

Juvenile Sentencing: A Mixed-Methods Approach*

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How do socially relevant attributes influence juvenile criminal sentencing? While judicial decisions should, in principle, be fully based on legally relevant factors such as the seriousness of the offense and the defendant's criminal record, I ask whether and how extralegal characteristics related to the adolescent's position in structural relations affect the decision-making process. I propose a mixed-methods design to study mechanisms of criminal sentencing. Using data from a representative sample of the São Paulo juvenile justice system records, I estimate mixed-effects logistic models to assess the probability of being sentenced to confinement given certain extralegal attributes, while controlling for legally relevant variables. Interaction effects show that adolescents registered as full-time students and classified as drug users are more likely to be sentenced to confinement than their counterparts, even when the arraignment is the same. The second step involved weekly visits to the juvenile courthouse in São Paulo over four months to observe judicial hearings. Prosecutors are central to the decision-making process. The standard decision-making mechanism is based on police documents and legally relevant information. When there is a rupture in the definition of the situation (usually when non-minority defendants enter the courtroom), a new mechanism emerges and more lenient decisions are made.

Keywords: Criminal sentencing; juvenile justice; mixed-methods; mechanisms of judicial decisions; Brazil.

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How do socially relevant attributes influence juvenile criminal sentencing? In principle, decisions are made fully based on legally relevant characteristics, such as the seriousness of the offense and the defendant's criminal record. From a normative perspective, structural components such as social class, ethnicity, and gender should not play roles in the decision-making process because it should be based entirely on the idea of proportionality between the offense and the sentence. Empirically, however, this is often not the case. Are less powerful defendants more likely to receive tougher sentences? There have been debates about the predictors of criminal sentencing in the social sciences for decades, but we still have not reached a consensus as to the roles of extralegal attributes.

This paper aims to contribute substantively to this criminological debate in the social sciences. Previous studies in the field of criminal and juvenile sentencing have empirically demonstrated that extralegal attributes usually influence the outcome of judicial decisions, even after controlling for legally relevant variables. In other words, belonging to social groups who structurally struggle in power relations increases one's likelihood of being sentenced to prison, even when accounting for the seriousness of the offense. To our knowledge, however, no one has yet explained 'how' these power relations actually operate in the decision-making process.

I suggest integrating quantitative and qualitative methods to answer this question. While previous studies have flagged the role that extralegal attributes can potentially play in criminal sentencing, an explanatory mixed-methods research design could also be theoretically fruitful to properly testing the most common hypotheses in the literature, as well as for providing an explanation about the mechanisms of judicial decisions.

Drawing upon the intense methodological debates that took place in the second half of the 20th century on the predictors of criminal sentencing, I test the hypothesis that the decision-making process of a juvenile court in São Paulo, Brazil is influenced by adolescents' positions within social structures. Foreshadowing some of the discussions to follow, our contribution to the literature is twofold. First, I argue for a mixed-methods approach to the study of the social mechanisms of judicial decisions. Second, while I demonstrate that the standard social mechanism of judicial decisions in the São Paulo juvenile justice system involves, as expected, the logic of criminal law (with more serious offenses and more extensive criminal records predicting judicial outcomes), I also find that another mechanism can occasionally be activated whereby non-minority adolescents receive more lenient sentences.

This paper proceeds as follows. I first introduce the debate on criminal sentencing, in particular the methodological discussions of the late 1970s. I then proceed to a discussion about the possibilities of a mixed-methods approach, how it could contribute to causal inference, and how it could play a role in rigorous observational social science. Finally, I present the results of our empirical study on juvenile sentencing. After discussing our

methods and materials (both quantitative and qualitative), I present our results, demonstrating that decisions are commonly based on official documents. This does create a certain proportionality between crime and punishment, but even so, more lenient decisions are made when there is a rupture in the definition of the situation, which often happens when non-minority juveniles are the defendants.

Literature on criminal sentencing: methodological concerns

The second half of the 20th century has seen a substantial growth in the number of studies on criminal sentencing, with a particular focus on the roles of legal and extralegal attributes as predictors of criminal sentences (whether the defendant goes to prison) and the sentences' severity (for how long the defendant is imprisoned).

The core of this sentencing debate centers on the Chambliss-Seidman hypotheses. Chambliss and Seidman (1971) proposed a theoretical framework for studying criminal sentencing that focused on the bureaucratic quality of criminal justice and its discretion. Two testable deductive propositions followed from this framework: 01. Where laws are so stated that people of all classes are equally likely to violate them, the lower the social position of the offender, the greater is the likelihood that sanctions will be imposed on him; 02. When sanctions are imposed, the most severe sanctions will be imposed on persons in the lowest social class (CHAMBLISS and SEIDMAN, 1971, p. 475).

Chiricos and Waldo (1975) were the first authors to effectively test these hypotheses. They concluded that there was no significant association between the defendant's socioeconomic status and the severity of the sanctions (CHIRICOS and WALDO, 1975).

Chiricos and Waldo's paper (1975) was so influential that it is considered the beginning of an intense methodological debate. On the one hand, some authors pushed back against Chiricos and Waldo (1975), arguing that the tests they used were methodologically inadequate and arguing that sentences could indeed be predicted by 'extralegal' factors, such as the defendant's social class, gender, age, and ethnicity (GREENBERG, 1977; HOPKINS, 1977; REASONS, 1977). On the other hand, some authors argued that 'legal' factors, such as the seriousness of the offense and the defendant's criminal records were still the best predictors of judicial decisions (HAGAN, 1974).

The debate that followed was essentially methodological, and criticisms usually focused on the incapability of each research design to effectively test the hypotheses in question.

Hopkins (1977), for instance, agreed with Chambliss and Seidman's (1971) theoretical proposal, but asserted that Chiricos and Waldo's (1975) research design did not allow them to actually test the Chambliss-Seidman hypotheses (1971). First, he suggested that socioeconomic status should be operationalized as a dichotomous, not a continuous, variable because judges see the defendant 'either' as someone with a similar background to their own 'or' as someone of a lower social class. Second, he stated that Chiricos and

Waldo (1975) did not control for the homogeneity of this social dimension: if the criminal justice system operates by selecting very specific stereotypes, then there should be no variability on the socioeconomic variable, and therefore no association between the two variables. As a result, Hopkins (1977) argued that the results of Chiricos and Waldo's study (1975) were inconclusive (HOPKINS, 1977).

Reasons was another who criticized Chiricos and Waldo's conclusions (1975). He argued that their theoretical proposal did not match the data they used to empirically test the Chambliss-Seidmann hypotheses (1971), and so suffered from an explicit selection bias. Incarceration, after all, is the most severe out of many other possible sanctions, so it is not possible to determine if the most severe sanctions will be imposed on those from the lowest social class. In short, according to Reasons (1977), "this is an excellent example of the data's inapplicability to the theory" (REASONS, 1977, p. 178), and Chiricos and Waldo's research (1975) design did not allow them to either accept or reject their hypotheses as the universe with which they worked was the incarcerated population of three American states.

Greenberg (1977) was a third author who disagreed with Chiricos and Waldo's conclusions (1975), and for the same reason: their research design did not allow them to test the Chambliss-Seidman hypotheses (1971). Greenberg (1977) gave three reasons why. First, there were plenty of decisions made by agents of the criminal justice system before the sentence itself that might also be socially biased. As a result, equal sentences for different social groups are not necessarily a sign of equal treatment. Second, Chiricos and Waldo (1975) did not analyze the social characteristics of the victims, which might have been an important influence behind unequal sentences. Third, the political context should also have been taken into consideration, especially during 1969-1973, immediately after the decade that had seen the greatest increase in political power for the black population in the U.S. up to that point (GREENBERG, 1977).

Another central paper in the sentencing debate from the 1970s was Hagan (1974), who reviewed 20 papers on social bias. When replicating them, Hagan (1974) added the chi-square test of categorical variables and found that the association between sentences and legal attributes was considerably stronger than that between sentences and extralegal variables (HAGAN, 1974). Hagan (1974) also agreed with Zeisel (1969) on the usage of bivariate analysis in research on criminal sentences, especially because of a possible omitted variables bias.

This particular debate on criminal sentencing was essentially methodological. After Chiricos and Waldo (1975) tested the Chambliss-Seidman hypotheses (1971), some authors did not agree with their results and pointed out some issues with the research design, whereas other authors argued that more advanced statistical techniques in fact yielded the same results. Nevertheless, the question remained unanswered: are extralegal attributes significant predictors of criminal sentences or do judges decide sentences

based solely on legal attributes? Despite the efforts of plenty of investigations, extralegal attributes' effects could not be isolated.

I argue that a reliance on only the hypothetico-deductive method with observational data is partially why no definitive conclusions were reached concerning the possible role of extra-legal attributes on criminal sentencing. One theoretically fruitful possibility, given the impossibility of randomizing defendants' social attributes, is an explanatory mixed-methods research design. By integrating quantitative and qualitative methods, it would be possible to explain the mechanisms of the sentencing process and the role that social attributes play in the decision-making process.

Note on the contemporary debate

While there have been contemporary developments on research about criminal sentencing since the 1970s, our literature review focuses on this period because it was when a methodological discussion explicitly took place: there were two concurrent hypotheses and researchers had found evidence for both. Later on, the 'legal vs. extralegal' debate did indeed advance, but these advances were based on new theoretical developments, in particular the organizational approach on sentencing (DIXON, 1995; FEELEY, 1979) and the emergence of sentencing guidelines (ENGEN and GAINEY, 2000). Our study, then, fits especially well within the methodological debate of the 1970s.

Mixed-methods approach: integrating quantitative and qualitative methods

I argue that the methodological debate about the role of extralegal attributes on criminal sentencing could benefit significantly from the adoption of a mixed-methods research design. Combining quantitative and qualitative methods in the social sciences, however, is not a trivial endeavor. As Creswell (2015) notes, a mixed-methods research design is not the simple sum of quantitative and qualitative techniques in a single study. "Mixed methods is not simply the gathering of both quantitative and qualitative data. Although this form of research is helpful, it does not speak to the integration of the two data sources and play upon the strength that this combination brings together" (CRESWELL, 2015, p. 02).

In contrast, the multi-methods approach I am using here assumes a variety of premises in order to more rigorously integrate quantitative and qualitative methods. These premises fit within a theoretical frame and are deductively brought to the empirical level (see SMALL, 2011). While they use divergent techniques and styles, both quantitative and qualitative methods do possibly follow the same underlying logic: the scientifically oriented goal of making causal inferences. Not everyone agrees about this, however.

King, Keohane, and Verba (1994) were, if not the first, probably the most emphatic advocates of this idea. They argued that there was one single inferential logic behind every scientific study, which had four points: whether descriptive or causal, the goal of the

study was to make inferences (i.e., to go beyond the particular collected observations); the procedures were public, which meant that there should be a validation process for evaluation afterwards; outcomes are uncertain, (i.e., perfectly precise conclusions from uncertain data are impossible); and the content was the method (given rules and procedures led to given outcomes)¹.

King, Keohane, and Verba (1994), following the Popperian theoretical framework and the principle of falsifiability (POPPER, 2005), argue that scientific research should begin with research questions and theories that can be shown to be wrong. Researchers should always be able to give a direct answer to the question of “what evidence would convince us that we are wrong? If there is no answer to this question, then we do not have a theory” (KING et al., 1994, p. 19).

Scientific research would then consist of deducing the observable implications of a theory and using these observations to connect the theory with the data. According to King, Keohane, and Verba (1994), this is valid for any scientific activity, whether it uses quantitative or qualitative methods.

King, Keohane, and Verba’s position (1994) is not universal in social science methodology. Mahoney and Goertz (2012; 2006), for instance, respond to them by stating that quantitative and qualitative methods are two essentially different ‘cultures’ of research: two approaches to explanation, two conceptions of causality, two types of multivariate explanation, two perspectives of equifinality, two scopes and different possibilities of generalization, two case selection practices, two ways of weighting observations, two ways of substantively treating important cases, two approaches to lack of fit, and two perspectives on concepts and measurements (MAHONEY and GOERTZ, 2006).

These points are reasonable. A quick search for papers that use either one of these methods demonstrates that there are essential differences concerning the strategies that the researchers use. Accordingly, it is possible to see that there are indeed two ‘cultures’. I argue, however, that the differences pointed out by Mahoney and Goertz (2006) consist precisely of the different ‘styles’ described by King et al. (1994). They are different styles that follow the very same underlying logic of inference: the scientific logic.

As a result, I use the theoretical framework described by King et al. (1994) and assume that it is possible to integrate quantitative and qualitative methods in the search for causal inference.

Mixed-methods research and causal inference

Harding and Seefeldt (2013) list five roles that qualitative research can play in mixed-methods studies aiming for causal inference: elucidating selection processes, ex-

¹This book has generated an intense debate in the field of political methodology. It was so influential that it is possible to identify an ‘after-KKV’ moment (MAHONEY, 2010). Still, the authors’ proposal is not universally accepted and has received plenty of criticism, particularly from researchers associated with the qualitative tradition in political science. For more on this debate, see Brandy and Collier (2010).

plaining sources of heterogeneous effects, understanding variable measurements from survey and administrative data, treatment definition and program fidelity, and explanations of mechanisms (that is, the whys and hows of treatment effects).

The first suggestion is to elucidate selection processes. In any observational study with the goal of drawing causal inferences, one must assume ‘selection on observables’ – i.e., uncounfoundedness. If such an assumption is not verified, the model is endogenous, meaning that any estimate would therefore be biased. Since this is a very strong assumption, a large part of the work developed by quantitative researchers is related precisely to attempting to eliminate the effects of unobserved factors; instrumental variables, regression discontinuity designs, matching, difference-in-differences, to name a few, are all examples of ‘selecting on un-observables’ (see ANGRIST and PISCHKE, 2009; MORGAN, 2013; MORGAN and WINSHIP, 2007). The integration of qualitative techniques with these quasi-experimental techniques might, if not necessarily solve the issue, make meaningful contributions to the elucidation of selection processes. Small-n research is able to focus deeply on searches for variables that were not previously included in models (and whose absence is causing bias), as well as demonstrate how unobservable factors may have effects on response variables, and explore whether a variable not included in the model in fact generates an endogenous model, among other things. This means that one method may play a role in the assumptions and limitations of the other.

Another common issue in traditional quantitative research is explaining the mechanisms behind a given causal relationship. Considering a simple relationship, where a set of variables ‘X’ affects a phenomenon ‘y’, quantitative methods are able to estimate the precise effect of a treatment variable ‘ x_1 ’ on ‘y’. However, this model does not explain the hows or whys of this effect; this explanation is usually left out of the theoretical discussion and the literature. The combination of qualitative techniques, in this sense, may contribute meaningfully to explaining the causal mechanisms of a relationship (HARDING and SEEFELDT, 2013). A deeper investigation would be able to help by explaining the ‘how’ of an estimated effect. In other words, the qualitative component of a mixed-methods study may be useful by explaining what quantitative results alone cannot.

This last approach to integrating quantitative and qualitative methods is particularly interesting, and sheds some light on the limitations of some previous studies on criminal sentencing. When investigating the predictors of judicial decisions through a hypothetico-deductive method, one is not able to explain ‘how’ the estimated relations actually work. The ‘mechanisms’ (ELSTER, 1983; 1998; 2007) of judicial decisions were not mentioned during the methodological discussions about the roles of extralegal attributes in criminal sentencing.

Analytical sociologists sustain that empirical verification by the hypothetico-deductive method, although necessary for scientific research, is not sufficient for a mechanism-based explanation. Instead, the researcher must go beyond the association and the effects of the

variables and demonstrate the ‘wheels and gears’ that make the agents characterized by ‘y’ be a consequence of ‘X’ (HEDSTRÖM and BEARMAN, 2013; HEDSTRÖM and UDEHN, 2013; HEDSTRÖM and YLIKOSKI, 2010). This methodological integration, with the qualitative part of the research following the quantitative, acts according to this assumption.

This study

I argue that the methodological debate that began in the 1970s, and sought to predict criminal sentencing with legal and extralegal attributes, could advance considerably with mixed-methods research designs. To demonstrate the impact of socially relevant attributes on the harshness of judicial decisions, as well as the advantages of mixed-methods approaches, I present the results of an explanatory mixed-methods design that aimed to investigate the likelihood of being sentenced the confinement disposition and the mechanisms of juvenile criminal sentencing in São Paulo, Brazil.

This is a fascinating scenario for two reasons. First, the juvenile justice system, as a separate system from the criminal justice system, usually provides the judges with more discretionary power to analyze the social condition of the defendants, thereby increasing the likelihood that the extralegal attributes of the adolescents will affect the sentence (BAILLEAU, 2002; BAILLEAU and CARTUYVELS, 2007; FELD, 1997; MUNCIE, 2005, 2008; PIÑERO, 2006, 2013; PIRES, 2006; VON HIRSCH, 2001). Second, the few studies that have taken into consideration the Brazilian context (that is, being a developing democracy) have found a socially and racially biased criminal justice system (ADORNO, 1995; RIBEIRO, 1999; RIBEIRO, 2010a, 2010b; VARGAS, 2007), yet only a few works have thus far been conducted on the juvenile justice system (see OLIVEIRA, 2017a).

Bearing in mind the methodological debate about criminal sentencing that took place during the second half of the 20th century, this study investigates whether and how extralegal factors influence judicial outcomes for youth defendants in the state of São Paulo. Are socially relevant attributes such as occupation and ethnicity significant predictors of the judicial decision even when the seriousness of the offense and the defendant’s criminal records are taken into account? To investigate the sentencing mechanisms of the São Paulo juvenile justice system, I used an explanatory mixed-methods research design.

Data and methods

The first part of this study is the quantitative stage. I start by quantitatively testing the literature’s hypotheses with a representative sample of records and folders archived in the ‘Tatuapé Complex’². The second part is the qualitative stage, wherein I ex-

²Either quantitatively or qualitatively, this material has already been used in other studies (ALMEIDA, 2016; ALVAREZ et al., 2009; OLIVEIRA, 2017a; SALLA and ALVAREZ, 2011; LIMA, 2014). Nearly every adolescent who passes through the juvenile justice system has a record and a file, with only a fraction of them being convicted and even a smaller fraction being confined. This is a very important point that highlights why Reasons’ (1977) criticism of Chiricos and Waldo (1975) (a sample only of convicted individuals would in-

plain the mechanisms of the previously estimated coefficients by directly observing the workings of judicial hearings in São Paulo.

Ever since the promulgation of the Children and Adolescent Statute (ECA) in 1990, the path followed by a juvenile defendant in the state of São Paulo has been relatively standardized. After catching a suspect in the act, police officers take them to a police station and then to an Initial Confinement Unit. When the suspect arrives to this unit, a file is opened under their name. This file will follow the adolescent throughout the juvenile justice system; should they ever commit another offense, it will be added to these data. On the following day, they should be taken to the courthouse. They first go to an informal hearing with the public prosecutor, and then to an introductory hearing in which the judge decides whether the adolescent will be held in custody for up to 45 days before trial. Defendants who had not been sent to an Initial Confinement Unit (because they had not been caught in the act, for instance) and then do get sent to a 45-day confinement before the trial will have their folder opened at that moment, whereas those who already had a file will have the new information added on. Finally, after trial, adolescents can receive different sentences. Those who end up confined, either definitively or just for a night, will again have a new opportunity to have a file opened for them or have new information added to their existing folder. A detailed explanation about this process, including a graph to better visualize it, can be found in OLIVEIRA (2017a).

The information about when a file can be opened on a subject is crucial for understanding the population from which we are drawing our representative sample. During a 2007-2009 research project, researchers from the Center for the Study of Violence at the University of São Paulo had access to the population of files opened in the state of São Paulo from 1990 to 2006. In total, 115,639 adolescents passed through a confinement unit at least once. Though this is not the same population as the total amount of defendants, as it excludes possible adolescents who never were confined at all, it is still a feasible population for studying judicial decisions. For instance, only about one third of the adolescents were definitively sentenced to confinement on their first entry into the system, which gives a very strong indication about the viability of this population for our research question.

Researchers sorted a sample of 1,581 randomly selected files that were representative of the population of files opened in the state of São Paulo from 1990 to 2006. These files refer to individuals, which means that the sample actually consists of an unbalanced panel because some adolescents re-offend more than others. Since our problem involves every judicial decision made, including those for re-offenders, our modeling strategy involves 2,139 decisions (entries in the system) nested within 1,581 files (adolescents)³. After the sampling procedures, a 26-question questionnaire was applied.

roduce selection bias) cannot be applied here. For more details concerning this universe and the sample of records and files archived in the 'Tatuapé Complex', see Oliveira (2017a).

³There are extreme cases in which two adolescents re-offended 10 times, which means that the multilevel

Table 1: Distribution of adolescents by entry into the juvenile justice system

Variable	Overall	First entry	Second entry	Third entry	Forth entry
Judicial decision (1 = confinement disposition)	40.2%	34.8%	53.5%	54.3%	48.5%
Offense					
Other offenses	14.2%	14.1%	15.4%	11.9%	13.6%
Minorisms* (not offenses)	4.2%	5.9%	0.3%	0.0%	0.0%
Theft and other property offenses	15.3%	11.7%	23.1%	23.2%	30.3%
Drug-related offenses	11.5%	10.5%	13.9%	15.9%	9.1%
Robbery	48.1%	50.7%	41.9%	43.7%	37.9%
Homicide and other crimes involving killing	6.7%	7.1%	5.4%	5.3%	9.1%
Use of drugs (1 = drug user)	60.4%	53.6%	73.8%	77.5%	92.4%
Ethnicity (1 = non-white)	64.1%	57.6%	79.2%	80.1%	81.8%
Gender (1 = males)	93.3%	91.6%	96.4%	99.3%	100.0%
Family relations					
Lives with both mother and father	22.4%	27.2%	12.1%	11.3%	4.6%
Lives only with mother	34.2%	38.1%	26.2%	22.5%	21.2%
Lives only with father	5.5%	6.2%	3.7%	2.0%	6.1%
Does not live with their parents	28.6%	17.5%	51.4%	58.9%	66.7%
No information	9.4%	10.9%	6.4%	5.3%	1.5%
Defendant's occupation (1 = full-time student)	16.6%	20.0%	10.0%	7.3%	3.0%
Total number of observations	2054	1448	389	151	66

Source: Pastas e prontuários do 'Complexo do Tatuapé' (1990-2006), Núcleo de Estudos da Violência da Universidade de São Paulo (NEV-USP).

*The group 'minorisms' refer to some misdemeanors and other non-offensive behaviors that would prompt confinement under previous legislation (the Minors Codes) but should not be registered as an offense under the new legislation. Such conduct involves rough sleeping, walking around, and disturbing the peace, among other things.

A brief description of the data can be found in Table 01⁴. One can see that 59.8% of all 2,054 decisions did not involve permanent confinement - 65% of the decisions involved defendants who had never been arraigned before. Even when only fourth entries are considered (i.e., the third time the defendants have re-offended), 51% of the decisions did not end up being sentenced to confinement. About half the decisions involved cases of robbery (48.1%), 11% involved drug-related offenses (which is not limited to drug trafficking), and just a small proportion - 6.7% - involved homicides and other crimes involving killing. Of the dependents, 35.9% were white and only 16.6% were full-time students.

The second stage of the research, after the determinants of the judicial decisions

structure of the data would consist of an unbalanced panel with up to 11 observations per group (i.e., decisions per file/adolescent). However, most adolescents do not re-offend so often. In fact, fewer than 1% of all sampled files included five or more decisions. For this reason, the multilevel structure includes up to only 04 repeated measures, which means that 85 observations were excluded from our sample, resulting in a final sample of 2054 decisions. Of the adolescents in the sample, 73.2% never re-offended, 16.2% re-offended once, 5.9% re-offended twice, and 2.3% re-offended three times.

⁴All replication materials, including data and code, are available upon request.

were estimated, consisted of a qualitative phase that aimed to explain ‘how’ the decision-making process of the juvenile justice system in São Paulo worked. The results from the quantitative analysis were taken as the initial premises. For instance, had the model indicated a socially and racially biased system, fieldwork would have explored how these attributes influenced judges and prosecutors in the decision-making process.

Accordingly, the ideal way to investigate the mechanisms behind the quantitative results was direct observation in the courthouse. Watching informal hearings with prosecutors and hearings with judges allowed us to collect interesting data. There are four judges in the juvenile justice system⁵ and nine prosecutors, as well as many public defenders, all of which make up the São Paulo juvenile courthouse.

For four months, from April to August 2014, I visited this courthouse weekly. Two of the four judges authorized our continuous presence in their sessions, as did five of the nine prosecutors (for details about access to the courthouse, see OLIVEIRA, 2017b). Throughout these four months, I managed to alternate between observing the prosecutors’ and the judges’ hearings.

Results: the ‘what’ - determinants of judicial decisions

Our analytical strategy involves operationalizing the outcome variable, the judicial decision, as a dichotomous variable – confinement or any other disposition. Of the 2,054 decisions sampled, 40.2% resulted in confinement and the other 59.8% resulted in other sentences. Using this dichotomous indicator as the outcome variable, I use mixed-effects binomial logistic regression models to test whether socially relevant variables are associated with greater odds of harsher punishment, even after controlling for legally relevant variables. Such extralegal attributes include the defendant’s ethnicity, gender, and relations with their family, which are all time-invariant, and whether a defendant was classified as a drug user or enrolled as a full-time student at the time they were arrested. Legally relevant variables include the adolescents’ criminal record (or re-entry in the juvenile justice system for that specific judicial decision) and their arraigned offense.

In order to assess the predictive power of extralegal attributes, I first estimate a model with all the variables mentioned above. Naturally, one would expect serious offenses such as ‘homicide and other crimes involving killing’ and ‘robbery’, as well as the defendant’s previous criminal record, to be associated with harsher punishments and positively associated with confinement. In other words, these variables should have coefficients that are statistically different from zero and odds ratios that are substantively high, which would indicate an increase in the likelihood of confinement as a proportionate response. Furthermore, one would expect less serious offenses such as theft and drug-related or other offenses to have a weaker association, or even none at all, with the judicial deci-

⁵There are also execution judges, who are in charge of deciding when the adolescents’ disposition may be terminated. There are, however, only four judges who can decide on this disposition in the city.

sion. Crucially for our analysis, no socially relevant variables should have an effect on the decision; whether a defendant is white, a drug-user, male, or a full-time student should not be associated with shifts in the probability of a harsher punishment. Any substantively high coefficient would indicate that extralegal attributes do influence the decision-making process within the São Paulo juvenile justice system.

Apart from the more obvious individual-level attributes, the use of drugs is an important extralegal attribute that speaks to power and morality. While one could argue that the use of drugs is indicative of a vulnerable situation, thereby justifying confinement by legal reasoning, this line of thought is precisely that used by the 'Irregular Situation Doctrine', the legal principle that guided the Brazilian juvenile justice system until 1990 and justified the confinement of vulnerable 'minors'. With the promulgation of the Children and Adolescent Statute, this doctrine was repealed and replaced by the 'Full Protection Doctrine'. Confinement was thereby established as the official response to serious offenses. A key separation was made between institutions that were in charge of handling youth offenders (who were subject to 'socio-pedagogical dispositions' such as confinement) and vulnerable children and adolescents (who were subject to 'protective dispositions', which includes being sent to, but not being imprisoned in, shelters). Any influence of drug use on decision-making could indicate that vulnerability still plays a role in the sentencing process.

This model obviously does not claim causality, as it would have to assume selection on observables, which is a very strong assumption. It does, however, bring correlations at the population level (due to representativeness) and provide an interesting multivariate picture of multiple influences on the decision-making process. Results can be found in Table 02.

As expected, every repeat offense is associated with an increase of 2.66 times in the odds of receiving the confinement disposition controlling for all other covariates. Compared to drug-related offenses, a robbery arraignment increases the odds of getting a harsher punishment by 2.75 times, whereas a homicide arraignment increases these odds by 6.89 times. Theft and other offenses do not change the probability of being confined. Overall, this demonstrates how the juvenile justice system operates on a similar logic to the criminal justice system: the more serious the offense, the harsher the punishment.

Table 2: Impact of legal and extralegal attributes on confinement

	Coefficient (s.e.)	p-value	Odds ratio
Fixed effects			
(Intercept)	-3.41 (0.50)	< 0.001	0.03
(Criminal record (re-entries))	0.98 (0.14)	< 0.001	2.66
Offense (reference: drug-related offenses)			
Theft and other property crimes	-0.32 (0.28)	0.255	0.73
Other offenses	-0.40 (0.30)	0.174	0.67
Robbery	1.01 (0.24)	< 0.001	2.75
Homicide and other crimes involving killing	1.93 (0.36)	< 0.001	6.89
Use of drugs (1 = drug user)	0.79 (0.16)	< 0.001	2.19
Ethnicity (1 = non-white)	-0.10 (0.14)	0.501	0.91
Gender (1 = male)	1.06 (0.32)	< 0.001	2.90
Occupation (1 = full-time student)	-0.49 (0.18)	0.007	0.62
Family relations (ref: lives with both parents)			
Lives only with mother	0.13 (0.17)	0.448	1.14
Lives only with father	0.21 (0.31)	0.503	1.23
Does not live with parents	-0.26 (0.22)	0.220	0.77
No family information	-1.60 (0.33)	< 0.001	0.20
Random effects			
Group-level variance (Intercept)		1.62	
Number of observations (entries)		1716	
Number of groups (adolescents)		1390	

Source: Pastas e prontuários do 'Complexo do Tatuapé' (1990-2006), Núcleo de Estudos da Violência da Universidade de São Paulo (NEV-USP).

Note: Mixed-effects logistic regression model predicting the confinement disposition. Number of entries per adolescent: min. = 01; avg. = 1.4; max. = 04. The offense group 'Minorisms' predicts failure perfectly, therefore all 86 observations were dropped.

As expected, every repeat offense is associated with an increase of 2.66 times in the odds of receiving the confinement disposition controlling for all other covariates. Compared to drug-related offenses, a robbery arraignment increases the odds of getting a

harsher punishment by 2.75 times, whereas a homicide arraignment increases these odds by 6.89 times. Theft and other offenses do not change the probability of being confined. Overall, this demonstrates how the juvenile justice system operates on a similar logic to the criminal justice system: the more serious the offense, the harsher the punishment.

However, Table 02 shows that extralegal attributes also appear to play a role in the decision-making process. Socially relevant variables are associated with shifts in the probability of confinement. Defendants who were identified as drug users by police officers, regardless of their criminal record or the seriousness of their offense, are 2.19 times more likely to be confined than adolescents who were not. Likewise, defendants who were registered as full-time students when they were caught by the police, as compared to others, had their odds of getting the harshest punishment decreased by 38%. A similar pattern emerges in regard to gender: males are 2.9 times more likely than females to be confined. These results relate to the argument that social factors do, in fact, play a role in the sentencing process of the juvenile justice system.

In order to have a clearer picture of how extralegal attributes might affect the proportionality between the seriousness of the offense and the harshness of the punishment, I estimated two other models with the same modeling strategy (i.e., a mixed-effects binomial logistic regression). Both models included interaction terms: one between the type of offense and whether the defendant was a full-time student, and another between the type of offense and whether the defendant was perceived to be a drug user⁶.

The reason for estimating these interaction effects was to determine whether the effect of the seriousness of the offense depends on the defendant's membership in socially relevant groups. In other words, the idea was to analyze whether the effect of specific offenses – say, theft and other property crimes – differs by extralegal groups.

I start with occupation. Is the association between theft and confinement the same for full-time students and other adolescents? What about drug-related offenses, robbery, or homicide? Because of the way that interaction effects are calculated, I estimated the same model in five different ways, changing the reference group for the interaction each time; in other words, I estimated one model for each type of offense. The estimation is conducted in the same way, but changing the reference group allows us to make direct comparisons. When the reference group consists of adolescents who are not full-time students and were accused of theft, I was particularly interested in the comparison to the group of full-time students who were accused of theft, and not as interested in the comparison between the reference group and other possible combinations of offenses and occupations. The same goes for when the reference group was full-time students accused of drug-related offenses, other offenses, robbery, or homicide. Our results can be found in Table 03.

⁶In fact, three other models were estimated. An analysis assessing the interaction between the type of offense and the ethnicity of the defendant was also carried out. Because there was no interaction effect and the results were similar to the ones displayed by Table 02, this model is not displayed here.

Table 3: Impact of the seriousness of the offense on confinement among full-time and non-full-time students

	Coefficient (s.e.)	p-value	Odds ratio
Fixed effects			
Interaction term: Offense x Occupation (reference: drug-related offenses / not full-time student)			
Occupation (1 = full-time student)	-1.58 (0.52)	0.002	0.21
Interaction term: Offense x Occupation (reference: theft and others / not full-time student)			
Occupation (1 = full-time student)	-0.55 (0.51)	0.286	0.58
Interaction term: Offense x Occupation (reference: other offenses / not full-time student)			
Occupation (1 = full-time student)	-0.13 (0.54)	0.806	0.88
Interaction term: Offense x Occupation (reference: robbery / not full-time student)			
Occupation (1 = full-time student)	-0.37 (0.22)	0.093	0.69
Interaction term: Offense x Occupation (reference: homicide and others / not full-time student)			
Occupation (1 = full-time student)	1.71 (1.46)	0.242	5.53
Random effects			
Group-level variance (Intercept)		1.61	
Number of observations (entries)		1716	
Number of groups (adolescents)		1390	

Source: Pastas e prontuários do 'Complexo do Tatuapé' (1990-2006), Núcleo de Estudos da Violência da Universidade de São Paulo (NEV-USP).

Note: Mixed-effects logistic regression model predicting the confinement disposition with interaction terms. Truncated table, only displaying coefficients of interest for visual ease. See full table in the Appendix.

Table 03 is a truncated table displaying only the coefficients of interest: those for 'occupation (1 = full-time student)', which represents the difference between adolescents in the reference group (those who are not full-time students and were accused of committing any type of offense) and full-time students who were accused of that same offense. All five full models can be found in the Appendix. Table 03 shows that, for defendants who were registered full-time students when they were caught by the police and accused of property crimes, the odds of being sentenced to confinement is 79% lower than it is for defendants with the same arraignment who were not full-time students. The statistically significant coefficient of -1.58 provides very strong evidence that socially relevant attributes affect the proportionality dynamics of the juvenile justice system.

No other coefficient in Table 03 is statistically significant. This means that there are no differences in the probability of being sentenced to confinement between adolescents accused of the same offense who belong to different social occupational groups. The interaction models did provide a few other significant results in comparisons with the reference groups, but none of them are of substantive interest.

Now we turn to the interaction effects between offenses and drug use. Our analytical strategy was the same as before, and our results can be found in Table 04. Testing this interaction is important because the classification of an adolescent as a drug user is an important extralegal attribute that relates to power and moral relations. It could indicate that the obsolete legal principle that did not differentiate between offenders and vulnerable adolescents still influences the decision-making process.

Table 4: Impact of seriousness of the offense on confinement among drug users and non-drug users

	Coefficient (s.e.)	p-value	Odds ratio
Fixed effects			
Interaction term: Offense x Use of drugs (reference: drug-related offenses / not a drug user)			
Use of drugs (1 = drug user)	0.48 (0.44)	0.268	1.62
Interaction term: Offense x Use of drugs (reference: theft and others / not a drug user)			
Use of drugs (1 = drug user)	1.02 (0.42)	0.015	2.77
Interaction term: Offense x Use of drugs (reference: other offenses / not a drug user)			
Use of drugs (1 = drug user)	0.93 (0.44)	0.035	2.55
Interaction term: Offense x Use of drugs (reference: robbery / not a drug user)			
Use of drugs (1 = drug user)	0.82 (0.20)	<0.001	2.28
Interaction term: Offense x Use of drugs (reference: homicide and others / not a drug user)			
Use of drugs (1 = drug user)	0.38 (0.51)	0.454	1.46
Random effects			
Group-level variance (Intercept)		1.64	
Number of observations (entries)		1716	
Number of groups (adolescents)		1390	

Source: Pastas e prontuários do 'Complexo do Tatuapé' (1990-2006), Núcleo de Estudos da Violência da Universidade de São Paulo (NEV-USP).

Note: Mixed-effects logistic regression model predicting the confinement disposition with interaction terms. Truncated table, only displaying coefficients of interest for visual ease. See full table in the Appendix.

Table 04 shows that, for defendants who were said to be drug users that were accused of property-related crimes, the odds of being sentenced to confinement was 2.77 times higher than for adolescents facing the same arraignment who were not classified as drug users. Likewise, drug users accused of other offenses or robbery had their odds increased by 2.55 and 2.28, respectively, compared to defendants facing the same arraignment but with no such classification. No differences were found for the direct comparisons of adolescents accused of drug-related offenses or homicide.

These results show the influence of extralegal attributes on the likelihood of being sentenced to confinement. While the seriousness of the offense and the existence of a criminal record are strong predictors, as expected, variables such as occupation, gender, and the use of drugs are also associated with shifts in the odds of harsher judicial decisions. Not only do some variables consistently predict judicial outcomes, but they interact with the type of offense and directly affect the foundations of the proportionality hypothesis.

It is therefore possible to conclude that there are structural influences on the decision-making processes of judges and prosecutors who work in the juvenile justice system. Power relations and moral judgements are taken into consideration and change the odds of a given adolescent receiving confinement. It is not clear what the mechanism of this association is, though. With the results presented so far, it is not possible to know 'how' the judicial decisions are conditioned by those factors. How, then, are the judicial decisions, in fact, made?

Results: the 'how' - mechanisms of judicial decisions

Once the determinants of confinement were estimated, the second stage of the study sought to explain the mechanisms through which the decisions are made. The goal of this stage was to explain how the relationship between the estimated coefficients operated. I started my observation 'assuming' that the seriousness of the offense and the existence of a previous criminal record were the best predictors of judicial decisions on confinement, but that several extralegal attributes, such as gender, occupation, and drug use would also impact the final decision.

Over four months in 2014, I was able to visit the São Paulo juvenile courthouse every week. As previously mentioned, during the 18 visits I paid to the courthouse, I was able to observe hearings with two of the four judges and five of the nine prosecutors, interviewing young defendants and making decisions about their sentences.

Assuming that judicial decisions followed a pattern of proportionality between the seriousness of the offense and the sentence, but still considered the individual characteristics of the defendants, I aimed to explain an action mechanism behind the duality of the two main hypotheses of the sentencing debate.

Activities in the São Paulo courthouse follow a very specific pattern. They start in the afternoon, precisely at 2 p.m., with continuity hearings: scheduled hearings with de-

defendants who were confined to a Provisional Unit for up to 45 days. They were the longest hearings of the day, lasting about 10 to 15 minutes each, and every judge would have about four or five of them a day. These hearings would also involve the presence of witnesses: in every single hearing I observed, the police officer in charge of the arrest was heard, and the victim occasionally testified as well. At about 4 p.m., after the end of the continuity hearings, hearings informally called ‘grades’ by the courthouse staff would start. These ‘grades’ were presentation hearings: cases of adolescents arrested by police officers on the previous day that would decide whether the defendant would be held in custody while waiting for trial (for about 45 days) based on the information provided by the prosecutor. These adolescents had just been through informal hearings with a prosecutor, who had already made a formal recommendation to the judge. Presentation hearings are relatively fast, lasting about five minutes and involving only a couple of questions from the judge; as such, they would all be over by 5 p.m. Though the number of cases varies each day, the mode of ‘grade’ cases during our four months of research was five a day. More thorough descriptions of the daily routines in this courthouse can be found in Miraglia (2005) and Oliveira (2017b).

Daily activities would also start at 2 p.m. on the ground floor of the courthouse, where all the prosecutors’ offices could be found. While four prosecutors would go upstairs to participate in the continuity and presentation hearings, the other five would stay in their offices holding informal hearings with adolescents coming from the Initial Unit (in other words, adolescents who had been arrested the previous day). These were, in fact, the ‘grade’ cases: defendants who would have their informal hearings with the prosecutor in the early afternoon and their presentation hearings with a judge after 4 p.m.

One of our first impressions from the direct observations is that judges usually follow the prosecutor’s recommendation. Though this could not be quantitatively tested, our perception was confirmed by informal conversations with other members of the courthouse staff (such as the court registrar) and even by the line of questioning conducted by the judge, who would always take the prosecutor’s word for granted. Considering our goal of explaining the mechanisms of the previously estimated effects (i.e., how extralegal attributes affect the proportionality dynamics of decision-making), I then focused all my attention on the informal hearings in the prosecutors’ offices.

Direct observations indicated that the prosecutor played a central role in the decision-making process. The prosecutor is in charge of deciding whether the adolescent will go home or will in fact become a defendant. The mechanisms behind the judicial decisions in the São Paulo juvenile justice system are therefore related essentially to the decisions made by the prosecutors.

The informal hearings involved a variety of questions asked by prosecutor and answered by the adolescents. In the case that the prosecutor decided to not recommend any type of detainment, the adolescent would go home and not even see the judge; this

would usually be followed by some oral reprimand including moral content. Alternatively, should the attorney indeed recommend detainment, the hearings would end quickly with “you’ll see the judge now”. This pattern occurred in every single hearing I observed during all of our 18 visits to the courthouse.

One of the most surprising pieces of information was the fact that the majority of the decisions were made a priori. In fact, the document with the prosecutor’s decision would usually be typed and printed before the beginning of the hearing. This was rapidly mentioned to us on the first day of our observations by a prosecutor who would tell us the outcome of each hearing beforehand. Later on, a court registrar showed us how they themselves would analyze the documents (produced by police officers) of every adolescent in the ‘grade’ and write the prosecutorial recommendation before the prosecutor even read the process.

Because all documents about the defendants are usually prepared before the hearings, it is safe to assume that most of the decisions are made a priori and do not take the hearings into account. This means there was a ‘tacit’ knowledge, shared not only by attorneys, concerning the decision that should be made in every case. This also means that the hearings themselves had no actual impact on the decision-making process despite their supposed importance.

One possible conclusion is that the juvenile justice is a loosely coupled system (HAGAN et al., 1979; MEYER and ROWAN, 1977; VARGAS and RODRIGUES, 2011). The ideals of individual-based and participative justice are particularly strong when the defendants are adolescents, and the hearings at the prosecutor’s office sustain this myth because they are the moments when adolescents are supposed to informally engage in the process. The hearings, however, do not promote this idealized participation of every defendant in the decision-making process because the documents are already prepared before the conversation even begins. Decisions are actually made on official documents prepared by the police - on paper - and are not based on these conversations between the attorneys and defendants. This provides us with sufficient data to explain the crime-punishment proportionality mechanism uncovered by the quantitative analysis.

This interpretation of hearings as the ceremonies of a loosely coupled system partially explains the mechanisms of judicial decisions. If the decisions are based on official documents, prosecutors and judges actually analyze the characteristics related to the offense. A principle of proportionality would indeed be expected if all decisions were based on police documents. The first social mechanism⁷ explains how the estimates of ‘homicide’, ‘robbery’, and previous criminal records were substantively and statistically significant across all regression models.

⁷It is important to note that every mechanism is explained in terms of ideal types, which means that it is possible to imagine a set of residual empirical examples that would contradict them. Ideal types, however, rarely exist in the empirical world; they are abstract constructions that help with analysis.

The idea of ceremonial hearings does not, however, explain the most important aspects of the quantitative results. I found evidence that males who are not full-time students and are drug users are more frequently sentenced to confinement. Furthermore, I found evidence that being part of these social groups even affects the notion of proportionality between crime and punishment.

In order to explain the mechanisms of these results, the observations in the courtroom focused on misunderstood gestures, inopportune intrusions and 'faux pas', which indicated ruptures in the definition of the situation (GOFFMAN, 1990, p. 206). This is crucial to making explicit everything that was implicit during an interaction. Ruptures in the definition of the situation could give us a hint as to how decisions concerning social characteristics were made.

The situation during the informal hearings was clearly defined by the prosecutor. There were often, however, situations that did not conform to the prosecutor's expectations, resulting in a rupture of the definition of the situation. When this happened, the standard mechanism would be suspended, resulting in not only a new definition of the situation, but also the creation of a new mechanism.

Ruptures in the definition of the situation during the informal hearings were identified when middle - and upper - class adolescents came to the courtroom, with both of their parents showing their desperation, demonstrating that they were not used to the context of the courtroom. Other situations included family members fainting and falling to the floor, or when a young, scared, and remorseful teenager showed regret for their offense. Every day, an average of one of the five 'grade' adolescents would fall into this situational category, with the prosecutor clearly trying to adapt his behavior once their default mode had been disengaged. Every time that happened, the prosecutor would actually reconsider their decision and suggest a more lenient sentence.

In short, I discovered that we had been mistaken about our substantive hypothesis: adolescents of certain social characteristics - female, full-time students, non-drug users - are 'punished less', not the other way around. Even though the outcomes found by the quantitative analysis would have been the same in both scenarios, the mechanism is the opposite. The normal situation has judicial decisions that are based exclusively on an ideal of proportionality between offense and disposition, but when there is a rupture in the definition of the situation, proportionality is suspended and an individual-based, more lenient, judgement is made. Biases about social class and morality are present in the sense that those with a weak position in regards to power relations receive impersonal justice, while those with a strong position receive individual-based justice. While the proportionality between crime and punishment generally defines crime in a legal sense, it sometimes is analyzed in a behavioral context.

Discussion and conclusions

After an intense debate on the influence of socially relevant attributes on criminal sentencing, it still was not clear to what extent societal power relations were reflected in judicial outcomes. Methodology-wise, no consensus had been reached; arguments had been made and empirical evidence shown for both the effect of extralegal characteristics and the lack thereof. At one point, both of these conflicting hypotheses had been empirically verified.

In the context of the juvenile justice system in São Paulo, Brazil, I demonstrated that socially relevant attributes, such as the adolescent's occupation and drug use, do appear to affect the sentencing process. Defendants positioned on the weaker side of power relations received harsher sentences when compared to those in stronger positions. In particular, I provided empirical evidence as to how being a part of such social groups could change the dynamics of the decision-making process, as the same arraignment directed at different groups was associated with different levels of harshness.

Overall, I showed how useful the adoption of a mixed-methods approach can be. By integrating quantitative and qualitative methods, I was able to effectively investigate the mechanisms through which sentencing decisions were made. This methodological strategy allowed us to explain 'how' judicial decisions were made, and in particular, how socially relevant attributes could affect the decision-making process.

I described how judicial decisions are usually made by consulting official documents, from which an impersonal idea of proportionality emerges: the more serious the offense or the more extensive the defendant's criminal record, the more severe the punishment, with confinement being the harshest available. This expected dynamic explains the significant coefficients of the legal variables. At some points, however, there are ruptures in the definition of the situation, which usually emerge when a non-minority defendant is involved. These ruptures often lead judicial officers to reverse their decisions and make new, more lenient judicial decisions. Biases about social class and morality are important in that defendants with a weak position in regards to power relations receive impersonal justice, while those with a strong position receive individual-based justice.

This explains the mechanisms of the results found in the quantitative analysis: the seriousness of the offense and the extensiveness of criminal records are naturally good predictors of sentences, but socially relevant attributes can challenge this relationship. The social mechanisms of judicial decisions therefore involve an impersonal and criminal justice for the majority of the adolescents, with hearings being mere formalities and decisions made based on the principle of proportionality. Yet they also involve an individual-based, less punitive justice for cases that surprise the prosecutors, and this is commonly the case for non-minority defendants. Uncovering the possible social mechanisms behind judicial decisions was therefore only possible because of the mixed-methods nature of the research design.

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