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# TIME BANDITRY: VALIDATION OF A MEASURE OF COUNTERPRODUCTIVE WORK BEHAVIOR

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TIME BANDITRY: VALIDATION OF A MEASURE OF COUNTERPRODUCTIVE WORK BEHAVIOR

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DEPARTMENT OF PSYCHOLOGY

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Abstract

A measure of time banditry, a type of counterproductive work behavior, was administered to undergraduate students to establish the validity of the measure. A confirmatory factor analysis failed to corroborate the previous exploratory factor analysis. Construct validity was established by using previously validated measures and by using the nomological network of the lawful relationships between time banditry and these related constructs. This measure could assist in the development of organizational interventions and serve to inform future research on the concept of time banditry.

# Time Banditry: Validation of a Measure of Counterproductive Work Behavior

## Introduction

Chad Keller is a middle-aged manager who works in the corporate office of a large telecommunications company. He loves his job and is very committed to the organization. While Chad is completing the same amount of work as he did a few months ago, the additional time at work is becoming a problem for him in his personal life. An examination of his workday behaviors could add valuable insight into why his workdays seem to disappear.

Chad arrives on Monday morning at 8:00 am and proceeds to the break room to fill up on morning caffeine. There, he finds several co-workers and he joins in a discussion of the weekend's activities. At 8:45 am, Chad returns to his desk and checks phone messages and returns e-mails, first from his corporate account and then from his personal account. He then logs into his online banking site to balance his checkbook. By this time, it is about 10:45. Despite being able to begin a presentation for Tuesday in the time before lunch, he uses the internet to check stocks, to catch up on the national news, and spends some time looking for new shoes on EBay. At noon, Chad leaves for lunch and picks up his dry cleaning, arriving back at the office at about 1:30. Again, Chad needs to return phone calls and e-mails for work, but also takes time to again check his personal e-mail account and check on his EBay bid. At 3:00 pm, he begins making the rounds of his co-workers, with the initial intention of discussing work, but quickly finding the conversation turning toward social topics. Finally, after 4:00 pm, he returns to his desk to begin the presentation, which he doesn't finish until after 7:00 pm.

While this vignette is a dramatization, Chad's workday could characterize many working in corporate America, and this should be disturbing to the individual employees, their families, and the corporations employing them. The employee requires more time to complete their tasks. The employee's family will suffer because the employee is spending more time working and less time with them, combined with the fact that the employee is likely to have more stress from working longer hours. An employee that engages in behavior like Chad's is cheating their employer out of valuable resources. He is using time and company equipment during his workday to engage in personal activities, such as checking his e-mail, working on his finances, and surfing auction websites. He is also stealing valuable time from other employees, because many of the daily conversations that he engages in are personal in nature, which compromises the efficiency of the entire work unit.

Chad's behavior is clearly counterproductive to his work goals, even if his productivity remains constant because of the extra time he puts in. His behavior at work is counterproductive to his co-workers because he is distracting them from their tasks. His behavior at work is counterproductive to the maintenance of a healthy personal life. Finally, his behavior at work is counterproductive to his organization because of the wasted time during the workday, particularly if Chad does not put in extra time outside of the workday to complete his assigned tasks. Chad is stealing from the workplace because of his misuse of company time and resources. Ultimately, all parties involved will suffer because of the actions of one person, even though there is no malicious intent to steal from the organization.

Counterproductive work behaviors are generally regarded as being negative; namely that they are counterproductive to accomplishing work goals. Ones (2002) has defined counterproductive work behaviors as including such behaviors as "theft, white collar crime, absenteeism, tardiness, drug and alcohol abuse, disciplinary problems, accidents, sabotage, sexual harassment, and violence," though the authors did not strictly limit this definition to these behaviors (p. 1). However, Spector, Fox, Penney, Bruursema, Goh, & Kessler (2006) defined counterproductive work behaviors more broadly as intentional actions or behaviors that result in organizational harm. From Ones' definition, it appears that there is a category of counterproductive work behaviors that are not represented, but seem to occur quite frequently: the theft of organizational time, which until very recently, has received very little attention from researchers.

The traditional definitions of counterproductive work behavior do not discuss workers who arrive late to work, workers who socialize excessively in the workplace, or workers who purposefully work at below their capability, and these are all clearly counterproductive to the organization's goals of productivity. However, all of these behaviors are not necessarily negative in nature, but are simply counterproductive strictly in terms of productivity. Previous definitions of counterproductive work behaviors have been based on actions punishable by the organization, such as theft, violence, and sabotage.

The theft of time from an organization is often not necessarily malicious, nor is it always counterproductive when the social aspect of the organization is considered. For example, someone engaging in creative or cognitive work could not produce quality work if they were forced to focus on their task every moment they are at work. Some

companies that focus on creative and/or cognitive work actually plan time for their employees during the workday for non-work related activities. For example, at Google's headquarters in California, employees can enjoy free massages during the workday. Providing such a service may not seem to be a financially sound business practice until one considers the mental work that the employees are performing. An employee who is required to be creative at work or solve problems can actually be more effective if given breaks throughout the day. Therefore, engaging in non-work behaviors while at work does not necessarily have to be negative, and could in fact be beneficial to the employee and to the organization. Additionally, these employees may not cease thinking about their work problems after the workday ends. It is likely that employees engaged in this type of work continue thinking about their work after the "work day" ends. Thus, they are putting cognitive effort into their jobs even when not being compensated for it. Finally, the issue of networking can be extremely important for professionals. Networking involves building personal relationships with those who may not be part of an immediately meaningful professional circle. Nonetheless, these relationships may prove very valuable in the future, so the time spent establishing these relationships should not be considered time banditry. It is important to consider the employee's actions as a whole and not individually. Observing an employee casually chatting on the phone could be considered time banditry. However, if that person were using that phone call to build a business relationship with a potential colleague or customer, their time spent on the call could potentially create future business for the organization, and would not be considered time banditry.

Therefore, it is the final result of time banditry that is important: a person who engages in time theft from an organization and who does not produce at work should be the focal candidate for change. An employee who engages in time theft from the organization but does produce the products expected of them should not necessarily be encouraged to reduce the number of behaviors that could be considered time banditry. A suggestion of optimization is not implied. Rather, it is suggested that employees and employers attempt to reduce, but not eliminate, the amount of time banditry that occurs that is truly counterproductive to the organization.

The theft of time from organizations is a very complex topic, and should no longer be ignored by researchers and managers. The omission of these behaviors from the accepted definition has done the corporate world an injustice, and this study will serve as an in-depth investigation into the aspect of organizational time theft, propose a model for the process of time banditry, explore different methods to predict time banditry, and form a basis for further research on the subject.

*Time Theft: An Imminent Problem*

It is unlikely that one employee's theft of time would cause the failure of the organization, just as one employee stealing merchandise will not cause a bankruptcy for the company. However, the additive effect is where both types of counterproductive work behaviors escalate into major organizational problems. Overall, there are very few safeguards implemented to reduce time theft. In the technology realm, there have been targeted efforts to track employee behavior, which some organizations use to keep employees on task. Technology monitoring of employee behavior has become increasingly common. One estimate is that two thirds of US companies have used or

are using some type of monitoring or surveillance technology (Orthmann, 1998, as cited in Spitzmüller & Stanton, 2006). This type of system is relatively easy to implement, as there are existing programs and software packages that can be used. Some programs provide information such as the names of e-mails sent to and received from. Others allow remote screenshots of the employee's monitor at any given point throughout the day. Spitzmüller and Stanton (2006) found that establishing an organizational climate of trust and openness provides the maximum results for productivity when these types of surveillance procedures are in place. Without this climate, employees are likely to view the organization as unjust and will find other ways to commit deviant behaviors that are not monitored. This finding emphasizes that the responsibility for reducing time banditry in organizations falls not only on the individual time bandits, but also on the organization to create a climate that is conducive to reduced levels of time banditry.

The misuse of time can have a significant effect upon the bottom line of an organization. Unlike the major fraud cases of embezzlement and physical organizational theft that are publicized in the media, the theft of time receives no media attention, but the additive effect of lost productivity is staggering. Human resources managers assume that employees will be paid for non-productive time at the rate of just under one hour per day, and this loss is calculated into productivity forecasts and salaries. However, a recent study by Salary.com revealed that some workers waste much more than one hour per day. While 64% of workers admit to spending an hour or less per day on non-work related activities, 22% admit to wasting about two hours per day and 14% admit to wasting at least three hours per day on non-work tasks. In just one week, this can add to more than a day and a half of time that the employer pays for

but receives no benefits in turn. Currently, one estimate is that one employee will waste $5,720 in productive time over the course of a year (cf. Malachowski, 2005). If this figure is multiplied by the 132 million American workers, an estimated $759 billion is spent annually to support wasted time in the workplace. With the struggling economy and manufacturing jobs being outsourced overseas to cheaper work forces, there is no better time for organizations to minimize financial losses by increasing the productivity of their workers.

The theft of time is likely more common than physical theft, and it can largely go unnoticed. Take the case of Shannon who is a personal assistant for a busy executive. She has been with the company for six years and knows her role very well. She is competent and can be depended on to finish her assigned tasks. She is pleasant to clients, her coworkers, and her boss. On the surface, Shannon seems like a great employee, and by all accounts thus far, she is. However, Shannon also demonstrates counterproductive behaviors while on the job. She generally arrives 5-10 minutes late in the morning, but no one is there to note her tardiness because she is the first to arrive. She also uses her work computer for personal tasks, such as online banking, shopping, and playing games, however, she stops when she needs to help clients. She also uses her work computer for personal e-mail and makes and receives personal phone calls at work. When running errands for her boss, she sometimes takes time out for personal errands. Her boss regards her as an excellent employee and depends on her to accomplish his work. Even though Shannon engages in counterproductive behaviors while at work, her performance is still consistently high, so is Shannon a counterproductive worker? According to the traditional view of counterproductive

work behaviors (Ones, 2002), Shannon only demonstrates one defined behavior: tardiness. However, there are more behaviors that she is doing that take away from her overall productivity. To account for these behaviors, a new type of counterproductive work behavior has been proposed: time banditry.

Time banditry has recently been suggested as the missing overarching link between workplace time misuse and the other forms of counterproductive work behaviors (Martin, Brock, Buckley, & Ketchen, in press), which contributes to and expands Ones' (2002) definition of counterproductive work behaviors. The concept of time banditry was introduced in 2008 (Ketchen, Craighead, & Buckley), and was later defined as employee engagement in non-work activities during designated work times (Martin, Brock, Buckley, & Ketchen, in press).

While there are more common ways for employees to engage in time theft, it would be a futile task to compile a comprehensive list of behaviors that constitute time banditry. Therefore, the definition and model of time banditry need to be broad enough to encompass the many ways that employees can steal time given their particular situation and surroundings, as well as to account for future methods to steal organizational time, such as with technology that does not currently exist. Broadly, there are different ways that an employee can steal time from the organization, and by adopting the perspective that banditry will be a constant while the manner of time theft will change, the definition and model become more flexible and adaptive to different work situations and to different time periods, thus creating a useful tool for the present and the future.

*Proposed Model*

The Salary.com study found an interesting paradox: 27% of the workers in the study said that they did not waste any time in the workplace, yet of these workers, a third admitted to spending time at work on non-work tasks. Salary.com proposes that these workers do not view their behaviors as wasting company time, but instead a normal part of the workday. This misconception supports the creation of a scale that can be used to assess behaviors, instead of simply asking employees to interpret their behaviors at work as wasteful or not. This scale is a necessary component in a model that can be used to better understand time banditry behaviors. With better understanding of these behaviors, researchers will be able to develop targeted interventions to reduce the amount of time banditry in the workplace, thereby saving valuable corporate resources.

A theoretical model of time banditry was originally proposed by Martin, Brock, Buckley, and Ketchen (in press) and is presented in Figure 1. Besides the antecedents, other parts of the model, such as the opportunity to engage in time banditry behaviors, consequences for engaging in such behaviors, and prior experience can help to predict future time banditry. Currently, there is not enough information about time banditry to be able to accurately predict the actions an individual will take in a specific set of circumstances, but an employee's likelihood to engage in time banditry is much more predictable when using the proposed model. With the ability to predict the actions of individuals comes the ability to introduce interventions aimed at changing the target behavior, such as reducing the amount of time banditry in a workplace. Employers would also have the ability to administer a measure of time banditry to applicants; a

measure that could yield large effects in future organizational productivity. This potential to reduce time banditry justifies more research on the subject.

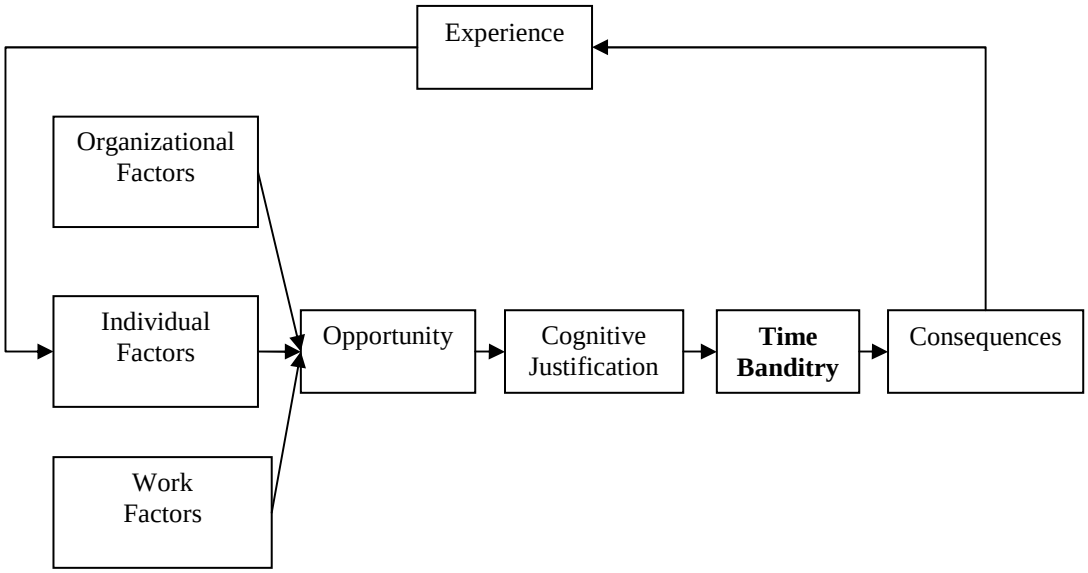


Figure 1. *A model of time banditry.*

*Antecedents.*

The proposed model of time banditry consists of antecedents and the cognitive justification for engaging in time banditry, coupled with the opportunity to do so, which often dictates how the time will be stolen, followed by a feedback loop of consequences and prior experiences (Martin, Brock, Buckley, & Ketchen, in press). The antecedents consist of organizational factors, individual factors, and work factors, though it is not believed that all three factors need be present for an employee to engage in time banditry. Instead, only one type of antecedent is suggested as a necessary and sufficient condition for time banditry to occur. At least one antecedent is required for time banditry to occur, though it is proposed that both the cognitive justification and available opportunities moderate the existence of time banditry. It is hypothesized that time banditry will occur when there is at least one antecedent, that the action is justified

from the individual's perspective, and that the individual has an opportunity to engage in time banditry. Even if antecedents are present, if the action is not justified or there is no opportunity to engage in time banditry, the negative behavior will not occur. Therefore, having antecedents is necessary though not sufficient for time banditry to occur.

No one type of antecedent is proposed to be more influential than the others, though depending on the individual situation, some antecedents could be more common than the others. For example, it is proposed that individuals who are conscientious will exhibit fewer time banditry behaviors than those individuals lower in conscientiousness. For these individuals, it may be less likely that the individual antecedents will lead to time banditry behaviors, though organizational and work factors could still contribute to time theft.

One type of precipitating factor could be more influential in employee time theft than another, depending on the individual(s) involved, the type of work, and specific aspects of the workplace. It should be noted that the presence or absence of any antecedent factors in any of the three main categories does not guarantee the presence or absence of time banditry behaviors. However, the more antecedent factors that are present or absent, the more likely the employee either will or will not engage in time banditry behaviors, respectively.

First, the organizational factors that contribute to an employee engaging in time banditry are those characteristics of the organization that predispose or allow the behavior to occur. More specifically, organizational factors include the climate of the organization, and whether or not it is conducive to the time banditry behaviors.

Organizational culture is a huge factor in determining the norms for workplace behavior (Lim, 2002). If the organizational culture is one that allows off-task behavior, this will contribute to employees engaging in more time banditry behaviors more often. Because this norm of behavior has been established, the organizational culture will then feed into the cognitive justification and contribute to a "bandwagon effect," wherein their behavior is justified because other employees are also engaging in such behavior (Wimbush & Shepard, 1994) or because that behavior is being displayed by their role models (Bennett & Robinson, 2000).

The field of social psychology contains a theory of how attitudes can be spread throughout groups of people: emotional contagion. This theory sets forth that individuals can unknowingly transfer their moods and attitudes about certain things and behaviors between one another (Hatfield, Cacioppo, & Rapson, 1993). This transfer can occur between any two or more individuals, and thus can permeate the bounds of job class (Johnson, 2008). For example, if an hourly employee comes in late to work one day, the supervisor may unconsciously convey a negative affect toward that behavior. The surrounding employees will then perceive that affect and be more likely to experience that emotion again in a similar situation, as when another employee arrives late and the supervisor is not there. In this organization, specific time banditry behaviors would be less likely to occur because of the feelings attributed toward them. In this way, the feeling about time banditry can spread quickly, and unintentionally, throughout an organization.

Other organizational factors also lead to time banditry behaviors, such as the existence and enforcement of organizational policies that reduce time banditry.

Instituting formal policies has been shown to reduce the number of counterproductive work behaviors in organizations (Lawrence & Robinson, 2007). These policies could be attendance and tardy policies, but the enforcement of these policies is critical. If the policies are enforced and there are consequences for showing up late to work or taking long lunches, employees will be much less likely to engage in this type of time banditry behavior.

As with organizational factors, there are also a number of individual factors that are hypothesized to predispose one to time banditry. One such factor is the tenure of the person in the particular organization. It has been proposed that ethical work behavior is positively correlated with the length of time spent working for an organization (Applebaum, Deguire, & Lay, 2005; Wimbush & Shepard, 1994). While behaving ethically is not necessarily synonymous with a lack of time banditry behaviors, it is likely that employees behaving ethically in the workplace will engage in fewer counterproductive work behaviors, and thus, fewer time banditry behaviors than their coworkers who behave less ethically.

Age is another individual factor that is proposed to be related to time banditry. Malachowski (2005) has found that older workers generally waste less time during the workday than younger workers. Thus, we propose that more time banditry behaviors will be observed in older workers than in younger workers.

Individual perceptions of justice, or more importantly injustice, can have dramatic effects on the prevalence of counterproductive work behaviors (Aquino, Lewis, & Bradfield, 1999; Everton, Jolton, & Mastrangelo, 2007; Greenberg, 1990; Skarlicki & Folger, 1997). Although these studies did not use time banditry behaviors

as a measure, time theft was used in a 2005 Salary.com survey. This survey asked how and why employees steal organizational time, and just under a quarter of the 10,000 respondents said that they felt they were underpaid for the work that they performed (Malachowski, 2005). Thus, to correct the perceived inequity, employees spend time on non-work tasks and subsequently feel as though they are receiving fair compensation for the amount of work they are actually doing.

It is important to note that the inequity might not actually exist; the employee merely needs to perceive that there is an injustice present for their subsequent actions to be effected (Lim, 2002). However, management can take proactive steps to limit inequities, particularly when economic conditions force salary cuts. When employees experienced a pay cut in a manufacturing plant, the counterproductive behavior of physical theft was measured. Employees retaliated against the inequity of the pay cut by stealing from the plant. However, when management explained the reason for the pay cut, thereby limiting the perceived inequity, the level of theft in the plant was reduced (Greenberg, 1990). Although this study deals with physical theft, the same conclusion could be found with the theft of time from the organization. Therefore, it would be beneficial to managers to thoroughly explain and address any perceived inequities on the part of their employees to reduce counterproductive work behaviors, and possibly time banditry.

The level of commitment that an individual shows toward their job can be a mitigating or precipitating factor in whether or not they engage in time banditry behaviors. Generally, committed employees perform better, maintain longer tenures with their organizations, and engage in fewer counterproductive work behaviors than

their counterparts who are less committed to the organization (Johnston, Parasuraman, Futrell, & Black, 1990; Spector & Fox, 2002). While no studies have been done that have looked at time banditry behaviors as a group and organizational commitment, one study employed sick days used when the employee was not sick as a dependent variable McElroy, Morrow, & Fenton, 1995), and this type of absenteeism is considered to be a form of time banditry.

Satisfaction with one's job is also hypothesized to impact time banditry. Those who experience lower levels of job satisfaction are more likely to engage in counterproductive behaviors at work (Lau, Au, & Ho, 2003). As was found with individuals with low organizational commitment, employees with low levels of job satisfaction are more likely to be absent or late than their satisfied coworkers (Adler & Golan, 1981). When employees are not satisfied with their jobs, they may are often less committed, and thus will be more likely to engage in counterproductive work behaviors such as time banditry (Bardwick, 2008).

The final individual factor that is hypothesized to influence time banditry behaviors is personality, though this is no small matter in and of itself. Conscientiousness is the personality factor that appears to impact many other different factors involved in the time banditry model, so it is the central point of focus for individual personality, though later studies should investigate other personality characteristics to determine their relationship with and impact on time banditry. Previously, it has been shown that conscientious employees are more likely to engage in organizational citizenship behaviors (Ilies, Scott, & Judge, 2006). The presence of organizational citizenship behavior does not preclude the presence of time banditry. At

times organizational citizenship behaviors might actually cause time banditry in the workplace if employees spend too much time helping others, thus preventing them from achieving their own work goals.

Conscientiousness has also been shown to be related to increases in productivity (Kamdar & Van Dyne, 2007) and job performance (Barrick & Mount, 1991) across different occupations (Salgado, 1997). Conscientiousness is also inversely related to counterproductive work behaviors (Salgado, 2002). Thus, increasing conscientiousness in employees is likely to increase productivity and performance while decreasing counterproductive behaviors such as time theft.

The final group of factors that are proposed as antecedents to time banditry are the job-specific factors that may vary widely across jobs. The first such factor is the engagement in the specific tasks that the employee completes. In a routine job, this could be generalized to engagement; however, we propose that there are a greater number of jobs for which different required tasks are more engaging than others, thus resulting in task engagement. An individual who is not engaged in their task, or their job in general, will be much more likely to engage in time banditry as a way to avoid the task they do not want to complete (Ketchen, et al., 2008). However, generally, those who are engaged in their jobs should exhibit fewer time banditry behaviors than those who are not engaged in their jobs.

Frustration is another factor that is hypothesized to impact time banditry. When an employee is frustrated by certain aspects of their job, such as interpersonal issues, specific tasks, lack of adequate resources, or a lack of adequate training, they are more likely to spend time on non-work activities to avoid the frustration they are sure will

result from completing their assigned tasks (Ketchen, et al., 2008). In fact, research has shown that employees lacking the resources required to perform their job duties can become overwhelmed and thus, fail to complete their tasks (Cordes & Dougherty, 1993). This antecedent is multi-dimensional as it can cause employees to fall short of their goals for numerous reasons. Employees may not reach their goals because they do not have the equipment or resources to perform their job duties, so the lack of resources if the deciding factor. Employees may also feel frustrated by equipment that is inadequate or does not work properly, thus avoiding or delaying interaction with the equipment, which then causes their work to be sub-par or late. Employees may also use the poor equipment as an excuse for not completing their work, or not doing certain assigned tasks. Depending on the situation, this can be relatively easy to fix from the organization's position. Simply investing in a new copier or a new piece of equipment would eliminate that possible antecedent of time banditry, thus increasing overall productivity of the workers who rely on that equipment.

The level of supervision that an employee is subject to on the job will also affect the amount of time stolen from the organization. In general, when supervision increases, time banditry decreases. It is predicted that supervision will only negatively impact the amount of time banditry for the type of behaviors that are monitored. Some organizations have a kind of informal monitoring system, whereby supervisors and managers observe employees periodically throughout the day doing what they should be doing, or at least at the location they should be at. However, these supervised employees could still be engaging in time banditry behaviors such as using their work computer for personal reasons, taking and/or receiving personal phone calls at work,

and not working to their potential. Other organizations monitor the internet usage of their employees. In these organizations, it is much less likely that the internet will be used for personal reasons because that is the behavior that is being monitored (Alder, Schminke, Noel, & Kuenzi, 2007). However, other behaviors that are not monitored closely, such as coming in late or taking long lunches could exist because the employees are not monitored for these specific behaviors.

Even if an organization cannot monitor employees' internet usage or the time spent at their work stations, time banditry can still be reduced by implementing different standards of work and holding employees accountable for these work goals. If standards or goals are put into place, employees are much more likely to stay on task, which naturally reduces the time that can be used for off-task behaviors (Ketchen, et al., 2008). The existence of these work goals is not enough in isolation; accountability is the factor that determines the amount of time banditry that is likely to occur. Employees that are accountable for their actions and productivity are much less likely to engage in time banditry because of the consequences that can occur for not meeting their goal.

The antecedents do not exist in isolation from each other. Instead, they are interrelated and together result in a greater or lesser propensity to steal time from the organization. For example, while Joe's job on the assembly line may limit the amount of job-specific time banditry he can engage in, he still might be influenced by his own personal motivation, engagement, and personality to steal time on the job. Likewise, a Karen may be very conscientious but work in an office where the copier is always breaking. She may justify putting off tasks that will require the copier because she

knows it will likely cause frustration for her. She also might be more likely to blame the copier if she does not accomplish a task on time, because she knows that her superiors know that it has problems that are, at times, beyond the control of an individual employee. In sum, the lack of any identifiable antecedents from one of the factor categories listed does not mean that an employee will not steal time from the organization. In addition, the antecedents are likely to change as the individual employee's circumstances change, such as getting a promotion or working under a new manager.

Also noteworthy is the hypothesis that all of the antecedents cannot be controlled in a work environment. At times, employees will have feelings of injustice about their work, they may be more or less committed to the organization, or their personal circumstances might change. Because of the dynamic interaction of the employee and their workplace, and all of the extraneous factors that are involved, it should not be expected that all antecedents could, or even should, be changed. Rather, understanding the relationship of these antecedents will allow better prediction of the tendency to engage in time banditry behaviors. Understanding which individual, organizational, and work factors are highly or not highly related to time banditry, managers can focus their selection efforts on hiring for individuals who are less likely to engage in time banditry because they are more informed about which factors contribute to or work against time banditry in the workplace. Researchers can also become more informed by this information and will be able to develop targeted organizational interventions to change the culture of the workplace. The model also suggests that fit could become an important factor in reducing time banditry because of the work factors

antecedents. It is suggested that if there is a poor fit between the employee and the job, there will be more time banditry behaviors observed.

*Opportunity.*

The next component of the model is the opportunity to engage in time banditry. This can take many different forms, and is demonstrated by the wide array of behaviors at work that can be performed when one should be working. Individuals need an opportunity to engage in time banditry before they can successfully do it, and unfortunately, opportunities abound. For employees who have no access to the internet at work, the opportunity for using the company's internet access to steal organizational time is absent. However, these employees can still find many different ways to engage in time banditry. With the advent of smartphones and personal digital assistants (PDAs), the internet has become mobile and can thus be easily used by employees at work. If an employee uses their phone to surf the internet, chat with a friend, or update their status on a social networking site, they are not using physical company resources but they are still engaging in time theft. Therefore, even if employers attempted to limit the access to the internet on company computers, employees would still have the opportunity to engage in technological time theft by using their personal phones.

The opportunity phase of the model is best thought not a necessary or sufficient condition for time banditry to occur. Its mere presence will not cause time banditry. Its absence, by means of supervision or specific environmental conditions, will not prevent time banditry; withholding effort and the self fulfilling prophecy can exist in nearly any job. If the antecedents are present and the behavior is justified, time banditry will

occur, and the opportunity is more a channel in which to express this counterproductive work behavior. In sum, the opportunity is just the means of the expression.

*Cognitive Justification.*

The third stage of the proposed model is the cognitive justification stage, wherein the employee decides whether or not to engage in time banditry. However, it is hypothesized that this is not always a conscious choice, making this stage the most complex in the model. Unlike some other forms of counterproductive work behaviors, individuals can steal time but may not necessarily be aware that they are doing so or be aware that they have considered doing so. On the other hand, individuals who steal money or merchandise are much more likely to have a justification for doing so, and a conscious understanding that they actually engaged in some sort of justification prior to their actions.

At times, the justification for stealing time and for stealing merchandise, money, or supplies may be very similar. For example, two retail employees did not receive the raises that they felt they deserved, and thus, an inequitable situation resulted. Jackson perceived this inequity and felt that he was giving more to the company than he was receiving in return. As a result, he chose to correct this inequity by taking a few dollars out of the register each shift he worked when no one was looking. By taking this extra money, he felt that equity had been restored. Richard also felt that he was being unfairly treated by not getting the raise he thought he deserved. He began to take longer and more frequent breaks than he was allowed, and began behaving more aloof to the customers that sought his help. In this way, he was correcting the perceived inequity by working less, thus he was working the amount he felt was fair for the wage he was

being paid. In both of these cases, the justification for engaging in the counterproductive work behavior was the same: to restore equity to an unjust situation, though the actions taken by the two employees were different

Many previous theories of cognitive justification are applicable to time banditry, and at times, many different cognitive processes might be used to justify the individual's actions. In the example given previously, equity theory was used to explain the motivation for the counterproductive actions based on the cognitive dissonance experienced by the two employees. Equity theory holds that individuals interacting in some way have an innate desire for the results to be equal. If either, or both, parties perceive an inequity, they will experience cognitive dissonance, which then motivates them to take action to correct the inequity (Adams, 1963). According to one survey of over 10,000 American workers, perceived inequities are the second most common reason for engaging in non-work tasks during the work day (Malachowski, 2005), a fact that emphasizes the need for perceived equity in the workplace.

The cognitive justification stage in the model is influenced by all of the antecedents that are present, and may combine these factors with the future goals and desires of the individual in their work career. The easiest way to achieve a goal is to create a plan of action, which requires conscious thought (Miles, & Proctor, 2008). If the future goal includes success in the workplace, the employee will be less likely to engage in time banditry because this goal is in direct conflict with the actions of stealing company time. It is not likely that the employee will contemplate whether or not to steal organizational time with respect to the organization. Rather, they are likely to focus on the personal possible consequences that could occur and how these

consequences could affect their ability to attain their desired goal. Miles & Proctor (2008) suggest that such goal-oriented thinking can become automatic to facilitate success. This cognitive process may help to explain why many people do not consider themselves to be time bandits: they are not investing cognitive energy when making these decisions, and they become unremarkable, and thus, are not recalled.

Individuals could be motivated to decide whether or not to engage in time banditry based on the behavior of those around them, and the reaction of others to certain behaviors. If others are behaving, or reacting, in a certain way, such as arriving late to work or taking long lunches or acting as though that behavior is acceptable, that individual will feel more justified in performing those same actions. Emotional contagion can have a pervasive effect in the workplace and the resulting organizational culture strongly affects this type of cognitive justification. One study found that a type of counterproductive work behavior, bullying, can be impacted by the emotional contagion of the organization (Harvey, Treadway, & Heames, 2007). If the organizational culture accepts bullying, emotional contagion will ensure its transfer to new employees, thus continuing the norm to future work generations.

In the cognitive justification stage, the individual may decide that they cannot complete their assigned tasks, and this can be the beginning of a self-fulfilling prophecy, a theory first suggested by Robert Merton in 1948. This process begins with the individual deciding that they cannot accomplish something, such as a work task, and then their belief becomes reality because their cognitions have influenced their actions. Individual beliefs are obviously strong predictors of this type of cognitive justification, but the culture of the organization can be a contributing factor as well.

Several more conscious justifications also may occur in this phase. Free riding occurs when a group member does not perform either their given share of the work or their individual work tasks and other group members or coworkers perform the tasks for them (Albanese & Van Fleet, 1985). Therefore, an individual might be motivated to engage in time banditry if they knew that their work tasks would be completed by others around them.

Similarly, social loafing happens in group settings and involves individuals who contribute less as a group member than they would have as an individual (Latane, Williams, & Harkins, 1979). Perhaps driving this in the workplace is the accountability issue mentioned earlier. The culture of the organization might also be a significant predictor of this type of justification.

Some schools of thought both in research and in applied management lead to the conclusion that workers are lazy and must be motivated to do every work task, and usually the motivation is provided by negative consequences if adequate performance is not achieved. Because these individuals need to be motivated, on their own they withhold effort that they could be placing into their work tasks (Judge & Chandler, 1996). Overall, it is thought that to "fix" this type of employee, more supervision and policies should be used in the organization (Chalykoff & Kochan, 1989). If an individual consciously chooses to not perform their work, job neglect is occurring (Albanese & Van Fleet, 1985). This is perhaps the worst form of time banditry because the individual recognizes the circumstances and their actions but still chooses to steal organizational time.

Another possible cognitive justification that could occur is the individual's belief that they are working to their full potential and are not capable of performing any more tasks or increasing the quality of their work.

Finally, a relatively recent study on performance justification found that maximal performance was not influenced by monetary compensation (Barnes & Morgeson, 2007). The results of this study have clear implications for time banditry in the workplace: more money does not lead to workers performing to their full potential. This idea is counter to what so many organizations practice and to what so many managers believe.

These cognitive justifications may be used for a single task in the workplace, or they may be used more frequently as an excuse for not performing to their expected level, perhaps becoming routine. Different justifications may be used in conjunction with one another, to further build the case for the employee's non-performance. For example, an employee may be in a culture where specific types of time banditry are accepted (organizational antecedent), they may not believe they can perform the task (individual antecedent), and they may feel that they are contributing all that they possibly can to the work task (workplace antecedent). These factors combine into a complex justification that they can use to explain their behavior should they need to.

In some instances, the cognitive justification process is overt and thoughtfully considered. However, in most cases, it is not obvious to the individual. This may in part be due to the fact that many workers do not view certain behaviors as time banditry. If the resulting behavior is not viewed as a counterproductive work behavior, trying to identify the cognitions preceding the behavior will be difficult for the

individual. Regardless of the processes involved, and regardless of whether the individual is consciously engaged in the decision to commit or refrain from time banditry, the cognitive justification stage must occur.

*Time Banditry.*

The next stage in the model is the actual banditry behavior, which as previously stated, can take many different forms. Regardless of the method by which time is stolen, the end result is the same for the organization. There are instances where stealing time is actually productive when viewed in context, and it is important to note that an individual who steals organizational time is not necessarily a bad person, which is important for developing methods to decrease time banditry in organizations. By eliminating the pre-conceived negative connotations of counterproductive work behavior, time banditry can be understood for what it is but is not necessarily a personal reflection, as shown by the numerous antecedents that can lead to stealing organizational time.

*Consequences.*

After the time theft has occurred, the employee has the opportunity to learn from the experience by facing the consequences of their actions. It is at this point in the model where the true learning can begin. Time banditry is reinforced by consequences, or the lack thereof. Whenever the employee engages in an act of time banditry, there could be a consequence, but learning will take place regardless of the consequence. In absence of any consequences, the employee will be more likely to repeat their action in the future because there were no adverse consequences for performing the same action previously. Often, there are consequences to time banditry, and that is what is

appealing about it: the consequence is that the employee used company time for personal reasons, which they presumably found as more attractive options than their work tasks. When the employee successfully engages in time banditry and there are no negative organizational consequences, the behavior will be much more likely to occur in the future.

Creating consequences for stealing organizational time is one way that organizations can reduce time banditry. By implementing negative consequences for off-task behaviors and for missing important deadlines, employees will become less motivated to perform such behaviors and more motivated to perform behaviors that will lead to rewards, such as staying on task and demonstrating the desired work habits.

*Experience.*

Bandura's social learning theory forms the feedback loop in the proposed model, and this phenomenon is very important to organizational learning, for better or worse. Prior experience and the vicarious experience of others are combined to contribute to the individual factors that start the process over again. Managers have a great opportunity to take advantage of the vicarious learning process to reduce time banditry in the workplace. By catching one employee stealing time and disciplining them for the action, other employees will then be less likely to steal time, at least in the same manner as the punished offense. For example, Julie came in a half hour late this morning. Johnny saw Julie come in late and he noticed how the boss greeted her when she came in but said nothing about how late she was. Johnny mentioned that she was late and nothing happened at his team meeting later that day. Now, multiple employees are aware of the opportunity for time banditry, and they are also aware that others have

stolen time in that manner without consequences. Situations like this can quickly snowball into problem behaviors of an entire work group instead of just an individual occurrence. In this instance, social learning theory has worked against the organization's goals to inform employees of a counterproductive opportunity with no negative consequences. Only one employee needs to be observed before this behavior is learned by others.

The same theory can be used to the organization's advantage, while at the same time creating a climate that discourages time banditry and increases perceived justice. Managers need to decide what time banditry behaviors they find acceptable, and which behaviors are unacceptable, and they need to reinforce these behaviors in a consistent manner across time and across employees. If Julie had received a consequence, such as being asked to stay late to make up for the time she missed, other employees would not perceive the incident as an effective way to use organizational time. In that case, time banditry is discouraged, and this learning took place vicariously through the observation of a fellow organizational member. Maintaining consistency is very important, as imposing consequences on some but not others will lead to the time banditry antecedent of perceived injustice, thus making it more likely that time banditry will occur in the future.

However, time banditry is often not an egregious event, making disciplining for the behavior petty and possibly counterproductive in and of itself. For example, an employee who takes excessive breaks throughout the day is engaging in time banditry, but trying to eliminate this behavior would likely not end well for either party. Often, the time bandit does not perceive that they are doing anything wrong, thus making any

consequence seem unjust. Instead, managers would be well advised to reinforce positive behaviors that inherently eliminate time banditry, such as meeting or exceeding productivity goals. Further, there often are no negative consequences because it is so common and so accepted in certain workplaces. Therefore, the behaviors are being reinforced by management's inaction.

This model adds to the literature about time banditry, but is somewhat constricting and may be too linear. Therefore, a revised version of the model is proposed in Figure 2.

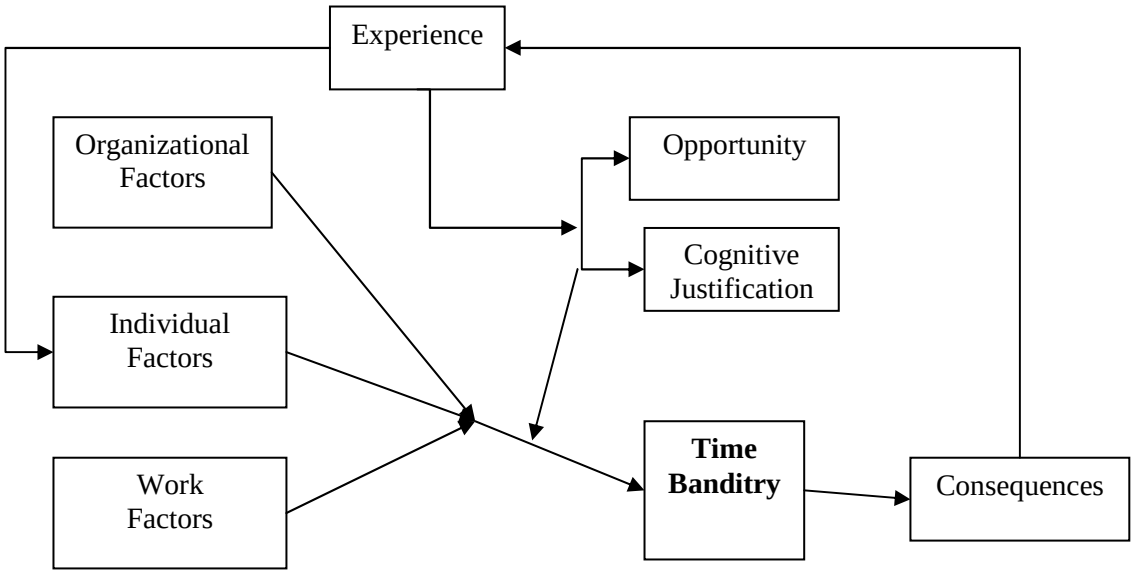


Figure 2. *A revised model of time banditry.*

This model proposes that the factors that influence time banditry remain the same, but the order in which they act on time banditry is different. Neither opportunity nor cognitive justification alone are necessary or sufficient conditions for time banditry to occur. Both of these factors, along with at least one type of antecedent must be present for time banditry to occur.

Moreover, past experience can influence the cognitive justifications about one's actions as well as the perceived opportunity to engage in the time banditry behavior. This model of time banditry is intuitive and presents great opportunities for organizational intervention. It also provides a framework upon which to base future research on time theft to understand each portion of the model more completely. However, in order to depend on the model, it has to be validated, and the one of the first steps in model validation is to understand the core concept and to develop a way to measure this construct in practice. This research endeavor has accomplished both goals and will serve as a basis for many future research studies on organizational time theft.

*Time Banditry vs. Counterproductive Work Behaviors*

A different model was needed for time banditry than for other counterproductive work behaviors for a number of reasons. First, while the argument could be made that all counterproductive work behaviors should be stopped in organizations, it is inappropriate to think that all time banditry behaviors could, or should, be stopped. Breaks and off-task time should be allowed, and at times encouraged, and employees should never be asked to work at maximal performance levels at all times. Attempting to eliminate time banditry would likely fail, but long term harm could be done to the organization's climate in the process. For example, mandating that employees only take two breaks throughout the day for refreshment, social exchanges, and restroom breaks would likely reduce time banditry. However, it is likely that employees may engage in other counterproductive work behaviors, such as loafing, shirking, and withholding effort to correct the injustice felt for the freedom that has been revoked. There are very few jobs in which time banditry is impossible in some form or another. Rather than

focusing on eliminating time banditry, reduction of this behavior pattern should be the goal.

Second, while the previously defined counterproductive work behaviors are largely performed intentionally and actively, time banditry does not necessitate intention nor action on the part of the employee, but involves both cognizant and unconscious judgments and both active and inactive behavior. For example, when Shannon takes time to do her personal errands along with her boss', she likely does not view her behavior as counterproductive, though it is by definition. Therefore, she has actively engaged in an unconscious theft of time from the organization. On the other hand, she seems to be more conscious that her actions on the computer are inappropriate because she stops when she needs to assist a client, thereby making this behavior cognizant and active.

Other counterproductive work behaviors revolve around access and opportunity, both of which precede time banditry in the proposed model. An employee with no access to organizational funds will not be able to steal from the organization. Likewise, an employee with no access to a computer at work will find it hard to engage in time banditry behaviors such as sending and receiving personal e-mails at work. Employees may still be able to access the internet using a smartphone, which will not squander the company's physical resources, but will still waste organizational resources via time theft. However, unlike other counterproductive work behaviors, there are many more forms that time banditry can take, which in theory, makes developing targeted interventions for specific behaviors relatively futile. For example, while developing a

strict policy against tardiness will reduce its occurrence, time banditry can still occur in others ways.

Another difference between traditional counterproductive work behaviors and time banditry is defining exactly where job duties end and time banditry begins. Time banditry behaviors may manifest themselves differently based on the level of the organization the employee works in, which in some ways is tied to opportunity. For example, the middle manager in an organization works long hours and is paid a fixed salary for performing their job duties. Much of their job consists of supervising the employees working under them, and research has shown that effective leadership involves a personal touch, which involves getting to know employees on a personal level. Therefore, the manager might engage in non-work conversations with the employees. For the manager, this is not time banditry because it is part of their job description, in a sense. However, for the employees, it is time banditry, because they are taking time away from their tasks.

To further complicate the definition of time banditry, at times, it can actually be productive to the overall goal. For instance, managers' duties often consist of complex cognitive tasks, and asking them to focus on these tasks for hours on end without breaks would probably be more harmful to productivity than allowing coffee breaks and short social exchanges. Other forms of counterproductive work behaviors do not present such paradoxes and are more clearly defined equally across organizational members and are more consistent across time. For example, stealing physical supplies from a company would never be considered to be productive to a work goal (Everton, Jolton, & Mastrangelo, 2007). At other times, managers might actually want to encourage

counterproductive work behaviors in the form of organizational citizenship behaviors, as this type of behavior can ultimately increase overall productivity (O'Brien & Allen, 2008). For example, if one employee helps another on a project, while they should be working on their own tasks, they may be engaging in time banditry. It is important that managers do not inhibit all helping behavior. Rather, employees should be encouraged to help others when they can still maintain all of their principle job responsibilities. If a task requires help from other coworkers, the "helpers" should be sure that management is aware of their time allocation if they will not be able to continue performing all of their normal job duties. Managerial involvement in organizational citizenship behaviors can be beneficial for the employee and for the organization. The employee will benefit because of increased recognition for their efforts, and the organization will benefit because employee productivity can be measured more accurately by accounting more thoroughly for employee's time.

Finally, most counterproductive work behaviors are inexcusably negative, and at times, illegal. Stealing large sums of money from the organization is much harder to justify than consistently arriving 5 minutes late to work, and each behavior has different consequences. Therefore, it is inappropriate to think of all counterproductive work behaviors, particularly time banditry, as negative. Workers who engage in time banditry are not necessarily bad workers. Instead, they are engaging in behavior that is counter to the organization's goals.

Just as it is inappropriate to consider all time banditry behaviors as negative, it is also inappropriate to attempt to eliminate all time banditry behavior in the workplace. Breaks, whether they are authorized specifically or not, can increase productivity

overall, particularly in tasks that are physically or mentally taxing. Thus, taking a break to focus on something else for a short period of time is necessary. It would be impossible for an employee to work every minute of every day that they are at work, and that is not what we are suggesting. When employees are constantly driven to perform and produce, burnout can result, and this is inarguably counterproductive for the organization and the individuals involved. Instead, the overriding goal for time banditry should be its reduction, not its elimination.

*Nomological Network*

Time banditry is a construct; that is it is only able to be observed through someone's actions and behavior in a workplace situation. This observation can take place by using behavioral markers while following employees in the workplace, or by using questionnaires and surveys. Because there is no physiological test for time banditry, alternate measurement methods of variables and other constructs must be employed. Because the measurement of constructs must be indirect, the focal and related constructs must be shown to be valid. To establish validity for time banditry, a nomological network of the lawful relationships between the constructs that are related to time banditry was developed (Cronbach & Meehl, 1955). This network involves the theory of how time banditry and other personality constructs are related. The proposed nomological network for time banditry is shown in Figure 3. This model visually demonstrates the proposal that time banditry is related to a number of different factors. It is imperative for the advancement of time banditry as a construct to be able to

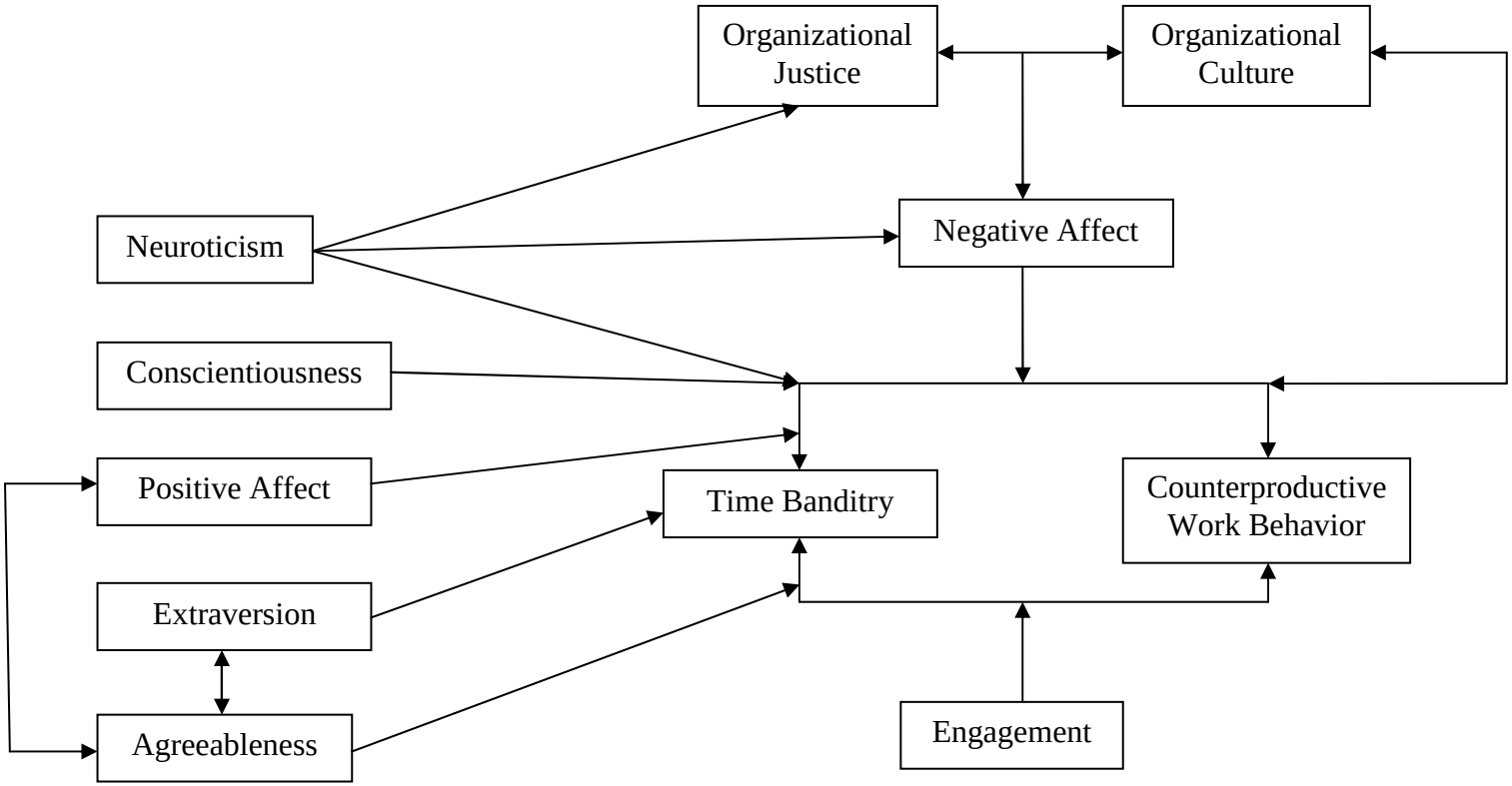


Figure 3. *Nomological Network of Counterproductive Work Behaviors*

develop a theoretical model of how it relates to other constructs, in an attempt to both understand time banditry and how it fits into established constructs.

As can be seen from the model, it is proposed that time banditry and counterproductive work behavior are influenced by many of the same factors while at the same time influencing each other. In this case, counterproductive work behaviors are regarded as negative behaviors that could occur in the workplace that do not involve stealing time. The proposed correlation between the two constructs is positive, such that individuals who engage in time theft from an organization are more likely to perform other negative behaviors in the workplace, though they can exist in isolation from each other. For example, an employee could never engage in any behaviors that could be classified as counterproductive work behaviors but still engage in time banditry, and vice versa.

The example previously referenced probably describes the majority of the American workforce: engaging in far more time banditry behaviors than counterproductive work behaviors. Behaviors such as stealing money or merchandise, sabotaging a coworker, or workplace violence are seen as much more serious offenses than surfing the internet after lunch or arriving late to work. By comparison, employees in an organization where these serious counterproductive work behaviors are exhibited may see time banditry as relatively minor offenses. This may lead to an attitude of apathy about time banditry in the workplace, or at least, the absence of strict policies prohibiting it as is the case with other counterproductive work behaviors. Lending credibility to this idea is the fact that managers actually budget time for employees to spend off-topic when calculating productivity (Malachowski, 2005).

As previously mentioned, the relationship between counterproductive work behaviors and time banditry is proposed to be positive. Several factors impact both of these variables in the workplace, so for simplicity in describing the relationships between these variables and the others in the model, these two constructs will be referred to as negative workplace behaviors, but includes both constructs independently.

The first influential factor is organizational culture. The culture of an organization can substantially influence the negative workplace behaviors that are expressed by an individual employee. The organizational culture is a complex set of factors that combine to form a general atmosphere about the workplace. The resulting culture can foster an atmosphere that either encourages or discourages negative workplace behaviors. If the organization contains members that engage in negative workplace behaviors with little or no consequence, the culture will be more conducive to greater numbers of negative workplace behaviors, particularly those behaviors that were modeled by other coworkers. If the culture is one that discourages these negative behaviors but instead encourages on task and pro-social behaviors, negative work behaviors will be less common. Ideally, an organization will maintain a culture that strongly values hard work and discourages the negative work behaviors. By creating and maintaining a culture of this type, organizations will likely see the benefits of higher levels of productivity because employee resources are not being squandered on off-task activities.

Although the fairness of organizational policies, procedures, and decisions can be objectively measured, it is the subjective perception of organizational justice that is of interest in this model. When a perceived injustice occurs, the individual will not

necessarily differentiate between rationality and their perception. Instead, they often base their actions on their feelings, which are based on their perceptions of reality, and not necessarily reality. From equity theory, when an individual perceives equality between themselves and their organization, they will not be motivated to take any extra actions. When there is an inequity perceived by the employee, they will be prompted to take action to restore equity to the situation. Many of the actions employees can take to restore their perception of equity can take the form of negative workplace behaviors. For example, individuals who feel that their performance review was unjustly negative will feel an inequity. There are many different behaviors that they could then engage in to restore equity. The individual could engage in time banditry by reducing their subsequent action at work or by using their time during the workday for personal activities. They may also engage in counterproductive work behaviors such as stealing money or merchandise in an effort to get even with the company. Because the results of a perceived inequity will commonly end poorly for the organization, ideally, all interactions with employees should be viewed as fair and just.

The factors of organizational culture and perceived organizational justice also influence each other. When individuals in the organization feel that there has been an injustice committed against them, either collectively or as individuals, it will likely change the culture of an organization. The resulting organization will likely have less trust of management, or whoever imposed the perceived unfair action. This cycle can continue if those who felt initially wronged retaliate in some manner, either directly or by using a negative work behavior, against those who initially imposed the injustice. Those who initially imposed the injustice might feel that they are being unfairly treated

or that the behavior of the individuals is inappropriate, thus creating feelings of injustice on the behalf of the original individuals, thus reinforcing the negative feelings that exist in the organization's culture.

The perceived justice in an organization and its culture do not necessarily dictate the behavior of the individuals involved. Every employee who feels that they have been wronged by the organization does not automatically engage in some kind of negative workplace behavior. Every employee who works in an organization with a culture that accepts, or at least does not punish, negative workplace behaviors, does not engage in such behave. The proposed moderator between justice, culture, and negative workplace behaviors is negative affect. When negative affect is present, the factors of organizational justice and culture influence the existence of time banditry and counterproductive work behaviors in the workplace. Therefore, it is proposed that only the individuals who have negative affect will exhibit negative workplace behaviors. Because of this proposed moderated relationship, the ideal level of negative affect for employees is low.

As was previously discussed, time banditry is not necessarily a negative behavior, and there are several other factors that influence its occurrence in the workplace. The first of several personality factors that increases negative work behaviors is neuroticism. Highly neurotic individuals are proposed to engage in more time banditry and counterproductive workplace behaviors. These individuals tend to be pessimistic and seek and dwell on the negative aspects of situations. Thus, they are proposed to be more likely to view situations as unfair, and thus have a higher level of

perceived injustice. Because of these negative outcomes, the ideal level of neuroticism for employees is low.

Another personality factor that is proposed to be directly related to negative work behaviors is conscientiousness. The proposed relationship between conscientiousness and these factors is negative, such that highly conscientious individuals are less likely to engage in either time banditry or counterproductive work behaviors. Conscientiousness is also proposed to have a mitigating effect on the relationship between negative work behaviors and negative affect. For example, an individual who is working in a culture that accepts negative work behaviors, has experienced a perceived injustice and scores relatively highly on negative affect will be less likely to engage in negative work behaviors if they also score highly on the conscientiousness dimension of personality.

The final personality factor in the nomological network is extraversion. Extraversion is proposed to be directly and positively related to agreeableness, such that friendly people are more agreeable and vice versa. Extraversion is also proposed to be positively correlated with organizational citizenship behaviors. There a couple of reasons for this relationship. The first reason is that individuals who are extraverted are more likely to visit with their coworkers, thus finding out about opportunities to assist them in their work tasks. The second reason is that individuals who are extraverted, and are also proposed to be more agreeable, are seen as more approachable by their colleagues, such that they are the coworkers who are asked when assistance is required. Finally, extraversion is hypothesized to be related directly to time banditry. Individuals who are very friendly in the workplace might misallocate their time away from their

actual work tasks, the material that their productivity is based on, to socializing with coworkers. Because of the relationship with both organizational citizenship behaviors and with time banditry, it is hypothesized that a moderate level of extraversion is optimal. In this way, individuals will be seen as social and friendly enough to be involved with their coworkers and help out when needed, but not overly friendly such that the work of all involved parties suffers the consequences of time misallocation.

Engagement is the final proposed construct in the network. It is hypothesized that when someone is engaged in their job, they will be less likely to engage in either time banditry or counterproductive work behaviors. Instead, they will be more likely to focus on their work tasks, which will help to increase their overall productivity. The optimal proposed level of engagement is high.

The workplace is a dynamic environment, and thus, the nomological network depicting the relationships between the constructs allows for changes that result from the passage of time and the changing levels of the different individual constructs. By identifying the constructs involved and the relationships between them, hypotheses were made and the measure was developed. This network was used to inform the current research on time banditry. This network was utilized when designing the focal studies and numerous findings have resulted from the research involving the network. As research on time banditry is relatively scant compared to other forms of counterproductive work behaviors, it is likely that further studies may change the proposed network, but will regardless provide invaluable information about the subject. Regardless, future research on the subject of time banditry is overdue and can provide

both managers and researchers information that could directly affect the bottom line of companies.

*Types of Time Bandits*

Time banditry was depicted in the nomological network as a single construct, but there is much more to time banditry than a single label can accommodate. To reemphasize the point previously stated, time bandits are not bad people, and their behavior is not always bad, but people do tend to develop behavior patterns, and when these behavior patterns contain high levels of time banditry behaviors, they can become problematic. It is hypothesized that there can be four different types of time bandits, based upon the overall productivity and engagement of the employee. Figure 4 illustrates the four different types of time bandits.

| | *Productivity* | |
|---|---|---|
| | Modest | Poor |
| *Engagement* Modest | Weasel: Engaged-Productive | Sandbagger: Engaged-Unproductive |
| Poor | Mercenary: Unengaged-Productive | Parasite: Unengaged-Unproductive |

Figure 4. *Types of time bandits.*

Each type of time bandit steals time for a slightly different reason, as the motivations are different between types. By identifying the type of time bandit,

managers may be better equipped to limit the theft of time, thus increasing organizational productivity. It is also hypothesized that specific personal characteristics can predict the type of time bandit the employee is likely to become, given the necessary opportunity, and this gives managers another tool to use in the selection process.

Overall, it is predicted that productivity and engagement will be the deciding factors for the type of time bandit that an employee will become. Most definitions of counterproductive work behaviors either imply or define the individuals as unengaged and unproductive. While this may be true for other forms of counterproductive work behaviors, we believe that time banditry is more accurately and fully represented by considering these factors on intersecting continuums, ultimately forming the four different types of time bandits in Figure 3. This illustration shows that there are four different groups of time bandits based on their levels of engagement in productivity in the workplace. Even the individuals with relatively high levels of productivity and engagement in the workplace can still steal time from the organization.

Some jobs lend themselves more easily to the development of one type of time bandit over another, as will be discussed briefly. The key factor to note is that time banditry can occur in all jobs in one form or another. Further, the classification of time bandit may change with the work task, instead of more generally with the job.

The first type of time bandit is the weasel. Weasels are time bandits that are both productive and engaged, but still steal time. They have learned how to manipulate their environment to be able to "weasel" out of work, and are fully capable of performing more and/or better work. For example, this type of time bandit may say that

their tasks will take longer to complete than they actually estimate, in an effort to get more time for themselves on the job. Although weasels steal organizational time, this is the most positive type of type of time bandit because they are still reasonably engaged, committed, and productive, but the additive effect of their behavior remains a problem. In some organizations, the goal might be to convert other types of time bandits to this type, which could significantly reduce time banditry in the workplace. For workers with this profile, managers should attempt to simply decrease the amount of time banditry behaviors that are acceptable, possibly through a culture change or by implementing performance standards with reinforcements for achieving production goals and consequences for falling short of such goals.

The second type of time bandit is productive but not committed. These workers are termed mercenaries. These are workers who "go through the motions" but would much rather be somewhere else and would arguably perform another job better if more engaged. This type of bandit only does what they have to in order to keep their job, and are hypothesized to be more common in jobs where there are specific and concrete job performance standards, such as piece rate work. This time banditry profile might also be appropriate for individuals who do not seek to remain with the company or advance their position, thus giving them little motivation to commit to the organization. If employees are already certain that they will turnover relatively soon, there is little that the manager can do to curb time banditry short of creating and enforcing policies against stealing organizational time. As organizational commitment is likely to remain constant throughout one's life (Morris & Sherman, 1981), managers could administer a measure of commitment during the selection process in an effort to reduce the number

of mercenary type time bandits that are hired. Time banditry could be reduced, along with all of the other negative employee characteristics that committed employees are less likely to display.

The next type of bandits is called sandbaggers because they are engaged but unproductive. They are very excited about what they are doing, but they don't really do a lot of work that helps the company. Because they are already engaged in their work, this type of bandit will likely be the easiest type to "fix," or move to becoming a weasel with high productivity along with their high engagement. Managers should focus their efforts and enthusiasm toward positive organizational goals, using performance goals and incentives to reduce time banditry behaviors.

The final type of bandit is the parasite, and is the most harmful to the organization because they are neither productive nor engaged but draw the same organizational resources as a worker who produces much more. There are different types of parasites and different behaviors that can be used. The first type of behavior is social loafing. This is propensity for employees to exert less effort on a task when in a group than they would if working independently (Latane, Williams, & Harkins, 1979). This type of time theft does not require a group to be formally defined by the organization, but it does require that there are other individuals in the organization who can and do perform the loafing employee's work.

Free riding is another type of parasitic time banditry behavior that also involves a group setting. These employees allow their colleagues to complete their work for them. This can result in an inequity for the employees who are performing extra work,

because they are unlikely to be compensated for work beyond their normal job duties (Albanese & Van Fleet, 1985).

The third type of parasitic time banditry behavior is shirking. This behavior is exhibited when employees do not put forth their full effort when working on a task (Judge & Chandler, 1996). The research on shirking maintains that employees are naturally lazy and will not put forth their full effort unless they are required to do so by threat of some consequence. Chalykoff and Kochan (1989) suggest that the best way to deal with this type of employee is to increase supervision and to create and enforce policies against such behavior.

The final type of parasitic behavior is job neglect. Employees engaging in job neglect will not perform all of their assigned duties, and they are mindful that they are not accomplishing all of their work tasks

Job neglect is related more closely to organizational antecedents than to individual motivation (Kidwell & Robie, 2003), once again emphasizing the important role of culture in maintaining a workplace with low levels of time banditry behaviors.

As was previously stated, an individual may fit into a profile type of time bandit for the job in general but have a different profile for a specific task. Because the organization is likely to have different types of time bandits, no one solution can be used universally to specifically reduce all time banditry behaviors based on the individuals' profiles. However, setting production goals and providing incentives for achieving those goals will help to decrease time banditry behaviors by increasing motivation to spend more time on work tasks. While the introduction of goals will not

eliminate time theft from the organization, it may result in a sizeable deduction that can have a significant monetary impact on the company.

*Measure Development*

Currently, there are very few measures of counterproductive work behavior, and no way to measure the concept of time banditry. The process of validly and reliably measuring counterproductive work behavior is problematic due to the very nature of the focal behavior. It is often very difficult for managers to know precisely how much counterproductive work behavior occurs in the organization, thus rendering their testimonies invalid. Questioning the employees is also problematic, due to the possible consequences for honestly responding to a questionnaire about negative behaviors at work. However, one study obtained more accurate levels of counterproductive work behavior by directly questioning the individuals about this behavior, when compared to personality measures that were used to predict counterproductive work behaviors (Lanyon & Goodstein, 2004). Despite the success of these researchers, more evidence exists that socially desirable responding might invalidate the results of the survey. To address this issue, researchers have used creativity in measure development that has made some recent contributions to different measures. Some researchers have taken a longitudinal approach, whereby children are followed into adulthood and counterproductive behavior in the workplace is then correlated with personality characteristics, which remain relatively stable over time (Roberts, Harms, Caspi, & Moffitt, 2007). Other researchers have taken a "back door" approach to predict counterproductive work behavior by developing scales designed to measure personality traits that are highly correlated with certain counterproductive work behaviors (Dahling,

Whitaker, & Levy, 2009). What these two studies have in common is that they use other measures, personality being a central measure, as proxies for measuring counterproductive work behavior, because desirable responding presents such a large confound for an accurate representation of the frequency of such behavior.

This research endeavor sought to use the same technique as these studies for time banditry. The first step in using this technique that measures the counterproductive behavior via other measures is to develop a valid measure of time banditry with which to correlate other measures. Therefore, a measure of time banditry was needed. This measure could not simply be a checklist of behaviors that an employee could potentially engage in while working, because there could be no complete checklist that would encompass every possible behavior. However, in broader terms, items could be used that target the propensity to perform certain off-task behaviors while also generalizing to different jobs and individuals. It was essential that the items not convey that the behavior was negative, thus inducing desirable responding and/or impression management.

Previously, a measure of time banditry was developed by the authors (Brock, Martin, Buckley, & Ketchen, in preparation). To develop the Time Banditry Questionnaire (TBQ), previously validated measures of counterproductive work behavior were consulted, and some of these items were used in the final measure. Table 1 lists the items that were sourced from previously validated measures. In sum, 10 items total were used from other sources. The small number of previously generated items that were included in other counterproductive work behavior measures is indicative of the scant attention that organizational time theft has received in the past.

Because the measures did not provide a complete coverage of the concept of time banditry, more representative items were generated based on the proposed nomological network. Forty additional items were generated by a panel of three Industrial/Organizational Psychology doctoral students and included items about time

| *Measure* | *Item* |
|---|---|
| Gruys & Sackett, 2003 | I spend time on the internet for reasons not related to work |
| | I play computer games during work time |
| | I take long coffee/smoke breaks without approval |
| Kidwell and Robie, 2003 | I daydream while at work |
| | I give less than 100 percent effort on my job |
| | I put in less effort in my work than I know I can |
| | I show up late for work even when I could make it in on time |
| Lim, 2002 | I check non-work related e-mail |
| | I send non-work related e-mail |
| | I receive non-work related e-mail |

Table 1. *Items Sourced from Previously Validated Measures*

banditry behaviors and a subset of items about organizational citizenship behavior, which were reverse scored. The resulting 50 items were administered to ten graduate students in Industrial/Organizational Psychology to check for clarity, redundant

concepts, and ease of comprehension prior to the pilot sample with undergraduates. Five items were eliminated because of substantial overlap with other items in the measure, resulting in 45 items in the initially administered measure. The TBQ is included in the Appendix. Its formatting is changed slightly due to the online administration.

*Initial Measure Administration.*

The first version of the TBQ consisting of 45 items was administered to a convenience sample of 226 students. These students were either in an upper division psychology course (55%) or in an MBA course (45%). Slightly more than half of the students were female (52%). Participants ranged in age from 18 to 52 (M=23.8 years, SD=5.37). More than half of the students reported being employed part time (55.7%) while 27.7% were employed full time. The remaining participants (14.6% were either temporary workers or were currently unemployed.

Data were obtained by administering the developed measure to students during regular course time. The participants were informed that the measure was targeting off-task behavior at work. In this situation, desirable responding was not predicted to influence results as the surveys were anonymous and there were no consequences for honest responding. In addition to the developed measure, a demographic questionnaire was distributed, which asked about employment status, number of hours worked per week, and compensation type (e.g., salaried or hourly), etc.

While this sample was not typical of the average American workplace, which consists of older and full-time employees, the students had no trouble answering the questionnaire in reference to their current or previous job. The students also responded

that they regularly engaged in many more of the behaviors than were originally speculated, adding more evidence that this problem is very common in the workplace.

An investigation of the correlations between variables revealed that four items were collinear, or were likely measuring the same behavior, and were thus eliminated. Then, an exploratory factor analysis with principle components extractions and oblique (promax) rotation was used to examine the data. Factor analysis was utilized to ensure that the questions asked related to the time bandit construct and to identify the multi-dimensionality of time banditry. An eigenvalue-greater-than-one criterion for retaining factors was utilized (Kaiser, 1958). This evidenced ten sub-factors. Examining the scree plot further discriminated between the factors and evidenced only three. A minimum criterion of .40 in the rotated factor pattern matrix was used to infer a significant relationship between a factor and item. Based on the scree plot providing the least number of sub-factors, a confirmatory factor analysis was used that specified the existence of three factors. Each factor evidenced at least six items that possessed pattern coefficients greater than .40. Ten items did not load on any of the three factors at .40 or above, the minimum acceptable value. Based on the eigenvalues obtained, the authors felt comfortable the maximum number of interpretable factors were extracted. This resulted in a final TBQ measure of 31 items, which are shown in the Appendix.

A qualitative look at the items grouped together in the three factor categories easily provided logical group categories, which were not proposed a priori. One factor that seemed to emerge was termed “Classical Time Banditry.” The classical expression of time banditry behaviors involves taking long lunches, excessive breaks, or feigning illness to avoid work. They are stealing time, but do not use technology or others to do

so. When employees engage in these behaviors, they can be likened to slugs: they take their time in doing things and will avoid doing any more work than is absolutely necessary.

The second factor that emerged was the theft of time using technology, thus providing the factor title of "Technological Time Banditry." Time bandits expressing their behavior in this manner use their work computer for non-work tasks, such as sending personal e-mails and surfing the internet. Phone abuse was also reported, such as sending and receiving calls at work using the company's phone. There were no items on the measure specifically addressing the use of a personal cell phone while at work, but the inclusion of this specific type of time theft will be used in future revisions of the measure and is indicative of the dynamic nature of this type of time banditry. This type of time bandit could be likened to a lightning bug: they can do some pretty cool things with technology, but it doesn't really get them, or the organization, anything.

The final way that time banditry behaviors can be expressed is socially, thus yielding the term "Social Time Banditry." Time bandits who are stealing time socially involve others in the process, such as those who talk at length about personal issues at work. They do not necessarily need to involve other coworkers, but could steal time by taking to customers and clients longer than needed and about non-work related topics. These bandits can be likened to the frogs of the workplace: they are in everyone's business and always seem to be busy, hopping from person to person without really accomplishing anything.

This preliminary data was analyzed using exploratory and confirmatory factor analysis simply for exploratory purposes, to test and refine the measure, and to inform

the later measure administration. Therefore, the practice was justified in this specific context, and the results were only used as exploratory results to compare to the later measure administration for validation purposes. The resulting 31 item TBQ, as determined by this preliminary study (Brock, Martin, Buckley, & Ketchen, in preparation), was then used in the current study for further analysis.

## Method

### *Participants*

The current study was needed to confirm the findings of the first study and to validate the TBQ. For this study, the three factors identified previously were used as sub-factors for the overarching concept of time banditry. The time banditry measure was administered along with a battery of other measures, which will be discussed later. This sample was much larger than the first sample, which was needed for some of the analyses performed. However, unlike the first study, there were no graduate students surveyed. Participants were recruited from introductory psychology courses (46.4%) and from business courses (53.6%), resulting in a total of 446 students. Participants ranged in age from 18 to 51, with a mean of 20.54 years. The sample contained slightly more females (51.4%) than males (48.6%). The majority of the participants identified their primary ethnicity as Caucasian (79%). Fifteen participants identified their primary ethnicity as Hispanic, and 21 participants identified themselves as Asian, while 21 classified themselves as primarily African American. One participant classified themselves as a Pacific Islander, and 11 participants identified themselves as "Other." Forty-eight participants identified with more than one race, with the most frequent classification being "Other." The sample was mainly composed of native English

speakers (91.5%), and 90% of non-native English speakers classified themselves as fully proficient to bilingual.

Most of the participants had declared a business major (46.8%), which is not surprising given the recruitment in business courses; however there were participants from most departments. The sample had more upper-classmen (61.4%) than freshman and sophomores (39.6%).

One of the issues identified in the previous measure administration was how accurately participants could recall incidents of time banditry from a previous job if they were not currently working. To remedy this issue, participation in this study required a work history of at least six months in the past year. Participants had worked from between 1 year (11.8%) to 35 years (.2%), with most participants possessing 2 years of work experience (21.1%). Some participants reported that they had management experience (14.8%), and of those, most had worked in management for between 2 and 3 years. Slightly more participants were not currently working (54.2%). Of participants that had jobs at the time of the survey, 60.2% worked 15 or more hours per week, with 4% reportedly working 40 hours or more per week.

*Materials*

The TBQ, as developed and refined previously (see Brock, Martin, Buckley & Ketchen, in preparation), was not modified for this administration. While there were a few details with regard to wording that were identified as minor problems in the first administration, comparing the two samples on the same measure proved more valuable than making these small edits to the measure. The time banditry measure was administered first in the battery of scales.

A valid measure of time banditry can assist in so many different ways, from adding basic knowledge to the field to giving managers a tool by which to select employees to measuring the effectiveness of an organizational intervention aimed at reducing the frequency of time banditry behaviors. However, the nature of time banditry as a counterproductive work behavior presents some unique challenges for valid measurement. Few employees would want to honestly answer a questionnaire about organizational time wasted when they knew that their boss would be the one reviewing their answers. Thus, while the measure has utility in certain contexts, it is not practical to use in the workplace to measure time banditry. As previously discussed, researchers have used personality and other measures correlated with counterproductive work behaviors to measure the likelihood that the employee will engage in such behaviors Therefore, additional measures were added in the second administration of the measure. These additional measures were selected because of their hypothesized relationships to time banditry in the nomological network. Through the use of these measures, time banditry can be estimated, such that the problem of desirable responding is eliminated. In sum, there were eight other previously validated measures administered with the time banditry measure.

*Productivity and engagement measure.* This 60 item scale included several sub-scales, and was somewhat specific in its orientation to employees in the service field (Singh, 2000). In the current study, our sample was open to participants from all different industries, making definitions of productivity and engagement difficult. Singh's (2000) scale was developed and administered to a single type of employee: frontline production employees in customer service positions of a large finance

company, and therefore minor changes in item wording to apply more generally to different positions were made. The scale of productivity assessed how well the employee met the performance goals set forth by their manager and how well they met the needs of their customers. Although this scale is relatively specific, the wording changes allowed the survey to be applied to settings where a manager and/or customers were involved. This measure was included to measure scale levels of productivity and engagement that an employee felt on the job for the classification of time bandit by type (Weasel, Sandbagger, Mercenary, and Parasite).

*Utrecht work engagement scale.* This 17 item scale measures the work engagement for individuals (Schaufeli, Bakker, & Salanova, 2006). This scale was included in the present validation effort because the measure of time banditry developed should correlate negatively overall with this scale of work engagement. While time bandits can be engaged, it is predicted that individuals who score higher on the time banditry measure will be less engaged, thus providing a negative overall correlation.

**Proposition 1.** Workplace engagement is negatively related to time banditry behaviors.

*Organizational justice.* This 17 item organizational justice measure validated by Lim (2002) was used to assess feelings of justice within the workplace. This measure taps three sub-components of organizational justice: distributive, procedural, and interactional. While it is written to take special consideration for technology, it is broad enough to apply to many different career fields.

In a just workplace, everyone is treated fairly. In the ideal workplace, there is no counterproductive work behavior. Because workplaces are not always fair, feelings of injustice have been shown to be positively correlated to counterproductive work

behavior (Colquitt, Scott, Judge, & Shaw, 2006). Thus, feelings of organizational injustice are predicted to be positively correlated with time banditry.

**Proposition 2.** Organizational justice is negatively correlated with time banditry.

*General Employee Deviance.* This scale was included as a general measure of self-reported counterproductive work behaviors. It has three main dimensions of deviance: cash or property theft, theft support (or aiding others in stealing cash or organizational property), and time theft (Boye & Slora, 1993). In this measure, there are four items that refer to the concept of time banditry, out of 31 on the entire scale. It is predicted that this measure will correlate positively with time banditry.

**Proposition 3.** Deviant workplace behaviors are positively correlated with time banditry behaviors.

*Paulhus Deception Scale.* The Paulhus Deception Scale is a measure that assesses the tendency to provide socially desirable responses (Paulhus, 1991). It was included because of the self-report nature of the study, given that the focal behaviors may be construed as negative in the workplace, particularly if the answers were given to a member of management. There should be no meaningful correlation between this measure and time banditry. Scores that are exceedingly high will be analyzed as a subset to determine if there are any differences between this group and the rest of the participants.

*Big five mini-markers.* The Big Five is a very common personality measure developed by Goldberg (1992). Shortly after, Saucier (1994) demonstrated validity evidence for a version less than half as long, and this was the personality measure administered in the present effort.

As previously stated, there have been many attempts to find indirect ways to measure concepts that are sensitive in nature, thus the measure can be a self-report and still validly inform the researchers or managers about the concept of interest. It was predicted that extraversion would correlate positively with time banditry, particularly the previously defined social factor, and also with neuroticism. Conscientiousness was predicted to correlate negatively with the construct, as previous research has shown that conscientiousness is negatively correlated with other counterproductive work behaviors. It was hypothesized that there would be no significant relationship between time banditry, openness, and agreeableness.

**Proposition 4.** Conscientiousness is negatively related to time banditry behaviors.

**Proposition 5.** Extraversion is positively related to time banditry behaviors.

**Proposition 6.** Neuroticism is positively related to time banditry behaviors.

*PANAS.* The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used in this study to measure levels of affect. This scale is easy to use and has been shown to be both reliable and valid (Crawford & Henry, 2004).

Based on prior research on counterproductive work behaviors (e.g. Roberts, Harms, Caspi, & Moffitt, 2007), it was hypothesized that positive affect would be negatively related to time banditry but that negative affect would show a positive correlation. This should not be construed as predictions that only negative people engage in time banditry. As evidenced by the proposed Weasel category of time bandit, it is possible for a person to be engaged and productive, which are both more likely when an employee is positive about the workplace than when they have a very negative

viewpoint. Rather, the correlations proposed between the PANAS and time banditry are merely predictions of the overall relationship between the constructs.

**Proposition 7.** Positive affect is negatively related to time banditry behaviors.

**Proposition 8.** Negative affect is positively related to time banditry behaviors.

*Demographic factors.* Certain demographic factors are predicted to be related to time banditry behaviors, and thus, a demographic questionnaire was administered. Ethnicity and college major are not expected to be related to time banditry behaviors. The number of hours worked per week, if the participant is working, is not predicted to affect time banditry behaviors in this sample. No prediction is made regarding the relationship between gender and time banditry behaviors. Prior research has suggested that age is inversely related to counterproductive work behavior (Malachowski, 2005), and this proposition is thus extended to apply to time banditry behavior. It is predicted that lower levels of time banditry will be exhibited as employees have worked a longer time during their lives, but this is naturally confounded with age.

**Proposition 9.** Age is negatively correlated with time banditry behavior.

*Procedure*

In the first administration of the TBQ, the survey was given in person during regular course time. However, the time banditry measure and the eight additional scales/measures that were administered for the current study were projected to take longer than one class period. Because of the time required by this group of measures, administration in the classroom was no longer an option. Online administration was attractive for several different reasons in this situation. The first reason is that of time: there was an immense amount of data to be collected in a short period of time. Utilizing

an online survey tool eliminated the need to conduct study sessions and automatically coded and entered the data. In addition, there were no hard copies of the material administered, so all participants were exposed to the stimulus material using the same method, and storing the data is much less problematic when in electronic form.

Taken together, the decision to administer the surveys online seemed logical, but there were many other unique considerations accounted for before the final decision was made. First, all of the measures needed to be converted from hard copy to electronic copy, and in this case, that was quite easy. Other measures that require timed administration or special pagination might not have been converted so easily. The most important consideration was the effect of administering online for the survey data results. For some study subjects, it is essential for the manipulations to hold the session in a controlled environment to eliminate confounds. In this situation, there were no manipulations. The researchers recognized that there would be no control over the environment in which participants chose to complete the surveys in, but the environment in which they worked was judged to have little, if any, significance on the overall survey results. Therefore, after careful consideration, it was decided that online administration would be superior to in-person administration for this set of measures.

Recruitment for this study was done by the principal investigator in both psychology and business undergraduate courses. Students were read a script describing the study and what their participation would entail. To eliminate peer pressure to participate in the research study, all students were given a study information sheet containing important information, the researchers' contact information, and the website

for the study. Participation was voluntary, and students could complete an alternate assignment for equal course credit.

Survey Monkey was the online tool used for the measure administration. This tool provided a dedicated web address for the study, and also allowed the users to remain anonymous. Anonymity was desired because of the nature of the questions and to reduce socially desirable responding. At the conclusion of the survey, the participants e-mailed a pass code that was displayed by Survey Monkey for the purposes of assigning credit. The codes were not associated with individual responses, so anonymity was guaranteed.

The online administration of this study worked very well. Students reported no technical problems and the system functioned flawlessly, though extensive testing was conducted prior to participant administration. Questions about how to participate were few and far between, perhaps due to the information sheet, the ease of use of Survey Monkey, and the straightforward nature of the questionnaires. Most participants completed the study in a single session in less than two hours. No participants began the survey and later asked for their data to be removed. Two participants finished less than 25% of the survey, and their data was not included in any analysis.

*Planned Analyses*

*Factor Analysis.*

In this study, confirmatory factor analysis will be used to cross validate the measure and the existence of the three factors in the construct of time banditry that were identified in the initial study. If the confirmatory factor analysis revealed that the same items in the time banditry questionnaire were still loading on the same factor, it could

be reasonably concluded that the construct of time banditry, as it is represented by the measure, has three sub-factors.

Further, measures will be administered that have been previously validated in other contexts that have theoretical relationships with time banditry. Measures such as deviant behavior and negative affect should be positively correlated with our proposed measure of time banditry. Measures such as positive affect and organizational commitment should be negatively related to time banditry. Convergent and discriminant validity evidence would be provided should these hypothesized correlations be supported.

*Correlations.*

A correlation matrix will be calculated to determine the relationships between the different measures administered, different demographic factors, and the time banditry measure. The relationships between the different constructs will serve to provide convergent or divergent validity for the measure, thus providing a more complete view of time banditry and its relationship to the other constructs in the survey battery. This matrix will serve as the basis for future research on time banditry and will inform future researchers of the relationships between the constructs.

*Discriminant Analysis.*

The main function of this study is to investigate time banditry and different methods of prediction that could be useful in screening potential applicants. To determine which personal characteristics are more or less associated with the propensity to steal time from the workplace, discriminant function analysis will be used. By examining constructs that have not previously been linked to time banditry, new

associations between personality characteristics and time theft can be established. By determining these associations, commonly administered pre-hire questionnaires could be used to inform the employer about the employee's potential to steal time from the organization. Thus, while no additional measures may need to be administered while screening applicants, employers could obtain valuable information to assist them in selecting the best possible candidate.

Discriminant function analysis will be used to validate the hypothesis that there are four different types of time bandits, and that these bandit types are differentiated by the productivity and engagement of the worker. Should this analysis produce significant results, measures of productivity and engagement could be used to predict the type of time bandit that the person is likely to be. This could circumvent, to an extent, the problematic fact that the measure of time banditry is open to faking and socially desirable answering. This could also assist managers in determining which type of intervention would reduce time banditry for that type of worker.

## *Results*

### *Factor Analysis.*

A confirmatory factor analysis was conducted to determine if the three previously identified sub-factors of time banditry, classic, technological, and social, could be confirmed in this data set. SAS was used to analyze this data. Using the same items to compose the factors as were identified in the previous study, the factor analysis was conducted. The $R^2$ for the model with these three factors was .57, which does not indicate a good model fit. The same analysis was then conducted with only two factors, classic and technological. The social items were not included in this analysis because

there were so few. This model yielded an $R^2$ of .60, which is only a slight improvement over the three factor model.

The fact that neither tested model fit the data well may indicate that time banditry is multi-faceted but we have not identified the correct factors, or that it is uni-dimensional. Because the technological and social sub-scales contained significantly fewer items than the classic sub-scale, this may be contributing to the factor analysis not confirming previous findings.

To determine whether or not time banditry is a multi-dimensional construct, an exploratory factor analysis was conducted. This analysis was conducted solely to investigate the dimensionality of time banditry as a construct, not to draw concrete conclusions because a confirmatory factor analysis had already been conducted on this data set. An exploratory factor analysis with promax rotation was conducted to determine the factorial structure of the data set. The scree plot again revealed three factors. The factor loadings are shown in Table 2. Together, these three factors accounted for 44.4% of the observed variance in the scale. Using the standards set forth by Comrey (1973), items were considered to load on the factor at the minimum criteria of .35. Two items failed to reach this criterion. The greatest number of items loaded on the Classical time banditry factor. Four items loaded on the technology factor, and two items loaded on the social factor. In the previous exploratory factor analysis, seven items loaded on the technology factor and six loaded on the social factor.

| | Item | Classic | Technology | Social |
|---|---|---|---|---|
| 2 | I purposely take longer in the restroom than necessary. | **0.53** | -0.25 | 0.13 |
| 4 | I use the internet for work related business only. | **0.28** | 0.17 | -0.22 |
| 6 | I receive personal phone calls at work. | **0.57** | 0.28 | 0.22 |
| 7 | I put less effort into my work than I know I can. | **0.55** | -0.32 | 0.14 |
| 8 | I talk to co-workers about their families during work hours. | 0.23 | 0.17 | **0.77** |
| 10 | I tell my boss/colleague a task will take longer than I know I can finish it in, so I can take my time. | **0.57** | -0.12 | -0.05 |
| 11 | I always put 100% effort into my work task. | **0.48** | -0.28 | -0.15 |
| 13 | If my boss is gone for the day, I will leave early. | **0.60** | -0.02 | -0.12 |
| 15 | I check non-work related e-mail at work. | 0.59 | **0.59** | -0.16 |
| 16 | When given a task I finish it faster than the expected time frame and use the remaining time for personal use. | **0.54** | 0.06 | 0.14 |
| 19 | I spend time on the internet for reasons not related to work. | **0.62** | 0.47 | -0.09 |
| 20 | I never make personal phone calls at work. | 0.28 | **0.28** | 0.02 |
| 23 | If I didn't feel like going to work I would call in sick, even if I wasn't. | **0.61** | -0.39 | 0.07 |
| 24 | I take time out of my day to talk with my boss about non-work related topics. | **0.39** | 0.11 | **0.61** |
| 25 | I receive non-work related e-mail at work. | **0.63** | 0.56 | -0.09 |
| 26 | I spend more time than necessary on tasks. | **0.64** | -0.19 | 0.07 |
| 27 | I daydream while at work. | **0.51** | -0.16 | 0.23 |
| 28 | I take long coffee/smoke breaks without approval. | **0.64** | -0.3 | -0.07 |
| 29 | I send non-work related e-mail at work. | **0.71** | 0.42 | -0.11 |
| 30 | I spend time in and out of the office engaging in leisure activities (e.g., golfing, going to lunch, drinks, and/or dinner) with clients. | **0.57** | 0.02 | 0.05 |
| 32 | I never check non-work related e-mail during work hours. | 0.40 | **0.48** | 0.01 |
| 34 | If I finished a project 20 minutes before the end of the work day, I would not start working on anything new. | **0.45** | 0.12 | 0.15 |
| 35 | I start working as soon as I arrive at work. | **0.62** | -0.03 | -0.29 |
| 36 | While at work, the only e-mail use I engage in is work related. | 0.47 | **0.50** | -0.1 |
| 37 | I go to the restroom even if I don't have to. | **0.64** | -0.37 | -0.08 |
| 38 | I take longer lunch breaks than I am supposed to. | **0.72** | -0.25 | 0.03 |
| 39 | I take breaks at my desk to catch up on a bestseller or to read a magazine. | **0.65** | -0.27 | -0.07 |
| 41 | I use sick days in order to catch up on personal things. | **0.57** | -0.28 | 0.02 |
| 42 | When I arrive at work in the morning I get coffee and/or eat breakfast before I start working. | **0.50** | 0.01 | -0.01 |
| 43 | I pretend to work through lunch to leave early, even though I still take a break to eat. | **0.67** | -0.28 | -0.14 |
| 45 | I only take the required amount of break time allowed in my organization. | **0.53** | -0.1 | -0.22 |

Table 2. Exploratory Factor Analysis with Promax Rotation Factor Loadings.
Note. Numbers in boldface indicate dominant factor loadings.

The internal consistency of two of the subscales satisfactory. The most consistent scale is for the Classic time banditry behaviors (α=.92), followed by the Technology behaviors (α=.70). Socially-based time banditry behaviors exhibited the lowest levels of internal consistency (α=.59), but computing internal consistency on only two items could contribute to this low reliability.

Although items loaded on three factors, the number of items that loaded on the technology and on the social factors were not sufficient for significant conclusions to be drawn. An explanation of the poor representation of these factors is given in the discussion.

*Correlation Matrix.*

The correlation matrix was then calculated to determine the relationship between the TBQ and the other measures that were administered. The correlation matrix appears in Table 3.

Correlations between the time banditry measure and the PANAS were significant and as expected. Time banditry was significantly related to negative affect ($r=.31$, $p<.01$) and negatively related to positive affect ($r=-.16$, $p<.01$). Thus, individuals who display more negative affect are more likely to steal time from their organizations.

The Big 5 Mini Marker correlation results presented some unexpected findings. Four of the five factors were significantly related to time banditry, but only two factors were hypothesized to be significantly related. First, conscientiousness was significantly related to time banditry ($r=-.24$, $p<.01$), such that employees with higher levels of conscientiousness demonstrated fewer behaviors of time banditry.

Table 3. *Correlation Matrix*

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Demographics: | | | | | | | | | | | |
| (1) Age | 1 | | | | | | | | | | |
| (2) Gender | -.19** | 1 | | | | | | | | | |
| PANAS: | | | | | | | | | | | |
| (3) Positive Affect | -.01 | .06 | .90 | | | | | | | | |
| (4) Negative Affect | -.11* | .11 | .04 | .87 | | | | | | | |
| Big 5 Mini-Markers: | | | | | | | | | | | |
| (5) Openness | .02 | .04 | .47** | .12* | .76 | | | | | | |
| (6) Conscientiousness | .12* | .13* | .50** | -.12* | .38** | .78 | | | | | |
| (7) Extraversion | .02 | .02 | .48** | -.09 | .30** | .29** | .81 | | | | |
| (8) Agreeableness | -.02 | .23** | .46** | -.15** | .44** | .48** | .24** | .85 | | | |
| (9) Neuroticism | -.08 | .10* | -.08 | .66** | .09 | -.14** | -.03 | -.16** | .77 | | |
| Paulhus Deception Scale: | | | | | | | | | | | |
| (10) Impression Management | -.03 | -.03 | .06 | .13** | .07 | .06 | .07 | .03 | .17** | .32 | |
| (11) Self Deceptive Enhancement | .01 | .04 | .20** | .06 | .10* | .13** | .10* | -.01 | -.02 | .37** | .50 |
| (12) Deviant Behavior | .01 | -.17** | -.14** | .25** | -.17** | -.33** | -.06 | -.36** | .30** | .21** | .12** |
| (13) Workplace Engagement | -.13** | -.15** | -.32** | .27 | -.22 | -.40** | -.17** | -.36** | .27** | .09 | -.09 |
| (14) Organizational Justice | .00 | .04 | .21** | -.16** | .04 | .18** | .07 | .17** | -.18** | -.04 | .03 |
| (15) Utrecht | .09* | .03 | .34** | -.10* | .07 | .28** | .17** | .15** | -.17** | .03 | .18** |
| (16) Engagement | -.01 | .04 | .09 | .12* | .11* | .05 | .12* | .05 | .12* | .07 | .15** |
| (17) Productivity | .10* | .06 | .31** | -.16** | .29** | .34** | .21** | .32** | -.13** | -.06 | .13** |
| (18) Time Banditry | .10* | -.17** | -.16** | .31** | -.14** | -.24** | .01 | -.24** | .25** | .06 | -.02 |

*Note:* * denotes significance at the .05 level
** denotes significance at the .01 level
Scale internal consistency appears along diagonal

Table 3. *Correlation Matrix (Continued)*

| | (12) | (13) | (14) | (15) | (16) | (17) | (18) |
|---|---|---|---|---|---|---|---|
| (12) Deviant Behavior | .95 | | | | | | |
| (13) Workplace Engagement | .54** | .93 | | | | | |
| (14) Organizational Justice | -.15** | -.27** | .94 | | | | |
| (15) Utrech | -.09 | -.44** | .52** | .91 | | | |
| (16) Engagement | .08 | .06 | .17** | .08 | .69 | | |
| (17) Productivity | -.27** | -.38** | .39** | .33** | .54** | .87 | |
| (18) Time Banditry | .43** | .60** | -.13** | -.24** | .15** | -.27** | .91 |

*Note:* * denotes significance at the .05 level
** denotes significance at the .01 level
Scale internal consistency appears along diagonal

Second, extraversion had no significant relationship with time banditry (r=.01, p>.05), when a positive correlation was predicted. Openness shared a negative correlation with time banditry (r=-.14, p<.01), meaning that individuals who are more close minded are more likely to demonstrate time banditry behaviors. Agreeableness was not predicted to be significantly related to time banditry, but a significant and negative relationship was observed (r=-.24, P<.01), meaning that less agreeable individuals were more likely to steal organizational time. Finally, neuroticism shared a positive relationship with time banditry (r=.25, p<.01), such that more neurotic individuals were more likely to display time banditry behaviors.

The Paulhus Deception Scale (PDS) was administered because of the nature of the constructs being measured, and thus, no correlations between either scale and time banditry was predicted. Time banditry was not related to the impression management subscale (r=.06, p>.05) of the (PDS), nor was the self-deceptive enhancement scale was related to time banditry (r=-.02, p>.01).

As was expected, the measure of deviant behavior that was used was significantly related to time banditry (r=.43, p<.01), such that higher levels of deviant behavior accompanied higher levels of reported time banditry behavior. As predicted, the measure of organizational justice was inversely related to time banditry behaviors (r=-.13, p<.01), such that more time banditry is observed when there are lower levels of organizational justice. Finally, the Utrech scale of work engagement demonstrated the hypothesized negative relationship with time banditry (r=-.24, p<.01), such that less engagement in work is related to more time banditry behaviors. Interestingly, the Workplace Engagement Scale was significantly related to time banditry (r=.60, p<.01).

These two scales of workplace engagement were negatively related to each other, and the correlation was significant ($r=-.44$, $p<.01$), which indicates that they are measuring different constructs.

*Demographic Factors.*

Though a number of demographic factors were surveyed, such as major and year in school, only age was hypothesized to be related to time theft. Age was negatively correlated with time banditry ($r=-.10$, $p<.05$), such that older employees are less likely to engage in time banditry behaviors. There was no specific hypothesis proposed for the relationship between gender and time banditry, but a significant correlation was observed. Gender was also related to time banditry ($r=-.17$, $p<.01$) such that males were more likely to waste time at work.

*Discriminant analysis.*

One of the first questions that could be answered using discriminant analysis is "Can we predict whether someone will be a time bandit or not?" Thus, this was the first question investigated using this statistical technique. As a preliminary test, a discriminant analysis was conducted to determine if the amount of time banditry reported by an individual can be predicted by their scores on the different measures that were administered. For classification purposes for this analysis, the distribution of scores on the time banditry measure were divided into quintiles. The middle quintile was removed from the analysis and the two lower and two upper quintiles were combined. This resulted in a dichotomy for classification: low and high levels of self-reported time banditry behavior. For the initial discriminant analysis, only variables that would be routinely obtained for a screening battery were used: the demographic factors

of age and gender, the PANAS, and the Big 5. These variables were then used to examine their predictive value of classifying someone as an employee who would be more or less likely to steal time from an organization.

The overall results from this test were significant (p=.00), meaning that the variables tested were able to accurately classify whether someone would score high or low on the TBQ. Table 4 shows these independent variables along with their standardized canonical coefficients, or the partial contribution of that variable controlling for the other independent variables, and the structure coefficients. The variables used correctly classified 71.8% of study participants as exhibiting high or low amounts of time banditry behavior.

Positive affect has been shown to influence the results of various measures. Therefore, a subsequent analysis was conducted controlling for positive affect through the use of Multiple Discriminant Analysis (MDA). The results of the MDA show that positive affect was the least correlated of any measure, and thus had no impact on this analysis.

The next analysis investigated whether the TBQ exhibited construct validity. For this analysis, the time banditry scores were again divided into quintiles, and the lower two quintiles were combined, as were the upper two quintiles. This time, the independent variables were the other previously validated measures that were administered to study participants. This analysis was conducted to test the hypothesized relationships between the measures and time banditry and to determine if there is an advantage to using the TBQ over the previous measures.

| Measure | Sub-Scale | Standardized Canonical Coefficients | Structure Coefficients | Wilks' Lambda | F | Sig. |
|---|---|---|---|---|---|---|
| Demographics | Gender | .50 | .33 | .97 | 12.66 | .00 |
| Demographics | Age | .23 | .16 | .99 | 2.86 | .09 |
| PANAS | Positive Affect | .26 | .40 | .95 | 18.58 | .00 |
| PANAS | Negative Affect | -.65 | -.58 | .90 | 40.08 | .00 |
| Big Five | Openness | .38 | .43 | .94 | 21.63 | .00 |
| Big Five | Conscientiousness | .21 | .54 | .91 | 34.79 | .00 |
| Big Five | Extraversion | -.35 | .04 | 1.00 | .16 | .69 |
| Big Five | Agreeableness | .06 | .55 | .91 | 36.33 | .00 |
| Big Five | Neuroticism | -.05 | -.45 | .94 | 24.34 | .00 |



Table 4. *Discriminant Analysis: Personality variables*

The results of this analysis were significant (p=.00), meaning that whether someone is a time bandit can be predicted using the previously validated measures. Overall, classification using these measures was improved over just using the personality variables, with a total correct classification of 80.7%. Results from this analysis are shown in Table 5. Again, a subsequent analysis was conducted controlling for positive affect, but again, it was not a significant predictor of group classification. The variables that were most influential in this analysis were workplace engagement, productivity, and task engagement. Table 6 shows the combination of all independent measures together, which results in a correct classification percentage of 82.4%, which is only a modest improvement from adding the personality variables to the previously validated measures.

The two most important measures in the correct classification of high vs. low time bandit are the Workplace Engagement Scale and the Deviant Behavior Measure, both of which were hypothesized to have positive correlations with the TBQ. Productivity and the Utrecht Work Engagement Scale were the next best measures for classification, both of which had hypothesized negative correlations to time banditry. The two measures that were not significant in the analysis were the sub-scales in the Paulhus Deception Scale, which were included because of the sensitive nature of the subject matter and were not supposed to be related to time banditry.

| Measure | Sub-Scale | Standardized Canonical Coefficients | Structure Coefficients | Wilks' Lambda | F | Sig. |
|---|---|---|---|---|---|---|
| Workplace Engagement | Work Engagement | .67 | .90 | .65 | 198.84 | .00 |
| Utrecht Work Engagement Scale | Work Engagement | -.04 | -.30 | .94 | 22.61 | .00 |
| Organizational Justice Scale | Organizational Justice | .11 | -.17 | .98 | 7.31 | .01 |
| General Employee Deviance | General Employee Deviance | .31 | .63 | .79 | 98.59 | .00 |
| Paulhus Deception Scale | Impression Management | -.01 | .10 | .99 | 2.37 | .12 |
| Paulhus Deception Scale | Self Deception | -.02 | -.03 | 1.00 | .28 | .60 |
| Productivity Engagement Measure | Engagement | .34 | .14 | 1.00 | 5.05 | .03 |
| Productivity Engagement Measure | Productivity | -.42 | -.40 | .91 | 38.45 | .00 |

Table 5. *Discriminant Analysis: Previously validated measures*

| Measure | Sub-Scale | Standardized Canonical Coefficients | Structure Coefficients | Wilks' Lambda | F | Sig. |
|---|---|---|---|---|---|---|
| Productivity Engagement Measure | Engagement | -.00 | .05 | 1.00 | 4.28 | .04 |
| Productivity Engagement Measure | Productivity | -.08 | -.16 | .91 | 37.63 | .00 |
| Demographics | Gender | -.07 | -.09 | .97 | 13.09 | .00 |
| Demographics | Age | .09 | -.04 | .99 | 3.04 | .08 |
| PANAS | Positive Affect | -.03 | -.11 | .95 | 18.28 | .00 |
| PANAS | Negative Affect | .03 | .16 | .90 | 39.51 | .00 |
| Big Five | Openness | -.18 | -.12 | .94 | 21.82 | .00 |
| Big Five | Conscientiousness | .09 | -.15 | .91 | 34.69 | .00 |
| Big Five | Extraversion | .03 | -.01 | 1.00 | .13 | .72 |
| Big Five | Agreeableness | .01 | -.15 | .91 | 36.74 | .00 |
| Big Five | Neuroticism | -.02 | .12 | .94 | 23.56 | .00 |
| Workplace Engagement | Work Engagement | .00 | .36 | .65 | 195.52 | .00 |
| Utrecht Work Engagement Scale | Work Engagement | -.05 | -.12 | .94 | 22.46 | .00 |
| Organizational Justice Scale | Organizational Justice | .03 | -.07 | .98 | 7.33 | .01 |
| General Employee Deviance | General Employee Deviance | .13 | .25 | .79 | 96.39 | .00 |
| Paulhus Deception Scale | Impression Management | .05 | .03 | 1.00 | 1.53 | .22 |
| Paulhus Deception Scale | Self Deception | -.03 | .02 | 1.00 | .40 | .53 |

Table 6. *Discriminant Analysis: Overall*

Combined with the findings from the correlation matrix, hypotheses about the relationships between the previously validated measures and the TBQ have been demonstrated. This adds construct validity to the measure and demonstrates convergent and discriminent validity. Convergent validity is demonstrated through the significant correlations observed between the TBQ and measures that were predicted to be related to time banditry, such as the measure of general employee deviance. Discriminant validity was established by observing the correlations between the TBQ and the measure that were not predicted to be related to time banditry, such as the scales of deception. While there is an improvement for using the previously validated measures to predict whether someone will be a major time bandit in the workplace, the improvement is not sufficient when the face validity issue and time to complete the measures are considered.

The last analysis predicted group membership into the four hypothesized types of time bandits: weasels, sandbaggers, mercenaries, and parasites. The distribution of scores for the productivity scale appears in Figure 4. Scored ranged from 30 to 166 with a mean of 131.6 (SD=14.07).

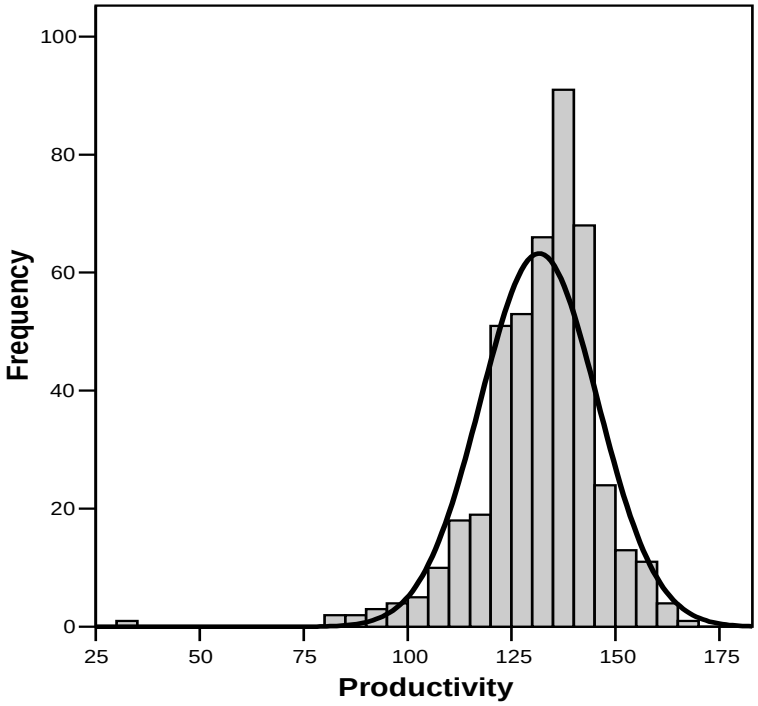


Figure 4. *Distribution of Productivity Scores.*

The distribution of scores for the engagement scale appears in Figure 5. Scores ranged from 42 to 152 with a mean of 112.7 (SD=10.5). Both distributions of productivity and engagement are normally distributed.

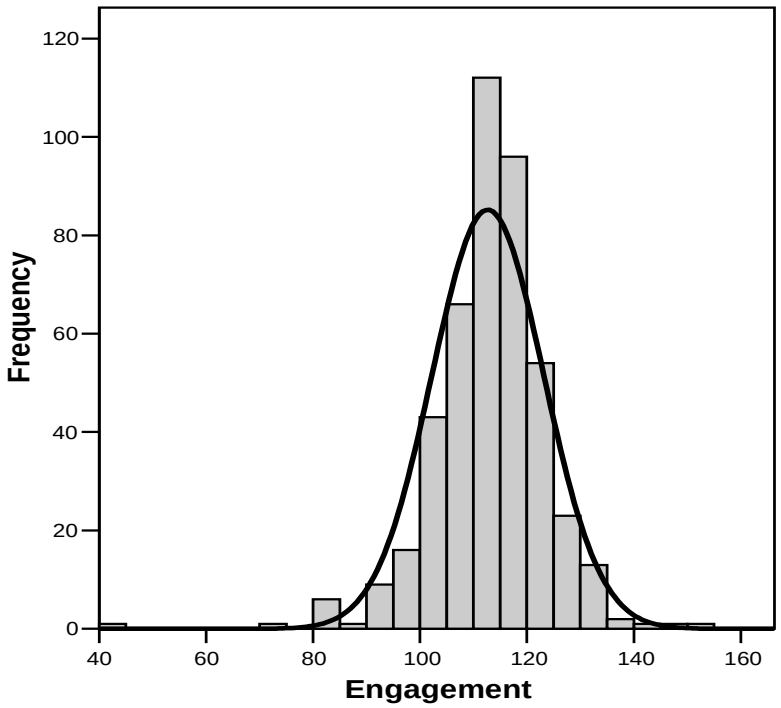


Figure 5. *Distribution of Engagement Scores.*

Initially, group membership was established by using productivity and engagement scores from the productivity and engagement scale, using the mean of each scale as the cut score for classification into the high or low group for that variable.

Group membership was not equally distributed among the groups. The weasels had the highest number of participants at 165. There were 107 participants classified into the parasite group. The next largest group was the mercenaries at 92 participants. The smallest group was the sandbaggers with 82 participants.

The first analysis conducted on this group was a discriminant analysis with univariate ANOVAs to determine if there were differences between group means in

determining group membership. The independent variables used were the "personality" factors (PANAS, Big 5, age, and gender) that were used previously. Overall, this test correctly classified only 43.2% of participants into the correct group, which is far too low to be useful for prediction purposes. Next, the same analysis was conducted with the previously validated measures, but the correct classification percentage decreased to 39.2%.

Discriminant analysis depends on clear classification of group membership and relies on the presence of categorical variables to do so. Performance and engagement were measured on a continuous scale and were transformed into interval data. However, graphical examination revealed a bell curve with no obvious breaks. To further inform the categorization of the types of time bandits, a MANOVA was conducted.

The results of the MANOVA demonstrate that there is a significant effect for classification type, $F(6, 421)=134.04$, $p<.00$, meaning that there is a significant difference on the time banditry measure for the four different groups, which is not surprising given the high correlation between the TBQ and the Productivity and Engagement scales.

To understand further the relationship of performance and engagement scores in this study, three categories of each variable were created. Performance and engagement were both separated into thirds, and each third had approximately 148 participants. The matrix of these variables is presented in Figure 6.

| | *Engagement* | | | |
|---|---|---|---|---|
| | | *High* | *Moderate* | *Low* |
| *Productivity* | *High* | N=46 (10.3%)<br>72.6 (SD=19.7) | N=51 (11.4%)<br>67.5 (SD=14.4) | N=24 (5.4%)<br>58.0 (SD=14.7) |
| | *Moderate* | N=58 (13%)<br>79.9 (SD=14.7) | N=74 (16.6%)<br>74.0 (SD=13.9) | N=58 (13%)<br>66.9 (SD=14.1) |
| | *Low* | N=22 (4.9%)<br>86.4 (SD=14.6) | N=52 (11.7%)<br>85.6 (SD=13.4) | N=61 (13.7%)<br>79.9 (SD=16.1) |

Figure 6. *Matrix of Productivity and Engagement Scores.*

The matrix of the productivity and engagement scores demonstrates that participants fell in each different category, so a wide range of the combination of productivity and engagement is observed. A univariate analysis of variance was conducted to determine if there were differences between the groups. This test was significant, $F(8, 437)=13.93$, $p<.00$, meaning that there were significant differences between the groups on the TBQ scores.

The group that scored the highest on the TBQ, meaning they exhibited the most time banditry behaviors, were the participants who had low productivity but high in engagement. This group was not significantly different than the group with moderate engagement and low productivity. The group that scored lowest on the TBQ was the group that was high in productivity but low in engagement.

*Discussion*

This research effort sought to demonstrate validity evidence for a newly developed measure of time banditry. A valid measure of this type could provide a tool for researchers to better understand this type of counterproductive work behavior. Additionally, it could provide an assessment measure to managers, which could be used to evaluate the effect of organizational interventions on time banditry behaviors.

The confirmatory factor analysis performed on this data set failed to confirm our previous conclusion that there are three underlying factors of time banditry: classic, social, and computer. This analysis did not reveal perfect agreement for the classification of factors into the three previously defined groups of Classic, Technological, and Social. Rather, this data heavily loaded on the first factor, Classic time banditry, and only a few items were left to represent the other factors. A subsequent Exploratory Factor Analysis did reveal three underlying factors, however, they were not correctly identified a priori.

Further evidence for validity was provided by the correlations between the time banditry measure and other previously validated measures. The Big Five Mini Markers provided more evidence that time banditry is related to personality factors. It was predicted that conscientiousness would be related to lower levels of time banditry behaviors, and this hypothesis was confirmed by the data. However, other personality factors were also related to time banditry. Being close-minded was positively related to time banditry behaviors. This could be due in part to selfishness, or ignoring social obligations to serve oneself. Time banditry was also significantly related to disagreeableness, perhaps partially because of the same reason. If one is disagreeable

and has important self interests, it seems likely that they will steal time from the organization. Neuroticism showed a positive correlation with time banditry behaviors, which was also a hypothesized result. Extraversion was predicted to positively correlate with time banditry, particularly with the social component, however, no significant relationship was observed. It may be that while there is a social aspect to time banditry (e.g. talking to others at work), there is also a social aspect to task-oriented behaviors (e.g. work groups), and this could be diluting the results for this sub-scale. The two items that represent the social factor are probably also interfering with a clear understanding of this factor, and the observed results could be different if more items were included in the TBQ that were social in nature.

The observed correlations between time banditry and the PANAS were as expected, which again contributes to the validity evidence for the time banditry measure. We predicted that there would be a negative relationship between time banditry and positive affect, and a positive correlation between negative affect and time banditry. This means that, in general, happy people are less likely to engage in time banditry, and this can be a scale that is administered in the selection process. However, controlling for positive affect did not alter the analyses.

As would be expected, the scale of general deviant behavior was significantly related to time banditry behaviors. Interestingly, the scale of workplace engagement was also significantly related to time banditry behaviors, confirming the hypothesis set forth in the model proposal (Martin, Brock, Buckley, & Ketchen, in press) that workers can be engaged in their jobs and still demonstrate high levels of time banditry behaviors. The other scale of workplace engagement, the Utrech, was negatively and

significantly related to time banditry, but as stated earlier, there is a negative and significant correlation between these two measures.

The scale of organizational justice was negatively related to time banditry, as was predicted. This is the only measure that was administered that focused on the organizational environment, which is probably very important in the expression of time banditry behaviors. This finding presents interesting implications for practitioners and researchers alike, because interventions have been developed to improve organizational justice, which may lead to lower levels of time banditry behaviors.

Another positive finding is that there are few demographic factors that seem to impact time banditry behavior. Time banditry was significantly related to age, with older workers demonstrating fewer time banditry behaviors than younger workers. Males also demonstrated more time banditry behaviors than females. No other demographic factor was significant, which increases the likelihood of successful organizational interventions to reduce time banditry behaviors in the workplace. If demographic factors do not contribute substantially to the expression of time banditry behaviors, it could be that environmental factors in the workplace are more influential. These factors could be things such as organizational culture and organizational justice, which have previously developed interventions that could reduce time banditry behaviors in the workplace.

Combined with the findings from the correlation matrix, hypotheses about the relationships between the previously validated measures and the TBQ have been demonstrated. This adds construct validity to the measure and demonstrates convergent and divergent validity. While there is an improvement in correct classification for using

the previously validated measures to predict whether someone will be a major time bandit in the workplace, there are also major drawbacks to the use of this method. The first drawback is the time needed to complete the measures. The measures in the "personality analysis" (PANAS, Big 5, age, and gender) total 60 items. The number of items in the "previously validated analysis" (Productivity and Engagement Measure, Utrecht Work Engagement Scale, Organizational Justice Measure, and Types of Deviant Behavior) total 114, or nearly double that of the battery that results in just slightly less predictive power. Managers and human resources managers already use personality measures in hiring decisions, and using them as a proxy for whether the applicant is likely to steal time provides yet another way that the correct applicant can be chosen. When combined with the problem of faking, the argument for using the personality analysis becomes stronger.

The exploration of the different types of time bandits revealed results that were consistent with some hypotheses and informed others. First, it seems that using productivity and engagement is the best method of predicting whether someone will steal more or less time from the organization. Using productivity and engagement scores help to predict what type of bandit that person would be, but the relationship is not perfect, so conclusions as to the prediction of type from measure score should be limited. Given that only 43.2% of participants were correctly classified into their time banditry group, it appears that there are more factors involved than are being tested. Each different type of time bandit could benefit from a different intervention to curb their behavior in the workplace, but no measures were found in this study that could serve as a proxy for classification. Therefore, the problem of face validity with the

TBQ and with the productivity and engagement measures remain and could confound any practical use at present.

Because the classification rate was so low, the type analysis will only be analyzed for trends, not for conclusive evidence. The parasites were hypothesized to be the most detrimental to the organization because of their low productivity and low engagement in their work. This hypothesis was consistent with what was found, and this group was found to have the highest reported score on the time banditry measure. For these individuals, opportunities for interventions abound, because there is not much that can decrease their current level of performance or engagement, thereby decreasing their time banditry behaviors. Managers could use a variety of tactics to improve performance, such as training, and different ways to increase engagement, such as empowerment and job enrichment and rotation.

The weasels were predicted to demonstrate the lowest levels of time banditry and were expected to be highly engaged and productive on their jobs. Because they are engaged and productive, organizational resources could be targeted at other time bandit types to receive a greater return on investment. For these individuals, it is more likely that they will respond to challenge and empowerment, but revoking some opportunity to engage in time banditry may also be effective.

Although the largest group was hypothesized to be the weasels, no specific hypothesis was made for the size of the other groups relative to each other. The parasites were nearly as large as the weasels in this sample, and that may be due to a sampling bias in that college students may have different work behaviors than do other more experienced workers.

The finding that productivity and engagement scores were distributed over a matrix with each variable trisected is important. This demonstrates that the constructs of productivity and engagement do not have to positively correlate with one another, and in fact, the two constructs can interact. The correlation matrix shows that the two constructs do positively correlate with each other, and that the correlation is significant ($r=.54$, $p<.01$). This correlation suggests that the construct that we are terming time banditry is just a result of this correlation. The trisected matrix provides evidence that although these two constructs are positively correlated with each other, there is still a distribution of scores over all cells in the 3x3 matrix. This suggests that time banditry is a unique construct that involves both of these factors. It also helps to explain why the observed correlation between productivity and engagement is not observed in the 3x3 matrix: mainly that scores on the TBQ are a result of more than just a combination of productivity and engagement.

A very interesting finding regards the TBQ scores by trisected groups of productivity and engagement. Theoretically, the group that would exhibit the most time banditry behaviors would be the group that is lowest on both the productivity and engagement measures, which would be equivalent to the parasites in the hypothesized typology. This was not demonstrated in this situation. In fact, the group that had the highest score on the TBQ was the group that had low productivity but high engagement. When comparing these trisected groups to the original 2x2 matrix of productivity and engagement, this group would be the sandbaggers. The group that demonstrated the lowest levels of time banditry behaviors was the group that was highly productive but not engaged. In the original typology, these would be the mercenaries. It was predicted

that the group that would exhibit the lowest level of time banditry behavior would be the weasels, or those that were both engaged and productive.

The results of the trisected matrix of engagement and productivity are useful because it demonstrates how complex time banditry is. A logical hypothesis is that engaged and productive workers will demonstrate the fewest number of time banditry behaviors. However, they did not demonstrate the fewest number of behaviors. This may be evidence for the role of "productive banditry behaviors," or behaviors that are off-topic but still assist the employee in completing their work. For example, an employee who is engaged in creative problem solving may engage in more off-task behaviors to "clear their minds" and are ultimately more productive because of that time off during the workday. This finding emphasizes the need for more research on the subject so that the underlying mechanisms of time banditry can be further understood.

The proposed nomological network was largely supported by the findings of this research study. With the exception of extraversion, all proposed relationships between constructs and time banditry were significant and in the direction predicted. The support of the nomological network provides further evidence that the face validity issue of time banditry can be circumvented through the use of alternate measures, such as personality factors. The nomological network provides researchers with a better framework of the related constructs and can be used to study either specific parts of the model or the entire model as a whole.

The support for the nomological network observed in this study lends additional evidence to the original idea posed by Ketchen, Craighead, & Buckley in 2008. These two research endeavors have sought to show that time banditry is a unique concept that

has similar yet different relationships with different constructs than counterproductive work behaviors.

*Implications*

This study sought to address the problem with face validity of the TBQ and how it can be circumvented but still provide the valuable information about the propensity to waste time to managers. This study has shown that a satisfactory level of employees can be classified as either very likely to waste time or not very likely to waste time in the workplace, which could assist in hiring, placement, and promotion decisions, ultimately saving the company's valuable resources. More variables could be investigated because in addition to being commonly used measures in assessment and selection, the factors shown to correlate with time banditry have other benefits in the workplace. For example, having agreeable employees is better for the organization's culture and will reduce time banditry. Conscientious employees are generally more committed, turnover less, and demonstrate fewer counterproductive work behaviors. Conscientiousness was negatively correlated with time banditry, and thus, applicants scoring high on this measure are less likely to engage in time banditry. However, there are many other positive effects that are observed in conscientious workers, such as better team performance (Morgeson, Reider, & Campion, 2005).

Therefore, more emphasis should be placed on the focal factors that have already been determined to impact the organization and the employee's future work in some particular way that have been shown to correlate with time banditry. Managers could weight measures of time banditry to select employees who will be less likely to engage in time banditry. This kind of indirect approach to hiring for certain

characteristics has been used previously with other constructs, such as reducing adverse impact (Newman & Lyon, 2009).

Agreeableness was another factor that was negatively related to time banditry. By assessing and selecting for agreeableness, Human Resources managers can not only reduce time banditry but can positively impact the workplace in other ways, such as by increasing the likelihood of positive social exchange relationships and organizational citizenship behaviors (Kamdar & Linn, 2007), and enhancing the performance of team interactions (Morgeson, Reider, & Campion, 2005).

The effect of the environment cannot be understated and may have more of an impact than personality predispositions for the factors with observed correlations with time banditry, though clearly personality factors do influence the expression of counterproductive work behaviors (O'Brien & Allen, 2008). A study investigating performance and commitment found that the relationship of these two factors fully mediated the significant correlations between conscientiousness and subsequent performance and between extraversion and commitment (Westerman & Simmons, 2007). Further, conscientiousness has been fully moderated in a study investigating the relationship between psychological workplace climate and job performance (Byrne, Stoner, Thompson, & Hochwarter, 2005), which emphasizes the importance of environmental variables. Another study using path analysis to investigate the relationship between conscientiousness, agreeableness, and counterproductive work behaviors also found that the environmental factor of job satisfaction mediated the relationship of the two personality factors with counterproductive work behaviors (Mount, Ilies, & Johnson, 2006). Thus, environmental factors could influence the

presence and frequency of time banditry in the workplace, and it is likely that this relationship mediates that between personality and time banditry. Managers in organizations can take advantage of this relationship by implementing various interventions designed to change certain organizational factors.

### *Limitations & Suggestions for Future Research*

The first, and perhaps most obvious, limitation to this study is the disconnect between the exploratory factor analysis in a previous study and the current factor analysis. While both analyses revealed three factors, the prior study had a fairly satisfactory number of items for each factor, whereas the current study did not. In this study, only two items represented the Social factor, and one factor consisting of 6% of the items is not sufficient for representation. There could be several reasons for this shift in item classification. The first reason is that of the sample. In the first study, nearly half of the participants were MBA students, whereas this sample contained only undergraduates. On average, the MBA students are older and have more working experience, which could change the likelihood that they would be exposed to the different items on the TBQ. Another reason could be that the students in this sample have qualitatively different jobs than those represented by the TBQ (i.e. fewer desk jobs), and are thus less likely to have had the same experiences as those who have been working longer.

This measure is a self-report measure, which is appropriate for validation and for research, and has been shown to be a valid and reliable source of information for other types of counterproductive work behaviors but possibly limits the utility and generalization of the measure in other contexts, such as employment testing, because of

faking and desirable responding. However, previous research on general deviant behaviors has shown that employees will honestly answer questions about engagement in some forms of counterproductive work behavior in a pre-employment interview (Lanyon & Goodstein, 2004). Using alternate measures which are unlikely to be faked, this study showed that classification as a major time bandit or not can be correctly achieved approximately 70% of the time. Future research should investigate the validity of the TBQ in a pre-hire setting. At this time, the authors do not recommend administering the TBQ to applicants because of faking, but this study has demonstrated that other measures can be used as a proxy, thus eliminating, or at least partially remedying, the face validity issue.

It would also be interesting to investigate time banditry against objective standards to add external validity evidence to this measure, particularly since this study used a self-report online method to collect data. Although the method was not hypothesized to influence the results of the study, some unknown confound might have been present. A study investigating counterproductive behavior and organizational citizenship behaviors found that the observed relationships were stronger when incorporating information from self-report measures and supervisor ratings (O'Brien & Allen, 2008), suggesting that more information could be gained using ratings from multiple sources. A future study could employ colleagues or supervisors to report on the amount of time banditry behavior that the target employee engages in. This would help to validate the measure in an applied setting, instead of relying on the self-report data of students.

This study was conducted on undergraduate students, most of whom have a short work history to refer to, and this could affect the results obtained in this study. Many of the items on the TBQ referred to situations that are less likely to happen in hourly retail or service jobs that many students perform. This is also likely to change the expression of their time banditry behaviors. Future research should investigate the generalizability of this measure to other contexts, and to determine how time banditry behaviors are different in different fields and with different organizational factors.

The nomological network was largely supported by the results of this study, but there are several changes that should occur in the future. First, measures of neuroticism and organizational culture were not administered, so the relationships proposed in the nomological network could not be tested. Future studies should investigate the role of these factors to ensure that the model is correct in structure.

A measure of organizational citizenship behavior was also not administered in this study. In the first version of the TBQ, several items of organizational citizenship behaviors were included and were designed to be reverse-coded. These items were later dropped from the scale and were not administered in the current study. However, the organizational citizenship may play a pivotal part in influencing and moderating the expression of time banditry behaviors. Future studies should investigate time banditry with a measure of organizational citizenship behavior, because the relationship between the two is likely very complex. This would also allow the proposed relationships between organizational citizenship behaviors and the related constructs to be tested. In future iterations of this study, a version of the TBQ again might be developed and tested

using a subcomponent of organizational citizenship behaviors to test for any type of moderating effect of these behaviors.

The nomological network predicts that extraversion is significantly and positively related to time banditry, yet this hypothesis was not supported by the results. The final version of the TBQ administered in this study contained only three items that purportedly represented the social aspect of time banditry. It is unlikely that these items fully represent how individuals can waste time at work socially, so it is unlikely that this sub-component of the measure can, or should, be used to draw conclusions about whether or not the relationship between extraversion and time banditry is significant. In future studies, and in future iterations of this research, the social and technological subcomponents of the measure will be expanded and tested to ensure that they are more fully representative of that portion of the construct. At that time, with a revised TBQ, the relationship between extraversion and time banditry should again be investigated for significance.

Future research should also focus on expanding the knowledge base of time banditry in general, and this measure, the bandit classification, and the nomological networks could serve as tools in that research. Important factors to research are antecedents and the cognitive justifications associated with time banditry.

### *Conclusions*

The results of this study are promising. The primary contribution of this research effort is to introduce a reliable and valid measure of time banditry for research and applied measurement purposes. This research has also established validity evidence for a method to use commonly administered personality measures as a proxy for

propensity to steal organizational time. The factor analytic results of this study confirm findings from an earlier development and pilot study, though the three factors were not fully represented in this study. Further validity evidence is provided by the confirmation of hypotheses about the correlation between the time banditry measure and other previously validated measures. Taken together, this evidence suggests that this measure of time banditry is valid for the sample used in this study.

The existence of time banditry is not isolated from other constructs, and this could aid in expediting the development of interventions designed to reduce it in the workplace. The data from this study show that increased levels of organizational justice are related to decreased levels of time banditry. Therefore, simply implementing existing organizational interventions designed to address certain areas of concern could actually reduce time banditry at the same time.

It is not suggested that an organization should attempt to create a workplace where no time banditry behavior occurs. Instead, interventions should be targeted on reducing time banditry behaviors, but not eliminating them. Malachowski (2005) estimates that the average American worker will waste 2.09 hours in an eight hour shift, costing companies $759 billion annually in lost productivity. Given these figures, there is room for great improvement over the current standard. If only a half hour of productivity was gained by using an organizational intervention aimed at reducing time banditry behaviors, the organization could see more profits because of the increased efficiency. Based on this estimate, this could mean that organizations could gain $253 billion annually in increased productivity just by the extra half hour of productive time. That increase in productivity could be the difference between outsourcing jobs or

organizational layoffs to cut costs. In this time of economic uncertainty, it seems that time banditry could be able to significantly contribute to the organization's bottom line.

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# Appendix

## Time Banditry Measure

Instructions: Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who takes long breaks without approval? Please circle a number for each statement to indicate the extent to which you agree or disagree with that statement.

Scale:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Disagree Strongly | Disagree a little | Neither agree nor disagree | Agree a little | Agree Strongly |

1. I purposely take longer in the restroom than necessary
2. I use the internet for work related business only
3. I receive personal phone calls at work
4. I put less effort into my work than I know I can
5. I talk to co-workers about their families during work hours
6. I tell my boss/colleague a task will take longer than I know I can finish it in, so I can take my time
7. I always put 100% effort into my work task
8. If my boss is gone for the day, I will leave early
9. I check non-work related e-mail at work
10. When given a task I finish it faster than the expected time frame and use the remaining time for personal use
11. I spend time on the internet for reasons not related to work
12. I never make personal phone calls at work
13. If I didn't feel like going to work I would call in sick, even if I wasn't
14. I take time out of my day to talk with my boss about non-work related topics
15. I receive non-work related e-mail at work
16. I spend more time than necessary on tasks
17. I daydream while at work
18. I take long coffee/smoke breaks without approval
19. I send non-work related e-mail at work
20. I spend time in and out of the office engaging in leisure activities (e.g., golfing, going to lunch, drinks, and/or dinner) with clients
21. I never check non-work related e-mail during work hours
22. If I finished a project 20 minutes before the end of the work day, I would not start working on anything new
23. I start working as soon as I arrive at work

24. While at work, the only e-mail use I engage in is work related
25. I go to the restroom even if I don't have to
26. I take longer lunch breaks than I am supposed to
27. I take breaks at my desk to catch up on a bestseller or to read a magazine
28. I use sick days in order to catch up on personal things
29. When I arrive at work in the morning I get coffee and/or eat breakfast before I start working
30. I pretend to work through lunch to leave early, even though I still take a break to eat
31. I only take the required amount of break time allowed in my organization

*Note:* Format modified from online administration.