

Mental illness in the courtroom: Does a psychiatric diagnosis affect perception of a defendant's speech dynamics on the witness stand?

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I declare that this thesis is my own work and that, to the best of my knowledge and belief, it does not contain material from published sources without proper acknowledgement, nor does it contain material which has been accepted for the award of any other higher degree or graduate diploma in any university.

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Stigma: a literature review

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Abstract

Stigma can be seen to be comprised of three distinctive steps: stereotypes, prejudice and discrimination. If negative stereotypes about a particular group of people are accepted by an individual this may lead to prejudicial views of that group which, if acted on, will result in discrimination. Although contemporary Western society endeavours to be seen as a place that is accepting of all people, research suggests that there is still widespread discrimination against minority groups. One area of particular concern is the stigmatisation and discrimination against people with mental health conditions. Studies have demonstrated that people with mental illness tend to be arrested and incarcerated more often for minor offences, and receive longer sentences than their mentally healthy counterparts. This suggests that some form of bias, or discrimination, against people with mental illness is probably occurring at some point in the criminal justice process. Understanding more about how a defendant is viewed by jurors and judges in court, and what factors are likely to influence the verdict for a mentally ill defendant would be beneficial in determining if stigma is present which will then inform strategies to reduce this bias.

Contemporary Western culture sees itself as one that is accepting of all people regardless of their race, religion, or sexual orientation. However, research suggests that discrimination against minority groups remains widespread. People from racial minorities are still discriminated against in court (Espinoza & Willis-Esqueda, 2008; Hodson, Hooper, Dovidio, & Gaertner, 2005), the overweight may be disadvantaged in employment selection (Finkelstein, Frautschy Demuth, & Sweeney, 2007) and be seen to have more symptoms, and a less optimistic prognosis in psychotherapy (Davis-Coelho, Waltz, & Davis-Coelho, 2000), and those who suffer from mental illness are said to be among the most stigmatised, discriminated against, marginalised and disadvantaged members of Western society (Johnstone, 2001). It would therefore seem that, despite the cultural self-portrayal of acceptance and inclusiveness, an underlying bias or prejudice against people who do not fit into the 'normal' mould remains.

This review will first consider what stigma is, and the impact that it can have on individuals. It will then discuss the stigma associated with mental illness, and explore ways in which it affects the lives of those who have a mental illness. This review will also examine the impact that bias or prejudice can have on people within the court system, and then investigate implications for people with mental illnesses within a courtroom setting. The review will also discuss the over-representation of people with mental illnesses within the criminal justice system and conclude by outlining the importance of research into the presence and effects of mental illness stigma in court.

What is stigma?

Public stigma has been described as a social cognitive process which comprises three distinctive steps: stereotypes, prejudice and discrimination (Watson, Ottati, & Corrigan, 2003). Stereotypes, which are defined as collectively held beliefs about the members of a social group (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003), provide an efficient way of categorising information about a social group. Simply being aware of the stereotypes associated with a particular group does not automatically mean that an individual will be prejudiced, and discriminate against that group. However, if negative stereotypes are accepted and believed by an individual then that can create prejudice against that group, which in turn can lead to discrimination. Discrimination is the behavioural manifestation of the emotions and beliefs generated by prejudice. This theory of stigma provides an explanation of the process that stigmatisation follows, and how it leads to discrimination, but it does not indicate why, or how the stigma actually originates.

Watson et al. (2003) outline possible theories for the origin of stigma against particular groups. These theories include the *normal cognitive reaction*, the *kernel of truth* and *system-justification theory*. Although there is some support for the former two theories, they also present significant limitations. Normal cognitive reaction, for example, asserts that societal reactions to individuals with mental illness are the natural response to psychiatric symptoms. However, there is empirical data suggesting that people with mental illness may experience discrimination regardless of their behaviour, simply due to the mental illness label (Socall & Holtgraves, 1992). Further, the lack of support for stereotypes commonly

attributed to people with mental illness (being dangerous and posing a threat of violence) (Link & Phelan, 1999) undermines the kernel of truth model. These theories may also actually promote stigmatisation. The present discussion will therefore focus on system-justification theory. System-justification theory asserts that stereotypes and prejudice develop to confirm, or make sense of, the systems within society. The theory maintains that stereotypes arise as explanations for the system-wide experience of in-group members. It is argued that the stereotypes do not provide a true representation of the characteristics of a particular group; they simply provide a justification for, or explanation of, the social system that the group is part of. For example, African Americans have been stereotyped as inferior and unintelligent. System-justification theory sees this stereotype as the result of the slavery system, where the black community was subservient to its white masters. It maintains that the societal justification of the slavery system was to view black people as inferior and less intelligent than their white masters, and that this view then became a stereotype for African American people; not a true representation of the characteristics of African Americans, but rather a way of interpreting why the slavery system was in place. The stereotype is therefore developed as an explanation of the social system that is, or has previously been at work.

System-justification theory can also be applied to the stereotype of people with mental illness as being dangerous. Watson et al. (2003) propose that this stereotype originates from the historical treatment of people with mental illness. During the Middle Ages, Europeans incarcerated people with psychiatric disorders in prisons to protect the public from what was alleged to be a dangerous group of

people. Again, since the 1960s, when the deinstitutionalisation from psychiatric hospitals began, more and more people with mental illness have been put into prison (Perez, Leifman, & Estrada, 2003). This further reinforces the idea that those with mental illnesses are a dangerous group, of whom the public should be afraid.

Watson et al. (2003) demonstrate that the idea of people with psychiatric disorders being dangerous or violent is not actually based on the characteristics of the group. They further explain that if we wish to avoid everyone with similar odds of acting violently, it would be necessary to stay away from teenagers, males and high school graduates.

The effects of stigma

Despite wanting to be seen as non-prejudiced, people can still act in discriminatory ways towards stigmatised groups of people. The findings of Sommers and Ellsworth (2001) provide some support for the idea that people can act discriminatorily despite their desire to be seen as non-prejudiced individuals.

Sommers and Ellsworth maintain that, while there have been major changes in what is considered socially accepted behaviour and attitudes towards African Americans in the US, prejudice remains. Their research has found that an underlying bias against African American defendants still exists, and will be expressed under certain conditions. Their study presented various court cases in which the defendant presented as either a European American or an African American, and in which the issue of race either was, or was not, made salient. As predicted, the researchers found that when the issue of race was made salient, the jurors' bias against

defendants said to be African American was not displayed, whereas when the issue of race was not mentioned, a clear bias could be seen. Sommers and Ellsworth argue that when there is an African American defendant, and race is made salient in the trial, the jurors' desire to fit the non-prejudiced, socially accepted profile is triggered. However, when race is not made salient in the case, this is not triggered, and thus the underlying bias against the African American defendant is expressed.

The idea that discrimination can be expressed implicitly, or unconsciously, as a result of the stigma associated with a particular group of individuals is further evidenced in a study by Teachman, Wilson and Komarovskaya (2006). Their findings suggested that even if an individual wishes to be tolerant of a person with a mental illness, this desire may be insufficient to prevent discrimination. They found that individuals unconsciously evaluated people with mental illness negatively, and their results suggested that bias against mental illness is evident on both an implicit and explicit level, across a variety of stereotype domains, and on the part of both mentally healthy and clinically diagnosed populations. Thus, the implicit biases show that even desiring to be tolerant or feeling conscious positive evaluations of people with mental illnesses may not be sufficient to avoid discriminating against the stigmatised group.

Socall and Holtgraves (1992) found that people were less willing to interact with a person considered to have a mental illness, as opposed to a person said to have a physical illness, when the behaviour of these individuals was identical. This suggests that the mere label of a mental health condition, regardless of how an individual behaves, can create bias or prejudice, resulting in discrimination.

Discrimination related to mental illness can take a variety of forms, including coercion, segregation, hostile behaviours, withholding help, or avoidance (Corrigan et al., 2003).

Communication Accommodation Theory (Giles, Mulac, Bradac, & Johnson, 1987) asserts that people use specific strategies to achieve their desired social distance from the person they are interacting with. If an individual wants to be seen to be similar to their interacting partner they may engage in convergence, making particular characteristics, such as their language, posture, gaze or speech rate, more similar to that of the person they are talking to. If on the other hand they want to distance themselves from the person they are interacting with, they may engage in behaviour that is contrary to that of their interacting partner (divergence). In light of Socall and Holtgraves findings it would be interesting to investigate whether people tend to engage in divergent strategies when interacting with someone said to have a mental illness. Moreover, in the courtroom context, where the verbal interaction of witness or defendant and counsel is observed and studied by jurors and judge, or by a magistrate, how might speech convergence or divergence be interpreted, especially in relation to any psychiatric condition the speakers might be suffering from and to a witness's credibility.

According to attribution theory, people make judgments about the cause and controllability of a person's illness, and then make inferences about a person's responsibility for their predicament (Weiner, 1995). These judgments lead to emotional reactions, such as pity, or anger, which then affect the way that a person will react in a given situation. If an individual believes the mental health condition

was not caused by the person who is suffering from it, and that the illness is outside of the person's control, then they are unlikely to hold the person responsible for their predicament, and are therefore more likely to feel pity for the individual, and provide help or assistance if needed or possible. If, on the other hand, they believe that the cause of the mental illness was within the person's control, they are more likely to hold that individual responsible for their predicament, are likely to feel anger or resentment toward that person, and are therefore more likely to discriminate against them in some way, whether through avoidance or some form of punishment (Corrigan et al., 2003; Weiner, 1995).

Consistent with attribution theory, Corrigan et al. (2003) found that when people viewed the onset of mental illness as being under the sufferer's control, people were more likely to avoid, withhold help, and endorse coercive treatment of someone with a mental illness. However, from this study it is still unclear how people in society make these judgments about the mentally ill in the absence of information relevant to illness onset. In Corrigan et al.'s study, participants were told what had caused the person's mental health condition, either a severe head injury (uncontrollable) or prolonged use of illegal drugs (controllable). The results therefore, although revealing, do not tell us much about how a person in the general public is likely to respond to someone with a mental illness, if unaware of what caused it. People often have no useful information about what has caused an individual's mental illness so they are left to make that judgment on their own, presumably relying on their own default strategies and cognitive heuristics. Results from a study by Bordieri and Drehmer (1986) suggest that when the cause of a

person's health predicament is not given (as either internal/controllable or external/uncontrollable) people tend to treat them just as they treat those who are said to have caused their own health problems. Thus, these results indicate that without evidence of any specific external cause, a disabled person (regardless of whether it is a physical disability or mental illness) will be viewed as responsible for their condition.

Bordieri and Drehmer (1986) further found that people are more likely to hire individuals with a physical disability than a mental illness. Despite these findings, it is possible that the mental illness chosen for this experiment (drug dependency) may limit the generalisability of the results to other mental illnesses, such as schizophrenia or depression. Drug dependency is likely to elicit a set of stigmas and biases distinct from other mental health conditions. However, regardless of the disability type (physical or mental) the results were consistent with attribution theory, showing that the cause of the disability was more influential in decision making than the type of condition the individual had. The results of Bordieri and Drehmer's (1986) study showed that, regardless of the type of disability, when the cause of the disability was viewed as being outside of the sufferer's control, individuals were more likely to be hired and seen to have a brighter future with the company than when it was attributed to an internal cause.

Other studies, such as that of Farina and Felner (1973), have also found that people with a mental illness may be disadvantaged in finding a job. The likelihood of someone with a mental illness finding somewhere to live may also be affected. Results of another investigation of landlords' willingness to rent an apartment to a

person with a mental illness suggested that 1) the stigma of the mental illness can influence the decision and 2) the effect of the 'mental illness' label may be equivalent to that elicited by the 'criminal' label (Page, 1977).

The studies, although fairly consistent, were all conducted several decades ago. It is therefore difficult to state with confidence whether or not their results are consistent with the treatment of people with mental illness in today's society. However, research suggests that the perception that mentally ill people are violent or frightening has substantially increased between 1950 and 1996 (Phelan, Link, Stueve, & Pescosolido, 2000). The fact that this stigma has persisted across time suggests that the discrimination resulting from that stigmatisation may also have continued, and thus people with mental illnesses may well face the same difficulties in finding jobs and accommodation as they did in previous decades.

We will now look at how stigma and discrimination can come into play in the courtroom, before discussing the implications of these for people with a mental illness.

Prejudice in court

Juror bias

It is generally assumed that when a jury hears a case it does so without prejudice toward either the complainant or the defendant (Lupfer, Cohen, Bernard, Smalley, & Schippmann, 2001). It is held that the judicial system provides a platform on which persons can receive a fair trial based on the facts of the case, rather than interpersonal bias and prejudice. However, contrary to this assumption,

research suggests that there are a number of biases, including physical attractiveness (Abel & Watters, 2005), age (Bergeron & McKelvie, 2004), race (Cohen & Peterson, 1981; Hodson et al., 2005; Sommers & Ellsworth, 2001), and gender of a defendant, which may influence jurors' and even judges' decisions about verdicts and sentencing (Lupfer et al., 2001).

Lupfer et al. (2001) found that, in civil cases in the US, jurors' verdicts reflected a bias against the plaintiff. The results of this study indicated that jurors tend to view the plaintiff's behaviour as more motivated by harmful, hostile intentions and negative stereotypes than the actions of the defendant. This anti-plaintiff bias may be a common occurrence in civil cases, as the plaintiff, by virtue of having initiated the complaint, may be perceived as bearing more responsibility for the burden of proof than the defendant. The results of Lupfer et al.'s research also suggest that the stance that the plaintiff takes in the proceedings is viewed by the jurors as being based on negative characteristics of the plaintiff as a person, rather than a result of the situation they are in, and the role that they are assuming.

Both the defendant's and the lawyer's race have also been found to have an effect on jurors' verdicts. Cohen and Peterson (1981) found that in the US defendants who were represented by African American lawyers were more likely to be found guilty than those represented by a European American lawyer. Results of a study by Espinoza and Willis-Esqueda (2008) in the US also revealed a relationship between defendant and lawyer race and sentencing. Their study not only included the race of the lawyer and defendant (Mexican American or European American), but also incorporated the defendant's socio-economic status (SES) (low or high).

The results suggest that bias against Mexican American defendants occurred when the Mexican American defendant was of low SES and represented by a Mexican American defence lawyer. Although there was no significant effect on the verdict, a significant effect was seen on length of sentence. The low SES Mexican American defendants were given a lengthier sentence compared with the high SES Mexican American defendants, and the low and high SES European American defendants. These results suggest that the race of both the lawyer and the defendant can influence a juror's sentencing, but that this is most likely to occur when a defendant fits within the stereotypical view of someone from that particular stigmatised group, and when it can be perceived that only someone from the same racial group is willing to represent them in court.

Hodson et al. (2005) also found a complex relationship between defendants' race and juror sentence preferences. In their UK study the defendant was stated as being either 'white' or 'black', and mock jurors were given transcripts to read in which incriminating DNA evidence was either allowed or stated to be inadmissible, and crossed out (although it was still possible for jurors to read the information if they so wished). The results showed that overall, participants did not respond more harshly to 'black' defendants than to 'white' defendants. However, when jurors were told that the incriminating DNA evidence was inadmissible, and therefore should not be used in making their judgments about the defendant, jurors rated the 'black' defendant as significantly more guilty than the 'white' defendant. In this situation the jurors also recommended a longer sentence for the 'black' defendant,

and viewed the defendant as more likely to re-offend. These results suggest that even if overt racism is diminishing in the courtroom, subtle racism may well persist.

Race is not the only factor that can influence a jury. Nelson (2004) provides an overview of the studies looking into the effects of lawyer gender on jurors' decisions. Although the results are not always consistent, and some of the methodologies have limited generalisability, the available data suggest that the gender of the lawyer can influence a juror's verdict as a result of numerous gender-related variables. These include stereotyped views of male and female characteristics and roles, relative attractiveness and dress, and the way that male and female lawyers are addressed by others in the courtroom. In particular, a female lawyer's credibility may be undermined if a judge refers to her using terms such as 'honey', and 'little lady' (see Nelson, 2004). Although it may be difficult to conceive how such remarks would be tolerated in courts today, the research presented in Nelson's review suggests that it still occurs, at least in the US, and that it has the potential to undermine a female lawyer's credibility.

Physical attractiveness is also said to have the potential to influence a juror's decisions. There have been conflicting research results regarding the effect of a defendant's physical attractiveness on jurors' decision making, and it is possible that attractiveness may affect verdicts only for certain crimes. One study also looked at a defendant's physical attractiveness, smiling, gender and the length of sentences given by jurors. The results suggest that if a person is actually guilty and physically unattractive, they should smile, but if the person is guilty and physically attractive, they should not smile (Abel & Watters, 2005). Beckham, Spray, and Pietz (2007),

on the other hand, found that attractiveness did not affect the form of punishment given to a defendant (life imprisonment or the death penalty). However, they did find that a juror's age and gender significantly influenced sentencing. The results showed that younger (20-40 years old) and older men (70+ years old) were less likely to choose the death penalty than were men of about 40–60 years, and that young women of about 20-40 years were more likely to sentence the defendants to death than were older women (40+ years).

The studies just discussed show that jurors can be influenced by prejudice and discrimination across a variety of factors. The stigma attached to, or the perceptions associated with, certain groups of people can influence a juror's decision in terms of verdict and length of sentencing. That this bias can occur across a variety of factors, of varying levels of stigma, suggests that some form of juror bias is also likely to occur when a defendant is said to have a mental illness.

Mental Illness and the Criminal Justice System

Research has shown that since the deinstitutionalisation of people with mental illness there has been an increase in the number of mentally ill people within the criminal justice system (Valdiserri, Carroll, & Hartl, 1986), resulting in a form of reinstitutionalisation or, what has been labeled the 'criminalisation' of mental illness (Perez, Leifman, & Estrada, 2003). Australian studies have shown that 13.5% of male prisoners, and 20% of female prisoners report having been previously admitted to a psychiatric facility. The study also found that up to 8% of males and 14% of females in Australian prisons have a major mental illness with psychotic features

(Mullen, Holmquist, & Ogloff, 2003). These statistics are alarming compared to the relatively low prevalence rates of such disorders in the general public.

Studies have also demonstrated that people with mental illness tend to be arrested and incarcerated more often for minor offences, and receive longer sentences than their mentally healthy counterparts (Valdiserri et al., 1986). This suggests that some form of bias against people with mental illness is probably occurring at some point in the criminal justice process. Some pre- and post-arrest programs have been initiated in the US in an attempt to counter this problem (Perez et al., 2003). However, there is still a long way to go, and as the problem of the criminalisation of mental illness continues it is important to investigate whether, and the ways in which, people suffering from mental illness are discriminated against in the criminal justice system.

The majority of research into mental illness in the court has focused on topics such as the insanity defence, expert testimony and whether people with mental illness should be put on death row. The topic of juror bias against defendants with mental illness for minor offences, and where the insanity defense is not applied, has received little attention. However, the research outlined above shows the huge impact that juror bias can have on verdicts and sentence length, and suggests that there is an increase in the number of people with mental illnesses within the criminal justice system, and that people with mental illnesses tend to be imprisoned for more minor offences. Thus, it would seem important to conduct research investigating whether there is any bias in the courtroom against defendants with mental illnesses. Also, the majority of research investigating bias in the criminal justice system, to

date, has focused on bias within American courtrooms. It is therefore important to investigate whether the results found in the US are replicable in other countries and cultures, such as the Australian context.

Research Direction

The stigma associated with, and the bias against, people with mental illness has been outlined in this review. Numerous studies have demonstrated that the stigma of mental illness can lead to discrimination in a variety of situations. Research results have shown that discrimination may occur in court (Abel & Watters, 2005; Bergeron & McKelvie, 2004; Cohen & Peterson, 1981; Hodson et al., 2005; Lupfer et al., 2001; Sommers & Ellsworth, 2001), that bias can occur despite an individual's desire to be tolerant and understanding towards those with mental illness (Teachman et al., 2006), and that the mere label of a mental illness can influence the way a person is viewed, despite their behaviour (Socall & Holtgraves, 1992). These findings together suggest that the stigma associated with mental illness may result in a bias against defendants with mental illnesses. It is therefore recommended that future research should investigate mental illness in the courtroom, and whether a defendant's mental health condition affects the way that a jury perceives him or her, and whether this influences the verdict.

More specifically, as research has suggested that the mere label of a mental illness can influence the way an individual is viewed (Socall & Holtgraves, 1992), it is recommended that future research investigate whether, under controlled conditions, a defendant said to have a mental illness is perceived and judged

differently by jurors from a defendant without a mental illness. It would also be interesting to investigate whether the label of a psychiatric disorder influences the way jurors view shifts in defendant behaviour. Communication Accommodation Theory provides a theoretic framework for investigating shifts in communicative behaviour between interacting partners, and would therefore be helpful in assessing whether changes in behaviour, which generally would be viewed as socially adaptive, would be viewed differently when one of the interacting partners is said to have a mental illness.

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Empirical Study

Mental illness in the courtroom: Does a psychiatric diagnosis affect perception of a defendant's speech dynamics on the witness stand?

Abstract

The present study aimed to investigate prospective juror's perceptions of the dynamics of social interaction in a courtroom where the defendant is said to have a psychiatric diagnosis. The experiment adopted Communication Accommodation Theory (CAT) to examine the effect of lawyer and defendant's converging and diverging speech rates on the jurors' perception of the defendant's credibility, likeability, cooperativeness, intent and guilt. One-hundred and eighty-six participants were allocated to one of 18 conditions, in which they listened to a reenactment of part of an edited court case and then filled in questionnaires. It was hypothesised that rapid speed of speech would act as a credibility cue, resulting in an increase in ratings of defendant credibility. It was further expected that ratings of cooperativeness and likeability would increase when the lawyer and defendant's speech rates converged and that ratings of cooperativeness and likeability would vary across convergence and divergence depending on whether the defendant's change in speech rate was perceived as being internally or externally motivated (intent). In regards to the effect of the defendant's mental health label, it was hypothesised that where the defendant was said to have a psychiatric diagnosis this label would override the effect of the speech rate manipulations. Little support was found for the hypotheses outlined in this study. Possible reasons for this lack of support, as well as suggestions for further research are outlined in the discussion.

Research indicates that there is an over-representation of people with psychiatric disorders in the criminal justice system (Munetz, Grande, & Chambers, 2001). There is also evidence that people with severe psychiatric disorders are more likely to be convicted of misdemeanors, and tend to be imprisoned for longer periods than their mentally healthy equivalents (Valdiserri, Carroll, & Hartl, 1986), based on the same evidence. Despite this, research into the mechanisms behind these apparent biases is sparse. Moreover, notwithstanding the high incidence of mental illness, it is still surrounded by widespread fear, misunderstanding and stigma, which is likely to affect the way mentally ill persons are received in court (Henderson, 2006), and the long term consequences for such people can be devastating. The current study therefore aimed to examine possible mechanisms behind this bias against defendants with psychiatric conditions. This is an extensive and complex topic and the present study focused on just one variable which may affect the way a defendant is perceived in court, namely juror bias in relation to language and social interaction.

Language in social interaction has attracted research across multiple disciplines, including social psychology, sociology, sociolinguistics, and communication (Shepard, Giles, & Le Poire, 2001). Theoretical frameworks dealing with language use in social interactions have been developed, of which the most influential is suggested to be Communication Accommodation Theory (CAT). Although CAT has undergone a number of revisions and developments, the fundamental argument of this theory remains that language is used *inter alia* by individuals as a means to adjust the social distance between self and the interacting partner (Giles, Mulac, Bradac, & Johnson, 1987).

In order to achieve this desired social distance, individuals employ specific strategies. One of the methods identified is the approximation strategy (Shepard et al., 2001), which incorporates a number of components (convergence, divergence,

maintenance and complementarity). The first of these is convergence, whereby individuals modify their behaviour to become more like that of their interacting partner. Other things being equal, this will reduce social distance, and the behaviours modified can include linguistic, paralinguistic, and non-verbal features such as speech rate, utterance length and gaze (Giles et al., 1991; Shepard et al., 2001). If, on the other hand, an individual desired to increase social distance, between themselves and their interacting partner, they could use the divergence strategy (Giles et al., 1991; Shepard et al., 2001). When the maintenance strategy is employed, an individual continues in their usual style of communication regardless of the characteristics of their interacting partner, and of any accommodation attempts the partner may be engaging in (Shepard et al., 2001). Finally, the complementarity strategy occurs when both interacting partners simultaneously diverge from each other by accentuating mutually valued differences between themselves, such as males and females speaking in more masculine and feminine tones, respectively, when conversing in mixed, as opposed to same-sex dyads (Hogg, 1985).

These approximation strategies have been investigated in various contexts. Research has investigated communication in intercultural (Ayoko, Hartel & Callan, 2002) and bilingual settings (e.g. Gallois & Callan, 1991) as well as looking at the strategies used between generations (e.g. McCann & Giles, 2006), and genders (Hogg, 1985). Few researchers have investigated these strategies within the context of courtroom proceedings (Aronsson, Jonsson, & Linell, 1987; Gnisci, 2005; Gnisci & Bakeman, 2007; Linell, 1991; Lind & O'Barr, 1976). Other research in applied contexts includes a novel experiment examining the approximation strategies used when leaving messages on answering machines (Buzzanell, Burrell, Stafford, & Berkowitz, 1996). The speech and non-verbal features studied have also varied, from vocabulary and

information density (Aronsson et al., 1987), the effect of voice quality, face and body (O'Sullivan, Ekman, Friesen, & Scherer, 1985), and various characteristics of question-answer exchanges (Gnisci, 2005). It can be seen that CAT has endured, as it still features prominently in research, and with the contexts of its application still expanding, three decades after its inception (Gallois, Ogay, & Giles, 2005). Thus, CAT, despite minor revisions, has stood up to extensive testing across various contexts and applications and provides an appropriate framework for research on juror bias.

An early study on speech in the courtroom investigated speed of speech, finding that rapid speech increased persuasion, although it did not make use of CAT (Miller, Maruyama, Beaver, & Valone, 1975). The topic has since been neglected. The present study therefore adopted CAT to examine the effects of converging and diverging speech rates within the courtroom setting.

Research has yet to investigate whether a juror's view of a defendant's interaction with a lawyer is affected by the mere label of a psychiatric disorder. It is therefore unclear whether shifts in speech which, under normal circumstances could be viewed as socially adaptive, are viewed differently when one of the interacting partners is a defendant in court and said to have a psychiatric disorder. The present study focused on one possible shift in speech, namely speed, and manipulated it to investigate its effects on prospective jurors' ratings of the perceived cooperativeness, likeability, credibility, intent and guilt of the defendant, for both mentally ill and healthy defendants.

Miller et al (1975) found that rapid speech acts as a credibility cue and thereby increases persuasiveness. It was therefore hypothesised that when a defendant's speech increases in speed, so will their credibility. As convergence has been found to result in positive evaluations of a person's friendliness and warmth (Coupland, 1985), it was

hypothesised that when the defendant's speed of speech converges with that of the prosecuting lawyer, whether at the slow or fast rates, prospective jurors will view the defendant as being more cooperative and likeable. Drawing on attribution theory (Kelley, 1967), it was further hypothesised that when participants view a defendant's convergence as an attempt to break down barriers (internal process), intent will be viewed as more positive than when it is attributed to situational pressures (external process); conversely, divergence that is believed to be a result of situational pressure is likely to be viewed more positively than when it is attributed to internal processes, such as a lack of effort or cooperation (Simard, Taylor, & Giles, 1976).

In order to investigate whether the specific psychiatric diagnosis affects the perception of a defendant in relation to their speech, the present study's design incorporated two contrasting psychiatric diagnoses (Bipolar Disorder and Post-traumatic Stress Disorder (PTSD)) and a non-psychiatric condition (Diabetes). Where the defendant was given the label of 'Bipolar Disorder', it could be expected that fast speech would be viewed as a manifestation of manic behaviour, while slow speech might be seen as a sign of depression (as the participants' level of understanding of Bipolar disorder would be likely to differ, the symptoms that the defendant experienced could be indicated by the defence lawyer during the court case).

It was also possible that regardless of how the defendant's speech was perceived, the mere label of a psychiatric disorder would influence the results. Labeling theory (Socall & Holtgraves, 1992) asserts that the label of a psychiatric condition can affect the way a person is perceived, whatever their behaviour. It was therefore hypothesised that the presence of Bipolar Disorder would override that of the speech rate, such that ratings of credibility would not increase with speed of speech. In regard to the PTSD condition, an even greater increase in credibility with speed of speech

might be expected than for the mentally healthy condition (Diabetes), if this defendant were viewed as having to overcome their trauma, and the associated symptoms, in order to be able to interact competently with the lawyer. However, it is also possible that the label and stigma of a mental health problem, regardless of what it is, is so strong that it again overrides any speech rate manipulations. If so, then no credibility effect would be expected. A post-experimental questionnaire was used to explore these possibilities.

Method

Design

A between-subjects design was employed to investigate the effect of defendant speech rate (slow, normal, fast), lawyer speech rate (slow, fast) and defendant health condition (Bipolar Disorder, PTSD, Diabetes) on perception of defendant cooperativeness, likeability, credibility, intent and guilt. The two speech rate variables (lawyer and defendant), in combination, manipulate convergence/divergence in speech speed. Manipulation checks were designed to assess the effectiveness of the independent variables.

Participants

One hundred and eighty-six participants (49 male, 134 female, 3 unidentified), ranging from 18 to 77 years of age ($M = 24.64$, $SD = 10.3$), were recruited for the present study. They were primarily first-year psychology students from throughout Tasmania, participating for course credit. Participants were randomly allocated to experimental conditions, and took part in a small group of up to 10 people.

Materials

The initial audio-recording of the edited court case (script in Appendix A) was carried out at the University of Tasmania Conservatorium of Music by a Multimedia student skilled in audio-production. The speech rates of the prosecution lawyer and defendant (both male) were later manipulated by him using the Cubase

audio-production software, adjusting speech rates by +/- 20% for fast and slow speech, respectively. The case presented was a drugs case in which the defendant was charged with possession with intent. In court the defendant admitted to having grown and used cannabis over a long period of time (20-25 years). However, he denied ever selling the cannabis.

The recording (script in Appendix A5) included only the section of the court case where the defendant was on the witness stand. It consisted of three segments: 1) the initial examination of the defendant by the defence lawyer. During this phase the defence lawyer asked the defendant questions related to his health condition (Bipolar Disorder, PTSD or Diabetes), thereby providing information about the conditions as well as the symptoms that the defendant experienced. There were no speech rate manipulations during this section, and thereby provided the baseline for the defendant's speed of speech. 2) The cross-examination by the prosecution lawyer. In this section the prosecuting lawyer and defendant's speech rates were manipulated so that the defendant either converged with the lawyer's speech rate, diverged from it, or maintained his previous speed. 3) The re-examination of the defendant by the defence lawyer. This section allowed the lawyer's and defendant's speech rates to return to baseline.

Colleagues and family members were recruited to play the parts of the lawyers, defendant, judge and judge's associate. The different versions of the audio-recording were transferred to compact disk and presented to participants via a laptop computer and loudspeakers. Questionnaires (provided in Appendix A) assessing the dependent variables and manipulation checks were used (with participants primarily

indicating ratings on 9-point Likert scales). The questionnaires also asked participants to provide written explanations for some of their answers and to complete a mood scale (using 9-point Likert scale), although this data was not formally analysed in the present study.

Procedure

At the start of the experimental session participants were given an information sheet and consent form. After informed consent was given, they were introduced to the court case. It was explained that they would hear a re-enactment of part of a real but edited court case in which the defendant would be testifying on his own behalf. The participants then listened to one of the recordings (conditions). After hearing the case once they were informed that they would be rating the defendant on his cooperativeness, likeability, credibility and innocence/guilt. Participants were then given the questionnaire that measured these qualities, and were told that the defendant would be experiencing the greatest pressure during cross-examination, and that the qualities measured on the questionnaire were therefore most likely to be tested during that time. However, participants were told to make their ratings based on the defendant's overall performance. They were also asked to familiarise themselves with the questionnaire, but not to fill it out until after they had heard the recording twice. They then listened to the case again (the same experimental condition as before) before completing the first questionnaire. After all participants had completed the first questionnaire they were given the second questionnaire, which included ratings of the defendant's intent, manipulations

checks, and a defendant mood rating scale. When these were completed participants were debriefed.

Results

The frequency of guilt ratings were calculated, as were the mean frequencies of guilty verdicts elicited for each independent variable, as displayed in Table 1. The means displayed here are only for the main effects, more detailed means are presented in Appendix B.

Table 1

Frequency of Guilt verdict across all conditions

Lawyer	Bipolar		PTSD		Diabetes		Def.speech overall mean%
	Slow	Fast	Slow	Fast	Slow	Fast	guilty verdicts
Defendant							
Slow	30%	20%	80%	20%	40%	40%	38%
Norm	20%	20%	40%	30%	20%	60%	32%
Fast	25%*	30%	50%	50%	50%	40%	41%
Lawyer speech overall mean % guilty verdicts:					39%	34%	
Health overall mean%:		24%		45%		42%	

* The number of participants in this cell was 16. All other cells had 10 participants.

Means and standard deviations were also calculated for ratings of cooperativeness, likeability and credibility (rated on a 9-point likert scale, where 1 is uncooperative, and 9 is cooperative etc) across all independent variables. The results are presented in Table 2, 3 and 4. The means suggest that there were no real differences in ratings of the defendant's cooperativeness, likeability and credibility across the independent variables (lawyer speed of speech, defendant speed of speech and health conditions).

Table 2

Means (M) and Standard Deviations (SD) for ratings of Cooperativeness across Lawyer speech rate, Defendant speech rate and Health

IVs	<i>M</i>	<i>SD</i>	<i>N</i>
Lawyer Speech			
Fast	7.75	1.08	89
Slow	7.41	1.44	97
Def. Speech			
Fast	7.80	1.08	66
Norm	7.53	1.33	60
Slow	7.58	1.29	60
Health			
Bipolar	7.80	1.13	66
PTSD	7.57	1.32	60
Diabetes	7.33	1.39	60

Table 3

Means (M) and Standard Deviations (SD) for ratings of Likeability across Lawyer speech rate, Defendant speech rate and Health

IVs	<i>M</i>	<i>SD</i>	<i>N</i>
Lawyer Speech			
Fast	5.81	1.80	89
Slow	5.43	1.88	97
Def. Speech			
Fast	5.73	1.97	66
Norm	5.63	1.82	60
Slow	5.56	1.85	60
Health			
Bipolar	5.76	1.56	66
PTSD	5.17	2.03	60
Diabetes	5.75	1.93	60

Table 4

Means (M) and Standard Deviations (SD) for ratings of Credibility across Lawyer speech rate, Defendant speech rate and Health

IVs	M	SD	N
Lawyer Speech			
Fast	5.57	1.86	89
Slow	5.32	1.95	97
Def. Speech			
Fast	5.65	2.12	66
Norm	5.45	1.70	60
Slow	5.44	1.91	60
Health			
Bipolar	6.05	1.67	66
PTSD	5.12	2.10	60
Diabetes	5.10	1.81	60

The frequency with which the defendant’s change in speech rate was viewed as internally or externally motivated was calculated (frequency and percent displayed in Table 5). Where rating of internality and externality were identical, the defendant’s motivational intent is described as ‘balanced’. The means were also calculated for ratings of cooperativeness and likeability across levels of intent

(internal, external, balanced). The means (displayed in Table 5) show no real difference across levels for either cooperativeness or likeability.

Table 5

Means (M) and Standard Deviations (SD for ratings of Cooperativeness and Likeability across Defendant Intent (Internal, External, Balanced)

Intent	<i>M</i>	<i>SD</i>	Frequency	Percent
Internal			28	22.2
Coop	7.68	1.16		
Like	5.32	2.07		
External			71	56.3
Coop	7.48	1.26		
Like	5.63	1.88		
Balanced			27	21.4
Coop	7.81	1.42		
Like	6.19	1.69		

Effect of Health and Lawyer and Defendant speech rates on cooperativeness, likeability and credibility

A between-groups multivariate analysis of variance (MANOVA) was performed to investigate the effects of health, and lawyer and defendant speech rates

on perceived levels of defendant's cooperativeness, likeability and credibility.

There was a statistically significant interaction between health and lawyer speech rate, $F(6, 332) = 2.86, p = .01$. The results for the dependent variables were then considered separately, with results showing significant interaction between health and lawyer speech across all three dependent variables; cooperativeness, $F(2, 168) = 3.06, p = .049$, likeability, $F(2, 168) = 4.70, p = .01$, and credibility, $F(2, 168) = 7.17, p = .001$.

An inspection of the mean scores indicated that while likeability ratings increased across health conditions (Bipolar disorder $M = 5.55$, Diabetes $M = 5.90$, PTSD $M = 5.97$) when the lawyer's speech rate was fast, the ratings of likeability decreased when the lawyer's speech rate was slow (Bipolar disorder $M = 5.92$, Diabetes $M = 5.60$, PTSD $M = 4.37$). The results also indicated that while ratings of credibility and cooperativeness decreased across health conditions when the lawyer's speech was slow (credibility: Bipolar disorder $M = 6.24$, Diabetes $M = 5.27$, PTSD $M = 4.23$; cooperativeness: Bipolar disorder $M = 7.80$, Diabetes $M = 7.23$, PTSD $M = 7.07$), ratings of credibility and cooperativeness were higher for Bipolar disorder (credibility: $M = 5.79$, cooperativeness: $M = 7.75$) and PTSD (credibility: $M = 6.00$, cooperativeness: $M = 8.067$) than Diabetes (credibility: $M = 4.93$, cooperativeness: $M = 7.43$) when the lawyer's speech rate was fast.

The MANOVA also indicated a statistically significant main effect for health condition, $F(6, 332) = 3.14, p = .005$. When the results for the dependent variables were considered separately, the only difference to reach statistical significance was credibility, $F(2, 168) = 5.23, p = .006$. Post-hoc analysis using Tukey HSD revealed

that ratings of credibility were significantly higher for defendants with Bipolar disorder than both Diabetes, $p = .01$ and PTSD, $p = .01$. This main effect can be accounted for by the health \times lawyer speech interaction.

Convergence and Divergence

To ensure that the convergence and divergence manipulations were valid (i.e., speeding and slowing the speech by 20% actually led to convergence and divergence of speech rates), the lawyer and defendant's words per minute (wpm), at the normal speech rate, were compared. It was found that the prosecuting lawyer spoke an average of 165wpm, and the defendant 150wpm. The speech rate manipulations were therefore considered to be valid, as the initial rates of speech (at the normal rate), before manipulation, did not notably differ.

Taking account of the specific direction of shifts in the defendant's speech rate in relation to the prosecuting lawyer's speech rate, a multivariate analysis of variance (MANOVA) was conducted to explore the effect of convergence (defendant's speech rate shifting to be more like the lawyer's) and divergence (defendant's speech rate changing to be more different from the lawyer's) on ratings of defendant cooperativeness and likeability, with the results indicating no significant effects, $F(2, 123) = .058, p = .94$.

Intent

Two MANOVAs were performed to investigate the effect of intent on ratings of defendant cooperativeness and likeability. Intent was broken into three

categories: internal, external and balanced (participants rated defendant as equally internally and externally motivated). One MANOVA looked at any differences in ratings of cooperativeness and likeability when the lawyer's and defendant's speech rates converged (at either the fast or slow rate), and the other explored any differences in ratings when the lawyer and defendant's speech rates diverged (incorporating all lawyer fast/defendant slow and lawyer slow/defendant fast conditions). The results indicated no significant differences in ratings of cooperativeness, $F(2, 57) = .22, p = .80$, or likeability, $F(2, 57) = .29, p = .74$, whether the participant viewed the defendant's convergence as internally, externally or equally internally and externally motivated.

Similarly, the results showed no significant differences in ratings of cooperativeness, $F(2, 63) = 1.87, p = .16$, or likeability, $F(2, 63) = 1.48, p = .23$, when the defendant's divergence was viewed as internally, externally, or equally internally and externally motivated.

Innocence/Guilt

A hierarchical loglinear analysis was conducted to determine a model that best fitted the verdict data, which took the form of frequencies. This analysis incorporated the health conditions, lawyer and defendant's speech rates and verdict (guilty/innocent) data.

All higher order effects were deleted from the model without any significant loss of fit, leaving only one effect that when deleted led to a significant loss of fit, namely health*verdict (innocent/guilty), ($\chi^2 = 7.052, p = .029$). Simple chi-square

analyses were then conducted to further investigate this effect. Chi-square results revealed that a defendant said to have Bipolar Disorder was significantly more likely to be given the verdict of not guilty, compared to one with PTSD ($\chi^2 = 6.02, p = .014$) or Diabetes ($\chi^2 = 4.35, p = .04$).

Manipulation Checks

A MANOVA was conducted to investigate whether the experimental manipulations (defendant's health condition and speed of speech) were noticed by participants. On the second questionnaires (Appendix A) participants were asked to indicate (on a 9-point Likert scale) "how much the defendant's speed of speech varied during the trial, if at all" and also "to what degree they viewed the defendant as having a mental health condition". Analysis of these ratings revealed no significant results for mental/health conditions, $F(10, 328) = 1.16, p = .32$ or speed of speech, $F(10, 328) = .99, p = .45$, suggesting not only that the participants were unaware of the experimental manipulations, but that they did not understand the difference between a mental and physical health condition.

Discussion

The over-representation of people with psychiatric disorders within the criminal justice system (Munetz, Grande, & Chambers, 2001), along with the widespread fear and stigma associated with mental illness (Henderson, 2006) raises questions about whether a bias exists against people with psychiatric disorders within the court system. The present study investigated this possibility, focusing

specifically on any juror bias against defendants with psychiatric disorders. Drawing on Communication Accommodation Theory (CAT), the present study manipulated lawyer and defendant speed of speech to investigate the effects on prospective jurors' ratings of the perceived cooperativeness, likeability, credibility, intent and guilt of the defendant. The ratings given on these measures were compared in regard to both the speech rate manipulations and the health condition ascribed to the defendant (being said to have a psychiatric disorder (Bipolar Disorder or PTSD), or to be physically unhealthy (Diabetes)).

Influence of speed of speech on ratings of defendants' credibility

Based on previous research into speech rates and perceptions of credibility (Miller et al., 1975), it was anticipated that the defendant's credibility would increase along with their speech rate. The present results did not support this hypothesis, with the findings suggesting that the speed of the defendant's speech had no effect on his credibility rating. It is unclear why the previously published findings were not confirmed. It is possible that the manipulation of the speech rates was not great enough to reveal the expected effect, but pre-testing of speech rate manipulations indicated that further deviation from the normal speed of speech (i.e., more than +/-20%) sounded unnatural, and was therefore considered inappropriate for the current study. Alternatively, presuming that speech rate would, under normal circumstances, affect the credibility of a defendant, it is possible that in the present case there were other, more influential factors that affected ratings of credibility, thereby swamping any speech rate effect.

In light of this possibility, hypotheses regarding the influence of the defendant's health condition on ratings of credibility were also provided. Specifically, it was hypothesised that the presence of Bipolar Disorder would override the influence of the speech rate manipulation, such that ratings of credibility would not increase with speed of speech. This prediction seems consistent with the current results, as there was no significant main effect for defendant speed of speech or interaction between health condition and defendant speed of speech for ratings of credibility. This hypothesis may have been upheld, though, the reason remains unclear. It was expected that when the defendant was given the label of 'Bipolar Disorder' fast speech would be viewed as a manifestation of manic behaviour, while slow speech would be seen as a sign of depression, and that this would override the speed of speech manipulation. Whether the speech manipulations were processed by participants in such a manner is unknown. Hypotheses regarding the influence of PTSD on credibility ratings were also framed. Due to the nature of PTSD it was difficult to predict for certain whether the psychiatric label or the symptoms of the disorder itself would have a greater affect on ratings of credibility. Two alternative hypotheses, based on different lines of reasoning, were therefore presented. On the one hand, there was the possibility of finding an even greater increase in credibility with speed of speech for PTSD than for Diabetes, if participants saw the defendant with PTSD as having to overcome their disorder, or symptoms, in order to interact in such a manner. Alternatively, there was also the possibility that the stigma of the mental illness would be such that it would override any speech rate manipulations. The analysis revealed no

significant increase in credibility with speed of speech, suggesting that the psychiatric label influenced this result. However, as no increase in credibility with speed of speech was found for any health condition, including Diabetes (where it was expected), no such conclusion can confidently be drawn. It therefore appears that the psychiatric labels of Bipolar Disorder and PTSD had no effect on these ratings.

Effect of health condition on credibility ratings

The present study's results revealed a main effect for health condition on ratings of defendant credibility. The results specifically showed that when said to have Bipolar Disorder the defendant was seen as significantly more credible than those said to have PTSD or Diabetes. This finding is in line with the data showing that when said to have Bipolar Disorder he was rated as being 'not guilty' significantly more often than when said to have PTSD or Diabetes. These findings, however, are not in line with what was hypothesised. Based on labeling theory (Socall & Holtgraves, 1992), it was expected that a defendant said to have a psychiatric disorder would be viewed as less credible (and more guilty) than one said to be mentally healthy. It is possible that the court case presented in the current study may have had a nullifying impact on the results for a couple of unforeseen reasons. Firstly, through the lawyer's questioning of the defendant it was made clear that the defendant was poorly educated. It is therefore possible that participants may have viewed him in a negative light purely based on his lack of academic achievement (having only completed 6th grade, and having had to repeat it 3 times).

Indeed, qualitative (verbal) feedback from participants suggested that many of them viewed him as possessing some kind of learning or psychiatric disorder, based on his academic skills. Secondly, the trial used in the current study was a drugs case, with the defendant admitting to having used cannabis from a young age (around 15 years old), and to have grown it for “in excess of 20-25 years”. This also may have influenced the jurors’ perception of the defendant and interfered with the expected results, as participants could have viewed the defendant, regardless of the manipulations carried out, as having a psychiatric diagnosis of substance use, abuse or dependence, which could have confounded the results. Thirdly, the psychiatric disorders chosen in this study may have influenced the results. The stigma associated with Bipolar Disorder and PTSD may not be as great as that associated with a diagnosis of Schizophrenia or psychotic disorders. It would be interesting for future research to investigate whether there is in fact a difference in the way defendants labeled with a range of different psychiatric disorders (of varying degrees of severity) are perceived by prospective jurors.

It is also possible that, despite a concerted effort to make the health condition of the defendant explicit (whether Bipolar Disorder, PTSD or Diabetes), the health manipulations in the current study were not vigorous enough to have any significant impact on the participant. The mental health condition was not used in the trial as part of the defence case. It therefore did not take centre stage, and so may have been overlooked or disregarded by participants. As it was not being used as a defence, participants may have also viewed the information given about the defendant’s condition as irrelevant. However, there is another possible explanation for the lack

of influence of the health condition on results. In qualitative feedback participants specified that they did not see direct evidence in his behaviour of the condition the defendant was said to have, and therefore did not believe that the defendant was really affected by the disorder while on the witness stand. This explanation contradicts expectations based on labeling theory, and therefore warrants further investigation in future research.

Effect of convergence and divergence on perception of defendant

In regard to the convergence and divergence of the lawyer and defendant's speech rates, it was hypothesised that when the defendant's and prosecuting lawyer's speed of speech converged, whether at the slow or fast rates, the perceived level of defendant cooperativeness and likeability would increase. This expectation was based on findings showing that, *ceteris paribus*, convergence results in positive evaluations of a person's friendliness and warmth (Coupland, 1985). Contrary to expectations, no significant difference was found in ratings of either cooperativeness or likeability when comparing convergence with divergence.

Based on attribution theory (Kelley, 1967) it was further anticipated that when participants viewed the defendant's convergence as an attempt to break down barriers (internal motivation), the defendant's intent would be viewed as more positive (measured by higher ratings on cooperativeness and likeability) than when it is attributed to situational pressures (external motivation). Conversely, it was expected that divergence viewed as a result of situational pressures would be regarded more positively than that attributed to internal processes, such as a lack of

effort or cooperation (Simard, Taylor, & Giles, 1976). These hypotheses were not supported by the current results. No significant differences in ratings of cooperativeness or likeability were found across ratings of motivational intent (internal, external, balanced). Once again, it is possible that the speech manipulations were not great enough to elicit the expected results, or that other factors, related to the defendant's health condition, or to the case more generally (such as the defendant's academic skills or drug use), influenced the results. It is also possible that the participants did not completely understand what they were being asked to do when required to rate the defendant's motivational intent.

Limitations of the present study

The current study presented a number of limitations. As has been mentioned, the court case used in this study, being a drugs case, may have confounded the effect of the mental health manipulation. The health condition manipulations may also have not been rigorous enough to elicit significant results. Also, the majority of participants used in the current research were first-year psychology students, which may limit the generalisability of the results. The population sampled is not necessarily representative of either the general public, or a prospective jury. First-year psychology students are likely to differ from the general public in age, sex distribution, intelligence and knowledge of mental health conditions. If their knowledge of mental illness is greater than that of the general public this may result in them being more sympathetic towards people with psychiatric disorders, and less likely to judge such a person harshly. The contrived

experimental situation may also act as a limitation, as prospective jurors may respond differently to the same information when presented in a courtroom where their responses are seen to be of greater import. Despite the limitations of the present study, it has presented an initial investigation into some of the possible factors influencing the over-representation of people with psychiatric disorders within the criminal justice system.

Directions for future research

The present findings indicate that the role of labeling theory warrants further research. Particularly, it seems important to investigate, in a more controlled manner, whether the label of a psychiatric condition affects the way a defendant is viewed and judged by a jury. It would also be interesting to vary both the type of psychiatric label given to the defendant and the severity of the crime to see whether these factors affect the verdict.

The over-representation of people with psychiatric disorders within the criminal justice system is an extensive and complex topic which warrants further investigation. The present study aimed simply to initiate such research by focusing on one variable which could affect the way a defendant is perceived in court, concentrating on juror bias in relation to language and social interaction. Little support was found for any of the hypotheses tested in this study. That does not mean that either the project itself or the research topic is without merit. It does, rather, indicate that this research area is yet to be fully understood, and therefore requires further exploration.

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Appendices

Appendix A: Materials

- A1 Information Sheet
- A2 Consent Form
- A3 Questionnaire 1
- A4 Questionnaire 2
- A5 Script of court case

Appendix B: SPSS Output

- B1 Descriptive statistics for ratings of dependent variables across independent variables
- B2 Frequency and means analysis for ratings of intent
- B3 MANOVA analysis for effects of health and lawyer/defendant speech rates on cooperativeness, likeability and credibility
- B4 MANOVA analysis for manipulation checks
- B5 MANOVA for intent data
- B6 MANOVA for effect of convergence and divergence on ratings of cooperativeness and likeability
- B7 Hierarchical Log linear analysis on verdict

Appendix A: Materials

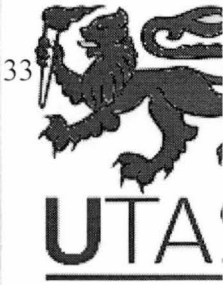
- A1 Information Sheet
- A2 Consent Form
- A3 Questionnaire 1
- A4 Questionnaire 2
- A5 Script of court case

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SCHOOL OF PSYCHOLOGY



PARTICIPANT INFORMATION SHEET SOCIAL SCIENCE/ HUMANITIES RESEARCH

Observing the defendant in the witness box

**Chief investigators: Mr. Peter Ball
Dr. Nenagh Kemp**

Master's student: Anastasia Stossich

Invitation

You are invited to participate in a research study into the perception of a defendant in the witness stand. This study is being undertaken as part of the requirement for a Masters degree in psychology.

1. 'What is the purpose of this study?'

The purpose is to investigate how a defendant's communication skills and emotional state are perceived when testifying in the witness box.

2. 'Why have I been invited to participate in this study?'

You are eligible to participate in this study if you are over 18 years of age.

4. 'What does this study involve?'

Participants will be asked to listen to a recording of part of a courtroom trial, and then to fill in some questionnaires about it. It is anticipated that the session will take no more than an hour.

It is important that you understand that your involvement in this study is voluntary. While we would be pleased to have you participate, we respect your right to decline. There will be no consequences to you if you decide not to participate, and this will not affect your treatment / service. No information is required from you which could identify you as an individual, and if you decide to discontinue participation at any time, you may do so without providing an explanation. You may also withdraw your

data at anytime before handing your sheets to the experimenter. All information will be treated in a confidential manner, and your name will not be used in any publication arising out of the research. All of the research will be kept in lockable storage at the University of Tasmania School of Psychology for a period of at least five years, and will be destroyed when no longer of scientific use.

5. Are there any possible risks from participation in this study?

There are no specific risks anticipated with participation in this study. However, if you find that you are becoming distressed you will be able to receive support from a counsellor at no expense to you.

6. What if I have questions about this research?

If you would like to discuss any aspect of this study please feel free to contact either Anastasia Stossich on ph 62293184 or Peter Ball on ph 62391265. Either of us would be happy to discuss any aspect of the research with you. Once we have analysed the information we will be making available a summary of our findings. You are welcome to contact us again at that time to discuss any issue relating to the research study.

This study has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. You will need to quote H10194.

Thank you for taking the time to consider this study.

If you wish to take part in it, please sign the attached consent form.

This information sheet is for you to keep.

Appendix 2 Consent Form

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CONSENT FORM

Observing the defendant in the witness box

1. I have read and understood the 'Information Sheet' for this project.
2. The nature and possible effects of the study have been explained to me.
3. I understand that the study involves a session not exceeding one hour, in which I will be asked to listen to a recording of a courtroom trial, and then fill in a questionnaire.
4. I understand that participation involves no anticipated risks.
5. I understand that all research data will be securely stored on the University of Tasmania premises for at least five years, and will be destroyed when no longer required.
6. Any questions that I have asked have been answered to my satisfaction.
7. I agree that research data gathered from me for the study may be published provided that I will not be identified as a participant.
8. I understand that the researchers will maintain my identity confidential and that any information I supply to the researcher(s) will be used only for the purposes of the research.
9. I agree to participate in this investigation and understand that I may withdraw at any time without any effect, and if I so wish, may request that any data I have supplied to date be withdrawn from the research.

Name of Participant: _____

Signature: _____

Date: _____

Statement by Investigator

☐

I have explained the project & the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

☐

The participant has received the Information Sheet where my details have been provided so participants have the opportunity to contact me prior to consenting to participate in this project.

Name of
Investigator
Signature of
Investigator

Name of investigator _____

Signature of investigator _____ Date _____

Appendix 3 Questionnaire 1

Observing the defendant in the witness box

Age: _____
Gender: M/F
Ph no. (last 4 digits): _____

Questionnaire 1.

Please rate the defendant on the following:

Uncooperative									Cooperative
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unlikeable									Likeable
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not credible									Credible
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate whether you believe the defendant is innocent or guilty of possession with the intent to sell.

☐ Innocent

☐ Guilty

Please indicate how confident you are in this decision.

Not at all confident				Extremely confident
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. To what extent do you think any variation in the defendant’s **speech volume** was a response to factors external to the defendant himself, such as the way they were being spoken to, or treated by the lawyers?

Not at allSomewhatExtremely

☐☐☐☐☐☐☐☐☐

5. To what extent do you think any variation in the defendant’s **accent** was the result of factors internal to the defendant himself, such as inner turmoil, peace, or spite?

Not at allSomewhatExtremely

☐☐☐☐☐☐☐☐☐

6. To what extent do you think any variation in the defendant’s **speed of speech** was the result of factors internal to the defendant himself, such as inner turmoil, peace, or spite?

Not at allSomewhatExtremely

☐☐☐☐☐☐☐☐☐

7. To what extent do you think any variation in the defendant’s **speech volume** was the result of factors internal to the defendant himself, such as inner turmoil, peace, or spite?

Not at allSomewhatExtremely

☐☐☐☐☐☐☐☐☐

8. Please indicate, in note form, your personal impression of the defendant’s general state, demeanour, response to questioning, and interpersonal style while giving evidence.
(Use the back of this page if you run out of space below)

9. Please rate how you believe the defendant was feeling during the trial:

Drowsy

Alert

Tense

Relaxed

Calm

Excited

Strong

Feeble

Muzzy

Clear-headed

Well-coordinated

Clumsy

Lethargic

Energetic

Contented

Discontented

Troubled

Tranquil

10. To what extent do you think the defendant's health condition may have affected his behaviour in the witness box?

Not at all

Somewhat

Extremely

☐☐☐☐☐☐☐☐☐

If you wish, add any brief comments you like about *how* it could have affected his behaviour.

11. To what degree did you view the defendant as having a mental health condition?

Not at all

Somewhat

Extremely

☐☐☐☐☐☐☐☐☐

If you wish, briefly explain what lead you to this conclusion.

Appendix 5 Script for court case

Court Radio

Judge Lowrie's Associate: The District Court of South Australia commencing in the trial of The Queen against James Rodney Matheson.

Mr Cole: My name's Cole, and I appear for the Crown.

Judge Lowrie: Thanks, Mr Cole.

Miss Mealor: If it please Your Honour, my name's Mealor, and I appear for the accused.

Judge Lowrie: Thank you, Miss Mealor.

Woman: James Rodney Matheson, you stand charged with possessing cannabis for sale. Particulars of the offence alleged against you are that on the 12th May 1996 at Aldinga Beach, you knowingly had cannabis, a prohibited substance, in your possession for the purpose of selling it to another person, the amount of cannabis being in excess of two kilograms.

How say you? Are you guilty, or not guilty?

James Matheson: Not guilty.

Woman: Members of the jury, the accused James Rodney Matheson stands charged with possessing cannabis for sale, and upon this he has been arraigned, and upon his arraignment has pleaded not guilty and put himself upon his country, which country you are.

Your charge therefore is to inquire whether he be guilty or not guilty, and harken unto the evidence.

Madame Crown Prosecutor, the accused is in the charge of the jury.

Judge Lowrie: Thank you.

Yes, Miss Mealor.

Miss Mealor: Thankyou your Honour. In this case the accused will be giving evidence as he's the only defence witness, and without further ado, I call the accused.

Judge Lowrie: Thank you. Thank you, Mr Matheson.....

Miss Mealor:...and what level of education did you achieve?

James Matheson: Sixth grade. I had to repeat sixth grade about four times.

Miss Mealor: Right. Before we go on, without wanting to sound rude, can you read and write?

James Matheson: Not at all well. I bluff my way through it and skip words everywhere, and if it makes any sense to me, it's all right.

Miss Mealor: Do you get unemployment benefits now, or some other sort of pension.

James Matheson: No, I'm on a disability pension.

Miss Mealor: Why do you get a disability pension?

James Matheson: Oh, I've got lower-half back injuries, knee, upper-half back injuries, and my reading and writing, people just don't want to hire me.

Section for Bipolar I Disorder condition

Miss Mealor: It is my understanding that you are also suffering from Bipolar I disorder, is that correct?

James Matheson: Yeah. I've had it for years now, it's pretty bad.

Miss Mealor: Bipolar I disorder can be described as a condition, probably involving some kind of biochemical imbalance, in which a person suffers from extreme highs and lows in moods, is that correct?

James Matheson: yeah, pretty much.

Miss Mealor: Would it be correct to say that sometimes you may be too pessimistic, negative, and lethargic...

James Matheson: Mmm

Miss Mealor: While other days you may be too optimistic, positive, and energetic?
James Matheson: Yeah...sometimes I feel real down and lack confidence, like you said, and it can go on for days, while at other times my mood can change to being very positive, confident, and even overexcited or agitated. Doesn't really make sense to me, but it's just the way that I am.

Section for Post-traumatic Stress Disorder condition

Miss Mealor: It is my understanding that you are also suffering from Post-traumatic stress disorder, is that correct?

James Matheson: Yeah. I've had it for years now, it's pretty bad.

Miss Mealor: Post-traumatic stress disorder can be described as a condition that occurs when a person experiences a traumatic event, in which they experience or witness actual or threatened death, serious injury or a threat to themselves or others; and in which the person's reaction to these events is one of fear, horror or helplessness. Is that correct?

James Matheson: Yeah.

Miss Mealor: And it affects parts of the brain that store and retrieve memories, which means that a person with Post-traumatic stress disorder can persistently relive the event in their mind, despite actively trying to avoid any reminders of the experience. As a result of what has happened, a person may also experience numbness and feel less involved in the world around them, is that correct?

James Matheson: yeah, pretty much. I get like flashbacks in dreams, and sometimes during the day, and yeah, just kind of feel detached from things around me.

Section for Diabetes condition

Miss Mealor: It is my understanding that you are also suffering from Type 1 diabetes, is that correct?

James Matheson: Yeah. I've had it for years now, it's pretty bad.

Miss Mealor: Type 1 Diabetes can be described as an autoimmune disease in which a person's body cannot process sugar and send it to the muscles normally, so that it builds up in the bloodstream and can cause damage to important organs of the body, is that correct?

James Matheson: yeah, pretty much.

Miss Mealor: There are a number of symptoms that a person suffering poorly controlled diabetes can experience. They include thirst, weight loss, dry, itchy skin, slow healing sores, loss of feeling, or tingling in the feet, blurry eyesight, excessive urination, as well as hunger and fatigue. Do you experience any of these?

James Matheson: Yeah, some of them – can you see this cut on my arm...it's taking ages to get better, and that's always the case. My skin is also pretty bad, and yeah, I have some of the others as well.

Miss Meador: I see. You're a, apparently a user of cannabis.

James Matheson: Have been for many years.

Miss Meador: When did you start smoking cannabis?

James Matheson: 1966.

Miss Meador: How old were you then?

James Matheson: Approximately 15, 16.

Miss Meador: How do you smoke cannabis?

James Matheson: Bong, cigarette papers, you name it, I smoke it.

Miss Meador: It would appear from the record of interview that you admit to growing some plants.

James Matheson: Yes.

Miss Meador: And how long have you been growing cannabis?

James Matheson: Last 20, over - in excess of 25 years, thereabouts.

Miss Meador: What's been the purpose of growing it?

James Matheson: I grow it for me own personal use.

Miss Meador: And in the past, how have you grown it, inside the premises or outside.

James Matheson: Outside.

Miss Meador: Have you ever grown cannabis inside?

James Matheson: No.

Miss Meador: Have you ever used a hydroponic system to grow cannabis?

James Matheson: No.

Miss Meador: The police found a number of packets of seeds. Have you been collecting seeds over a period of time?

James Matheson: I've collected seeds for the last 20-odd years.

Miss Mealor: You've seen the seeds, or the packets of seeds that have been taken by the police.

James Matheson: Yes.

Miss Mealor: You agree that those are all the seeds that were taken, or were there any seeds -

James Matheson: No. The seeds that I've been working on- basically, are not here. One in a film container should be NZ on top, which is a New Zealand variety of seed which are not in that display of seeds.

Miss Mealor: And I think another one - there's paper with the writing "Trentham Purple"?

James Matheson: Yes, that's one of the varieties I bred. It's not green like normal, it's actually deep purple.

Miss Mealor: So is that a strain that you believe you've produced.

James Matheson: I know its parentage, so yes.

Miss Mealor: And this backyard, is it set up as a garden or what?

James Matheson: Well it's sort of like a jungle more or less.

Miss Mealor: Did you have any irrigation system set up.

James Matheson: No.

Miss Mealor: So what, you watered it just with a hose?

James Matheson: I watered them with bucket, because I mix other things in a bucket.

Miss Mealor: Well anyway, when you put these five seedlings, you planted them outside

James Matheson: Yes.

Miss Mealor: - do they get to a certain point where you can sex them and work out which are the males and which are the females?

James Matheson: Yes. Eight to twelve weeks you can normally sex a plant. With a magnifying glass.

Miss Mealor: And what was the conclusion you came to after sexing the plants?

James Matheson: I had three females, two males.

Miss Mealor: So what did you do then?

James Matheson: Nothing. Sat back and let them grow. Waited until they flowered.

Miss Mealor: What did you do then?

James Matheson: Well I take the pollen off the particular male I want, which is normally the biggest and the strongest of the two, fertilize- like your bud may be that round, and yea long. So you get a paper bag, put the pollen in --

Miss Mealor: So that's the pollen from the male plant?

James Matheson: Yes. Slide it over the top, and hook it up with a rubber band and give it a shake.

Miss Mealor: And what's the idea of this cross pollinating?

James Matheson: Well if I've got three different plants, from three different countries of the world, I can get them all on the one parentage.

Miss Mealor: The one that was found outside, the policeman gave some evidence, what was the closest strain that could be related to?

James Matheson: Thai Buddah.

Miss Mealor: And he talked of seeing a silver glow on it, I think he said.

James Matheson: That's correct, looked like a silver Christmas tree, like somebody'd spray painted it.

Miss Mealor: In your record of interview, you mentioned something about modifying the plants and working hard to promote good growth

James Matheson: Yes.

Miss Mealor: And is it your understanding, that you can have some sort of influence on the crop that you produce?

James Matheson: Yes.

Miss Mealor: What sort of things do you do to promote good, healthy growth in your plants?

James Matheson: I mix up a special fertilizer, made of ingredients that are good for the plant, things that help produce a good quality cannabis.

Miss Meador: And are these ingredients that you actually dig into the ground round the plants?

James Matheson: No, I actually ferment them and pour them on in a liquid form.

Miss Meador: Right. So you make it into like a liquid fertilizer?

James Matheson: Yes.

Miss Meador: And then you pour it around the base of the plant.

James Matheson: That's correct.

Miss Meador: And do you believe that that is absorbed by the root system?

James Matheson: It does.

Miss Meador: Right. And it goes into the plant and can change the plant.

James Matheson: Enhance certain characteristics of a plant.

Miss Meador: Right. And how long have you been doing that sort of thing?

James Matheson: About 20-odd years.

Miss Meador: When you pick it, it's described as being wet, is that the suggestion?

James Matheson: Correct.

Miss Meador: And then when you dry it, from your experience and from what you understand, does it lose weight?

James Matheson: It does.

Miss Meador: What does it dry down to, using a fraction?

James Matheson: Explain fraction.

Miss Meador: Well say you've got a unit of cannabis, of wet cannabis that you've just picked.

James Matheson: Well if I got a pound of it.

Miss Mealor: What are you left with when it dries?

James Matheson: A quarter and under.

Miss Mealor: So it gets down to - are you saying it gets down to a quarter of the original weight?

James Matheson: That's correct. And by the time you take the leaf and the stems out, you can be well below a quarter again.

Miss Mealor: Of the cannabis that was found in the spare bedroom, which was the whole lot from the two plants, was 4.2 kilograms.

James Matheson: Yes.

Miss Mealor: After drying it, would that get it down to about 1 kilogram?

James Matheson: It would, or less.

Miss Mealor: Right. And after removing the twigs and stalk and whatever, and leaf, what do you reckon you'd end up with after one kilogram of dry?

James Matheson: At the most, probably 700 grammes.

Miss Mealor: You've told us that this cannabis that you had harvested, plus you had the third plant that was growing outside -

James Matheson: Yes.

Miss Mealor: How long's it going to last you?

James Matheson: All year. It would do me until June next year.

Miss Mealor: And can you say with a supply of cannabis, how much cannabis you'd smoke a week, say?

James Matheson: Some weeks I may smoke an ounce, and some other weeks I may not even have a smoke at all.

Miss Mealor: This cannabis that you were growing, was that for your own use?

James Matheson: Yes.

Miss Mealor: Did you have any intention of supplying anyone with that cannabis?

James Matheson: No.

Miss Mealor: Back in May of this year, did you own a motor car?

James Matheson: No.

Miss Mealor: Did you have any money in the bank at all?

James Matheson: No.

Miss Mealor: At any time, Mr Matheson, did you intend to sell any of the cannabis that you harvested from any of the three plants?

James Matheson: No.

Miss Mealor: No other questions.

Judge Lowrie: Thank you.

Judge Lowrie: Yes, Mr Cole

Mr Cole: Thank you, Your Honour. Now the cannabis the police found that was in the bedroom, it had only really just started drying?

James Matheson: It wouldn't have even had a chance to get the dew off.

Mr Cole: But you agree, don't you, Mr Matheson, that if you'd kept all that cannabis, and the police hadn't taken it, and you'd dried that cannabis -

James Matheson: Yes.

Mr Cole: - chucked out the stalks -

James Matheson: Yes.

Mr Cole: - you'd have still been left with a very large quantity of cannabis, wouldn't you?

James Matheson: Probably would have had round about 700 grammes.

Mr Cole: But you can't be sure about the weight --

James Matheson: No, nobody can. Not even the botanist who examined it can be so sure of what it finishes up as.

Mr Cole: That's right. So in fact, all of that cannabis, once dried, could have been considerably more than 700 grammes, couldn't it?

James Matheson: It could have been; it could have been considerably less too, on the other hand.

Mr Cole: And again, the Thai Buddah plant that was still growing, was that bigger or smaller than the two plants that were hanging in the bedroom?

James Matheson: About the same size.

Mr Cole: If that plant had stayed at your house, and you'd harvested the Thai Buddha plant from the backyard, and you dried it all, got rid of the stems, again you'd have been left with a pretty large quantity of cannabis, wouldn't you?

James Matheson: Possibly, yes.

Mr Cole: That would have lasted you for several years, wouldn't it?

James Matheson: What?

Mr Cole: Well how long do you say that cannabis would have lasted you?

James Matheson: Twelve months, if that. Depends on how many times the police drop in for a visit.

Mr Cole: You smoke cannabis with your friends and your acquaintances, don't you?

James Matheson: Not normally.

Mr Cole: If you were at a friend's house, and he had some cannabis --

James Matheson: Yes.

Mr Cole: Probably offer you some, wouldn't he?

James Matheson: Anything is possible.

Mr Cole: And similarly, if you'd had a friend at your house, you might say, 'Got my bong going, have some of mine.'

James Matheson: Oh yeah? Not a wise idea. Not if you want to keep the plants in the ground, you don't bother, otherwise you'll find there'll be somebody coming over the back fence, and you'll have no plants.

Mr Cole: But are you saying, Mr Matheson, that you've never ever given a friend some of your cannabis?

James Matheson: No, don't think so, not a wise idea.

Mr Cole: You're pretty proud of what you've done, and the plants that you've grown over the last 20 years or so, aren't you?

James Matheson: I enjoy what I've produced.

Mr Cole: I mean you were pretty happy to boast about what you were doing to the police when they interviewed you, weren't you?

James Matheson: If you seen the state I was in, I didn't even know what I'd said to the police. I had to wait for the record of interview before I knew what I'd told them.

Mr Cole: As you've already said, over the years when your supply runs out, you end up having to buy cannabis, don't you?

James Matheson: Yes.

Mr Cole: And it's expensive.

James Matheson: Not half as expensive as the police reckon.

Mr Cole: He said that a gramme of cannabis, cannabis head, costs between \$20 and \$40. If you just accept that for a moment, I appreciate you don't agree with it.

James Matheson: I don't agree with it.

Mr Cole: But that's an expensive substance to buy, isn't it?

James Matheson: It is. Well, it's no different to a dozen bottles of beer, basically.

Mr Cole: Well if I'd taken all that cannabis from your bedroom, and I'd gone down to Hindley Street, or Rundle Street, and I'd sold it all, you'd agree I'd have made an awful lot of money from the cannabis in your bedroom, wouldn't I? You don't deny that, do you?

James Matheson: No, I won't deny that.

Mr Cole: And because it's expensive to buy, that's one of the reasons you grow it, isn't it?

James Matheson: That's right.

Mr Cole: Correct?

James Matheson: Yes.

Mr Cole: Because you don't have a whole lot of extra money to throw around, do you?

James Matheson: No.

Mr Cole: And yet you still maintain, do you, that you wouldn't have tried to sell even a gramme of that cannabis in your bedroom once it was dry.

James Matheson: Well otherwise I wind up in a place like this, don't I? If I tried that stunt.

Mr Cole: Just answer the question Mr Matheson, yes or no?

James Matheson: No.

Mr Cole: But you were quite happy to buy it, weren't you, when you needed it?

James Matheson: Yes well I don't get in so much trouble that way.

Mr Cole: And yet you never thought, take an ounce or so of that cannabis, go down to Rundle Street, Hindley Street one day, and sell it off, make a bit of money on the side?

James Matheson: No.

Mr Cole: Never entered your mind.

James Matheson: No. I don't want to get done for dealing, thank you.

Mr Cole: But you're happy to be "done" for producing?

James Matheson: Oh, I don't mind possession.

Mr Cole: So if you'd kept all that cannabis, and you'd dried it, and a friend of yours had come over to you and said 'Look, I'm short, haven't got any cannabis, how about I buy an ounce off you?' What would you have said?

James Matheson: No, go away.

Mr Cole: You'd never ever ever attempted to grow plants indoors, is that right?

James Matheson: That's right. Stuff from indoors has chemical residues, it's full of chemicals, so why smoke that?

Mr Cole: You said that you'd bought the light and transformer in 1994 in Melbourne.

James Matheson: Yes.

Mr Cole: Did you ever use it to grow anything, Mr Matheson?

James Matheson: Oh I grew a couple of lettuces. I didn't find it particularly at all well, because I burnt everything.

Mr Cole: So if that's the case, if you hadn't worked, and you burnt everything, why bring it all the way to South Australia with you, two years later?

James Matheson: Because I was going to modify it.

Mr Cole: You've told us that you don't have much money, correct?

James Matheson: Correct.

Mr Cole: You had a lot of cannabis at your house, didn't you?

James Matheson: Yes.

Mr Cole: In the months leading up to the police attending at your house, you'd bought cannabis on several occasions, hadn't you?

James Matheson: Yes.

Mr Cole: You know where you can buy cannabis, don't you?

James Matheson: That's very easy, yes, any 15-year-old kid will sell that to you.

Mr Cole: And yet you still maintain, do you Mr Matheson, that it never entered your head that you might sell even a gram of the cannabis in that bedroom once it was dry?

James Matheson: I use that as medication.

Mr Cole: No further questions.

Ms Mealor: I would like to re-examine the witness, Your Honour. You said that you receive a disability pension, correct?

James Matheson: Yeah, like I said I have some injuries that mean I get a disability pension every fortnight, cos it is pretty hard for me to get a job in my condition.

Ms Mealor: Now, that pension money cannot be a real lot.

James Matheson: Well not compared to you lawyers, I imagine, but I have enough to live. I don't live an extravagant life – I don't have a car or anything, but I don't really need one. I always manage to get where I wanna go, and do what I wanna do.

Ms Mealor: So, would it be right to say that, as far as you are concerned, and contrary to what the Crown would lead us to believe, you are not actually in desperate need of money?

James Matheson: No, I'm quite happy the way I am thank you very much. I have everything I need.

Ms Mealor: No further questions

Judge Lowrie: Thank you, Mr. Matheson; you may step down from the witness stand.

Judge: My remarks will be very brief to you. This man of course, when the charge was read out, was charged with possessing cannabis for sale, so the Crown have taken you through those elements they have to prove. He knowingly admitted he had it, it was cannabis, he admitted it was; in any event we had the forensic expert saying he examined both what was found in the bedroom and the plant, and it was the genus cannabis. It was a prohibited substance. He's charged here with a breach of what we call our Controlled Substances Act. I won't take you through it, but as has been admitted, one of those substances which is prohibited is cannabis in that Act. And really, why we're here is to find that (whether) he had this cannabis for the purpose of selling it.

As you've heard both Counsel comment, this Act's a little bit different to a lot of Acts. There's an unusual situation because it has a deeming provision. And what that says is a person who has in his possession more than the proscribed amount of a prohibited substance in the absence of proof to the contrary, is deemed to have that in his or her possession for the purpose of sale. So what that does, of course, once the Crown has established that person had this quantity of this prohibited substance, if it's more than the proscribed amount, and the proscribed amount as you've been told, is 100 grammes, then the onus is on that person to prove to you that they didn't have it for sale. That's an onus that Mr Matheson has, and which he's undertaken, and the proof there, as you've heard comment upon by Counsel, it's not the same degree as beyond reasonable doubt, but if you accept that it's more likely than not that he had it for his own use, then simply he's discharged that onus.

Really the two things here: one's the size, because the Act says 100 grammes, anything more than that he's deemed to be having it for sale; and when this was tested, this green matter, it was over 4,000 grammes - 4 kilogrammes. So we've got that large quantity, plus its value. The only inference you can draw really is that he had it for sale.

But then the Defendant gave evidence. The thread of that evidence is much the same as his interview.. on his background, on his habitual use with this drug, his long experience with growing it, and indeed he's obviously got a great interest, no doubt it's his hobby, this plant. His own method of growing it and those very forthright admissions about growing it, keeping several, looking for females - and here admitting of course he had three plants - one still in the garden, two that he'd harvested, and indeed his only purpose was that was for himself and denying quite specifically that he was proposing to sell a gramme of it. It was as was his past, it was for his own use.

But as I say if you accept his evidence, or sufficient of it to say 'Well I believe it's more likely than not that he had this for his own use,' bearing in mind that's what he maintained to the police in that long interview when clearly his faculties were not quite as sharp as what they were in Court, well that's sufficient to satisfy the onus.

However if you find his evidence totally unsatisfactory, and if indeed you accept what the Crown have said, well then that would mean of course he hasn't discharged the onus. But it's a factual matter, and factual matters are for you, not for me.

As has been mentioned to you, if you reach that stage and say 'I find the Accused not guilty of possessing for sale' you will then be asked the further question, 'Do you find the Accused guilty of simple possession?' and as his Counsel has said, on his own evidence, I think the foreperson would have to say, 'Yes, we do.'

Well, ladies and gentlemen, would you mind; you'll be able to take into the Jury Room the exhibits to assist you in your deliberations. I ask that you retire.

Appendix B: SPSS Output

- B1 Descriptive statistics for ratings of dependent variables across independent variables
- B2 Frequency and means analysis for ratings of intent
- B3 MANOVA analysis for effects of health and lawyer/defendant speech rates on cooperativeness, likeability and credibility
- B4 MANOVA analysis for manipulation checks
- B5 MANOVA for intent data
- B6 MANOVA for effect of convergence and divergence on ratings of cooperativeness and likeability
- B7 Hierarchical Log linear analysis on verdict

B1 Descriptive statistics for ratings of dependent variables across independent variables

Means

Coop Like Cred * Health

Health		Coop	Like	Cred
B	Mean	7.80	5.76	6.05
	N	66	66	66
	Std. Deviation	1.126	1.560	1.668
D	Mean	7.33	5.75	5.10
	N	60	60	60
	Std. Deviation	1.398	1.928	1.811
P	Mean	7.57	5.17	5.12
	N	60	60	60
	Std. Deviation	1.320	2.027	2.100
Total	Mean	7.58	5.56	5.44
	N	186	186	186
	Std. Deviation	1.289	1.851	1.906

Coop Like Cred * Law speed

Law speed		Coop	Like	Cred
LF	Mean	7.75	5.81	5.57
	N	89	89	89
	Std. Deviation	1.080	1.796	1.864
LS	Mean	7.41	5.34	5.32
	N	97	97	97
	Std. Deviation	1.442	1.881	1.945
Total	Mean	7.58	5.56	5.44
	N	186	186	186
	Std. Deviation	1.289	1.851	1.906

Coop Like Cred * Def speed

Def speed		Coop	Like	Cred
DF	Mean	7.80	5.73	5.65
	N	66	66	66
	Std. Deviation	1.084	1.973	2.116
DN	Mean	7.53	5.63	5.45
	N	60	60	60
	Std. Deviation	1.334	1.822	1.702
DS	Mean	7.37	5.32	5.20
	N	60	60	60
	Std. Deviation	1.426	1.742	1.858
Total	Mean	7.58	5.56	5.44
	N	186	186	186
	Std. Deviation	1.289	1.851	1.906

B2 Frequency and means analysis for ratings of intent

Frequencies

Statistics

ConInt(0)/Ex(1)balanced(2)

N	Valid	126
	Missing	0

ConInt(0)/Ex(1)balanced(2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	28	22.2	22.2	22.2
	1	71	56.3	56.3	78.6
	2	27	21.4	21.4	100.0
	Total	126	100.0	100.0	

Means

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
ConvCoop *	126	100.0%	0	0%	126	100.0%
ConInt(0)/Ex(1)balanced(2)						
ConvLike *	126	100.0%	0	.0%	126	100.0%
ConInt(0)/Ex(1)balanced(2)						

Report

ConInt(0)/Ex(1)balanced(2)		ConvCoop	ConvLike
0	Mean	7.68	5.32
	N	28	28
	Std. Deviation	1.156	2.074
1	Mean	7.48	5.63
	N	71	71
	Std. Deviation	1.263	1.884
2	Mean	7.81	6.19
	N	27	27
	Std. Deviation	1.415	1.688
Total	Mean	7.60	5.68
	N	126	126
	Std. Deviation	1.272	1.896

B3 MANOVA analysis for effects of health and lawyer/defendant speech rates on cooperativeness, likeability and credibility

General Linear Model

Between-Subjects Factors		
		N
Health	B	66
	D	60
	P	60
Law speed	LF	89
	LS	97
Def speed	DF	66
	DN	60
	DS	60

Multivariate Tests ^c		Value	F	Hypothesis df	Error df	Sig
Effect						
Intercept	Pillai's Trace	.977	2347.711 ^a	3 000	166.000	.000
	Wilks' Lambda	.023	2347.711 ^a	3 000	166 000	.000
	Hotelling's Trace	42.429	2347.711 ^a	3.000	166 000	.000
	Roy's Largest Root	42.429	2347.711 ^a	3.000	166 000	.000
Health	Pillai's Trace	.107	3 147	6 000	334 000	.005
	Wilks' Lambda	.896	3 139 ^a	6.000	332 000	.005
	Hotelling's Trace	.114	3 132	6 000	330.000	.005
	Roy's Largest Root	.078	4.317 ^b	3 000	167.000	.006
Lawspeed	Pillai's Trace	.033	1.877 ^a	3.000	166.000	.135
	Wilks' Lambda	.967	1.877 ^a	3.000	166 000	.135
	Hotelling's Trace	.034	1.877 ^a	3.000	166.000	.135
	Roy's Largest Root	.034	1.877 ^a	3 000	166.000	.135
Defspeed	Pillai's Trace	.026	.737	6 000	334 000	.620
	Wilks' Lambda	.974	.736 ^a	6 000	332.000	.621
	Hotelling's Trace	.027	.735	6 000	330.000	.622
	Roy's Largest Root	.024	1 360 ^b	3 000	167 000	.257
Health * Lawspeed	Pillai's Trace	.096	2.817	6 000	334 000	.011
	Wilks' Lambda	.904	2.860 ^a	6 000	332 000	.010
	Hotelling's Trace	.106	2 901	6 000	330.000	.009
	Roy's Largest Root	.100	5.580 ^b	3 000	167.000	.001
Health * Defspeed	Pillai's Trace	.068	.978	12.000	504 000	.469
	Wilks' Lambda	.932	.984	12 000	439 486	.464
	Hotelling's Trace	.072	.989	12.000	494 000	.459
	Roy's Largest Root	.063	2.641 ^b	4.000	168 000	.036
Lawspeed * Defspeed	Pillai's Trace	.019	.542	6.000	334 000	.776
	Wilks' Lambda	.981	.541 ^a	6 000	332.000	.777
	Hotelling's Trace	.020	.540	6.000	330 000	.778
	Roy's Largest Root	.018	1.013 ^b	3.000	167 000	.388
Health * Lawspeed * Defspeed	Pillai's Trace	.084	1.203	12.000	504.000	.277
	Wilks' Lambda	.918	1.206	12 000	439 486	.276
	Hotelling's Trace	.088	1.206	12.000	494.000	.275
	Roy's Largest Root	.066	2.774 ^b	4 000	168.000	.029

b The statistic is an upper bound on F that yields a lower bound on the significance level c Design Intercept + Health + Lawspeed + Defspeed + Health * Lawspeed + Health * Defspeed + Lawspeed * Defspeed + Health * Lawspeed * Defspeed

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Coop	55.724 ^a	17	3.278	2.188	.006
	Like	84.617 ^b	17	4.977	1.523	.092
	Cred	118.058 ^c	17	6.945	2.107	.009
Intercept	Coop	10490.735	1	10490.735	7001.541	.000
	Like	5657.335	1	5657.335	1730.864	.000
	Cred	5377.456	1	5377.456	1631.321	.000
Health	Coop	6.057	2	3.028	2.021	.136
	Like	13.405	2	6.702	2.051	.132
	Cred	34.487	2	17.243	5.231	.006
Lawspeed	Coop	6.767	1	6.767	4.516	.035
	Like	11.985	1	11.985	3.667	.057
	Cred	4.918	1	4.918	1.492	.224
Defspeed	Coop	5.642	2	2.821	1.883	.155
	Like	5.656	2	2.828	.865	.423
	Cred	5.011	2	2.505	.760	.469
Health * Lawspeed	Coop	9.173	2	4.587	3.061	.049
	Like	30.734	2	15.367	4.702	.010
	Cred	47.277	2	23.639	7.171	.001
Health * Defspeed	Coop	14.923	4	3.731	2.490	.045
	Like	13.264	4	3.316	1.014	.401
	Cred	12.106	4	3.026	.918	.455
Lawspeed * Defspeed	Coop	.402	2	.201	.134	.874
	Like	3.291	2	1.646	.503	.605
	Cred	4.430	2	2.215	.672	.512
Health * Lawspeed * Defspeed	Coop	12.292	4	3.073	2.051	.090
	Like	6.627	4	1.657	.507	.731
	Cred	7.549	4	1.887	.573	.683
Error	Coop	251.722	168	1.498		
	Like	549.109	168	3.269		
	Cred	553.792	168	3.296		

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Coop	55.724 ^a	17	3.278	2.188	.006
	Like	84.617 ^b	17	4.977	1.523	.092
	Cred	118.058 ^c	17	6.945	2.107	.009
Intercept	Coop	10490.735	1	10490.735	7001.541	.000
	Like	5657.335	1	5657.335	1730.864	.000
	Cred	5377.456	1	5377.456	1631.321	.000
Health	Coop	6.057	2	3.028	2.021	.136
	Like	13.405	2	6.702	2.051	.132
	Cred	34.487	2	17.243	5.231	.006
Lawspeed	Coop	6.767	1	6.767	4.516	.035
	Like	11.985	1	11.985	3.667	.057
	Cred	4.918	1	4.918	1.492	.224
Defspeed	Coop	5.642	2	2.821	1.883	.155
	Like	5.656	2	2.828	.865	.423
	Cred	5.011	2	2.505	.760	.469
Total	Coop	10981.000	186			
	Like	6393.000	186			
	Cred	6178.000	186			
Corrected Total	Coop	307.446	185			
	Like	633.726	185			
	Cred	671.849	185			

a. R Squared = .181 (Adjusted R Squared = .098)

b. R Squared = .134 (Adjusted R Squared = .046)

c. R Squared = .176 (Adjusted R Squared = .092)

Estimated Marginal Means

1. Health

Dependent Variable	Health	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Coop	B	7.776	.153	7.473	8.079
	D	7.333	.158	7.021	7.645
	P	7.567	.158	7.255	7.879
Like	B	5.735	.226	5.288	6.182
	D	5.750	.233	5.289	6.211
	P	5.167	.233	4.706	5.627
Cred	B	6.018	.227	5.569	6.467
	D	5.100	.234	4.637	5.563
	P	5.117	.234	4.654	5.579

4. Health * Law speed

Dependent Variable	Health	Law speed	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Coop	B	LF	7.752	.228	7.303	8.201
		LS	7.800	.205	7.395	8.205
	D	LF	7.433	.223	6.992	7.875
		LS	7.233	.223	6.792	7.675
	P	LF	8.067	.223	7.625	8.508
		LS	7.067	.223	6.625	7.508
Like	B	LF	5.552	.336	4.888	6.215
		LS	5.919	.303	5.320	6.518
	D	LF	5.900	.330	5.248	6.552
		LS	5.600	.330	4.948	6.252
	P	LF	5.967	.330	5.315	6.618
		LS	4.367	.330	3.715	5.018

4. Health * Law speed

Dependent Variable	Health	Law speed	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Coop	B	LF	7.752	.228	7.303	8.201
		LS	7.800	.205	7.395	8.205
Cred	B	LF	5.793	.338	5.126	6.459
		LS	6.244	.305	5.642	6.845
	D	LF	4.933	.331	4.279	5.588
		LS	5.267	.331	4.612	5.921
	P	LF	6.000	.331	5.346	6.654
		LS	4.233	.331	3.579	4.888

Post Hoc Tests

Health

Multiple Comparisons

Tukey HSD

Dependent Variable	(I)	(J) Health Health	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Coop	B	D	.47	.218	.083	-.05	.99
		P	.24	.218	.526	-.28	.75
	D	B	-.47	.218	.083	-.99	.05
		P	-.23	.223	.550	-.76	.30
	P	B	-.24	.218	.526	-.75	.28
		D	.23	.223	.550	-.30	.76
Like	B	D	.01	.322	1.000	-.76	.77
		P	.59	.322	.162	-.17	1.35
	D	B	.00	.322	1.000	-.77	.76
		P	.58	.330	.184	-.20	1.36
	P	B	-.59	.322	.162	-1.35	.17
		D	-.58	.330	.184	-1.36	.20
Cred	B	D	.95*	.324	.011	.18	1.71
		P	.93*	.324	.013	.16	1.69
	D	B	-.95*	.324	.011	-1.71	-.18
		P	-.02	.331	.999	-.80	.77
	P	B	-.93*	.324	.013	-1.69	-.16
		D	.02	.331	.999	-.77	.80

Based on observed means.

The error term is Mean Square(Error) = 3.296.

* The mean difference is significant at the .05 level.

B4 MANOVA analysis for manipulation checks

General Linear Model

Between-Subjects Factors		
		N
Health	B	65
	D	60
	P	60
Law speed	LF	89
	LS	96
Def speed	DF	66
	DN	59
	DS	60

Multivariate Tests ^c						
Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.935	466.902 ^a	5.000	163.000	.000
	Wilks' Lambda	.065	466.902 ^a	5.000	163.000	.000
	Hotelling's Trace	14.322	466.902 ^a	5.000	163.000	.000
	Roy's Largest Root	14.322	466.902 ^a	5.000	163.000	.000
Health	Pillai's Trace	.068	1.155	10.000	328.000	.321
	Wilks' Lambda	.933	1.148 ^a	10.000	326.000	.326
	Hotelling's Trace	.070	1.141	10.000	324.000	.331
	Roy's Largest Root	.037	1.228 ^b	5.000	164.000	.298
Law speed	Pillai's Trace	.030	1.021 ^a	5.000	163.000	.407
	Wilks' Lambda	.970	1.021 ^a	5.000	163.000	.407
	Hotelling's Trace	.031	1.021 ^a	5.000	163.000	.407
	Roy's Largest Root	.031	1.021 ^a	5.000	163.000	.407
Def speed	Pillai's Trace	.058	.987	10.000	328.000	.454
	Wilks' Lambda	.942	.986 ^a	10.000	326.000	.455
	Hotelling's Trace	.061	.985	10.000	324.000	.456
	Roy's Largest Root	.048	1.577 ^b	5.000	164.000	.169
Health *	Pillai's Trace	.044	.731	10.000	328.000	.696
Law speed	Wilks' Lambda	.957	.728 ^a	10.000	326.000	.698
	Hotelling's Trace	.045	.726	10.000	324.000	.700

Multivariate Tests^c

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.935	466.902 ^a	5 000	163 000	.000
	Wilks' Lambda	.065	466.902 ^a	5 000	163 000	.000
	Hotelling's Trace	14.322	466.902 ^a	5 000	163 000	.000
	Roy's Largest Root	14.322	466.902 ^a	5 000	163 000	.000
Health	Pillai's Trace	.068	1 155	10.000	328 000	.321
	Wilks' Lambda	.933	1 148 ^a	10 000	326 000	.326
	Hotelling's Trace	.070	1 141	10 000	324 000	.331
	Roy's Largest Root	.037	1 228 ^b	5.000	164 000	.298
Lawspeed	Pillai's Trace	.030	1 021 ^a	5.000	163 000	.407
	Wilks' Lambda	.970	1 021 ^a	5 000	163 000	.407
	Hotelling's Trace	.031	1 021 ^a	5 000	163 000	.407
	Roy's Largest Root	.033	1 096 ^b	5 000	164 000	.365
Health * Defspeed	Pillai's Trace	.155	1.342	20 000	664 000	.145
	Wilks' Lambda	.852	1.344	20 000	541 560	.145
	Hotelling's Trace	.166	1.341	20 000	646 000	.146
	Roy's Largest Root	.096	3 177 ^b	5.000	166 000	.009
Lawspeed * Defspeed	Pillai's Trace	.065	1.098	10.000	328 000	.363
	Wilks' Lambda	.936	1 095 ^a	10 000	326 000	.365
	Hotelling's Trace	.067	1 092	10 000	324 000	.367
	Roy's Largest Root	.050	1.628 ^b	5 000	164 000	.155
Health * Lawspeed * Defspeed	Pillai's Trace	.084	.714	20 000	664 000	.814
	Wilks' Lambda	.918	.709	20 000	541 560	.819
	Hotelling's Trace	.087	.705	20 000	646 000	.823
	Roy's Largest Root	.047	1.575 ^b	5.000	166 000	.170

a. Exact statistic

b. The statistic is an upper bound on F that yields a lower bound on the significance level

c. Design: Intercept + Health + Lawspeed + Defspeed + Health * Lawspeed + Health * Defspeed + Lawspeed * Defspeed + Health * Lawspeed * Defspeed

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Accent	35.992 ^a	17	2.117	.725	.774

	Speech sn	46.098 ^b	17	2.712	1.073	.384
	volume	60.114 ^c	17	3.536	1.213	.259
	health	94.160 ^d	17	5.539	1.292	.203
	affected					
	mental cond	52.683 ^e	17	3.099	.726	.773
Intercept	Accent	2160.264	1	2160.264	739.619	.000
	Speech sn	2253.648	1	2253.648	892.009	.000
	volume	2864.412	1	2864.412	982.580	.000
	health	3265.954	1	3265.954	762.014	.000
	affected					
	mental cond	2573.376	1	2573.376	602.866	.000
Health	Accent	6.547	2	3.274	1.121	.328
	Speech sn	6.205	2	3.102	1.228	.296
	volume	3.020	2	1.510	.518	.597
	health	14.626	2	7.313	1.706	.185
	affected					
	mental cond	20.350	2	10.175	2.384	.095
Lawspeed	Accent	.694	1	.694	.238	.626
	Speech sn	4.531	1	4.531	1.793	.182
	volume	1.748	1	1.748	.600	.440
	health	6.412	1	6.412	1.496	.223
	affected					
	mental cond	.113	1	.113	.026	.871
Defspeed	Accent	3.414	2	1.707	.584	.559
	Speech sn	8.613	2	4.307	1.705	.185
	volume	8.015	2	4.007	1.375	.256
	health	20.063	2	10.031	2.341	.099
	affected					
	mental cond	9.645	2	4.823	1.130	.326
Health * Lawspeed	Accent	1.131	2	.565	.194	.824
	Speech sn	2.598	2	1.299	.514	.599
	volume	9.994	2	4.997	1.714	.183
	health	4.688	2	2.344	.547	.580
	affected					
	mental cond	2.806	2	1.403	.329	.720
Health * Defspeed	Accent	9.339	4	2.335	.799	.527

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Accent	35.992 ^a	17	2.117	.725	.774
	Speech sn	46.098 ^b	17	2.712	1.073	.384
	volume	60.114 ^c	17	3.536	1.213	.259
	health	94.160 ^d	17	5.539	1.292	.203
	affected					
	mental cond	52.683 ^e	17	3.099	.726	.773
Intercept	Accent	2160.264	1	2160.264	739.619	.000
	Speech sn	2253.648	1	2253.648	892.009	.000
	volume	2864.412	1	2864.412	982.580	.000
	health	3265.954	1	3265.954	762.014	.000
	affected					
	mental cond	2573.376	1	2573.376	602.866	.000
Health	Accent	6.547	2	3.274	1.121	.328
	Speech sn	6.205	2	3.102	1.228	.296
	volume	3.020	2	1.510	.518	.597
	health	14.626	2	7.313	1.706	.185
	affected					
	mental cond	20.350	2	10.175	2.384	.095
	Speech sn	16.920	4	4.230	1.674	.158
	volume	18.260	4	4.565	1.566	.186
	health	17.936	4	4.484	1.046	.385
	affected					
	mental cond	9.429	4	2.357	.552	.698
Lawspeed * Defspeed	Accent	5.126	2	2.563	.878	.418
	Speech sn	143	2	.071	.028	.972
	volume	6.654	2	3.327	1.141	.322
	health	14.441	2	7.220	1.685	.189
	affected					
	mental cond	3.868	2	1.934	.453	.636
Health * Lawspeed * Defspeed	Accent	10.561	4	2.640	.904	.463
	Speech sn	6.718	4	1.680	.665	.617
	volume	11.906	4	2.976	1.021	.398

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Accent	35.992 ^a	17	2.117	.725	.774
	Speech sn	46.098 ^b	17	2.712	1.073	.384
	volume	60.114 ^c	17	3.536	1.213	.259
	health	94.160 ^d	17	5.539	1.292	.203
	affected					
	mental cond	52.683 ^e	17	3.099	.726	.773
Intercept	Accent	2160.264	1	2160.264	739.619	.000
	Speech sn	2253.648	1	2253.648	892.009	.000
	volume	2864.412	1	2864.412	982.580	.000
	health	3265.954	1	3265.954	762.014	.000
	affected					
	mental cond	2573.376	1	2573.376	602.866	.000
Health	Accent	6.547	2	3.274	1.121	.328
	Speech sn	6.205	2	3.102	1.228	.296
	volume	3.020	2	1.510	.518	.597
	health	14.626	2	7.313	1.706	.185
	affected					
	mental cond	20.350	2	10.175	2.384	.095
	health	14.538	4	3.634	.848	.497
	affected					
	mental cond	6.802	4	1.700	.398	.810
Error	Accent	487.770	167	2.921		
	Speech sn	421.923	167	2.526		
	volume	486.837	167	2.915		
	health	715.754	167	4.286		
	affected					
	mental cond	712.852	167	4.269		
Total	Accent	2724.000	185			
	Speech sn	2780.000	185			
	volume	3483.000	185			
	health	4107.000	185			
	affected					
	mental cond	3384.000	185			

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Accent	35.992 ^a	17	2.117	.725	.774
	Speech sn	46.098 ^b	17	2.712	1.073	.384
	volume	60.114 ^c	17	3.536	1.213	.259
	health	94.160 ^d	17	5.539	1.292	.203
	affected					
	mental cond	52.683 ^e	17	3.099	.726	.773
Intercept	Accent	2160.264	1	2160.264	739.619	.000
	Speech sn	2253.648	1	2253.648	892.009	.000
	volume	2864.412	1	2864.412	982.580	.000
	health	3265.954	1	3265.954	762.014	.000
	affected					
	mental cond	2573.376	1	2573.376	602.866	.000
Health	Accent	6.547	2	3.274	1.121	.328
	Speech sn	6.205	2	3.102	1.228	.296
	volume	3.020	2	1.510	.518	.597
	health	14.626	2	7.313	1.706	.185
	affected					
	mental cond	20.350	2	10.175	2.384	.095
Corrected Total	Accent	523.762	184			
	Speech sn	468.022	184			
	volume	546.951	184			
	health	809.914	184			
	affected					
	mental cond	765.535	184			

a. R Squared = .069 (Adjusted R Squared = -.026) b. R Squared = .098 (Adjusted R Squared = .007)

c. R Squared = .110 (Adjusted R Squared = .019) d. R Squared = .116 (Adjusted R Squared = .026)

e. R Squared = .069 (Adjusted R Squared = -.026)

B5 MANOVA for intent data

General Linear Model

Between-Subjects Factors

		N
ConInt(0)/Ex(1)balanced(2)	0	13
	1	35
	2	12

Multivariate Tests^d

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Intercept	Pillai's Trace	.964	744.625 ^a	2.000	56.000	.000	.964	1489.250	1.000
	Wilks' Lambda	.036	744.625 ^a	2.000	56.000	.000	.964	1489.250	1.000
	Hotelling's Trace	26.594	744.625 ^a	2.000	56.000	.000	.964	1489.250	1.000
	Roy's Largest Root	26.594	744.625 ^a	2.000	56.000	.000	.964	1489.250	1.000
ConInt0Ex 1balanced 2	Pillai's Trace	.026	.374	4.000	114.000	.827	.013	1.497	.133
	Wilks' Lambda	.974	.369 ^a	4.000	112.000	.830	.013	1.477	.132
	Hotelling's Trace	.026	.364	4.000	110.000	.834	.013	1.457	.131
	Roy's Largest Root	.024	.692 ^c	2.000	57.000	.505	.024	1.383	.161

a Exact statistic

b Computed using alpha = .05

c The statistic is an upper bound on F that yields a lower bound on the significance level.

**B6 MANOVA for effect of convergence and divergence on ratings of
cooperativeness and likeability**

General Linear Model

Between-Subjects Factors

		N
con/div	C	60
	D	66

Multivariate Tests^b

Effect		Value	F	Hypothesis df	Error df	Sig
Intercept	Pillai's Trace	.973	2252.804 ^a	2.000	123.000	.000
	Wilks' Lambda	.027	2252.804 ^a	2.000	123.000	.000
	Hotelling's Trace	36.631	2252.804 ^a	2.000	123.000	.000
	Roy's Largest Root	36.631	2252.804 ^a	2.000	123.000	.000
condiv	Pillai's Trace	.001	.058 ^a	2.000	123.000	.944
	Wilks' Lambda	.999	.058 ^a	2.000	123.000	.944
	Hotelling's Trace	.001	.058 ^a	2.000	123.000	.944
	Roy's Largest Root	.001	.058 ^a	2.000	123.000	.944

a Exact statistic

b Design: Intercept + condiv

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	ConvCoop	.166 ^a	1	.166	.102	.73
	ConvLike	7.215E-5 ^b	1	7.215E-5	.000	.99
Intercept	ConvCoop	7255.468	1	7255.468	4449.646	.00
	ConvLike	4059.524	1	4059.524	1120.363	.00
condiv	ConvCoop	.166	1	.166	.102	.73
	ConvLike	7.215E-5	1	7.215E-5	.000	.99
Error	ConvCoop	202.191	124	1.631		
	ConvLike	449.302	124	3.623		
Total	ConvCoop	7471.000	126			
	ConvLike	4518.000	126			
Corrected Total	ConvCoop	202.357	125			
	ConvLike	449.302	125			

a R Squared = .001 (Adjusted R Squared = -.007)

b R Squared = .000 (Adjusted R Squared = -.008)

B7 Hierarchical Log linear analysis on verdict

Hierarchical Loglinear Analysis

Data Information		
		N
Cases	Valid	186
	Out of Range ^a	0
	Missing	0
	Weighted Valid	186
Categories	Health	3
	Lawyer speed	2
	Def Speed	3
	Guilt (o-g,1-i)	2

a Cases rejected because of out of range factor values

Design 1

Convergence Information	
Generating Class	Health*Lawyerspeed*DefSpeed*Guiltog1i
Number of Iterations	1
Max Difference between Observed and Fitted Marginals	.000
Convergence Criterion	250

Cell Counts and Residuals

Health	Lawyer speed	Def Speed	Guilt (o- g,1-i)	Observed		Expected		Residuals	Std Residuals
				Count ^a	%	Count	%		
0	0	0	0	3.500	1.9%	3.500	1.9%	.000	.000
			1	7.500	4.0%	7.500	4.0%	.000	.000
		1	0	2.500	1.3%	2.500	1.3%	.000	.000
			1	8.500	4.6%	8.500	4.6%	.000	.000
		2	0	2.500	1.3%	2.500	1.3%	.000	.000
			1	8.500	4.6%	8.500	4.6%	.000	.000
	1	0	0	4.500	2.4%	4.500	2.4%	.000	.000
			1	12.500	6.7%	12.500	6.7%	.000	.000
		1	0	2.500	1.3%	2.500	1.3%	.000	.000
			1	8.500	4.6%	8.500	4.6%	.000	.000
		2	0	3.500	1.9%	3.500	1.9%	.000	.000
			1	7.500	4.0%	7.500	4.0%	.000	.000
1	0	0	0	5.500	3.0%	5.500	3.0%	.000	.000
			1	5.500	3.0%	5.500	3.0%	.000	.000
		1	0	3.500	1.9%	3.500	1.9%	.000	.000
			1	7.500	4.0%	7.500	4.0%	.000	.000
		2	0	2.500	1.3%	2.500	1.3%	.000	.000
			1	8.500	4.6%	8.500	4.6%	.000	.000
	1	0	0	5.500	3.0%	5.500	3.0%	.000	.000
			1	5.500	3.0%	5.500	3.0%	.000	.000
		1	0	4.500	2.4%	4.500	2.4%	.000	.000
			1	6.500	3.5%	6.500	3.5%	.000	.000
		2	0	8.500	4.6%	8.500	4.6%	.000	.000
			1	2.500	1.3%	2.500	1.3%	.000	.000
2	0	0	0	4.500	2.4%	4.500	2.4%	.000	.000
			1	6.500	3.5%	6.500	3.5%	.000	.000
		1	0	6.500	3.5%	6.500	3.5%	.000	.000
			1	4.500	2.4%	4.500	2.4%	.000	.000

1	2	0	4.500	2.4%	4.500	2.4%	.000	.000
		1	6.500	3.5%	6.500	3.5%	.000	.000
	0	0	5.500	3.0%	5.500	3.0%	.000	.000
		1	5.500	3.0%	5.500	3.0%	.000	.000
	1	0	2.500	1.3%	2.500	1.3%	.000	.000
		1	8.500	4.6%	8.500	4.6%	.000	.000
	2	0	4.500	2.4%	4.500	2.4%	.000	.000
		1	6.500	3.5%	6.500	3.5%	.000	.000

a For saturated models, 500 has been added to all observed cells.

Goodness-of-Fit Tests

	Chi-Square	df	Sig.
Likelihood Ratio	.000	0	
Pearson	.000	0	

K-Way and Higher-Order Effects

K	df	Likelihood Ratio		Pearson		Number of Iterations
		Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects ^a	1	37.108	.372	36.968	.378	0
	2	22.541	.797	22.608	.794	2
	3	12.485	.710	12.083	.738	3
	4	3.992	.407	3.971	.410	3
K-way Effects ^b	1	14.567	.024	14.359	.026	0
	2	10.056	.689	10.525	.651	0
	3	8.493	.745	8.112	.776	0
	4	3.992	.407	3.971	.410	0

a Tests that k-way and higher order effects are zero

b Tests that k-way effects are zero

Backward Elimination Statistics

Step Summary						
Step ^a		Effects	Chi-Square ^c	df	Sig.	Number of Iterations
0	Generating Class ^b	Health*Lawyerspeed*DefSpeed*Guiltog1i	.000	0	.	
	Deleted Effect 1	Health*Lawyerspeed*DefSpeed*Guiltog1i	3.992	4	.407	3
1	Generating Class ^b	Health*Lawyerspeed*DefSpeed, Health*Lawyerspeed*Guiltog1i, Health*DefSpeed*Guiltog1i, Lawyerspeed*DefSpeed*Guiltog1i	3.992	4	.407	
	Deleted Effect 1	Health*Lawyerspeed*DefSpeed	.699	4	.951	3
	2	Health*Lawyerspeed*Guiltog1i	3.541	2	.170	3
	3	Health*DefSpeed*Guiltog1i	.410	4	.982	3
	4	Lawyerspeed*DefSpeed*Guiltog1i	3.903	2	.142	3
2	Generating Class ^b	Health*Lawyerspeed*DefSpeed, Health*Lawyerspeed*Guiltog1i, Lawyerspeed*DefSpeed*Guiltog1i	4.401	8	.819	
	Deleted Effect 1	Health*Lawyerspeed*DefSpeed	.639	4	.959	3

	2	Health*Lawyersp eed*Guiltog1i	3.639	2	162	3
	3	Lawyerspeed*De fSpeed*Guiltog1i	4.014	2	.134	3
3	Generating Class ^b	Health*Lawyersp eed*Guiltog1i, Lawyerspeed*De fSpeed*Guiltog1i , Health*DefSpee d	5.040	12	957	
	Deleted Effect 1	Health*Lawyersp eed*Guiltog1i	3.556	2	169	3
	2	Lawyerspeed*De fSpeed*Guiltog1i	3.969	2	.137	3
	3	Health*DefSpee d	.962	4	915	2
4	Generating Class ^b	Health*Lawyersp eed*Guiltog1i, Lawyerspeed*De fSpeed*Guiltog1i	6.003	16	988	
	Deleted Effect 1	Health*Lawyersp eed*Guiltog1i	3.476	2	176	3
	2	Lawyerspeed*De fSpeed*Guiltog1i	3.892	2	.143	2
5	Generating Class ^b	Lawyerspeed*De fSpeed*Guiltog1i , Health*Lawyersp eed, Health*Guiltog1i	9.478	18	.948	
	Deleted Effect 1	Lawyerspeed*De fSpeed*Guiltog1i	3.892	2	143	3
	2	Health*Lawyersp eed	.515	2	773	2
	3	Health*Guiltog1i	7.217	2	027	2

6	Generating Class ^b	Lawyerspeed*DefSpeed*Guiltog1i	9.994	20	.968	
	Deleted Effect	Health*Guiltog1i				
	1	Lawyerspeed*DefSpeed*Guiltog1i	3.892	2	.143	2
	2	Health*Guiltog1i	7.054	2	.029	2
7	Generating Class ^b	Health*Guiltog1i, Lawyerspeed*DefSpeed, Lawyerspeed*Guiltog1i, DefSpeed*Guiltog1i	13.885	22	.906	
	Deleted Effect	Health*Guiltog1i	7.054	2	.029	2
	2	Lawyerspeed*DefSpeed	.325	2	.850	2
	3	Lawyerspeed*Guiltog1i	.309	1	.578	2
	4	DefSpeed*Guiltog1i	.912	2	.634	2
8	Generating Class ^b	Health*Guiltog1i, Lawyerspeed*Guiltog1i, DefSpeed*Guiltog1i	14.211	24	.942	
	Deleted Effect	Health*Guiltog1i	7.054	2	.029	2
	2	Lawyerspeed*Guiltog1i	.337	1	.562	2
	3	DefSpeed*Guiltog1i	.940	2	.625	2
9	Generating Class ^b	Health*Guiltog1i, Lawyerspeed*Guiltog1i, DefSpeed	15.150	26	.955	
	Deleted Effect	Health*Guiltog1i	7.054	2	.029	2

	2	Lawyerspeed*Gu iltog1i	.337	1	562	2
	3	DefSpeed	383	2	826	2
10	Generating Class ^b	Health*Guiltog1i, Lawyerspeed*Gu iltog1i	15.533	28	.972	

a At each step, the effect with the largest significance level for the Likelihood Ratio Change is deleted, provided the significance level is larger than .050.

b Statistics are displayed for the best model at each step after step 0.

c. For 'Deleted Effect', this is the change in the Chi-Square after the effect is deleted from the model

Convergence Information^a

Generating Class	Health*Guiltog1i, Lawyerspeed*Guiltog1i
Number of Iterations	0
Max Difference between Observed and Fitted Marginals	.000
Convergence Criterion	.250

a Statistics for the final model after Backward Elimination.

Cell Counts and Residuals

Health	Lawyer speed	Def Speed	Guilt (o- g,1-i)	Observed		Expected		Residuals	Std Residuals
				Count	%	Count	%		
0	0	0	0	3.000	1.6%	2.431	1.3%	.569	.365
			1	7.000	3.8%	8.333	4.5%	-1.333	-.462
		1	0	2.000	1.1%	2.431	1.3%	-.431	-.277
			1	8.000	4.3%	8.333	4.5%	-.333	-.115
		2	0	2.000	1.1%	2.431	1.3%	-.431	-.277
			1	8.000	4.3%	8.333	4.5%	-.333	-.115
	1	0	0	4.000	2.2%	2.902	1.6%	1.098	.645
			1	12.000	6.5%	8.333	4.5%	3.667	1.270
		1	0	2.000	1.1%	2.902	1.6%	-.902	-.529

			1	8 000	4.3%	8.333	4 5%	- 333	- 115
			2 0	3.000	1.6%	2.902	1.6%	098	.058
			1	7.000	3.8%	8.333	4.5%	-1.333	- 462
1	0	0	0	5 000	2.7%	4.103	2 2%	897	.443
			1	5.000	2.7%	5.500	3.0%	- 500	- 213
			1 0	3.000	1 6%	4.103	2.2%	-1.103	- 545
			1	7.000	3.8%	5 500	3 0%	1 500	.640
			2 0	2.000	1.1%	4.103	2.2%	-2 103	-1.038
			1	8.000	4 3%	5.500	3.0%	2.500	1.066
	1	0	0	5.000	2 7%	4 897	2 6%	103	.047
			1	5 000	2.7%	5.500	3.0%	- 500	- .213
			1 0	4.000	2.2%	4.897	2 6%	- 897	- 405
			1	6.000	3.2%	5 500	3.0%	.500	213
			2 0	8.000	4.3%	4.897	2.6%	3 103	1.402
			1	2 000	1.1%	5.500	3.0%	-3.500	-1.492
2	0	0	0	4.000	2.2%	3.799	2.0%	.201	103
			1	6.000	3.2%	5.833	3.1%	167	069
			1 0	6 000	3 2%	3 799	2 0%	2 201	1 129
			1	4.000	2.2%	5 833	3 1%	-1.833	- 759
			2 0	4.000	2.2%	3 799	2 0%	.201	.103
			1	6.000	3 2%	5.833	3.1%	.167	.069
	1	0	0	5.000	2 7%	4.534	2.4%	.466	219
			1	5.000	2.7%	5.833	3.1%	-.833	-.345
			1 0	2.000	1.1%	4 534	2.4%	-2.534	-1.190
			1	8 000	4.3%	5.833	3.1%	2.167	897
			2 0	4.000	2.2%	4.534	2.4%	- 534	- 251
			1	6.000	3 2%	5 833	3 1%	.167	.069

Goodness-of-Fit Tests

	Chi-Square	df	Sig
Likelihood Ratio	15.533	28	.972
Pearson	15.015	28	.978