

Workplace Cyberloafing: Theoretical Perspectives, Mechanisms, and Cross-Domain Research Directions

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Abstract

As digital technologies have become increasingly integrated into the workplace, employee cyberloafing has emerged as an important topic in organizational behavior and human resource management. Early research largely conceptualized cyberloafing as a counterproductive or deviant behavior and focused on its antecedents, organizational norms, and detrimental effects on efficiency and performance. Subsequent research has shown that cyberloafing may also alleviate boredom, facilitate resource recovery, and regulate emotions. Accordingly, the literature has gradually moved beyond a singular resource-depletion and negative-outcome perspective toward a dual perspective that considers both resource depletion and resource recovery. However, existing research remains largely confined to the work domain, with comparatively limited attention to whether cyberloafing crosses the work-family boundary and generates consequences in the family domain. Based on a review of the relevant literature, this paper organizes cyberloafing research into six areas: conceptualization and research development, theoretical foundations, antecedents and influencing factors, work-domain consequences, cross-domain effects, and research evaluation and future directions. Particular attention is given to the potential pathways through which cyberloafing may extend from the work domain to the family domain, drawing on perspectives on the work-family interface, resource transmission, emotional spillover, and boundary management. The paper further suggests that future research should place greater emphasis on dynamic processes, bidirectional cross-domain relationships, contextual contingencies, and multilevel research designs, thereby extending cyberloafing research beyond behavior within the workplace to the broader study of cross-domain digital behavior.

Keywords

Cyberloafing, Work-Family, Cross-Domain Spillover

1. Introduction

The rapid development of digital technologies has reshaped the contemporary workplace. While the Internet, mobile devices, and social media have improved communication, information access, and task execution, they have also made it easier for employees to engage in non-work-related online activities during working hours. This behavior, commonly referred to as cyberloafing, has attracted considerable attention in organizational behavior and human resource management research. Lim initially conceptualized cyberloafing as employees' use of organizational Internet access for personal online activities during working hours and examined it as a form of workplace deviance [1]. Subsequent research has expanded the concept and examined its antecedents, mechanisms, and consequences from multiple theoretical perspectives [2] [3].

Early research predominantly viewed cyberloafing as a negative workplace behavior that could divert employees' time and attention away from work and potentially undermine organizational functioning [1] [2]. However, later studies have suggested that cyberloafing may also serve adaptive functions. For example, brief non-work-related online activities may help employees recover from work demands, alleviate boredom, and regulate their affective states [4] [5]. Accordingly, cyberloafing is increasingly understood from a dual-function perspective that recognizes both its potential resource-depleting and resource-replenishing effects [3] [6].

Despite this development, existing research remains largely concentrated on outcomes within the work domain. Much of the literature has examined cyberloafing in relation to job performance, work attitudes, employee behavior, and work-related resource states, whereas its implications for employees' non-work lives have received considerably less attention. This work-centered focus is notable because employees continuously navigate multiple life domains, and experiences in one domain can influence functioning in another through resource transmission, psychological processes, and boundary transitions [7] [8]. The work-family literature further suggests that work and family experiences are interconnected rather than independent, with demands, resources, and emotions potentially crossing domain boundaries [9] [10].

These perspectives suggest that cyberloafing may have consequences that extend beyond the workplace. Employees' online activities during work hours may influence subsequent emotional states, resource availability, and boundary management, which in turn may shape their functioning in the family domain. At the same time, family experiences may also influence employees' behaviors at work, suggesting that the relationship between cyberloafing and work-family function-

ing may be bidirectional. However, empirical research directly examining these cross-domain processes remains limited. Existing studies have paid insufficient attention to how cyberloafing may affect family-related outcomes, how family experiences may shape cyberloafing, and what emotional, resource-based, or boundary-related mechanisms may account for these relationships.

Against this background, this review synthesizes the existing literature on workplace cyberloafing and identifies promising directions for future research. Specifically, it first reviews the conceptualization and development of cyberloafing research, followed by an examination of its major theoretical perspectives and antecedents. It then summarizes research on work-domain consequences and considers the potential positive functions of cyberloafing. Finally, the review focuses on the emerging cross-domain perspective, examining how cyberloafing may be connected to the family domain through resource, emotional, and boundary processes. By integrating these perspectives, this review aims to highlight the limitations of the existing work-centered literature and encourage greater attention to the dynamic and cross-domain nature of cyberloafing.

2. Conceptualization and Research Development of Cyberloafing

2.1. Review Method

This narrative review adopted a structured literature search and screening process to identify research relevant to workplace cyberloafing, its theoretical foundations, underlying mechanisms, work-domain consequences, and potential cross-domain implications. Relevant literature was searched through Google Scholar, Web of Science Core Collection, Scopus, and APA PsycInfo to obtain coverage of research across organizational behavior, information systems, applied psychology, and work-family studies.

The search strategy combined terms related to cyberloafing, workplace Internet use, work-family processes, and relevant psychological mechanisms. Core search terms included “cyberloafing”, “cyberslacking”, “personal Internet use at work”, “non-work Internet use”, and “non-work-related Internet use”. These terms were combined with keywords such as “workplace”, “employee”, “work time”, “work-family”, “work-home”, “spillover”, “cross-domain”, “resource”, “recovery”, “emotion”, “self-regulation”, and “boundary”. Additional searches were conducted using closely related terminology identified from highly cited studies and recent review articles.

Studies were included when they examined cyberloafing or closely related forms of non-work-related Internet or technology use during work time and addressed its conceptualization, antecedents, theoretical mechanisms, work-related consequences, or cross-domain implications. Studies focusing exclusively on non-work Internet use outside the work context or on technology use unrelated to non-work activities during working time were excluded. The screening process involved reviewing titles and abstracts, followed by full-text examination when the relevance

of a study could not be determined from the initial screening. Reference lists of key articles and recent review papers were also examined to identify additional relevant studies.

Because this article is a narrative review rather than a systematic review or meta-analysis, the final selection of studies emphasized conceptual relevance, empirical contribution, methodological quality, and relevance to the central research questions. The literature was subsequently organized thematically around the conceptualization and development of cyberloafing, theoretical foundations, antecedents, work-domain consequences, cross-domain effects, and future research directions.

2.2. Concept and Connotations of Cyberloafing

As the Internet and digital technologies have become increasingly integrated into the workplace, employees can engage in non-work-related online activities with relatively low technological and temporal barriers. Lim was among the first scholars to conceptualize this phenomenon as cyberloafing, referring to employees' use of organizational Internet access to engage in personal online activities during working hours and treating such behavior as a form of production deviance [1]. This early definition emphasized three core features: the behavior occurs during working hours, organizational Internet access is used, and the activities are unrelated to formal work tasks [1].

Subsequent research has gradually broadened this conceptual boundary. Vitak *et al.*, for example, defined cyberslacking more broadly as the use of Internet and mobile technology during work hours for personal purposes, reflecting the growing importance of mobile and socially oriented online activities in workplace Internet use [11]. More recent research on personal use of technology at work further suggests that non-work-related technology use may involve either organizational or personal IT resources, rather than being restricted to employer-provided devices or networks [12]. Accordingly, contemporary research can conceptualize cyberloafing primarily according to the behavioral criterion of engaging in non-work-related online activities during work time, rather than according to the ownership of the device or the specific type of network used.

This broader conceptualization is particularly relevant in remote and hybrid work settings, where the technological and spatial boundaries between work and personal activities are less distinct. Recent research on cyberloafing during remote work explicitly considers Internet access through both workplace computers and personal cell phones, illustrating how changes in work arrangements have further complicated the traditional boundary between work-related and personal technology use [13]. Thus, cyberloafing may include non-work-related Internet activities conducted through organizational or employee-owned devices and networks, including personal mobile use during work time and comparable activities conducted while working remotely, provided that the activities are unrelated to the employee's formal work tasks.

At the same time, cyberloafing should not be treated as synonymous with all forms of personal Internet use or digital leisure. Personal Internet use at work is a broader category that may include activities with different levels of work relevance and behavioral characteristics [12]. Similarly, brief digital micro-breaks should not automatically be classified as cyberloafing solely because they involve non-work-related technology use. The distinction depends on whether the activity constitutes non-work-related online behavior occurring during work time and on how the behavior is conceptually and operationally defined in a particular study. This distinction is important because the content, duration, timing, and cognitive demands of online activities may shape their consequences differently [6] [12].

2.3. Types of Cyberloafing

Existing research generally distinguishes forms of cyberloafing according to activity content, behavioral purpose, and potential function. In terms of activity content, cyberloafing may include information browsing, online shopping, entertainment, social interaction, and attending to personal matters. These online activities differ in their time demands, cognitive requirements, and social meanings and therefore may not have equivalent effects on employees' work states [4] [6].

In terms of behavioral purpose, cyberloafing may be undertaken for entertainment or work avoidance, to attend to personal matters, or to obtain brief recovery and emotional regulation. Pindek *et al.* found that boredom arising from insufficient workload may promote cyberloafing, suggesting that employees do not always engage in online activities with the intention of avoiding work [5]. Cyberloafing may also function as a means of coping with workplace boredom. Thus, evaluating cyberloafing solely according to whether an activity is unrelated to work may overlook differences in employees' underlying motives.

From a functional perspective, cyberloafing has a pronounced dual character. On the one hand, it occupies working time, diverts attention, and departs from the role behavior expected by organizations. On the other hand, brief online activities may help employees restore psychological resources and alleviate fatigue or boredom. Accordingly, recent research has gradually shifted from the static question of whether cyberloafing is harmful toward a more contextualized examination of when it is harmful and when it may be beneficial [4]-[6].

2.4. Development and Evolution of Cyberloafing Research

Cyberloafing research has evolved from describing the phenomenon and explaining its negative effects to examining its dual functions and contextual characteristics. Early research primarily viewed cyberloafing as work shirking or production deviance, with particular attention to organizational justice, social exchange, and neutralization mechanisms. Lim argued that when employees perceive their organization as unfair, they may use neutralization mechanisms to reduce the psychological constraints associated with rule violations, thereby making cyberloafing more likely.

Later research began to focus on individual self-control, attitudes, subjective norms, and perceived behavioral control. Drawing on the theory of planned behavior, Askew *et al.* found that attitudes toward cyberloafing, social norms, and perceived behavioral control could explain employees' cyberloafing intentions and behavior, suggesting that cyberloafing is shaped not only by external conditions but also by individual cognitions and behavioral intentions [2].

More recent research has moved beyond a purely negative behavioral framework. Lim and Chen found that different online activities may have different emotional and work-related effects [4], whereas Pindek *et al.* directly proposed that cyberloafing may serve a coping function in response to workplace boredom [5]. Zhou *et al.* further showed that different types of stressors do not have identical effects on cyberloafing and that challenge and hindrance stressors may influence cyberloafing through different resource processes [14]. A review by Lim and Teo further emphasized the complexity and contextual nature of cyberloafing and its interaction with digital work environments [6].

3. Theoretical Foundations of Cyberloafing

3.1. Resource Conservation and Self-Regulation Perspectives

Conservation of resources theory provides an important theoretical foundation for explaining why employees may engage in cyberloafing. According to conservation of resources theory, individuals strive to acquire, maintain, and protect valued resources, including time, energy, and attention [15]. When employees face sustained job demands, these resources may become depleted, increasing the likelihood that employees will seek behaviors that reduce immediate psychological pressure or provide temporary relief. From this perspective, resource depletion should be understood as a potential antecedent or state condition that may increase the likelihood of cyberloafing, rather than as a consequence of cyberloafing itself.

The self-regulation perspective provides a related explanation. Work tasks require employees to maintain attention, inhibit competing impulses, and regulate behavior in accordance with work goals. When self-regulatory capacity is weakened, employees may have greater difficulty suppressing immediately attractive non-work-related online activities. Wagner *et al.*, for example, found that insufficient sleep can weaken self-regulatory capacity and subsequently increase cyberloafing [16]. Zhou *et al.* likewise showed that different types of stressors may influence cyberloafing through different resource processes [14]. These findings suggest that depleted or weakened resource states may help explain why cyberloafing occurs.

This explanation, however, should be distinguished from the possibility that cyberloafing may subsequently influence employees' resource states. Once cyberloafing occurs, the behavior may consume time and attention and therefore contribute to further resource loss, particularly when it is prolonged or cognitively demanding. At the same time, some forms of cyberloafing may temporarily inter-

rupt work demands and facilitate recovery. Recent experimental and survey evidence provides more direct support for this possibility. Wu *et al.* found that cyberloafing could reduce ego depletion, although the recovery effect varied across activities and was less beneficial for activities involving greater cognitive demands [17]. Recent research on non-work-related ICT activities further suggests that recovery should be treated as a process that is conceptually distinct from the antecedent conditions that lead employees to engage in such activities. Guo *et al.*, based on a systematic review of 54 empirical studies, distinguished non-work-related ICT activities from subsequent recovery experiences and identified activity characteristics, affective experience, and usage duration as important conditions shaping recovery outcomes [18].

Therefore, the resource perspective should distinguish at least three analytically different processes. First, resource depletion may precede cyberloafing and increase the likelihood that employees engage in it. Second, cyberloafing itself may consume additional work resources, particularly when it is prolonged or difficult to regulate. Third, some forms of cyberloafing may subsequently facilitate temporary recovery, depending on the activity and employees' states. Distinguishing these processes avoids treating cyberloafing as inherently resource-depleting or inherently restorative and provides a more precise basis for examining its subsequent consequences across work and family domains.

3.2. Neutralization, Social Exchange, and Organizational Justice Perspectives

Cyberloafing deviates from formal organizational role expectations, making it important to explain why employees may engage in it even when they are aware of organizational norms. Drawing on organizational justice, social exchange, and neutralization perspectives, Lim (2002) argued that when employees perceive that the organization has treated them unfairly, they may use forms of neutralization, such as a "psychological ledger", to reinterpret their behavior and thereby reduce the psychological barriers associated with rule violations [1]. This perspective emphasizes that cyberloafing is not simply a manifestation of individual laziness but may represent a behavioral response to the employee-organization relationship. When employees perceive procedural, distributive, or interactional injustice, cyberloafing may become a means of restoring psychological balance or responding to the organization. Subsequent research on leadership has likewise found that negative leadership behavior can increase employees' cyberloafing and that this relationship is influenced by psychological mechanisms such as moral disengagement [19].

3.3. Theory of Planned Behavior and Social Cognitive Perspectives

The theory of planned behavior emphasizes that attitudes toward a behavior, subjective norms, and perceived behavioral control influence behavioral intentions. Askew *et al.* applied this theory to cyberloafing and found that attitudes toward

cyberloafing, social norms, and perceived behavioral control could explain cyberloafing behavior [2]. This study indicates that whether employees engage in cyberloafing depends not only on the availability of opportunities but also on whether they perceive cyberloafing as acceptable, controllable, and attractive.

The social cognitive perspective further focuses on how employees make moral judgments about cyberloafing and rationalize their behavior. For example, when employees believe that cyberloafing is common or perceive that the organization treats them unfairly, they may pay less attention to the consequences of the behavior. Norms, moral cognition, and the social environment therefore jointly constitute important psychological conditions underlying cyberloafing.

3.4. Recovery and Dual-Function Perspectives

The recovery perspective has encouraged cyberloafing research to move beyond viewing cyberloafing solely as a form of negative deviance and toward understanding it as a more complex work behavior. Sustained task demands during work can generate fatigue and resource depletion, whereas temporary disengagement from work tasks may help employees restore attention and emotional states. Pindek *et al.* found that workplace boredom can promote cyberloafing through the experience of boredom, with cyberloafing serving, to some extent, as a means of coping with boredom [5]. Lim and Chen similarly showed that different online activities do not have identical effects: some browsing activities may generate positive emotions, whereas others may produce negative effects [4]. The function of cyberloafing therefore cannot be judged solely by its non-work nature but should be understood in relation to activity type, duration, timing, and employees' resource states.

Overall, theoretical research on cyberloafing has expanded from explanations based on deviant behavior toward explanations centered on resource regulation and contextual functions. This theoretical development provides a basis for examining the cross-domain effects of cyberloafing. If cyberloafing changes employees' resource, emotional, and cognitive states, these changes may subsequently cross the work-family boundary and influence family life after work.

4. Antecedents and Influencing Factors of Cyberloafing

4.1. Individual Factors

Individual differences are among the earliest antecedents examined in cyberloafing research. Existing studies have mainly considered self-control, personality, work engagement, attitudes toward Internet use, boredom proneness, and age. Meta-analytic evidence indicates relatively stable relationships between boredom, work engagement, self-control, and cyberloafing, while attitudes toward cyberloafing and actual opportunities for Internet use are also important predictors [20]. Employees with lower self-control may find it more difficult to inhibit immediate online temptations, whereas employees with more positive attitudes toward online activities may perceive cyberloafing as more attractive. By contrast, employees with higher

work engagement are generally more focused on task goals and less likely to engage in cyberloafing. Thus, whether employees engage in cyberloafing depends on both behavioral opportunities and how they evaluate online activities and regulate their own behavior.

In addition, employees' perceptions of work meaning, work goals, and role expectations may also influence cyberloafing. Employees do not necessarily engage in cyberloafing in the same way. The same work environment may elicit different behavioral responses because of differences in individual goals, values, and self-regulatory capacity. Future research should therefore avoid attributing cyberloafing entirely to environmental stimuli.

4.2. Work Contextual Factors

The nature of work tasks is an important contextual factor influencing cyberloafing. Insufficient workload, monotonous tasks, and workplace boredom may reduce employees' interest in their current tasks, making online activities an alternative means of seeking stimulation and regulating emotions. Pindek *et al.* found a relationship between insufficient workload and cyberloafing, with workplace boredom playing an important role [5].

In contrast, high-intensity job demands may also promote cyberloafing through resource depletion. Zhou *et al.* found that challenge and hindrance stressors had different effects on cyberloafing: challenge stressors may have some motivational effects, whereas hindrance stressors are more likely to promote cyberloafing through emotional exhaustion [14]. This suggests that the simple linear proposition that greater work stress leads to more cyberloafing is overly simplistic. The nature of the stressor and the resources available to employees are also important. In addition, job autonomy, task characteristics, and the structure of working time may alter opportunities for cyberloafing. Highly digitalized and information-intensive work provides greater opportunities for Internet access but also makes the boundary between work-related and non-work-related online activities more blurred. The relationship between cyberloafing and work digitalization is therefore not simply causal but is strongly context-dependent.

4.3. Organizational and Leadership Factors

Organizational justice, organizational norms, leadership behavior, and coworker behavior are important social-contextual factors influencing cyberloafing. Lim (2002) noted that organizational injustice may promote cyberloafing through social exchange and neutralization mechanisms [1]. Askew *et al.* further found that employees' observations of Internet use by coworkers and managers can shape social norms and influence cyberloafing intentions [2].

Leadership behavior also shapes employees' perceptions of cyberloafing. Koay *et al.* found that abusive supervision was positively related to employee cyberloafing and that moral disengagement and negative reciprocity beliefs strengthened this relationship [19]. This suggests that cyberloafing may serve as a behavioral

response to negative leadership experiences.

Therefore, organizational management of cyberloafing should not rely solely on technical monitoring and punishment. If employees perceive cyberloafing rules as unfair, leadership behavior as harmful, or cyberloafing as widely accepted among coworkers, simply increasing monitoring intensity may not fundamentally reduce the behavior. Effective cyberloafing management should also consider organizational systems, justice climate, leadership relationships, and team norms.

4.4. Stress, Emotion, and Resource Factors

Stress, emotions, and resource states constitute important psychological processes linking the work environment to cyberloafing. Work stress may consume employees' time, energy, and attention, leading them to seek temporary psychological escape, whereas workplace boredom may reduce task engagement and make online activities more attractive. Conservation of resources theory provides a useful explanation for this process, as employees may adjust their behavior to prevent further resource depletion or seek resource recovery.

Importantly, stress does not necessarily lead to cyberloafing. Challenge and hindrance stressors have different effects on cyberloafing. The former may be associated with employees' resource acquisition processes, whereas the latter is more likely to promote cyberloafing through emotional exhaustion [14]. These findings suggest that a more accurate explanation of cyberloafing requires consideration of the nature of stressors, employees' resources, and their psychological states together.

This finding further suggests that cyberloafing has a clear dynamic character. The same employee may exhibit different levels of cyberloafing across workdays, work stages, and even different points within the same day. Future research should therefore make greater use of diary and experience-sampling methods and examine cyberloafing as a state-like behavior that varies with context rather than relying solely on stable individual differences.

5. Work-Domain Consequences of Cyberloafing

5.1. Cyberloafing, Job Performance, and Work Engagement

One important reason cyberloafing initially attracted scholarly attention was its potential to occupy working time and reduce task engagement. Because employees must allocate attention and time resources to cyberloafing, excessive cyberloafing may delay task completion, divert attention, and reduce work efficiency. Meta-analytic research shows that cyberloafing is strongly related to counterproductive work behavior, but its relationships with other indicators of job performance are not entirely consistent, suggesting that its work-related consequences are complex [20]. This complexity means that cyberloafing should not simply be equated with low performance. Employees may briefly browse non-work-related content after completing one stage of a task and then return to work, or they may use online activities to obtain brief recovery during periods of high work pressure. The most

pronounced negative consequences may therefore arise not from cyberloafing per se but from frequent, prolonged, or difficult-to-control cyberloafing.

5.2. Cyberloafing, Work Attitudes, and Behavior

In addition to performance, cyberloafing may be associated with work attitudes, work engagement, and counterproductive behavior. When employees repeatedly devote working time to non-work activities, they may experience task disengagement and reduced role involvement, which may in turn affect work behavior. Cyberloafing may also interact with organizational justice perceptions, job satisfaction, and employee-organization relationships [1].

However, the relationship between cyberloafing and work behavior is not uniformly negative. Lim and Chen found that different online activities may have different effects on employees' emotions and work, with some browsing activities improving emotional states [4]. The work-related consequences of cyberloafing should therefore be considered in terms of both immediate and delayed effects. In the short term, cyberloafing may reduce task engagement, but if it serves a recovery function, it may also improve subsequent work states.

5.3. Positive Functions and Recovery Effects of Cyberloafing

Cyberloafing does not necessarily produce only negative work consequences. Its effects may depend on the content of the activity, its duration, and employees' states at the time. On the one hand, cyberloafing occupies working time, diverts employees' attention from tasks, and may reduce work efficiency. On the other hand, brief non-work-related online activities may allow employees to temporarily disengage from work demands and alleviate boredom and psychological strain. Pindak *et al.* found that cyberloafing can serve as a means of coping with workplace boredom [5]. Lim and Chen similarly found that different types of online activities may produce different emotional and work-related effects, indicating that cyberloafing is not uniformly negative [4].

From a recovery perspective, temporarily disengaging from work demands may help employees achieve a degree of psychological detachment and relaxation, thereby facilitating recovery [21]. This perspective provides a theoretical basis for understanding the potential function of cyberloafing but does not imply that cyberloafing itself necessarily produces recovery. Whether cyberloafing generates positive effects may also depend on activity content, duration, and the work context. If online activities last too long or involve high cognitive demands, they may further consume work resources and weaken their potential recovery function.

Rather than simply treating cyberloafing as harmful, it is therefore more useful to consider the specific context and behavioral characteristics in which it occurs. Cyberloafing may provide brief recovery and emotional regulation to some extent, but such effects are neither stable nor universal. Its ultimate consequences depend on the online activity itself and employees' work states at the time.

5.4. Mechanisms Underlying the Work Consequences of Cyberloafing

Existing explanations of the work consequences of cyberloafing have mainly focused on time resources, attention, self-control, and emotions. Negative pathways emphasize that cyberloafing consumes work resources and diverts attention, whereas positive pathways emphasize that online activities may alleviate boredom and restore emotional and psychological resources. Conservation of resources theory can incorporate these two types of mechanisms within a unified framework.

In addition, employees' interpretations of cyberloafing may influence its consequences. If employees view cyberloafing as a legitimate short break, the behavior may serve a recovery function. If they use cyberloafing as a means of prolonged work avoidance, it may lead to persistent task disengagement. Thus, an important distinction exists between the behavior itself and the meaning employees attach to it.

Overall, work-domain research has established a relatively clear understanding that cyberloafing may involve both work-resource depletion and resource-state regulation. However, existing studies still mainly ask what happens at work after cyberloafing occurs, while paying relatively limited attention to whether the psychological and resource states altered by cyberloafing subsequently enter other life domains. This leaves important room for cross-domain research.

6. Cross-Domain Effects of Cyberloafing: From the Work Domain to the Family Domain

6.1. The Work-Family Interface and Cross-Domain Spillover

Work and family are interconnected but analytically distinct domains. Research on the work-family interface has examined several forms of cross-domain relationships, including work-family conflict, spillover, enrichment, and resource transmission [7] [9] [22]. Recent reviews further emphasize that work-family research encompasses distinct constructs concerning conflict, boundary management, emotions, and episodic cross-domain experiences rather than treating the family domain as a single outcome category [23]. Accordingly, the potential family-domain consequences of cyberloafing should be distinguished according to their substantive meaning. Family-role performance concerns how effectively employees fulfill responsibilities and behaviors associated with the family role. Work-family conflict concerns incompatibility between work and family demands, time, or behavioral requirements. Family interaction quality concerns the quality of employees' interactions and social experiences with family members. Boundary management concerns how employees transition between and regulate the boundaries separating work and family roles. These constructs are related but conceptually distinct and should not be treated as interchangeable indicators of a single family-domain outcome.

This distinction is important for cyberloafing research because different forms

of cyberloafing may plausibly affect these outcomes through different processes. For example, prolonged cyberloafing may delay work completion and increase subsequent work pressure, potentially contributing to work-family conflict. In contrast, a brief non-work-related online activity may alter employees' immediate emotional or resource states without necessarily producing conflict. Similarly, changes in boundary management may concern how employees transition between roles rather than whether their family-role performance improves or deteriorates.

The work-home resources model provides a theoretical basis for understanding these potential cross-domain processes. It proposes that resources generated or depleted in one domain can influence functioning in another domain [10]. Thus, although cyberloafing occurs during working hours, its consequences may extend beyond the workplace if the behavior changes employees' available time, energy, psychological states, or role-boundary conditions. Importantly, however, these theoretical mechanisms do not by themselves establish that cyberloafing produces specific family-domain outcomes. Direct empirical evidence remains limited.

6.2. Potential Effects of Work-Domain Cyberloafing on the Family Domain

Although cyberloafing occurs during work, its potential consequences may extend into the family domain through changes in time, resources, emotions, and role transitions. These pathways should, however, be regarded primarily as theoretical propositions because direct empirical evidence linking cyberloafing to specific family outcomes remains limited.

From a resource perspective, prolonged cyberloafing may redistribute time and attention away from formal work tasks. If this redistribution delays task completion, employees may experience greater task pressure toward the end of the workday, potentially reducing the resources available for family roles after work. The work-home resources model provides a theoretical explanation for such resource transmission across domains [10]. Nevertheless, evidence that work demands or resource loss spill over into family functioning in general does not demonstrate that cyberloafing itself produces these effects.

Emotional spillover represents another possible pathway. Ilies *et al.* found that daily workload and affective experiences at work were related to employees' emotions and social behavior at home [24]. Similarly, Judge *et al.* examined dynamic relationships between work-family conflict and emotional experiences across work and non-work contexts [25]. These findings support the broader proposition that affective experiences can cross domain boundaries. They do not, however, directly test whether cyberloafing generates emotional spillover into the family domain.

Boundary processes provide a third possible explanation. Employees increasingly use the same digital devices for work and personal purposes, which may facilitate transitions between work and family activities. Boundary theory suggests that work and family roles have permeable and flexible boundaries and that indi-

viduals differ in how they manage transitions between roles [8]. Cyberloafing may therefore be associated with boundary management, particularly when employees move between work-related and personal online activities. However, existing boundary research does not establish that cyberloafing causes poorer boundary management or specific family outcomes.

Taken together, resource, emotional, and boundary perspectives provide theoretically plausible pathways through which cyberloafing could influence the family domain. At present, however, these pathways should be treated as propositions for future empirical testing rather than established cyberloafing effects.

6.3. Reverse Effects of Family-Domain Factors on Work-Domain Cyberloafing

Cross-domain relationships may operate not only from work to family but also from family to work. Family demands, stress, and emotional experiences may enter the work domain and influence employees' psychological states and subsequent behavior. In digitally connected work environments, employees can also receive and respond to family-related information through smartphones and other personal devices during working hours, further reducing the physical separation between work and family.

From a work-family perspective, family experiences may therefore represent potential antecedents of cyberloafing. Edwards and Rothbard argued that work and family can be interconnected through emotions, cognition, behavior, and resources, providing a theoretical basis for considering how family experiences may influence work-related behavior. However, evidence directly linking family-domain experiences to cyberloafing remains limited [7].

Recent research provides more direct evidence for this possibility. Zhao *et al.* examined family ostracism among hospitality employees and found that family ostracism was indirectly associated with cyberloafing through family emotional exhaustion [26]. The study further identified self-compassion and family-supportive coworker behavior as buffering conditions. This finding provides direct evidence that a specific family-domain stressor can be associated with subsequent cyberloafing through an emotional mechanism. However, the study focused on hospitality employees and a specific form of family experience, so its findings should not be generalized to all family-domain factors or all employee populations.

Thus, the current evidence supports the possibility of a bidirectional relationship between work-family experiences and cyberloafing, but the evidence remains narrow. Future research should examine whether family demands, family conflict, family support, family emotions, and other family experiences influence cyberloafing through different psychological and resource mechanisms.

6.4. Resources, Emotions, and Boundaries: Potential Mechanisms and Boundary Conditions

Taken together, existing cyberloafing and work-family research suggest that re-

source, emotional, and boundary processes may provide three theoretically relevant pathways for understanding potential cross-domain effects. Importantly, these mechanisms should be distinguished from established cyberloafing effects because most of the relevant evidence comes from broader work-family or non-work-related ICT research rather than direct tests of cyberloafing.

The resource pathway concerns whether cyberloafing consumes or restores resources. Prolonged cyberloafing may divert time and attention from work tasks and increase subsequent task pressure, whereas brief activities may temporarily interrupt work demands and facilitate recovery. Recent evidence supports this conditional perspective. Wu *et al.* found that cyberloafing could reduce ego depletion, but the effect varied across types of activities and was less beneficial when activities involved greater cognitive demands [17]. Guo *et al.* similarly identified activity characteristics, affective experience, and usage duration as factors associated with different recovery outcomes of non-work-related ICT activities [18].

The emotional pathway concerns whether cyberloafing changes employees' immediate affective states and whether these changes persist into subsequent roles. Work-family research has demonstrated that emotions can cross domain boundaries [24] [25]. However, these findings do not establish that cyberloafing produces emotional spillover. A more appropriate proposition is that the emotional consequences of cyberloafing may depend on the type and meaning of the online activity and may subsequently influence family experiences when affective states persist across the work-family transition.

The boundary pathway concerns the management and permeability of work-family boundaries. Cyberloafing occurs at the intersection of work and personal activities and may therefore be associated with employees' boundary transitions. Boundary theory suggests that individuals differ in the permeability and flexibility of their role boundaries [8]. Yet existing boundary research does not establish whether cyberloafing itself weakens boundaries, reflects already blurred boundaries, or in some cases provides a temporary transition between roles. Boundary management should therefore be treated as a theoretical mechanism requiring direct empirical examination.

Taken together, these perspectives suggest that the cross-domain consequences of cyberloafing may depend less on the mere occurrence of cyberloafing than on how, when, and why it occurs. More specifically, activity type, duration, timing, and employees' resource and emotional states may determine whether cyberloafing is more likely to be followed by temporary recovery or by accumulated work demands.

Accordingly, future research may examine the following propositions:

Proposition 1: The relationship between cyberloafing and subsequent resource states depends on the type, duration, and cognitive demands of the online activity, such that brief and low-demand activities are more likely to be associated with temporary recovery, whereas prolonged or high-demand activities are more likely to be associated with continued resource depletion.

Proposition 2: The relationship between cyberloafing and subsequent family-domain functioning may be mediated by changes in employees' affective states, particularly when emotional experiences generated during work persist across the work-family transition.

Proposition 3: The cross-domain consequences of cyberloafing depend partly on employees' work-family boundary conditions, such that the effects of cyberloafing may differ according to boundary permeability, flexibility, and employees' strategies for managing role transitions.

6.5. Current Status and Limitations of Cross-Domain Cyberloafing Research

Overall, research on the cross-domain effects of cyberloafing remains limited relative to the substantial literature on its work-domain antecedents and consequences. Existing work-family theories provide several plausible explanations for how cyberloafing may be connected to family-domain functioning through resource transmission, emotional spillover, and boundary processes. However, most of these explanations have not yet been directly tested in cyberloafing research.

The existing evidence also varies substantially in terms of the direction and specificity of the cross-domain relationship. Research has traditionally focused on how work experiences influence family functioning, whereas recent evidence suggests that family-domain experiences may also influence subsequent cyberloafing [26]. Nevertheless, direct evidence remains concentrated on particular family experiences and specific occupational contexts. It therefore remains premature to generalize these findings to broader work-family processes.

Another limitation concerns the heterogeneity of cyberloafing itself. The potential cross-domain consequences may differ according to activity type, duration, timing, cognitive demands, and employees' resource and emotional states. Recent evidence on cyberloafing and non-work-related ICT use supports the importance of these behavioral and contextual characteristics [17] [18]. Thus, future research should avoid treating cyberloafing as a homogeneous behavior.

Overall, the current literature provides a theoretical basis for examining cyberloafing as a cross-domain phenomenon but does not yet provide sufficient empirical evidence to establish consistent family-domain consequences. The most important research opportunity therefore lies in directly testing the proposed mechanisms and boundary conditions using designs capable of capturing temporal and within-person processes.

7. Research Evaluation and Future Directions

7.1. Major Developments in Existing Research

First, cyberloafing research has developed a relatively comprehensive conceptual and variable framework. Early research clarified the core definition of cyberloafing and explained its occurrence from the perspectives of organizational justice and neutralization mechanisms. Later research introduced the theory of planned

behavior, self-regulation, conservation of resources, and recovery perspectives, resulting in a richer explanatory framework [1]-[3].

Second, researchers have gradually recognized the dual functions of cyberloafing. Traditional research mainly emphasized its harmful effects on productivity and job performance, whereas more recent research has found that cyberloafing may also alleviate workplace boredom, improve emotional states, and facilitate resource recovery. This shift from a singular negative evaluation toward a contextualized, dual-function perspective represents an important theoretical development in cyberloafing research [4]-[6].

Third, the populations and contexts examined in cyberloafing research have gradually expanded. Early studies focused mainly on Internet use in office settings, whereas recent research has begun to consider social media, mobile devices, remote work, and digital work environments. At the same time, researchers have started to consider the influence of family-domain factors on cyberloafing, providing a new direction for cross-domain cyberloafing research.

7.2. Limitations of Existing Research

Despite substantial progress in cyberloafing research, several limitations remain.

First, the literature remains predominantly work-centered. Existing studies have examined performance, work engagement, counterproductive behavior, employee attitudes, and other work-domain consequences in considerable detail, whereas comparatively less attention has been given to what happens after employees leave the work domain. Family-role performance, family interaction quality, work-family conflict, and boundary management represent conceptually distinct outcomes that have not been sufficiently incorporated into cyberloafing research. As a result, the extent to which cyberloafing has cross-domain consequences remains an open empirical question.

Second, cyberloafing research and work-family research remain insufficiently integrated. Work-family scholarship has developed mature perspectives on conflict, spillover, resource transmission, emotions, and boundary management, whereas cyberloafing research has only recently begun to consider these processes. Existing discussions therefore provide stronger theoretical arguments than direct cyberloafing-specific evidence [23]. Future research should move beyond using family variables simply as antecedents or outcomes and instead examine cyberloafing as a behavior embedded within a broader work-family process.

Third, the dynamic nature of cyberloafing has not been sufficiently captured. A substantial proportion of cyberloafing research relies on cross-sectional survey designs, which are limited in their ability to capture when cyberloafing occurs, what employees' states are immediately before the behavior, and how those states change afterward. Because cyberloafing may vary across situations and time, diary, experience-sampling, and multi-time-point designs are particularly valuable for identifying within-person processes and temporal sequences.

Fourth, the heterogeneity and dual functions of cyberloafing require greater

differentiation. Existing research increasingly recognizes that cyberloafing may involve both costs and potential recovery functions, but different forms of online activity may differ in their cognitive demands, emotional consequences, duration, and timing. Recent research suggests that these characteristics may influence whether non-work-related ICT use is followed by recovery or additional resource costs [17] [18]. Future research should therefore move beyond frequency-based measures and distinguish activity type, duration, timing, cognitive demands, and employees' subjective purposes.

7.3. Future Research Directions

Future research can advance cyberloafing research in several directions.

First, future studies should extend cyberloafing research beyond the work domain. Rather than assuming that cyberloafing produces either uniformly positive or negative work outcomes, researchers should examine whether changes in time, resources, emotions, and boundary conditions during work subsequently influence family-role performance, work-family conflict, family interaction quality, or boundary management. Importantly, these relationships should be tested directly rather than inferred solely from general work-family research.

Second, future research should adopt a genuinely dynamic perspective on cyberloafing. Experience-sampling and diary designs could examine employees' states before cyberloafing, the characteristics of the online activity, and immediate and delayed outcomes after the behavior. Such designs would help distinguish resource states that precede cyberloafing from recovery or depletion effects that follow it. They would also allow researchers to examine whether the same employee experiences different consequences from cyberloafing across different days or work episodes.

Third, future research should distinguish the conditions under which cyberloafing is more likely to function as recovery versus task avoidance. Activity type, cognitive demands, duration, timing, and employees' initial resource and emotional states may jointly determine these outcomes [17] [18]. This approach would move the literature beyond the simple question of whether cyberloafing occurs toward the more theoretically meaningful question of when and under what conditions it produces different consequences.

Fourth, future research should examine bidirectional work-family processes. Existing research has primarily considered work-domain antecedents of cyberloafing, whereas emerging evidence suggests that family-domain experiences may also influence cyberloafing [26]. Future studies could therefore examine both work-to-family and family-to-work pathways and test whether similar or different psychological mechanisms operate in the two directions.

Finally, future research should integrate resource, emotional, and boundary perspectives rather than examining them as isolated mechanisms. A more complete cross-domain framework could examine how cyberloafing changes resource availability and emotional states during work, how these changes influence work-fam-

ily boundary transitions, and how the resulting states shape functioning in the subsequent domain. Such an approach would provide a more dynamic explanation of cyberloafing as a cross-domain digital behavior.

Declaration of AI-Assisted Technology Use

During the preparation of this manuscript, the author used artificial intelligence (AI)-assisted tools (specifically large language models) for the purposes of language refinement, grammar correction, and enhancing the clarity and readability of the manuscript.

All AI-assisted suggestions were carefully reviewed, revised, and verified by the author. The author independently determined the content, theoretical framework, interpretation of the literature, research design, data analysis, and conclusions presented in this manuscript. The author takes full responsibility for the accuracy, scientific integrity, and originality of the final manuscript. No AI tools were used to generate core scientific data, conduct analyses, or replace author intellectual contributions. The use of these tools was strictly limited to the writing and editing phase to improve the presentation of the paper.

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Conflicts of Interest

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