# Assessing the Celerity of Arrest on 3-Year Recidivism Patterns in a Sample of Criminal Defendants

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## A B S T R A C T

*Purpose:* In an effort to build on celerity research, we use longitudinal data to examine whether celerity, as measured by the amount of time from the commission of an offense to the time of arrest, impacts the likelihood for recidivism.
*Methods:* Propensity score matching is used to examine how the effects of several different measures of celerity are related to subsequent arrests.
*Results:* Findings were consistent with assumptions of deterrence theory; experiencing a shorter time between offense and arrest date was related to a significantly lower risk of recidivism, while the effect diminished beyond thirty days.
*Conclusions:* Results suggest that celerity of arrest may have a small, short-term deterrent effect—a finding that is similar to one from the research on sanction certainty.

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## Introduction

One of the primary concerns of the criminal justice system is to identify, apprehend, and effectively punish law violators. The foundation of the American criminal justice system is based on the assumption that deterrence works. While there is ample empirical evidence assessing the deterrent effects of certainty and much less so with respect to severity (see Nagin, 2013; Piquero, Paternoster, Pogarsky, & Loughran, 2011), less is known about the effects of celerity, or the time elapsed between the commission of an offense and its punishment. While a handful of studies have considered the potential deterrent effects of celerity (see Howe & Loftus, 1996; Kleck, Sever, Li, & Gertz, 2005; Nagin & Pogarsky, 2001; O'Connell, Visher, Martin, Parker, & Brent, 2011; Pestello, 1984) there is little consensus as to whether swift punishment provides for a deterrent effect. Further, celerity has historically been defined by the time between arrest and criminal sentence, leaving other 'punishments' such as pre-sentence punishments (e.g., arrest and jailing), relatively unexplored. This is somewhat problematic because the arrest itself (and jailing pretrial), though not a formal sentence, is nothing short of a punishment (see Andenaes, 1966). Thus, exploring celerity from this perspective fills an important gap in the literature.

After a police contact, detainment via arrest marks a defendant's first point of contact with the criminal justice system. All criminal defendants experience this event, albeit these experiences can vary particularly in terms of the amount of time between the date of offense and the date of arrest/jailing. Many offenders are arrested during or shortly after the commission of the offense while other offenders may not be arrested for days, weeks, or even years. Considering this variability, it is important to consider the deterrent effects of celerity measured as the time between the crime/s itself and its initial arrest. Comparing similar defendants exposed to varying magnitudes of celerity is a useful method of examining the effect of a swift arrest on subsequent offending.

The current study contributes to the relatively limited knowledge base on celerity by focusing on the initial point of contact with the criminal justice system following an alleged criminal offense/s. Data were culled from a large urban county in Texas (Dallas County) representing all defendants arrested in a single year (N = 27,137). Propensity score matching was used in order to establish a counterfactual in an effort to isolate the effects from various degrees of celerity on subsequent arrest among similarly situated individuals.

## Background

### The Deterrence Framework

The principles of deterrence theory are centered on the perceived certainty, celerity, and severity of punishment. Beccaria (1986[1764]) argued that increasing the certainty of punishment should be an effective deterrent as a would-be offender will be less likely to engage in criminal behavior if the risk of detection is great. The second tenet, celerity, should be an effective deterrent as prompt punishment will

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be perceived as more unpleasant than delayed punishment. Finally, the severity of punishment will only be a deterrent when the punishment is proportionate to the crime and the costs perceived as greater than the benefits derived from the crime.

There is a wealth of research testing the tenets of deterrence theory (see Cook, 1980; Cornish & Clarke, 1986; Nagin, 2013; Paternoster, 1987, 2010; Zimring & Hawkins, 1973). However, the majority of deterrence research has focused on policies and perceptions surrounding the severity and certainty of punishment (Decker, Wright, & Logie, 1993; Paternoster, Saltzman, Chiricos, & Waldo, 1982; Piquero & Rengert, 1999; Piquero et al., 2011; Pogarsky & Piquero, 2003). One reason many empirical studies have limited their focus to severity and certainty is that measuring celerity, or the swiftness of punishment, is challenging and data containing measures of celerity are rare. Further, assessing the effectiveness of swift punishment is often difficult considering due process requirements to ensure punishments are properly imposed. When contemplating the commission of a crime, would-be offenders may only consider the swiftness of punishment only if they give preference to a delayed sanction over an immediate sanction (Nagin & Pogarsky, 2001).

*Assessing the Effects of Celerity*

Several experimental studies have assessed the impact of celerity on decision-making processes. In one study, subjects played a video game where the goal was to obtain as many points as possible with a computer as the opponent (Gray, Miranne, Ward, & Menke, 1982). Subjects were told they could press a preview button that displayed the computer's next move before they chose their next course of action, which would potentially minimize the loss and increase the potential gain. During the training trials, the subjects were instructed that they could use the preview button to learn about the game, while in the experimental trials the experiment administrator discouraged them. Further, subjects were instructed that the computer was programmed to scan for their use of the preview button. Punishment was defined as loss of points when the subject was caught using the preview option. The researchers measured high celerity as the point loss occurring on the trial immediately following the use of the preview and low celerity as point loss a few trials later. The experiment concluded that celerity was an unimportant factor on the subjects' behaviors when compared to certainty and severity. Similarly, Howe and Brandau (1988) conducted two experiments to evaluate the effects of certainty, severity, and celerity of eight hypothetical punishments for serious crime. Their analysis identified strong effects of certainty and severity and moderate effects of celerity and that the components of deterrence combined additively. Further, Clark (1988) reviewed laboratory studies estimating the effects of celerity and found its importance as a bivariate relationship. However, the relationship diminished when intervening variables were introduced.

While experimental studies of celerity effects provide mixed results, there have been several non-laboratory-based studies examining perceptions of celerity. Pestello (1984) found a positive relationship between celerity of punishment and fear of consequences in a study of perceived certainty, celerity, and severity of punishment upon student misconduct. Similarly, Howe and Loftus (1996) examined students' perceptions of punishment outcomes to determine the relationship between certainty, celerity, and severity. The results of their study found minimal effects of celerity. More recently, Nagin and Pogarsky (2001) administered a survey to college students integrating the extralegal consequences from conviction and impulsivity into the deterrence model. Their study concluded that variation in sanction certainty and severity predicted offending, whereas variation in celerity did not. A telephone survey of adults' perceptions of punishment certainty, severity, and swiftness of punishment did not find that celerity of actual punishment had an effect on respondents' perceptions of punishment

(Kleck et al., 2005; see also Piquero et al., 2012). A similar study by Kleck and Barnes (2008) aggregated these perceptions up to the county level and found that average local population perceptions of the certainty, severity, and swiftness of punishment were not related to actual levels of punishment at the county level.

Empirical studies have also considered the effects of criminal justice policies that have increased the celerity of punishment. Several studies have focused on the deterrent effect of the swiftness of the death penalty on several different outcomes. Bailey (1980) measured the time between sentence and execution for states and failed to find support for the deterrence argument for the certainty and celerity of executions. Along the same line, Wright (2009) considered three measures of celerity: the length of time offenders wait from the commission of offense, conviction, and sentence to determine whether homicide rates are influenced by how quickly executions are carried out. Using national data from the FBI Supplementary Homicide Reports and execution data from the U.S. Department of Justice, Wright found that longer waits prior to executions were not related to homicide rates, and the amount of time prior to an execution was not significantly related to homicide rates. Additional research has focused on the swiftness of police action and court processing on crime rates. Selke (1983), for example, found that while conviction rates (certainty) were negatively correlated with burglary rates, quickness of police action and court processing (celerity) correlated positively with burglary rates.

A number of studies have examined the effects of drunk-driving laws that increase the swiftness of punishment. A study evaluating the deterrent impact of Ontario's 12-hour driver's license suspension law imposed to administer swift punishment found a small short-term effect in the number of drunk-driving related fatalities (Vingilis, 1988). Similarly, Yu (1994) examined the effects of punishment celerity and severity in a specific deterrence model of drunk driving and found that when license withdrawal was mandatory an increase in fines significantly decreased the probability of recidivism while finding a weaker effect for the swift imposition of fines. A study evaluating state policies toward alcohol-impaired driving estimated the three components of deterrence and found that the celerity variable (administrative license suspension) had the greatest impact on single-vehicle nighttime fatalities (Legge & Park, 1994). Strong support for the celerity effect was found in a study evaluating the effects of mandatory pre-conviction and post-conviction driver's license suspension laws, finding pre-conviction suspension policies reduced alcohol-related crash involvement by five percent (Wagenaar & Maldonado-Molina, 2007). In contrast, an evaluation of an "on-the-spot" fine payment policy in Portugal for drunk driving did not produce any convincing deterrent effects (Tavares, Mendes, & Costa, 2008).

Celerity has also been incorporated into various treatment models applied in correctional settings, as a way to increase accountability and facilitate positive change. For example, graduated sanctions models that are often used in probation agencies, suggest that by focusing more on certainty and swiftness rather than severity, individuals will be more inclined to comply with the rules (Boyum & Kleiman, 1995). An example of one such model is Delaware's Decide Your Time (DYT) program, designed to manage high-risk substance-using probationers by focusing on the certainty of detection through frequent urinalysis and graduated sanctions (O'Connell et al., 2011), although problems with program implementation has prevented a full evaluation of the treatment model. Another correctional program based on the deterrence framework is Project HOPE, a probation strategy for substance abusing offenders in Hawaii (Hawken & Kleiman, 2009). An evaluation of Project HOPE found that by using swift and certain sanctions for drug violations, future violations and recidivism were substantially reduced (though see Duriez, Cullen, & Manchak, 2014). Evaluations of these programs based on the principles of deterrence theory specifically lend some support for the increased celerity and especially certainty of sanctions.

Overall, the empirical evidence surrounding perceptions and policies of celerity is mixed. While the perceptual research typically does not