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**SCALING THE PERCEPTION OF CRIME SEVERITY USING  
THURSTONE'S METHOD OF PAIRED COMPARISONS**

A thesis presented in partial fulfilment  
of the requirements for the degree  
of Master of Arts in Psychology  
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## ABSTRACT

The present research assessed Thurstone's (1927*a,b*) method of paired comparisons as a technique for scaling crimes according to their seriousness as perceived by a New Zealand population. In the first of two experiments, 10 crimes, ranging from murder to possession and use of cannabis, were judged for their seriousness by 78 male and female subjects made up of University students and New Zealand Army personnel. Subjects were given a questionnaire in which each of 10 single-word crime descriptors was paired with every other crime. For each of the possible 45 crime pairs, subjects selected the most serious in the pair. Due to numerous boundary probabilities, Edwards (1957) Case V Incomplete Data Scaling Method was employed to construct crime seriousness scales. The method of paired comparisons produced similar results in the ranking of crime seriousness to a previous New Zealand study (Davis, 1992) that employed magnitude estimation scaling. A high level of relative consensus was found between different community groups based upon occupation and sex. This relative consensus extended to crime severity evaluations obtained from the sample employed and the New Zealand Judiciary and Legislature. A second study was carried out to examine whether the degree of relative consensus could be manipulated by varying the seriousness of the crimes. Subjects (24 males and 27 females) were given a forced-choice, computer-generated questionnaire that presented high and low serious versions of each of the 10 crimes employed in Experiment 1 in a one or two sentence description. Crime seriousness was manipulated by varying the quantity of economic or physical harm inflicted upon the victim. In general, the results showed that the degree of crime seriousness altered the position of any given crime on the scale in a very systematic way. Nonetheless, the relative consensus found was much the same as for the first experiment, suggesting that subjects do not envision a specific crime scenario when evaluating a crime's seriousness.

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# INTRODUCTION

## OVERVIEW

The perception of crime severity lies at the heart of the criminal justice system. Seriousness of a crime in the eyes of the law is expressed by the amount of punishment prescribed in penal codes. As Forgas (1980) asserted, a nation's criminal code is ultimately a composite expression of the seriousness of a set of behaviours (crimes) as perceived by members of that society. Historically, specific members of society that have been involved in the perception of crime severity have been employees of criminal justice: legislators, judges, the police and juries.

However, as Mulvilhill and Tumin (1969, cited in Forgas, 1980) state, the legal code should be an expression of how crimes are perceived by the population at large. There is growing awareness that if public opinions of crime severity are not taken into consideration in legal perceptions of crime severity, the interests of the public and victims, who pay for and suffer these crimes, may be overlooked (Waller, 1982). For this reason the U.S Supreme Court mandated that the socially perceived severity of a crime be considered in assessing the degree of offence severity for penal statutes.

Thus, there is a need for courts and legislators to have a system of reference against which to evaluate the proportion of the sanction relative to the social perceptions of crime seriousness. Such a system of reference can be provided by crime severity scales. Potential applications for seriousness ratings obtained by such scales have been cited as equating legal proscriptions consistent with public opinion (Kadish, 1963, cited in Miethe, 1982) and for creating criminal policy (Levi & Jones, 1985).

Very little has been done in the way of scaling crime seriousness in New Zealand; only two such studies exist to date. Spier, Luketina and Kettles (1991*a*) developed a crime seriousness scale based on court sentencing data. Although a useful research tool for measuring trends over time in offending, and in the seriousness of offences for which sentences are imposed, it is not a crime seriousness scale based upon public perception.

This led Davis (1992) to scale public perceptions of crime seriousness using magnitude estimation. Results indicated that public perceptions of crime severity could be obtained from a New Zealand sample using this scaling method. It was also found that a high degree of congruence existed between the public and the judiciary, with less congruence between the public and legislature, and public and the police. Societal consensus was also found between different subgroups when his sample was examined by age, sex, occupation and whether or not subjects had been a victim of crime within the last 12 months. However, certain disadvantages exist in scaling crime seriousness using the technique of magnitude estimation one being that subjects find the idea of conceptualising the seriousness of a given crime to that of a standard crime difficult (Walker, 1978).

The present study used the method of paired comparisons to scale the seriousness of various crimes. The paired comparison technique may have some advantages over the magnitude estimation technique. Moreover, the paired comparison technique has never been applied to scale crime seriousness in New Zealand.

### THE CONCEPTUAL BASIS FOR CRIME SERIOUSNESS RESEARCH

Criminal law is a list of specific forms of human conduct, or crimes, which have been prohibited by political authority (Haskell & Yablonsky, 1974). In order for the prohibition to be effective, the criminal must be punished. There must also be a high level of consensus within society regarding the perception of the relationship between the crime committed and the sanction allocated. The conceptual basis for arriving at a

hierarchy of criminal offences according to public evaluations of crime seriousness is linked to the just allocation of punishment and to the investigation of societal consensus regarding such punishment.

### The Just Allocation of Punishment

Sanctions can take on various forms depending upon their purpose. Sanctions can rehabilitate or act as a punishment that deters crime and/or seeks retribution from the offender (McFatter, 1982). For the purposes of punishment, the severity of a crime is central to the fair allocation of punishment to individuals who transgress the law.

As a matter of justice the severity of the punishment should be proportional to the severity of the crime (Hart, 1958). In order for this proportional fit to be achieved, two ranking processes need to be underway simultaneously, one for the offence the other for punishment (Fox & Freiberg, 1990). This concept of proportionality has been of fundamental importance to adherents of both deterrence and retributive (or Just Deserts) sentencing theory.

Although deterrence and retribution are not the only bases for sentencing theory, they are the only models to be guided by the principle of proportionality, where the severity of the punishment allocated should be commensurate with the seriousness of the crime. For example, punishment can be allocated for rehabilitative purposes. Rehabilitative sentencing theory is a treatment-orientated sentencing approach that seeks to "cure" the offender of their criminal behaviour. It is usually applied to certain categories of offenders, such as the young and repeat offenders (Von Hirsch, 1983a). As such, rehabilitative sentencing theory is inconsistent with the principle of proportionality. It is based upon the offender (Hamilton & Rytina, 1980) and the perceived consequences of punishment (Warr, Mier & Erikson, 1983) rather than upon the perceived seriousness of the crime.

Deterrent sentencing theory is based upon ideas of crime prevention. The proportional fit between the severity of a crime and the punishment allocated for that crime should be just great enough to deter potential criminals from being attracted by the rewards of any given crime (Beccaria, 1794/1963). However, the deterrence rationale is not based solely upon the seriousness of the crime as the frequency of the crime is also an important component (Warr et al., 1983). As such, the idea of proportionate punishment can be given firmer grounding in retributive sentencing theory than in deterrence, because crime seriousness is the central criterion for retributive sentencing theory (Von Hirsch, 1983a).

The seriousness of a crime can be broken down into two components: the extent of harm done and the extent of the criminal's blameworthiness, or culpability. Retributive sentencing theory is based upon these two components. Punishment should be distributed among convicted offenders in a manner consistent with the amount of implicit blame and harm done (Hart, 1958; Von Hirsch, 1983a,b). Retributive sentencing theory is an important concept as it forms the underlying ideological basis for the crime seriousness paradigm (Cullen, Link, Travis & Wozniak, 1985).

The crime seriousness paradigm is considered retributive as it focuses solely on the seriousness of offences in terms of harm done and the blameworthiness of the offender. This retributive philosophy is deeply entrenched and even influences research on criminal behaviour. As Cullen et al. (1985) state, research involving the ranking of crimes according to their severity is based on a sentencing system guided by retributive principles. (The more serious the offence the more serious the punishment.)

An important question arises as to the accuracy of this paradigm. Do the public think the punishment should fit the crime, and, if so, do members of the public prefer a retributive sentencing philosophy that fits the punishment to the crime ?

Studies in the area of crime seriousness have supported the concept of proportionality. Public evaluations of crime and punishment have indicated that the punishment should fit the crime (e.g., Blumstein & Cohen, 1980; Geshcheider, Catlin & Fontana, 1982; Hamilton & Rytina, 1980; Warr, Gibbs & Erikson, 1982). Further research (Warr et al., 1983) suggests that it is also safe for crime seriousness research to prescribe to a retributive paradigm, as the paradigm is reflected in public theories of sentencing. The concordance that is emerging from the research literature is that the general public do in fact favour retributive sentencing. It seems that the average lay person is less concerned with utilitarian aims of sentencing (i.e., deterrence and rehabilitation) than with the principle of desert.

For example, Warr et al. (1983) found that respondents used the perceived seriousness of the offence as the central criterion for fixing punishment, as suggested by the retributive theory of criminal punishment. The perceived frequency of an offence, as suggested by utilitarian theories, was not used as a criterion. In addition to this finding, Parton, Hansel and Stratton (1991) showed that the perceived seriousness of a crime is evaluated in retributive terms, that is, by the injury and loss sustained by the victim

Adherence to retributive sentencing theory has been shown to hold even when members of the public are presented with other sentencing theories. For example, McFatter (1982) examined the perceived usefulness of four different punishments (incapacitation, deterrence, rehabilitation and retribution) for different types of crime (car theft, assault, rape and murder). Both punishments and crimes were given to university students and six practising court judges. Importance weights derived from the data indicated that retribution was the most important factor for all crimes among the judges and for all crimes except murder among the students. It seems that the perceived appropriateness of penalties depends primarily on their usefulness in giving offenders what they deserve, rather than on their incapacitative, rehabilitative or deterrence properties.

In summary, public opinion supports the concept of proportionality: the punishment should fit the crime. Furthermore, it has been demonstrated that this matching of crime and punishment is undertaken using the common principle of retribution. This is an important finding as data on public evaluations of crime seriousness are only meaningful if people use the principle that underlies the crime seriousness paradigm.

Although it appears that most people agree that the punishment should fit the crime, it does not necessarily follow that it does. Ideally, public perceptions of crime severity should be in consensus with the legal perceptions of crime severity as expressed in statutory and/or actual punishment. If the legal gradation of crimes is not too far out of line with public opinion, the sanctioning of these crimes will be effective. Legal prescriptions of crime severity receiving a high degree of public support are more likely to result in formal action against violators than are laws lacking in widespread support (Haskell & Yablonsky, 1974). The law in this sense is effective; legal authority is strengthened and violators of such crimes are punished. However, the outcome of a legal prescription of crime severity receiving low public support may result in sanctions for crime becoming ineffective. For instance, the reduction in criminal conduct regarding the crime in question will not take place. A legal prescription that is out of line with public perception may also be counter-productive, meaning that as well as a lack of reduction in criminal offending, society's belief in, and obedience to, legal authority will diminish. A substantial body of crime seriousness research has been directed towards ascertaining the degree of consensus between the legal gradation of crime seriousness and public perceptions of crime seriousness for these reasons.

Several studies have found discrepancies between public perceptions of crime seriousness and legal sanctions imposed upon criminal offenders. Rose and Prell (1955) found that students' seriousness ratings of 13 minor felonies were not correlated with the sentencing policies of the courts in California. Gibbons (1969) found support for these findings when he had respondents assign punishments to 20 different crimes, the punishments of

which ranged from execution to no penalty. Gibbons established that there were discrepancies between public sentiment and legal practices for victimless crimes such as possession of cannabis. The sanctions for these crimes were perceived as being disproportionately high in relation to the seriousness of these crimes. Vehicular manslaughter and child molestation offences were also found to be out of line with public sentiment; the public gave offenders harsher sentences than those meted out by the court. Gibbons also confirmed that when public sentiments and legal penalties did match they were with visible crimes, crimes against the person or those that involved coercive attacks upon property. Thus, crimes that citizens would have heavily punished were usually in line with actual court sentences.

Geshcheider et al. (1982), using magnitude estimation and crossmodality matching, found that although crime severity (as judged by respondents) and punishment (as prescribed by the New York penal code) were related, the relationship was not perfect. But, in general, they found that as the seriousness of the crime increased the prescribed sentence also increased.

When comparing the two studies by Geshcheider et al. (1982) and Gibbons (1969) contradictory findings present themselves. Gesheider et al.'s results obtained 13 years after Gibbons' suggested that the discrepancies between legal sanctions and public perceptions of crime severity involved crimes against the person, where punishment was seen as not severe enough by the public. Differences between the public and legal sanctions were also seen for crimes against property for which the public viewed the punishment as too harsh in relation to the severity of the crime, the reverse of which was found in Gibbons' study. Although caution must be taken in the comparison of the two studies (as different scales were used to judge crime seriousness), these results suggest temporal changes. For example, public opinion may have moved towards recommending harsher penalties for property and person orientated crimes while statutory opinion remained unchanged. Thus, the consensus between legal and public perceptions in the



gradation of crime seriousness that existed in Gibbons' study no longer existed in Gescheider et al.'s study. As Gescheider et al. noted, the punishment may not fit the crime because of the relatively slow response of the judicial system to rapid changes in public opinion on the seriousness of criminal offences.

Rose and Prell (1955) termed this slow response "cultural lag", or a clash between law and normative structure, where the law represents an older cultural evaluation and respondents of crime seriousness research represent a contemporary evaluation. The concept of "cultural lag" has been advanced as one reason why perfect public and statutory consensus may not be reached in crime seriousness research.

Another reason that may account for varying degrees of consensus between the two perceptions may lie in the limitations of crime seriousness research itself. Research seeks to fit the punishment to the crime, rather than to the criminal as the criminal justice system does (Gescheider et al., 1982). Courts deal with individuals and individual circumstances, aspects which are missing from crime seriousness research. The severity of a sentence as evaluated by the courts is a function of two factors: the crime and, to a lesser extent, the criminal history of the offender. It is therefore possible that empirical research may never find a perfect relationship between the public's perceptions of crime seriousness and punishment prescribed by the courts and legislators.

Strathern (cited in Willemin, Richardson & Moore, 1986) stated that the viability of a nation's criminal code is determined not only by the degree of consensus between the legal gradation of crime seriousness and public perceptions of crime seriousness, but also by the degree of consensus members of society reach about what are regarded as serious offences. Consequently, another important area within crime seriousness research concerns the degree of consensus that exists between members of the public.