used the following measures: sex (0 - male, 1 - female), age, annual NET salary (EUR), educational level (1 – BA, 2 – MA, 3 – MBA, 4 – PhD) and job position (1 – general level, 2 – managerial level, 3 – executive level).

In our sample, 32% of respondents were women and 67% were men, which is consistent with the low representation of women in masculine industries, such as high-tech industries (McKinsey 2020). The average age was 34 years, with all respondents having either a master’s degree (68%), MBA, or doctoral degree (32%). Respondents occupied either managerial (25%) or general levels (70%), and three respondents (5%) occupied top-management positions. The demographic characteristics of our sample are displayed in Table 1.

### **Data analysis**

For the analysis, we used SPSS 20 software with an extension of the PROCESS macro tool (Hayes, 2018). To avoid common method bias, we informed respondents in our welcome text that while some of the statements might be viewed as similar, we encouraged them to read carefully and answer thoughtfully (Podsakoff et al. 2003). To confirm the absence of common method bias, we used Harman’s single factor (Podsakoff et al. 2003). We found that 35.4% was the cumulative total variance, representing the first component (from all variable items), and the reliability estimate

**Table 2.** Means, standard deviations, and correlations.

Variables	Mean (SD)	1	2	3	4	5	6	7	8
(1) Age	33.66 (9.04)	1							
(2) Sex	0.32 (0.47)	0.040	1						
(3) Education	3.54 (0.97)	-0.076	-0.145	1					
(4) Position	1.36 (0.58)	0.356**	-0.160	-0.055	1				
(5) Salary(log)	4.65 (0.17)	0.476**	-0.213	0.237	0.329*	1			
(6) Organizational commitment	-	0.134	-0.042	-0.069	0.340*	-0.024	1		
(7) Perceived OC of co-workers	-	0.093	-0.022	-0.301*	0.262	-0.166	0.598**	1	
(8) Intention to quit	-	-0.062	-0.253	0.331*	-0.170	0.341*	-0.531**	-0.425**	1

Note: We report coefficients for the variables used (Pearson correlation). \*Correlation is significant at the 0.05 level (2-tailed). \*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 3.** Overview of the mediating and moderating effects determined using multiple regression.

Variables	Organizational commitment (OC)	Intention to quit (IQ)
Constant	-0.9477	-0.8612
Age	0.0028	-0.0103
Sex	0.0277	-0.3799
Education	0.1132	0.1909
Position	0.2933	-0.1393
Salary(log)	0.0000	0.0000
POCC	0.5443***	0.0030
OC		-0.5040***
R	0.6381	0.6976
R2	0.4072	0.4866
F	5.6089***	6.4996***

Note:  $N = 56$ . \*\*\* $p < 0.001$ ; \*\* $< 0.01$ ; \* $p < 0.05$ .  
We report coefficients for the variables used.

**Table 4.** Direct and indirect effects of the POCC-OC-IQ model.

	Effect	Se	t	p	LLCI	ULCI
<b>Direct effect</b> (POCC – IQ)	0.0030	0.1388	-0.0214	.9830	-0.2819	0.2760
	Effect	BootSE	BootLLCI	BootULCI		
<b>Indirect effect</b> (POCC – OC - IQ)	-0.2743	0.1083	-0.4986	-.0822		

was acceptable (Cortina 1993). Cronbach’s alpha was .873 for IQ, .684 for POCC and .729 for OC.

The data analysis consisted of three steps. First, we ran a correlation analysis including theoretical and control variables (Table 2). Then, we tested mediation through multiple regression analysis by using Model 4 in the PROCESS macro tool (Tables 3). Finally, we showed a mediating effect through direct and indirect effects (Table 4). We also used a bootstrap technique (with 95% confidence

intervals) to test the validity of significant effects in our model (Preacher and Hayes 2004).

## Findings

Table 2 displays the correlation matrix of variables chosen for this study. Regarding the correlation of theoretical variables, the analysis shows that OC, POCC and IQ are correlated, which provides an important ground for the testing of our hypotheses in more detail. Regarding control variables, our analysis claims correlations between age and several other factors, such as job position and salary level. This could be seen as logical since older employees are more likely to have a higher job position and higher compensation. Similarly, the data show that a higher salary correlates with a higher job position.

Our model, shown in Table 3, uses multiple regression analysis. First, it shows a significant negative direct effect of OC on IQ ( $p = -0.504$ ,  $p < 0.001$ ). Second, our analysis reveals a positive direct effect of POCC on OC ( $b = 0.544$ ,  $p < 0.001$ ).

Third, our regressions show that POCC has no direct effect on IQ. Table 4 explains the direct, indirect, and total effects of the model.

Fourth, our analysis shows that POCC influences IQ through OC. Indeed, we find that the indirect effect of POCC on IQ through OC is significant and negative ( $b = -0.274$ ) since it belongs to the interval of confidence, and this interval is below zero ( $CI = -0.499$ ;  $-0.082$ ). Therefore, it can be concluded that individual OC remains the main predictor of IQ but is intensified by POCC, and consequently, POCC has a negative indirect effect on the IQ of talent.

As an additional final step, we tested for the moderating effect of all control and theoretical variables included in this study (by using Model 59, which is Model 4 of mediation with an additional moderating effect). However, none of the moderating effects were significant.

## Discussion

In this study, we investigate how POCC influences the OC and IQ of talent in Luxembourg's space industry. Drawing on social contagion theory (Hatfield, Cacioppo, and Rapson 1994), we find that POCC and OC play roles in the IQ of high-tech talent, meaning that the individual and meso-level perspectives should be taken as a whole when we focus on talent retention practices in organisations. In this section, we revisit the hypotheses and highlight the importance of the study's findings.

*Hypothesis 1:* As we suggested earlier, OC is a strong predictor of IQ in high-tech talent. Our results confirm this hypothesis, which aligns with previous studies that examined this relationship on diverse samples (e.g. Mathieu et al. 2016; Weng et al. 2018), for example, high-tech employees (Calisir, Gumussoy, and Iskin 2011) and those that were identified as valuable talent (Redondo et al. 2020). Although recent studies have raised concerns about the importance and validity of OC in today's

global and technological world (Chauhan, Howe, and Nachmias 2022), our study once again highlights the role of OC in developing quitting intentions and thus its significance for talent retention.

*Hypothesis 2:* Drawing on the emotional contagion effect (Doherty et al. 1995; Hatfield, Cacioppo, and Rapson 1994), we also hypothesised that OC is subject to the contagion process. We found that the level of OC of a talent significantly depends on talent's perceptions of the level of co-workers' OC. This finding is important since it is the first, to our knowledge, that empirically shows the contagious nature of OC. In fact, there have been attempts to understand whether psychological prequitting cues might spill over to others; however, those studies are limited (Porter and Rigby 2021) and place a particular focus on job satisfaction (Wang et al. 2017).

The only study that focuses on the prequitting cues of co-workers and their attitudes about *organisation* is a dissertation by Pustovit (2019). The author found a positive link between co-workers' prequitting cues and their perceptions of the organisational attractiveness of a focal colleague; however, this effect is not significant (Pustovit 2019), in contrast with our results. On the other hand, our results are in line with studies that focus on the leader-subordinate contagion of emotions (Cardon 2008; O'Neill et al. 2009), contagion of emotions among co-workers (Ho, Garg, and Rogelberg 2021) and the contagion nature of another emotional predictor of IQ – job satisfaction (Wang et al. 2017).

This effect could be explained by the 'cohesiveness' of high-tech companies, where employees work on complex tasks and are thus motivated to collaborate, develop trust, and maintain close connections to overcome those task-related challenges (Burke and Moore 2004). This promotes the emotional contagion effect (Ho, Garg, and Rogelberg 2021; Jung and Yoon 2019), even when recognition of the most valuable employees exists.

*Hypotheses 3 and 4:* Another hypothesis in our study suggests that POCC has a negative effect on the IQ of high-tech talent (cf. Hypothesis 3). Our correlation results show that this link exists, and it is significant. However, further analysis testing the mediation effect shows that POCC does not influence IQ directly but rather indirectly via talent's OC (cf. Hypothesis 4). Therefore, Hypothesis 3 is not supported, but Hypothesis 4 is supported. Previous results are inconclusive regarding the POCC-IQ relationship. Earlier studies (Felps et al. 2009; Krackhardt and Porter 1986; Mowday 1981) did not confirm this relationship. In contrast, our finding that POCC does not directly influence IQ is in line with those of a study showing that individuals' OC is a more important predictor of individuals' IQ than collective OC (Neininger et al. 2010). Moreover, in Neininger et al. (2010), OC serves as a partial mediator, while in our data, it fully mediates the relationship between POCC and IQ. This could be explained in several ways. The first explanation could be the nature of OC. OC is an attitudinal and emotional state that can be less easily controlled by the person experiencing it than can intentions about real actions (such as thinking about quitting). Consequently, our results show that perceptions regarding the way that co-workers think about their organisation influence individuals' attitudes and emotions about the organisation. In contrast, more rational and cognitive processes such as thinking about leaving rely more on personal attitudes and emotions towards the

organisation than on collective perceptions. Another explanation could be that OC depends on internal factors (e.g. level of desire to contribute to the organisation), while IQ depends on both personal evaluation (e.g. desirability of movement) and external factors (e.g. ease of movement) (Lee et al. 1999). Indeed, there are many factors that could impact the decision to leave, for example, external factors such as opportunities on the market (March and Simon 1958) and the ease of accessing those opportunities through external networking (Porter et al. 2022; Porter, Woo, and Campion 2016). This could attenuate the influence of colleagues' attitudes towards the organisations. In fact, Luxembourg is a small country, and the aerospace sector is also small (LSA 2022). Consequently, talented individuals looking to change employers have fewer options than elsewhere. Indeed, this idea is in line with previous studies that indicate an independence of individual IQ from perceptions about co-workers' general work attitudes in terms of the way that individuals interpret the reasons that their co-workers left (Krackhardt and Porter 1986; Mowday 1981).

### **Theoretical implications**

This study has important theoretical implications. First, it provides novel insights for turnover contagion. The turnover contagion literature is growing; however, it still lacks explanations regarding the ways that co-workers' prequitting feelings and attitudes impact focal employees' quitting thoughts (Porter and Rigby 2021). The finding that POCC has a negative effect on talent's IQ via OC deepens our understanding of turnover contagion and could serve as a starting point for future research in this domain and in the broader area of talent turnover (Urrutia Pereira, de Lara Machado, and Ziebell de Oliveira 2021).

Second, our study contributes to the talent management literature. In particular, it nuances our understanding of high-tech talent as a specific type of worker, and it challenges the conventional assumption that high-tech talent is highly independent, such as ideas that they are the new 'free agents' (Burke and Moore 2004; Pink 2001). Indeed, studies have begun to examine talented individuals in the context of social relations (e.g. Boekhorst, Basir, and Malhotra 0000). In relation to talent turnover, our findings show that talented employees' OC is significantly influenced by their perceptions on how the majority of their co-workers evaluate the organisation. However, the fact that IQ is developed based on their personal OC rather than directly on POCC paints a more complex picture, one in which IQ arises through a more independent process. Consequently, our study provides a clearer picture of how this group of valuable workers develop their thoughts about quitting (Thunnissen and Gallardo-Gallardo 2019; Urrutia Pereira, de Lara Machado, and Ziebell de Oliveira 2021; Van Zelderen, Dries, and Marescaux 2022).

Third, our study contributes to the existing human resource development literature. It is evident that OC plays a significant role in this domain, functioning both as an outcome and predictor of effective development. Thus, on the one hand, previous research has consistently demonstrated that employee commitment increases as a result of engaging in training and development opportunities (Bartlett 2001). On the other hand, committed employees exhibit higher motivation levels to actively embrace and apply learning materials (Facteau et al. 1995).



Considering these findings, our study focuses on highlighting the spillover effect of OC levels among co-workers, emphasising the importance of this construct in the human resource development models employed by scholars. By recognising the interpersonal dynamics and influence of OC within an organisation, researchers are encouraged to give specific attention to OC as they design and implement their human resource development strategies.

Finally, our findings contribute to the broader literature on social contagion. Indeed, by focusing on POCC, OC and IQ, we elucidated how commitment, which is associated with positive feelings about the organisation, work efforts and the desire to remain in the organisation, is spread through a specific setting, in our case, through the context of high-tech talent (Vijayalakshmi and Bhattacharyya 2012).

### Practical implications

This study has several practical implications for space industry organisations in Luxembourg. Managers could use our findings to adjust their retention strategies, focusing on the OC of the majority of co-workers. We confirm that talented individuals do not act in isolation (McDonnell et al. 2021) and that their IQ is significantly shaped by POCC. Therefore, POCC is an important target for talent retention strategies, and organisations should pay particular attention to the general mood regarding the organisation among employees. Consequently, organisations that pursue exclusive talent management and thus focus exclusively on pivotal talent (e.g. through ‘special’ development or rewarding practices (Collings and Mellahi 2009)) by investing disproportionately more in such a workforce might wish to reconsider their approach and pursue a more inclusive talent development strategy (Downs and Swailes 2013). For example, adopting a ‘fully inclusive TM’ (see Swailes, Downs, and Orr 2014) to ensure an acceptable level of OC among the majority of employees. In addition, managers should consider that OC is a predictor of other important potential outcomes for the organisation. For example, committed employees are more engaged, perform better and are more likely to help their colleagues (e.g. Wang et al. 2017). OC can be influenced by various factors. There is evidence, for example, that talent development practices (e.g. training) (Bartlett 2000), compensation (Lamba and Choudhary 2013), clear vision (Dvir, Kass, and Shamir 2004), meeting needs of employees (Wang et al. 2017) and practices that reinforce the identification of an employee with an organisation (Afshari 2021) increase the OC of workers. Thus, talent managers should pursue commitment-enhancing practices, arrange regular meetings, and develop a trustful culture where employees are free to express their needs and aspirations (e.g. Van Rossenberg, Cross, and Swart 2022). This will help to improve the overall OC level of the workforce, which, in turn, will help retain the most valuable employees.

These recommendations hold significant relevance not only for Luxembourg’s space industry but also for Luxembourg’s broader society. As previously mentioned, Luxembourg’s organisations have made substantial investments in talent development, surpassing those of other European countries (Brutcher 2019). By focusing on OC of the workers and implementing these recommendations, Luxembourg’s organisations can effectively mitigate the waste of development efforts and ensure that the investments made in nurturing talent yield optimal outcomes.

## Limitations and future research avenues

Our study is not without limitations. Regarding the robustness of the results, our sample can be viewed as relatively small since we focused on the specific group of Luxembourg's aerospace sector, which itself is small. However, we run a bootstrap that shows similar results, confirming the robustness of our results (Preacher and Hayes 2004). Our control variables did not show significant effects as moderators. However, future research should test our results on a larger sample.

The fact that we focused on high-tech talent who tend to be viewed as the most valuable employees in aerospace companies makes it more homogenous; however, the element of heterogeneity is still present. Indeed, organisations might understand talent differently (Redondo et al. 2020). Although we control for job position as a moderator and do not find a significant difference in our results, we believe that an interesting difference might be related to exclusive versus inclusive talent identification (for example, where talent comprises only a small group of 'star employees' or where talent comprises the majority of employees (Dries 2013; Gallardo-Gallardo et al. 2015)). Both options are possible (Vaiman et al. 2021), and both were observed in one sector (for example, in non-profit sector (Usanova et al. 2022)). Another factor to consider whether that differentiation is transparent to everyone or hidden (Swales, Downs, and Orr 2014).

Measuring the level of coherence and testing whether talent from 'exclusive' TM programs and those from 'inclusive' teams have different cohesion levels would be beneficial. This might moderate the contagion effect and, more specifically, the link between POCC and IQ.

Finally, there are opportunities to further nuance our model by focusing on differences in the relationships among high-tech talent (e.g. those who are friends and those who are not (Krackhardt and Porter 1986); those who feel that they fit in an organisation well and those who do not (Usanova, Zikic, and Vaiman 2023), those who inspire each other and those who do not (Li, Hausknecht, and Dragoni 2020)). For example, studies have shown that high-performing leaders quitting the company are more likely to trigger quitting thoughts in their subordinates than other leaders do (Li, Hausknecht, and Dragoni 2020). A similar specificity of this effect was observed among colleagues of the same job level by Krackhardt and Porter (1986). They found that when co-workers who are friends leave, focal employees are more sensitive to that decision. Indeed, variations in the relationship could be an important contingency (Porter and Rigby 2021; Vijayalakshmi and Bhattacharyya 2012).

## Conclusion

The goal of this study was to determine how POCC impacts IQ among talented individuals from the aerospace sector in Luxembourg. To that end, we build a model using OC as one of the main antecedents of IQ and introduce POCC as a new variable. Therefore, we confirmed that it is not only the turnover behaviour of co-workers that spreads among colleagues and contributes to talent's quitting thoughts but also their attitudes and feelings (Porter and Rigby 2021; Wang et al. 2017). We found that POCC does not directly influence IQ, supporting previous suggestions in this domain (Felps et al. 2009; Krackhardt and Porter 1986; Mowday 1981), but

intensifies OC, which in turn influences IQ of focal talent. Indeed, we nuanced previous suggestions and found a mediating effect of OC in the POCC-IQ relationship, which is in line with the study that claims that OC is a stronger predictor of IQ than team commitment (Neininger et al. 2010). Overall, this study highlights the important call for organisations to not look at talent as an isolated group but also to account for their colleagues (McDonnell et al. 2021). Finally, the results suggest that organisations should not focus only on the OC of focal talent but also manage other co-workers' attitudes and feelings towards organisations. This can help retain the most valuable employees more effectively.

## Note

1. Doherty et al. (1995) found that women are more likely to adopt/spread emotions of/to others than men are.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## ORCID

Ksenia Usanova  <http://orcid.org/0000-0001-5286-7579>

Mickaël Géraudel  <http://orcid.org/0000-0002-4921-5788>

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