

# Hybrid Work as the Holy Grail? The Influence of Telework Intensity on Envy and Professional Isolation

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## Abstract

*The emergence of hybrid work has transcended organizational boundaries, trailblazed by post-pandemic outlooks. Hybrid work, enabled through information- and communication technologies, has the potential to harmonize the advantages of traditional office work and telework for employees. However, there exists a dearth of research on this promising paradigm, particularly concerning the impact of varying levels of telework intensity within hybrid work setups – spanning from full-time office work to complete telework. This study aims to empirically investigate how different telework intensities influence employees' negative emotions, specifically professional isolation and envy, and how these emotions, in turn, affect turnover intentions and perceived job performance. Our findings show that lower to no telework intensity is prone to the development of envious feelings. Surprisingly, office workers feel more professionally isolated than teleworking peers. Both envy and professional isolation significantly correlate with heightened turnover intentions and reduced perceived job performance.*

**Keywords:** Hybrid Work, Social Comparison Theory, Envy, Professional Isolation, Telework

## 1. Introduction

Historically, the privilege and entitlement to engage in some amount of telework was confined to certain socio-economic classes and a selected minority within organizations (Office for National Statistics, 2020). Broadly, telework is work conducted outside the conventional workspace with the usage of information and communication technologies (ICTs) (Messenger, 2019). As a response to the social imperative of reducing contact to contain the COVID-19 pandemic, both governments and society at large have mandated organizations and their employees to move to telework arrangements. This often resulted in a state of ubiquitous full-time telework where feasible, heavily dependent on ICTs as a facilitating condition to ensure coordination and collaboration among employees. In the wake of the

COVID-19 pandemic, flexible hybrid work-modes became omnipresent in organizations (Appel-Meulenbroek et al., 2022), leveraging previous privileges and opening up hybrid work as concomitant telework and on-sight work within a work week to large parts of society (Abdullah et al., 2020). In a flexible hybrid work environment, an employee enjoys the autonomy to freely decide their telework and office-days throughout the work week. Like telework, hybrid work is heavily dependent on ICTs as enabling and mediating interfaces to ensure functioning communication, collaboration, and work across physical spaces (Kingma, 2019).

Hybrid work is a dyadic phenomenon, incorporating both beneficial and malicious consequences for employees working from the office and elsewhere (Maier et al., 2022). Being at the office can have benefits such as reduced social and professional isolation and better task-related communication (Bélanger & Allport, 2008) for employees. Contrary, office workers are prone to the development of envious feelings, triggered by perceived disparities and social comparisons with their teleworking counterparts (Maier et al., 2022). Teleworkers report better work-life-balance, or greater flexibility (Ferreira et al., 2021; Maruyama & Tietze, 2012), while often feeling more professionally isolated than their office-working counterparts (Golden et al., 2008; Golden & Eddleston, 2020).

One might logically assume that a hybrid work-mode, where an employee works remotely and from the office concomitantly throughout a work-week, would bring together the benefits of both office and telework while mitigating their respective drawbacks. However, research surrounding this promise is scarce. Whether and how workers engaging in certain intensities of telework are more or less affected by adverse emotional reactions such as envy and professional isolation remains speculative and anecdotal.

It is imperative to investigate the potential impact of telework intensities on negative emotional responses and take appropriate measures to accommodate individual needs and implement various work

arrangements successfully. Furthermore, it is essential to observe whether envy and professional isolation affect behavioral outcomes, such as turnover intentions and perceived job performance. Previous research reported emotional effects, such as envy and isolation, as proxies for detrimental behavioral consequences regarding perceived job performance and turnover intentions (Golden et al., 2008; Maier et al., 2022). Those behavioral outcomes are relevant in an organizational context, as they are determinants for organizational success and vital for organizational growth (Huselid, 1995). We hence ask:

*How do different levels of telework intensities influence the emotional reactions of envy and professional isolation and, thus, perceived job performance and turnover intentions?*

To answer this research question, we take the perspective of individuals who, on average, solely work from the office (0 days of telework intensity), completely remotely (5 days of telework intensity), or in low hybrid work (1-2 days of telework intensity), moderate hybrid work (2-3 days of telework intensity) and high hybrid work (3-4 days of telework intensity) modes. In flexible hybrid work environments, when employees are provided with the autonomy to design their work-week according to their own preferences, it is imperative to investigate telework intensities with flexible boundaries. Employees working in flexible hybrid work environments tend to not exclusively telework, for example, two *or* three days a week, but vary on telework intensities throughout their weeks (Appel-Meulenbroek et al., 2022).

We draw on previous research from information systems to theoretically explain why one's telework intensity influences emotion. In this scenario, we make use of established constructs from social sciences for our investigation. Furthermore, we investigate whether envy and professional isolation have effects on one's turnover intention as the behavioral intention to quit their job, or one's self-reported perceived job performance.

With office workers as a baseline, our findings show that higher telework intensity leads to less perception of envious feelings. Surprisingly, higher telework intensity also leads to lower perceptions of professional isolation. Both envy and professional isolation have significant effects on turnover intentions and perceived job performance. This study contributes theoretically by demonstrating telework intensity differences on the emotional reaction envy and how envy and professional isolation influence turnover intentions and perceived job performance. Hereby, a moderate hybrid work-mode might serve as the holy

grail in reducing both envy and professional isolation. Additionally, we theoretically discuss our counterintuitive findings using expectation-disconfirmation theory (Oliver, 1997) and how our findings might be moderated through various cultural and environmental factors.

## 2. Literature review

Hybrid work is the entanglement of telework and conventional office work. Hence, telework is an essential module of hybrid work. Telework can be defined as work conducted outside the conventional workspace with the usage of ICTs (Messenger, 2019). Accordingly, we define hybrid work as work *conducted throughout a certain time-period concomitantly from employer premises and remote spaces enabled through the usage of ICT*. Thus, a hybrid worker has a telework intensity of one to four days of a work-week and an office worker has a telework intensity of zero days, while a teleworker has a five day telework intensity. Hybrid workers hold an expectation of possessing a degree of self-governance and adaptability in configuring their work schedules. Conversely, employers confront the challenge of preserving conventional work paradigms whilst fashioning hybrid work schemes (Sewell & Taskin, 2015). Both telework and hybrid work rely heavily on information systems and ICT as an enabling or mediating interface, tool, or infrastructure (Kingma, 2019).

Teleworking has been identified as beneficial for society and employees (Blount, 2015), including telework as a factor in increasing employability and saving energy without impairing the economy (Sharit et al., 2009), promising greater job autonomy and self-determination with regard to the time and place of work (Belanger et al., 2001; Igbaria et al., 1999). As a positive consequence, teleworking can lead to more satisfied employees, better work-life balance, lower turnover rates, and higher productivity (Carillo et al., 2021; Gajendran & Harrison, 2007). However, telework may also bring disadvantages for teleworkers, including overworking (Kelliher & Anderson, 2010), exhaustion (Sardeshmukh et al., 2012), the blurring of personal and work lives, emotional distress, and a feeling of isolation and losing touch with their organization (Bloom et al., 2015). Additionally, office workers might be adversely impacted by teleworking colleagues through the development of envious feelings and, hence, job dissatisfaction (Maier et al., 2022).

In hybrid work environments, high telework intensity was found to be linked to professional isolation which negatively affects work outcomes and productivity (Golden et al., 2008; Hoornweg et al., 2016). Furthermore, differences between lower and

higher telework intensity were empirically identified to have direct influences on job satisfaction, especially on the lower end. This effect was presumed to be in relationship with hybrid workers being satisfied with teleworking (Bentley et al., 2016).

In general, despite ongoing discussions in major IS research journals (e.g. Carillo et al. (2021)), research regarding telework intensity and hybrid work is scarce. It is yet unclear how emotional reactions, such as envy and professional isolation are affected by telework intensities. Furthermore, research surrounding detrimental organizational consequences is a timeless topic. Especially in the aftermath of the COVID-19 pandemic, there is an organizational and academic interest in studying current workforces, and how these react inter-personal and within their work-modes. There exists a dearth of consistent findings, and the ability to draw comparisons between post-COVID-19 circumstances and previous eras is regarded as limited. This research aims to address the aforementioned research gap by investigating how the intensity of telework has effects on malicious envious feelings and professional isolation, and how those affect adverse employee behavioral intentions for organizations.

### **3. Theoretical foundation and research model**

#### **3.1. Emotional effects as a response of different work-modes**

According to social comparison theory (Festinger, 1954), humans tend to build their self-worth based on derivations of social comparison (Campbell, 1990). When an individual perceives their work environment (e.g. at the office) to be inferior to those of another person (e.g. at home), their private and public self-esteem may be negatively affected (Parrott, 1991). The negative work environment percept triggers individuals' inherent will of comparison, which may lead to states of negative social comparison towards those they perceive superior (Festinger, 1954). Negative social comparison can trigger malicious envious feelings by increasing an individual's awareness that their own deprivation and suffering are not experienced by others (Duffy & Shaw, 2000). In other words, envy occurs due to the perception that a "person lacks another's superior quality, achievement, or possession and either desires it or wishes that the other lacked it" (Parrott & Smith, 1993, p. 906). Envy may stem from negative social comparisons of work-mode-related opportunities. As teleworkers access increased flexibility, office workers with less flexibility may perceive missing out on work qualities they may perceive while not being physically

in the office. Those qualities may include private aspects, such as family-time or sport activities, or work-related aspects, such as increased focus-time and less noise at the workplace. Previous research has shown that based on negative social comparisons, office workers may develop feelings of envy toward teleworkers (Maier et al., 2022). Numerous organizations exhibit transparency regarding their policies (Hunton & Norman, 2010), which offers employees convenient access to comparable information. Hence, in line with social comparison theory (Festinger, 1954), when office workers perceive their work environment-related privileges to be inferior in comparison to their teleworking peers with more flexibility and work-mode-related benefits, they may develop higher levels of envious feelings. This is in line with previous research, which has shown that telework has direct influences on office workers emotional reactions (Golden, 2007). In conclusion, we expect office workers to develop higher levels of envious feelings compared to their teleworking peers. We hence hypothesize:

*H1: Higher telework intensity is negatively related to malicious envious feelings.*

When employees telework, the connectedness of professional ties may suffer (Golden et al., 2008). Feelings of professional isolation can result from geographical separation of co-workers and colleagues (Marshall et al., 2007), primarily present in teleworking environments. Professional isolation can be described as a feeling characterized by an individual's perception or belief that they are disconnected from their colleagues in the workplace (Diekema, 1992). The experience of professional isolation is not necessarily contingent upon geographical separation or solitude alone (Vega & Brennan, 2000), but is attributed to feeling out of the loop on office interactions (Baruch & Nicholson, 1997). Especially, professional isolation assumes particular significance when individuals harbor a sense of dearth in terms of pivotal networks of influence and interpersonal ties (Miller, 1975). Empirical investigations have established that teleworkers experience a higher degree of professional isolation in comparison to their peers who operate from a physical office setting. This further deprives them of three significant opportunities: First, to network with others. Second, lacking development of their skill-set through informal learning by interacting with colleagues. Third, less professional guidance from colleagues and supervisors. Hence, teleworkers may lack sufficient connection to pivotal networks of influence and interpersonal ties (Golden et al., 2008). Those lacking connections, hence, result in professional isolation, attributed by less professional development, limited

information sharing, and knowledge acquisition (Cooper & Kurland, 2002). Professional isolation is primarily found to be the case for high-intensity teleworkers who particularly suffer from a lack of physical presence in the office and face-to-face interactions with colleagues and supervisors (Golden & Eddleston, 2020). Hence, extended telework intensity has an adverse impact on the emotional reaction of professional isolation. We, therefore, argue that:

*H2: Higher telework intensity is positively related to feelings of professional isolation.*

### **3.2. Behavioral reactions based on emotional effects**

Behavioral research in information systems established that emotional effects are followed by behavioral reactions (Maier et al., 2022). We align with previous research and assume that envy and professional isolation both influence employee behavior (Golden et al., 2008; Maier et al., 2022).

This study focuses on two behavioral reactions: turnover intention, and perceived job performance, which are proxies for organizational success (Huselid, 1995). Turnover intention is construed as a deliberate and conscious inclination to terminate one's present employment and sever ties with the employing organization (Tett & Meyer, 1993). Research revealed that turnover intention is, among others, influenced by envious feelings (Maier et al., 2022). Envy is a powerful emotion that causes adverse behavioral reactions (Vecchio, 2000). Employees willing to overcome envious feelings may consider turnover as an attractive problem-solving strategy. This strategy development is considered a specific adaptation mechanism in response to envious emotion (Lazarus & Folkman, 1987).

Professional isolation as a salient negative outcome of telework intensity is perceived as a desire to leave one's organization. Specifically, workers who experience severe professional isolation are prone to dislike their colleagues and are less likely to fulfill their basic human need to belong (Baumeister & Leary, 2017). Additionally, employees reporting high levels of professional isolation may develop disinterest or even rejection towards co-workers (Golden, 2006). This further could lead to less desire to remain in an organization. We hence hypothesize that:

*H3a: Envy is positively related to workers' turnover intentions.*

*H3b: Professional isolation is positively related to workers' turnover intentions.*

Envy is detrimental to the working climate (Perini, 2018), impairing workers' personal growth. This ultimately leads to toxic working environments, where workers feel uncomfortable, which finally deteriorates job performance (Lee & Duffy, 2019). Beyond that, organizational practices, policies, and features influence perceived job performance, defined as the work outcome achieved and accomplished by an employee (Anitha, 2014). Organizational success is strongly dependent on perceived job performance (Cardy & Leonard, 2014). Previous research suggests a large number of determinants for perceived job performance, such as work engagement (Salanova et al., 2005), organizational climate (Luthans et al., 2008), job satisfaction (Mobley, 1977), and professional isolation (Golden et al., 2008). Professional isolation harms commitment to supervisors and whole organizations, resulting in lower perceived job performance (Becker et al., 1996). We hence hypothesize that:

*H4a: Envy is negatively related to workers' perceived job performance.*

*H4b: Professional isolation is negatively related to workers' perceived job performance.*

To control our research results, we recognize several demographic and theoretical explanations for turnover intention and perceived job performance. We include the variables task interdependence, IT complexity, gender, and age in our study. Task interdependence, as employees' interdependence of others in their work (Van der Vegt et al., 2001), was found to influence turnover intention (Tsen et al., 2021). IT complexity, as employees perceived easiness in adapting to and using IT, may alter perceived job performance (Moore & Benbasat, 1991). Gender and age have been found to be important predictors of perceived job performance and turnover (Blomme et al., 2010). For parsimony, we purposely only control for the behavioral effects of our control variables in this study.

## **4. Method**

### **4.1. Sample and procedure**

We conducted an online survey to evaluate our proposed hypotheses. This form of data collection is suitable for investigating emotional effects and behavioral consequences in relation to telework intensity and offers a cross-organizational view. Survey participants were recruited via Prolific (see <http://www.prolific.co> for further information) and received monetary compensation (i.e. £2) for their participation. Previous research has shown that this form of data collection via Prolific is suitable for

collecting reliable and accurate survey data (Palan & Schitter, 2018). We chose a German sample for the data collection as Germany had no work-related COVID-19 restrictions present at the time of our data collection (October 2022), and the three work-modes including their respective telework intensities are common among the German workforce (Statista, 2022). We surveyed participants who reported to be in work-relations where at least two work-modes are simultaneously performed among the respective workforces. As an illustration, participants who self-reported full-time office work were required to verify their colleagues' hybrid work or telework status. This ensures qualification among participants for revealing emotional differences. All participants were in full-time work relations. In total, 268 participants completed our survey. We excluded the fastest 5% of participants based on their total completion time, as those were unlikely to have thoughtfully filled in the survey, reducing our dataset to 254 participants.

We further excluded participants who reported to be working in hybrid work environments but are not given autonomy in organizing their attendance days. This exclusion was necessary to ensure the existence of our flexible hybrid work categories. This leads to a final dataset of  $N=237$  participants (self-reported genders: 96 female, 1 non-binary, 140 male). The participants split among the work-modes as follows. 0 days per week telework: 81, 1-2 days per week telework: 24, 2-3 days per week telework: 30, 3-4 days per week telework: 37, 5 days per week telework: 65. The participants' mean age was 32.6 years ( $SD = 8.5$ ).

## 4.2. Survey instrument and design

We used SoSciSurvey to create our online survey (<https://www.sosicisurvey.de/>). To investigate variances among telework intensity, participants were given similar items to measure envy, professional isolation, turnover intention, and perceived job performance, regardless of their individual telework intensity. We used measurement 7-point-Likert scales from well-established and reliable research instruments to survey our mediating and dependent variables. The first mediating variable envy (Duffy et al., 2012; Vecchio, 2000) was measured with four items, e.g. 'I hope that my colleagues who work remotely would fail at something.'. The second mediating variable professional isolation (Golden et al., 2008) was measured with three items, e.g. 'I feel left out of activities and meetings that could enhance my career.'. The dependent variables turnover intention (Hom et al., 1984), and perceived job performance (Belanger et al., 2001), were measured with three, respective four items. Those include 'I intend to quit my current job.', and 'My

work environment allows me to improve my overall work performance.'. To enhance the validity of our results, we controlled for potential moderating effects of task interdependence (Van der Vegt et al., 2001) and IT complexity (Moore & Benbasat, 1991). As the survey was conducted in Germany, we used an iterative process of forward and backward translation for our item-set. We discussed the forward and backward translation with two PhD students profound in both English and German, to evaluate the correct translation and understandability. We conducted a pretest with 20 participants to ensure the understanding and functionality of our survey.

## 4.3. Data analysis and integrity tests

To test our first set of hypotheses (i.e. H1 & H2), we used ordinal regression and cumulative link models in R code (Christensen, 2018). The mediators, envy and professional isolation, are categorized as ordinal variables, for which the use of ordinal regression is deemed the most suitable approach (Bürkner & Vuorre, 2019). The regression analysis allows us to investigate differences among the five groups of different telework intensities. For our second set of residual hypotheses (i.e. H3a-H4b), we used multiple regression analysis.

In order to ensure the integrity of our regression analysis and scales, we conducted an assessment of various statistical assumptions (Verma & Abdel-Salam, 2019). To evaluate normality, we visually inspected a studentized residual plot, which indicated a satisfactory one-sided bell-curved distribution. We further investigated homoscedasticity and non-independence of errors with Breusch-Pagan and Durbin-Watson tests, both showing acceptable p-values above .05.

To evaluate the internal consistency of our measurements, we employed Cronbach's Alpha with a threshold set at .70 (Taber, 2018). We identified alpha values of envy (Cronbach's  $\alpha = .81$ ), professional isolation (Cronbach's  $\alpha = .85$ ), turnover intention (Cronbach's  $\alpha = .97$ ), and perceived job performance (Cronbach's  $\alpha = .90$ ). We conclude that our measurements are internally and externally consistent which allows us to proceed with reporting our results.

## 5. Results

On the basis of the ordinal regression carried out, we were able to assess H1 & H2 (see Table 1). For evaluating descriptive results, we concerned the mean and standard deviation values of the individual telework intensities. In relation to envy, we have observed a near consistent decrease in the mean value as telework intensity increases. The highest level of envy was reported with zero telework intensity (mean = 2.11,  $sd = 1.19$ ), followed by one to two days of telework (mean =

1.57, sd = 0.69), two to three days of telework (mean = 1.60, sd = 0.73), three to four days of telework (mean = 1.65, sd = 0.74), and full telework intensity of five days (mean = 1.53, sd = 0.58). Interestingly, we have found the highest mean value of professional isolation for mainly office-working employees with near consistent decrease in the level of professional isolation with an increase in telework intensity. In this case, the score was highest when there was no telework (mean = 3.34, sd = 1.36). The remaining categories were as follows: one to two days of telework (mean = 3.08, sd = 1.10), two to three days of telework (mean = 2.81, sd = 1.48), three to four days of telework (mean = 2.86, sd = 1.30), and five days of telework (mean = 3.03, sd = 1.24).

**Table 1. Regression analysis regarding H1 & H2**

Telework intensity in days	Envy	Professional Isolation
1-2	-0.92* (0.40)	-0.29 (0.38)
2-3	-0.93* (0.37)	-0.78* (0.39)
3-4	-0.80* (0.36)	-0.58 (0.34)
5	-1.10*** (0.30)	-0.34 (0.29)

Baseline = 0 telework intensity in days; \*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001; n = 237; Standard error in parenthesis

Our regression results provide evidence in regard of H1 (see Table 1). With office workers as a baseline, the results show that higher telework intensity is negatively related to malicious envious feelings. In more detail, our regression results show that the employees who completely work remotely present themselves with the least expressions of envy, expressed through the significant negative main effect. However, our results do not support H2 that higher telework intensity is positively related to feelings of professional isolation (see Table 1). In fact, our model hints that telework intensities might negatively affect professional isolation with office workers as a baseline.

We estimated the parameters of our residual hypothesis H3a-H4b with multiple regression analysis. Both envy and professional isolation have negative significant main effects on perceived job performance (see Table 2). We hence confirm H3a and H3b. Additionally, envy and professional isolation have significant positive main effects on turnover intention (see Table 2), confirming H4a and H4b. We excluded our control variables gender, age, task interdependence, and computer-self efficacy since they did not significantly influence turnover intention or perceived job performance (all  $p > 0.1$ ). We could observe that envy and professional isolation explain 17% of the

variance in turnover intention and 30% of the variance in perceived job performance.

**Table 2. Regression Analysis regarding H3a – H4b**  
**Dependent Variable: Perceived Job Performance**

Constant	6.82*** (0.17)
Professional Isolation	-0.31*** (0.05)
Envy	-0.40*** (0.07)
R <sup>2</sup>	0.30
Residual Std. Error	0.97 (df=251)
F Statistic	54.51*** (df=2; 251)

<b>Dependent Variable: Turnover Intention</b>	
Constant	0.90** (0.31)
Professional Isolation	0.41*** (0.09)
Envy	0.44*** (0.13)
R <sup>2</sup>	0.17
Residual Std. Error	1.76 (df=251)
F Statistic	25.71*** (df=2; 251)

\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001; n = 237; Standard error in parenthesis

## 6. Discussion

### 6.1. Theoretical and practical contributions

This research was motivated by the push-through of hybrid work-modes in workers' everyday lives, making different levels of telework intensity omnipresent in society. We adopted theoretical insights from previous empirical research on teleworking's effects on malicious envious feelings and perceptions of professional isolation. A sample of 237 respondents was investigated to substantiate the notion routed in social comparison theory (Festinger, 1954), suggesting that employees with minimal to negligible telework intensity experience a greater degree of envy when juxtaposed with their counterparts who engage in teleworking practices (Maier et al., 2022). We theoretically advance the current knowledge by highlighting that, next to full teleworkers, hybrid workers also show significantly less envy than office workers. This highlights that concomitant office presence and remote work reduce envy other than fully remaining at the office.

Contrary to expectations (e.g. Golden et al. (2008)), we could not observe that higher telework intensity leads to increased feelings of professional isolation. Instead, a mean value comparison between telework intensity groups showed that office workers with zero telework intensity feel more professionally isolated than hybrid workers and teleworkers. These results differ from previous empirical findings (Cooper & Kurland,

2002; Golden et al., 2008). The rationale behind this phenomenon is currently based on anecdotal evidence, and as such, lacks empirical support. One plausible explanation is rooted in expectation-disconfirmation-theory (EDT) (Oliver, 1997) and is regarded from both, the perspectives of hybrid- or teleworkers and office workers. In short, EDT explains that emotions can depend on the alignment between expectations and perceived performance, with positive disconfirmation (confirming expectations) leading to beneficial emotions and negative disconfirmation (not confirming expectations) leading to malicious emotions (Oliver, 1997). For one, individuals who engage in some amount of telework may hold lower expectations of managerial support for their professional development compared to their counterparts who work in no teleworking settings (Gazit et al., 2021). Hence, these expectation differences may result in possible bias in their responses regarding professional development. Another explanation for the contrary findings may be due to the shifts caused by COVID-19. While a rising number of employees do have access to teleworking options, those primarily attending the physical office may expect supervisory support there. Having these high expectations of mentoring, while mentors may be teleworking, could result in negative-expectation-disconfirmations, ultimately leading to detrimental feelings (Fan & Suh, 2014), including those of professional isolation. However, these explanations cannot be extrapolated without further research.

In summary, hybrid work is a promising avenue for reducing the detrimental emotional reactions envy and professional isolation. Both, attending the office and teleworking throughout a work-week have beneficial emotional effects, presumably due to physically sustaining social contacts (Bloom et al., 2015) while enjoying the flexibility of teleworking (Belanger et al., 2001; Igarria et al., 1999). Maintaining a moderate hybrid work-mode, as categorized in this paper, appears to represent a valuable approach for mitigating feelings of envy among employees, while concurrently avoiding a sense of professional isolation. This may be theoretically underpinned by positive social comparisons (Festinger, 1954) altered expectations (Oliver, 1997), and physical presence.

Our results regarding the effects of the emotional reactions of envy and professional isolation on behavioral intentions corroborate with previous findings. Envy indeed contributes to workers' willingness to leave organizations, which is in line with Maier et al. (2022). Additionally, turnover intention is further reinforced by professional isolation, which is in accordance with Golden et al. (2008). Both envy and isolation have significant effects on individuals' perceived job performance, which is also consistent

with previous literature (Becker et al., 1996; Lee & Duffy, 2019).

By investigating the different omnipresent telework intensities this study provides a further step towards a theory of holistic telework contemplation. Previous research mostly regarded the teleworker's perspective when investigating telework phenomena (Belanger et al., 2001; Blount, 2015; Igarria et al., 1999). However, telework has a broader scope, influencing office workers and entire organizational ecosystems. By incorporating an inclusive view regarding the emotional effects of different levels of telework we move a step forward into a complete telework consideration. We include a new perspective to the telework discussion in information systems research, including hybrid work situations post-COVID-19. Our results indicate that hybrid workers neither have high feelings of envy nor professional isolation. It can thus be suggested that hybrid working is an organizational solution for compromising a professionally isolated or envious workforce.

Unfortunately, the COVID-19 outbreak may not have been the last catastrophe putting workers in a state to work from home, while others may not be allowed to do so (Carillo et al., 2021). Implications derived from this study may help organizations recognize disparities among their workforce, fostered through telework intensities. Recognizing the effects of telework intensity-induced disparities enables organizations to counteract envious feelings and, hence, negative behavioral consequences. It may need strong leadership involvement to design practices for reducing envious feelings, such as inclusive transparent telework policies and guidelines. However, doing so helps ensure collaborative work among various work-modes.

## 6.2. Limitations and future research

This research is not free of limitations. Envy and professional isolation are to be regarded in employees' individual environments. For one, the work environments under consideration are highly IT-enabled. IT-artifacts in place are used to virtually connect employees (Waizenegger et al., 2020) and, hence, may presumably play a viable role in the development of envious feelings and professional isolation. One may feel more connected via an IT-artefact while another may feel more separated. Those IT-artefacts also could incorporate transparency features to provide reasoning why colleagues do telework and reveal where supervisors remain on certain days, further altering envy and professional isolation. Additionally, organizational culture and policies that restrain or enable employees to telework are further

factors that could change perceptions of envy and professional isolation (Scherer, 1997).

This study investigated employees' self-reported emotions, which are subjective and of either chronic or episodic nature (Ragu-Nathan et al., 2008), and, hence, subjective to change over time. Additionally, our sample comprises a younger German work-force, which is not holistically representative of Germany.

We conducted an online survey due to the goodness-of-fit for this study's purposes to identify work-mode differences. However, these results may well reflect an individual's stance towards teleworking and their colleagues. Results within work situations of one single organization could differ, where group dynamics play an essential role in developing emotional reactions. Also, we used self-reported measurements to shine light on behavioral intentions. Whether or not those are fulfilled is not observed, as peoples' intentions and actual behavior differ (Awad & Krishnan, 2006).

This study opens an avenue for future research, primarily via highlighting the need to investigate the roles of IT-artefacts in hybrid work environments in more detail, especially towards negative emotions. As negative effects of telework intensities are reported in this study, a holistic contemplation of hybrid work perils is deemed. As this study focuses on subjective measures, further research regarding objective consequences of hybrid work and telework is necessary. For example, research surrounding how hybrid work counter lack of knowledge due to teleworking-caused office absence could be of high potential. Furthermore, we need to understand professional isolation among office workers and teleworkers better. Given that the findings of this paper contradict prior research and the supporting explanations remain anecdotal, a need arises to delve into the underlying rationale for the comparable level of professional isolation experienced by office-based employees in comparison to their teleworking counterparts.

## 7. Conclusion

Driven by post-pandemic opportunities for work-mode-related research, this study revealed emotional differences caused by telework intensities. Our empirical investigation showed that office workers develop higher levels of the emotional reaction envy than their teleworker and hybrid worker peers. Surprisingly, as reported in this study, office workers do show increased feelings of professional isolation, compared to their teleworking peers. Hereby, we call for further research to identify causes and drivers that make office workers more professionally isolated than employees who (partly) work remotely. These findings contribute to the telework and hybrid work research

stream in information systems research and advance the discussion about teleworking and its associated consequences. A hybrid work-mode could be the holy grail regarding workers emotional reactions in teleworking environments. However, information systems research deems a holistic perspective of hybrid work in post-COVID-19 times, especially regarding perils and potential adverse consequences.

## 8. Acknowledgements

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## 9. References

- Abdullah, N. A. A., Rahmat, N. H., Zawawi, F. Z., Khamsah, M. A. N., & Anuarsham, A. H. (2020). Coping With Post COVID-19: Can Work from Home be a New Norm? *European Journal of Social Sciences Studies*, 5(6). <https://doi.org/10.46827/ejsss.v5i6.933>
- Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management*.
- Appel-Meulenbroek, R., Kemperman, A., van de Water, A., Weijs-Perrée, M., & Verhaegh, J. (2022). How to attract employees back to the office? A stated choice study on hybrid working preferences. *Journal of Environmental Psychology*, 81, 101784. <https://doi.org/10.1016/j.jenvp.2022.101784>
- Awad, N. F., & Krishnan, M. S. (2006). The Personalization Privacy Paradox: An Empirical Evaluation of Information Transparency and the Willingness to Be Profiled Online for Personalization. *MIS Quarterly*, 30(1), Article 1. <https://doi.org/10.2307/25148715>
- Baruch, Y., & Nicholson, N. (1997). Home, Sweet Work: Requirements for Effective Home Working. *Journal of General Management*, 23(2), 15–30. <https://doi.org/10.1177/030630709702300202>
- Baumeister, R. F., & Leary, M. R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal Development*, 57–89.
- Becker, T. E., Billings, R. S., Eveleth, D. M., & Gilbert, N. L. (1996). Foci and bases of employee commitment: Implications for job performance. *Academy of Management Journal*, 39(2), 464–482.
- Bélanger, F., & Allport, C. D. (2008). Collaborative technologies in knowledge telework: An exploratory study. *Information Systems Journal*, 18(1), 101–121.
- Belanger, F., Collins, R. W., & Cheney, P. H. (2001). Technology Requirements and Work Group Communication for Telecommuters. *Information Systems Research*, 12(2), 155–176. <https://doi.org/10.1287/isre.12.2.155.9695>
- Bentley, T., Teo, S. T., McLeod, L., Tan, F., Bosua, R., & Gloet, M. (2016). The role of organisational support in teleworker wellbeing: A socio-technical systems approach. *Applied Ergonomics*, 52, 207–215.



- Blomme, R. J., Van Rheede, A., & Tromp, D. (2010). The use of the psychological contract to explain turnover intentions in the hospitality industry: A research study on the impact of gender on the turnover intentions of highly educated employees. *The International Journal of Human Resource Management*, 21(1), 144–162.
- Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a chinese experiment. *Quarterly Journal of Economics*, 130(1), 165–218. <https://doi.org/10.1093/qje/qju032>
- Blount, Y. (2015). Pondering the fault lines of anywhere working (telework, telecommuting): A literature review. *Foundations and Trends in Information Systems*, 1(3), Article 3.
- Bürkner, P.-C., & Vuorre, M. (2019). Ordinal regression models in psychology: A tutorial. *Advances in Methods and Practices in Psychological Science*, 2(1), 77–101.
- Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology*, 59(3), 538.
- Cardy, R., & Leonard, B. (2014). *Performance Management: Concepts, Skills and Exercises: Concepts, Skills and Exercises*. Routledge.
- Carillo, K., Cachat-Rosset, G., Marsan, J., Saba, T., & Klarsfeld, A. (2021). Adjusting to epidemic-induced telework: Empirical insights from teleworkers in France. *European Journal of Information Systems*, 30(1), 69–88. <https://doi.org/10.1080/0960085X.2020.1829512>
- Christensen, R. H. B. (2018). Cumulative link models for ordinal regression with the R package ordinal. Submitted in *J. Stat. Software*, 35.
- Cooper, C. D., & Kurland, N. B. (2002). Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior*, 23(4), 511–532. <https://doi.org/10.1002/job.145>
- Diekema, D. A. (1992). Aloneness and social form. *Symbolic Interaction*, 15(4), 481–500.
- Duffy, M. K., Scott, K. L., Shaw, J. D., Tepper, B. J., & Aquino, K. (2012). A Social Context Model of Envy and Social Undermining. *Academy of Management Journal*, 55(3), 643–666. <https://doi.org/10.5465/amj.2009.0804>
- Duffy, M. K., & Shaw, J. D. (2000). The Salieri Syndrome: Consequences of Envy in Groups. *Small Group Research*, 31(1), 3–23. <https://doi.org/10.1177/104649640003100101>
- Fan, L., & Suh, Y.-H. (2014). Why do users switch to a disruptive technology? An empirical study based on expectation-disconfirmation theory. *Information & Management*, 51(2), 240–248. <https://doi.org/10.1016/j.im.2013.12.004>
- Ferreira, R., Pereira, R., Bianchi, I. S., & da Silva, M. M. (2021). Decision factors for remote work adoption: Advantages, disadvantages, driving forces and challenges. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(70). <https://doi.org/10.3390/joitmc7010070>
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117–140.
- Gajendran, R. S., & Harrison, D. A. (2007). The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences. *Journal of Applied Psychology*, 92(6), 1524–1541. <https://doi.org/10.1037/0021-9010.92.6.1524>
- Golden, T. (2007). Co-workers who telework and the impact on those in the office: Understanding the implications of virtual work for co-worker satisfaction and turnover intentions. *Human Relations*, 60(11), 1641–1667. <https://doi.org/10.1177/0018726707084303>
- Golden, T. D. (2006). The role of relationships in understanding telecommuter satisfaction. *Journal of Organizational Behavior*, 27(3), 319–340. <https://doi.org/10.1002/job.369>
- Golden, T. D., & Eddleston, K. A. (2020). Is there a price telecommuters pay? Examining the relationship between telecommuting and objective career success. *Journal of Vocational Behavior*, 116, 103348. <https://doi.org/10.1016/j.jvb.2019.103348>
- Golden, T. D., Veiga, J. F., & Dino, R. N. (2008). The Impact of Professional Isolation on Teleworker Job Performance and Turnover Intentions: Does Time Spent Teleworking, Interacting Face-to-Face, or Having Access to Communication-Enhancing Technology Matter? *Journal of Applied Psychology*, 93(6), 1412–1421. <https://doi.org/10.1037/a0012722>
- Hom, P. W., Griffeth, R. W., & Sellaro, C. L. (1984). The validity of Mobley's (1977) model of employee turnover. *Organizational Behavior and Human Performance*, 34(2), 141–174.
- Hoorweg, N., Peters, P., & Van der Heijden, B. (2016). Finding the optimal mix between telework and office hours to enhance employee productivity: A study into the relationship between telework intensity and individual productivity, with mediation of intrinsic motivation and moderation of office hours. In *New Ways of Working Practices*. Emerald Group Publishing Limited.
- Hunton, J. E., & Norman, C. S. (2010). The impact of alternative telework arrangements on organizational commitment: Insights from a longitudinal field experiment (retracted). *Journal of Information Systems*, 24(1), 67–90.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), Article 3.
- Igbaria, M., Kassicieh, S. K., & Silver, M. (1999). Career orientations and career success among research, and development and engineering professionals. *Journal of Engineering and Technology Management*, 16(1), Article 1. [https://doi.org/10.1016/S0923-4748\(98\)00027-7](https://doi.org/10.1016/S0923-4748(98)00027-7)
- Kelliher, C., & Anderson, D. (2010). Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, 63(1), 83–106. <https://doi.org/10.1177/0018726709349199>
- Kingma, S. (2019). New ways of working (NWW): Work space and cultural change in virtualizing organizations. *Culture and Organization*, 25(5), 383–406. <https://doi.org/10.1080/14759551.2018.1427747>
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1(3), 141–169.

- Lee, K., & Duffy, M. K. (2019). A Functional Model of Workplace Envy and Job Performance: When do Employees Capitalize on Envy by Learning from Envied Targets? *Academy of Management Journal*, 62(4), 1085–1110. <https://doi.org/10.5465/amj.2016.1202>
- Luthans, F., Norman, S. M., Avolio, B. J., & Avey, J. B. (2008). The mediating role of psychological capital in the supportive organizational climate—Employee performance relationship. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 29(2), 219–238.
- Maier, C., Laumer, S., & Weitzel, T. (2022). A Dark Side of Telework: A Social Comparison-Based Study from the Perspective of Office Workers. *Business & Information Systems Engineering*. <https://doi.org/10.1007/s12599-022-00758-8>
- Marshall, G. W., Michaels, C. E., & Mulki, J. P. (2007). Workplace isolation: Exploring the construct and its measurement. *Psychology & Marketing*, 24(3), 195–223. <https://doi.org/10.1002/mar.20158>
- Maruyama, T., & Tietze, S. (2012). From anxiety to assurance: Concerns and outcomes of telework. *Personnel Review*, 41(4), 450–469. <https://doi.org/10.1108/00483481211229375>
- Messenger, J. (2019). *Telework in the 21st Century*. Edward Elgar Publishing Cheltenham.
- Miller, J. (1975). Isolation in organizations: Alienation from authority, control, and expressive relations. *Administrative Science Quarterly*, 260–271.
- Mobley, W. H. (1977). Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology*, 62(2), 237.
- Moore, G. C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research*, 2(3), 192–222. <https://doi.org/10.1287/isre.2.3.192>
- Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer: A behavioral perspective on the consumer*. Routledge.
- Palan, S., & Schitter, C. (2018). Prolific. Ac—A subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, 17, 22–27.
- Parrott, W. G. (1991). The emotional experience of envy and jealousy.
- Parrott, W. G., & Smith, R. H. (1993). Distinguishing the experiences of envy and jealousy. *Journal of Personality and Social Psychology*, 64(6), 906.
- Perini, M. (2018). The power of envy: A poison for workplace and organisational life. In *Psychoanalytic essays on power and vulnerability* (pp. 41–57). Routledge.
- Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The Consequences of Technostress for End Users in Organizations: Conceptual Development and Empirical Validation. *Information Systems Research*, 19(4), Article 4. <https://doi.org/10.1287/isre.1070.0165>
- Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology*, 90(6), 1217.
- Sardeshmukh, S. R., Sharma, D., & Golden, T. D. (2012). Impact of telework on exhaustion and job engagement: A job demands and job resources model. *New Technology, Work and Employment*, 27(3), 193–207. <https://doi.org/10.1111/j.1468-005X.2012.00284.x>
- Scherer, K. R. (1997). The role of culture in emotion-antecedent appraisal. *Journal of Personality and Social Psychology*, 73(5), 902.
- Sewell, G., & Taskin, L. (2015). Out of Sight, Out of Mind in a New World of Work? Autonomy, Control, and Spatiotemporal Scaling in Telework. *Organization Studies*, 36(11), 1507–1529. <https://doi.org/10.1177/0170840615593587>
- Sharit, J., Czaja, S. J., Hernandez, M. A., & Nair, S. N. (2009). The employability of older workers as teleworkers: An appraisal of issues and an empirical study. *Human Factors and Ergonomics in Manufacturing*, 19(5), 457–477. <https://doi.org/10.1002/hfm.20138>
- Statista. (2022). Remote work in Germany. Statista. <https://www.statista.com/study/108858/remote-work-in-germany/>
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Tett, R. P., & Meyer, J. P. (1993). Job Satisfaction, Organizational Commitment, Turnover Intention, and Turnover: Path Analyses Based on Meta-Analytic Findings. *Personnel Psychology*, 46(2), 259–293. <https://doi.org/10.1111/j.1744-6570.1993.tb00874.x>
- Tsen, M. K., Gu, M., Tan, C. M., & Goh, S. K. (2021). Effect of flexible work arrangements on turnover intention: Does job independence matter? *International Journal of Sociology*, 51(6), 451–472.
- Van der Vegt, G. S., Emans, B. J., & Van De Vliert, E. (2001). Patterns of interdependence in work teams: A two-level investigation of the relations with job and team satisfaction. *Personnel Psychology*, 54(1), 51–69.
- Vecchio, R. P. (2000). Negative emotion in the workplace: Employee jealousy and envy. *International Journal of Stress Management*, 7(3), 161–179.
- Vega, G., & Brennan, L. (2000). Isolation and technology: The human disconnect. *Journal of Organizational Change Management*, 13(5), 468–481.
- Verma, J., & Abdel-Salam, A.-S. G. (2019). *Testing statistical assumptions in research*. John Wiley & Sons.
- Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). An affordance perspective of team collaboration and enforced working from home during COVID-19. *European Journal of Information Systems*, 29(4), 429–442. <https://doi.org/10.1080/0960085X.2020.1800417>