EXPERT WITNESSES IN THE COURTROOM: THE IMPACT OF THE ROLE OF THE DEFENDANT AND EXPERT WITNESS TYPE ON EVALUATIONS OF PROCEDURAL JUSTICE

by
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People tend to cooperate with and defer future decisions to authorities when those people perceive the authorities as fair (Tyler, 2003). In the current experiment, the effects of expert witness type (adversarial, neutral court appointed, biased court appointed) and class of defendant (individual, corporation, government agency) on perceived fairness were explored. Participants were given a pre-trial questionnaire to control for the trial experience, provided with a court transcript, and then filled out a post-trial questionnaire composed of procedural justice evaluations. Neutral observers rated cases with adversarial testimony as more procedurally fair than cases with court appointed testimony, and found cases against corporations to be more procedurally fair than cases against government entities. As hypothesized, perceived fairness judgments were lowest when the plaintiff lost to more "powerful" entities and when the loss was coupled with testimony by court appointed expert witnesses. The present research continues to highlight the concern about the use of court appointed experts in the courtroom.

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The American legal system is a complex entity that attempts to govern the behavior of those living under its rule. Given that most people seem to be law-abiding citizens, the system appears to be relatively successful. But what factors entice someone to obey the law when no authority is watching, to involve and cooperate with authorities when one has a complaint, and to trust the possibly expensive and tedious process of litigation to justly solve a problem? According to the notion of procedural justice, a key factor shaping the behavior of the public in dealing with authorities and the legal system is the fairness of the processes used (Tyler, 2003). There are other factors that may also be influential, including the perceived risk of being caught and punished, the successful performance of authorities in the apprehension and prosecution of criminals, and the perception of equal treatment across communities (Tyler, 2003). However, these factors are less predictive of future cooperation with legal authorities than procedural fairness (Tyler, 2003).

In the courtroom, there are numerous variables that could impact how fair people rate the proceedings. One such variable is the type of expert witness used to present evidence to the judge and/or jury. Expert witnesses play a growing role in litigation, as many types of cases require some sort of expert knowledge to be considered in determining the verdict – for example, medical malpractice suits in which the jury must be educated about biochemical interactions resulting from a possibly dangerous combination of medications (Gross, 1991). Psychological research has begun to look at the effects of using the standard party-appointed experts (adversarial experts) versus court appointed experts on the perceived fairness of the legal system (see Johnstone, 1996). The current study continues this line of research with an added

consideration of the role of the defendant, defined by whether an individual plaintiff is suing another individual, a corporation, or the government. This exploration of the effects of expert witness type and role of the defendant on evaluations of procedural justice will provide insight as to the best use of expert witnesses in the courtroom, depending on the trial scenario, in order to maximize perceptions of fairness in the legal system.

Procedural Justice, Fairness, and Motive-Based Trust

The idea of procedural fairness is part of the concept of procedural justice. The term "procedural justice" was first used in 1975 in social psychology, referring to the consequences of variation in procedures (Lind & Tyler, 1988). A strong emphasis was on the perceived fairness of procedures, which shifted the focus from the outcome to the process. So instead of researchers concerning themselves solely with whether people believed that the verdict of a trial or interaction with a police officer was fair, the fairness of the procedures used to reach the verdict came under consideration. The general finding in the field since incorporating the procedural element is that it is the fairness of the procedures used that increases people's willingness to cooperate with and defer to legal authorities, more so than the perceived fairness of the actual outcome (Tyler, 2001). It is important to emphasize that, when an individual believes authorities are using fair procedures, that individual is more willing to accept the decisions of those authorities *even upon receiving an unfavorable outcome* than if the individual did not believe fair procedures were being used.

It is necessary to explore the concept of fairness to understand what qualities it encompasses in procedural justice and how it is measured in psychological research.

Researchers consider two manifestations of the fairness concept: the quality of decision making by the authorities, and the quality of interpersonal treatment received from the authorities by those involved in the legal system (Tyler, 2003). People feel that decision making is fair when it has features of neutrality, consistency, openness and objectivity, and when decisions are clearly explained. Positive evaluations of the quality of interpersonal treatment are based on people feeling like they are treated with respect and dignity, and that the authorities care about their concerns and recognize their rights (Tyler, 2003; Tyler, 2001). These two components of fairness, the quality of decision making and of interpersonal treatment, are two primary aspects that comprise procedural justice models and are generally accepted in the research field.

Occasionally included as an aspect of the quality of treatment, but more generally accepted as a consequence of the quality of decision making and interpersonal treatment, is motive-based trust (Tyler & Huo, 2002). Motive-based trust is based on inferences about another's character and motives (Tyler & Huo, 2002). Tyler and Huo (2002) concluded that people are more willing to allow authorities to make decisions when those people trust the motives of those making the decisions. They provide extensive empirical support for the procedural justice hypothesis, finding that both procedural justice judgments and evaluations of motive-based trust are more important factors than outcome-based evaluations when it comes to decision acceptance (Tyler & Huo, 2002). For example, Tyler and Huo (2002) compared social motives (procedural justice and motive-based trust judgments) to instrumental motives (ratings on the favorability and fairness of the particular outcome), and found that 44% of the variance in the willingness to accept legal decisions is based on social motives, with only 1%

based on instrumental motives. In other words, 44% of the variation in people's responses can be attributed to procedural justice and motive-based trust judgments, whereas only 1% of the variation in people's responses can be attributed to evaluations based on outcome. This particular finding is illustrative of the weight people put on process-based judgments as opposed to outcome-based judgments.

Why is Procedural Justice Important? Questions of Legitimacy

Tyler and Huo (2002) define legitimacy as the belief that authorities are entitled to be obeyed and that therefore people should defer judgments and decisions to those authorities. In a way, legitimacy is a value, motivating people to cooperate with and trust in an institution. It is this notion that allows the legal system in the United States to function as it does, for it would be impossible to employ enough police to watch the move of every inhabitant (who would, without faith in the system, have no reason to follow it) and enforce every law, and the courts would backlog if the state attempted to prosecute all subsequent wrong-doings. When the legal system and those authorities that operate within it are perceived to be legitimate, a self-regulating society is possible (Tyler, 2003). This self-regulating society is generally a law-abiding one, with citizens who have personal morals that mesh with the socially presented norms of acceptable behavior (Tyler, 2003). When individuals feel that the legal system reflects their own notions of justice and morality, those individuals will be more willing to let the authorities deal with legal matters, and because those individuals hold themselves to a personal standard of behavior, they in turn follow accepted laws. Of course, not everyone agrees with all the laws or the outcomes of legal disputes, but research suggests that when people receive bad outcomes they are less likely to react negatively

if those people view the authority that delivered that outcome as legitimate, or if they felt there was procedural justice (Tyler, 2006). Speaking simply, when the procedures are perceived to be legitimate, people are less likely to interpret the actions and outcomes of the legal system as unfair.

Legitimacy is recursive. People who find authorities to be more legitimate tend to find the procedures used by those authorities as more fair, and the belief that authorities use fair procedures leads to people perceiving those authorities as more legitimate (Tyler, 2006). In a courtroom, for example, legitimacy is strengthened through procedural justice (when people believe fair procedures are used), and the use of rational approaches to decision making (including scientific and technological means which reflect neutrality and the use of facts) (Tyler, 2006). Once authorities are perceived to be legitimate, people are more likely to accept their decisions and defer future decisions to them (Tyler, 2006). When people disagree with a decision or believe the decision to be unfair within a system perceived as legitimate, they are more likely to make external attributions rather than internal attributions (Tyler, 2006). For example, in a study that partially addressed the perceived control over a plaintiff's win or loss in the courtroom, Johnstone (1996) noted that the plaintiff did not rate his or her ability to affect the outcome higher after a win or loss; rather, the success was attributed to the lawyer. To analyze this finding in terms of legitimacy, it would be reasonable to hypothesize that had the plaintiff lost in a system perceived as legitimate, the loss would be attributed to the actions of the lawyer (as Johnstone (1996) states). Whereas in a system perceived as illegitimate, the plaintiff would attribute the loss to a faulty and unfair system, with the consequences of this attribution highlighting the focal concern

of legitimacy and the legal system: if people do not believe a system is legitimate, they will be unlikely to defer decisions to and trust in the authorities that compose the system, and when such a system is responsible for controlling the behavior of the masses, the downside to a loss of legitimacy is often based in fear of anarchy and chaos (Tyler, 2006).

Legitimacy in the Courtroom: Admission of Evidence and Expert Testimony

Current literature emphasizes a focus on procedural justice models, including motive-based trust, instead of a focus on the instrumental aspects of the legal system. The next step is for the legal system to take psychological research into consideration. It is a good sign for the legal system that individuals do not tend to disregard court verdicts when a ruling seems unfair, but the knowledge that process is more important than outcome in regard to decision acceptance is not the end of the road. Instead, it is up to procedural justice research to determine how to best increase the perceived fairness and trustworthiness of motives in police and courtroom procedures so as to boost the overall legitimacy of the legal system, thus contributing to a self-regulating society that voluntarily defers legal decisions to proper authorities.

One area of concern involving procedural justice and legitimacy revolves around expert witness testimony in the courtroom. Case law, in conjunction with the Federal Rules of Evidence (FRE), has established standards for the presentation of expert evidence. This evidence is generally accepted as "scientific, technical, or other specialized knowledge" that is "beyond the ken of the average layman" (FRE 702; *Dyas v. US*, 1977). When such evidence is deemed necessary to assist the judge and/or jury in their decision making, a qualified witness is allowed to testify about the topic (FRE

702). This qualified expert witness is different from the common lay witness in a number of ways. The lay witness is traditionally a stranger to both parties, has testimony available to both sides, can be subpoenaed to testify, and is extremely limited to what s/he can offer as testimony (Gross, 1991). What can be presented as testimony is related to the issue of opinion, and is the key difference between lay and expert witnesses.

Lay witnesses can only offer testimony that is based on the perception of the witness and helpful for a clear understanding or the determination of fact (FRE 701). Experts, on the other hand, "*create* new evidence in the form of expert opinions" (Gross, 1991, p. 1140). This leaves the decision of what resources to consult and what methodology and studies to consider up to the witness (Gross, 1991). The lawyer, fighting to win the case, is put in charge of the selection, preparation, and presentation of the hired expert witness, resulting in anything but neutrality, thoroughness, and clarity (Gross, 1991). In fact, it is the lawyer who provides much of the information on which the expert is to base an opinion (Gross, 1991). The logical solution to the problems stemming from the partisan selection of expert witnesses is to have the court appoint neutral expert witnesses, either in place of or in combination with the adversarial expert witnesses (Gross, 2001).

There is no question that the use of adversarial expert witnesses is widespread. In a survey of California State Superior Court civil jury trials, Gross (1991) found that experts testified in 86% of cases, with an average of 3.3 experts per trial. More importantly, in 63% of all trials there were experts testifying on both sides, creating a courtroom "battle of the experts" that is left to the jury to resolve (Gross, 1991; Milich,

1994). Finally, almost 60% of the expert witnesses who testified had testified previously in similar cases at least twice over a six-year period (Gross, 1991). This raises the concern of "professional witnesses," who are those experts trained to testify by lawyers on a particular issue to the extent that they have perfected their courtroom performance, exercising credentials and authority to the point where they are hard to discredit (Gross, 1991). This might not sound like a problem until one considers that credentials are not synonymous with the ability to accurately and thoroughly inform others on a critical issue, and that looking the part and maintaining composure under cross-examination does not mean that the analysis of the information presented is of the highest quality (Gross, 1991). In fact, the entire adversarial process often deters well-informed experts from participating in cases, because they do not wish to deal with misplaced criticism and scrutiny focused on, say, the expert's medical school transcript instead of the scientific information being presented in regard to the case (Gross, 1991).

With adversarial experts, lawyers try to select those who will be firm and convincing in their points, train with them extensively before the trial, and decide, to an extent, what evidence the expert is provided on which to base his/her professional opinions (Milich, 1994; Gross, 1991). For example, lawyers may give an expert certain documents on which the expert is to base an opinion, but leave out additional evidence that might lead the expert to draw a different conclusion (Gross, 1991). The additional evidence could then be presented by a different expert, restricting cross-examination by the opposing party that could be detrimental to a winning verdict (Gross, 1991). The process of cooperation between the lawyers and experts inevitably develops into a partisan relationship between the parties, resulting in a biased expert (Gross, 1991). In

addition, there is always the advantage of one party having superior resources, in the form of time and money, to invest in the often costly selection, preparation, and presentation of experts (Gross, 1991). If fairness is determined by neutrality, consistency, openness, objectivity, and the clarity of decisions, the current procedures involving adversarial expert witnesses should raise significant alarm. A proposed solution to increasing procedural justice evaluations and maintaining the perceived legitimacy of the functioning courtroom involves the use of court appointed expert witnesses.

To address the practical disadvantages of adversarial expert witnesses, both Milich (1994) and Gross (1991) advocate for the use of court appointed experts, whose purpose is to present a neutral review of applicable research and scientific opinion. The foundation in the legal system to use court appointed experts is in place, and the demand has existed for over a century (FRE 706; Gross 1991). So why are court appointed expert witnesses so rarely used in practice? Gross (1991) points to trial lawyers as the primary reason, claiming that lawyers are at the forefront of the adversarial system and their organized opposition is strong. Opponents argue that court appointed experts have too much power, which in turn compromises the supposedly impartial role of the judge, and that a court appointed expert will take the constitutional right to a jury decision away from the parties, because the jury will be compelled to accept the testimony at face value (Gross, 1991). Gross (1991) believes that these arguments are unfounded, noting that court appointed experts *should* be given more weight because they are neutral, and that research suggests juries will continue to ring in verdicts counter to the testimony of court appointed experts when they deem it to be

appropriate. For example, when a court appointed medical expert testified in a court case that went to verdict, the jury agreed with the court appointed expert in 15 cases but reached a verdict that was not consistent with the expert's opinion in 9 cases (Myers, 1965). In this particular report, the jury came to a conclusion different from the court appointed expert over one third of the time, demonstrating that a jury will not blindly adhere to the verdict of the expert without their own evaluation of the case.

Gross (1991) goes on to explain the numerous benefits of court appointed experts, including the avoidance of the dreaded battle of the experts. The battle of the experts is a result of the selection and preparation methods of adversarial experts, and results in the magnification of areas of disagreement, and the obfuscation of common ground, in the area of expert knowledge (Gross, 1991). Court appointed experts have the potential to help avoid this issue, because they would have the opportunity to clarify any disagreements in the field. He also points out the lack of incentive for the court appointed expert to butt heads with the attorney during cross-examination, because the questioning would not be viewed as an attack on credentials or personality but rather on the limits of the expert's opinion. The purpose of expert testimony should not be to mislead and confuse the jury, but rather to provide a neutral and accurate base of specialized knowledge for the jury to use in reaching a verdict. Eighty-seven percent of federal district court judges surveyed believed that court appointed experts are likely to be helpful in certain cases, yet over 75% of those same judges had never bothered appointing expert witnesses themselves (Gross, 1991). Current research involving procedural justice and legitimacy might provide the push needed to increase the use of court appointed experts in the courtroom.

Current Psychological Research Addressing Expert Witness Testimony

Kaiser (1994) surveyed university students and a sample of the general public to gain insight into whether the subjects – potential jurors – felt expert testimony was a valid component of the legal system, and whether experts should be appointed by the parties or by the courts. The results suggest that expert testimony can be a necessary aspect of a trial "to see that justice is served" (Kaiser, 1994, p. 26). The subjects also believed that court appointed experts are more likely to be non-biased than adversarial experts. But do these findings hold up in practice? The responses in Kaiser's (1994) study were not given from the point of view of those actually involved in legal proceedings. Johnstone (1996), in two studies examining the effects of expert type, verdict, and perspective on procedural justice judgments, addresses the relevant issues in Kaiser's survey and sets the foundation for the current study.

In the first study conducted by Johnstone (1996), university students read an abridged civil court case transcript either from the viewpoint of the plaintiff or a neutral observer. The transcript had testimony from either two court appointed experts or two opposing adversarial experts, and the outcome for the plaintiff was varied. Subjects then provided ratings of outcome and procedural fairness, perceived control, perceptions of the expert witnesses and judge, and other related measures. Johnstone (1996) had hypothesized that participants would find adversarial experts to be fairer than court appointed experts, whereas neutral observers would prefer court appointed experts. Results suggest that the plaintiffs actually felt trials with court appointed experts were as fair as trials with adversarial experts, but that those plaintiffs believed the court appointed experts were more biased than adversarial experts. Neutral observers also

rated court appointed experts as more biased than adversarial experts. This finding runs counter to the Kaiser (1994) results, where respondents viewed court appointed experts as more likely to be non-biased. Despite rating one type of expert as more biased than another type, neither perspective condition showed a preference for an expert type. Johnstone (1996) ran a follow-up study to examine this finding.

The significant change in Study 2 was the use of one court appointed expert for testimony, but in three conditions: a court appointed expert with, a) testimony biased towards the plaintiff, b) testimony biased towards the defendant, and c) neutral testimony. This sort of testimony resembles real-life courtroom situations much more than the testimony of Study 1. The adversarial condition was identical to Study 1. Johnstone (1996) findings suggest that the use of a court appointed expert can lead to lower perceived fairness ratings when the plaintiff loses from the perspective of a subject role-playing the plaintiff – a clear example of procedural justice concerns voiced by Tyler. From a neutral observer perspective, court appointed experts were rated as less biased than adversarial experts. Neutral observers were better at distinguishing between outcome fairness and procedural fairness, but results still tended to be messy (Johnstone, 1996). Basically, people do not like to hear verdicts counter to what they desire, and the addition of court appointed testimony might complicate such situations.

The findings of Johnstone (1996) are discouraging in the sense that court appointed expert testimony continues to appear problematic in regard to procedural justice judgments made by those involved in litigation. Other variables need to be uncovered to provide more information about circumstances in which the use of court appointed experts might be better received by participants in the legal system. In the

Johnstone (1996) studies, only one courtroom situation was used – a civil case in which an individual was suing a company. This is only one example of an individual interacting with a defendant within the courtroom. It is reasonable to assume that judgments of motives, relating to Tyler and Huo's (2002) motive-based trust, could vary depending on whether an individual was in a civil case against another individual, a corporation, or the government. Across these instances, the use of court appointed experts might carry different weight, especially in regard to outcome. For example, a loss for a plaintiff in an individual v. individual civil case where the testimony of a court appointed expert played a key role might have a different effect on procedural justice evaluations than if that court appointed expert played a strong part in a favorable outcome for a corporation, or even more so, for the government. This is because the plaintiff may feel that the motives of those more strongly associated with the body of the court, in this case, the motives of the court appointed experts in conditions where expert testimony favors the defense, are untrustworthy. This effect is likely to increase as the plaintiff loses to more and more "powerful" entities (the corporation and the government).

To test these hypotheses, the current experiment will manipulate the role of the defendant and expert witness conditions. Three types of defendants will be used to explore the impact of the role of the defendant on procedural justice and motive-based trust evaluations: an individual plaintiff v. an individual defendant, individual v. corporation, and individual v. government. Three expert witness conditions are designed to study the interaction between the role of the defendant and expert witness

testimony: adversarial testimony, court appointed testimony that is neutral, and court appointed testimony that is biased in favor of the defense.

The strictly adversarial condition will consist of two expert witnesses, one appointed by each party and with testimony favorable to the side that hired the expert. The two court appointed expert conditions will also feature adversarial expert testimony, which is consistent with the use of court appointed experts in the real world. The addition of court appointed expert witness testimony to adversarial testimony is not only realistic, but it is also the most frequently suggested reform in the matter of expert witness testimony (Gross, 1991). In the neutral court appointed condition, the court appointed expert will provide background testimony to supplement the adversarial expert testimony, but the testimony of the court appointed expert will not favor one side or the other. However, in the biased court appointed expert condition the testimony of the court appointed expert favors the defense, with the plaintiff-appointed adversarial expert providing the only testimony supporting a win for the plaintiff. The biased court appointed expert condition represents the worst-case scenario for the plaintiff, and results from this particular condition may be the most dramatic in regard to procedural justice evaluations.

Methodology

Subjects

Subjects consisted of 97 University of Oregon college students (53 female) participating in Human Subject Pool research. Subjects ranged in age from 18-24 (M=19.26) and were 84.21% European American, 8.42% Hispanic American, 5.26% Asian American, and 2.11% other. Subjects were compensated one credit (equal to one

hour of time) for completion of the study to put towards introductory psychology class requirements and were run in groups ranging from 1-9 participants. Two subjects were excluded to due their failure to complete the entire pre-trial questionnaire (above numbers reflect descriptive statistics after exclusion).

Materials and Procedure

Subjects were randomly assigned to one of 9 conditions based on two variables: role of defendant (individual v. individual, individual v. corporation, individual v. government), and type of expert witnesses used (adversarial only, neutral court appointed with adversarial, biased court appointed with adversarial). Subjects filled out a pre-trial questionnaire (Appendix B) designed to control for any effects of the trial experience and to be used as a comparison with the post-trial questionnaire. The pre-trial questionnaire posed questions regarding perceived fairness of the legal system and its participants, and perceived control over trial proceedings.

Following completion of the pre-trial questionnaire, subjects were provided with an abridged transcript of a civil court case (Appendix D) that included opening and closing statements made by the parties and testimony from expert witnesses. The trial transcript detailed a case held constant in all aspects except for the role of the defendant and type of expert testimony. The role of the defendant was played by a doctor, a private medical group, or a government healthcare agency. The court case involved a plaintiff who suffered a heart attack, purportedly due to the combination of prescribed arthritis medication and a previously documented condition of angina (chest pain). Expert witness testimony addressed background information necessary to understand the prescribed medication and relevant issues pertaining to the likelihood that the

arthritis medication, in combination with the angina, led to the plaintiff's heart attack. The defendant was being accused of malpractice due to the prescription of a drug, known to increase the risk of heart attack, to a patient with a history of angina. Subjects were instructed to read the trial transcript as though they were playing the role of a neutral observer. The verdict of the case was held constant, with the plaintiff losing the civil case in all conditions.

Following the perusal of the transcript, subjects filled out a post-trial questionnaire (Appendix C). The questionnaire included basic demographic factors (age, sex, race/ethnicity) and evaluations of procedural and outcome fairness, motive-based trust, perceived control, and reflections on the expert witnesses.

At the end of the study, subjects were debriefed as to the purpose of the experiment and had an opportunity to ask questions.

Data Analysis

Data were primarily analyzed using contrast coded variables and regression analyses, unless otherwise specified. Two regression models were run for each research question, when applicable: a smaller model to test for main effects across conditions and a larger model to test for interactions.

Results and Discussion

Procedural Fairness Ratings and Expert Type

The general findings of procedural fairness ratings support earlier results found by Johnstone (1996) and continue to highlight the concern about the use of court appointed experts in the courtroom. Subjects who read the transcript with only adversarial testimony rated the trial procedures higher in fairness than subjects whose

adversarial testimony was accompanied by court appointed testimony. This finding approached significance ($t(95) = 1.750$, $p = .083$) and was present regardless of the type of court appointed testimony, as no significant difference existed between the procedural fairness ratings between the neutral and biased court appointed conditions ($t(95) = .293$, $p = .771$, n.s.). Pre-trial procedural justice ratings were controlled for in the regression analyses, and remained a significant predictor of post-trial procedural justice ratings ($t(95) = 2.670$, $p < .01$).

The persistence of this effect is worrisome. "Fairness" is defined by the quality of decision making, including aspects of neutrality, consistency, openness, and objectivity, along with the quality of interpersonal treatment (Tyler, 2003; Tyler, 2001). By this definition, court appointed expert witnesses should be favored, as they theoretically possess these traits to a greater degree than experts prepared by the parties' lawyers. If the type of expert witness were seen to possess traits that align with the definition of fairness used to evaluate procedural justice, the use of such an expert type would be hypothesized to increase fairness ratings in trial proceedings. Either the subjects in the current study did not rate the court appointed experts more favorably in evaluations of degree of bias, suggesting that the court appointed experts used were not considered neutral and objective, or despite high ratings in this category the subjects felt proceedings were more fair with solely adversarial testimony. If the former outcome is the case, there is a fundamental issue in regard to displaying the court appointed expert in a positive and fair light. This would need to be addressed before court appointed experts would be beneficial in the courtroom in regard to improving evaluations of procedural justice. If the latter is the case, and neutral observers still prefer strictly

adversarial testimony despite the perception of court appointed experts as possessing qualities related to fairness, then the induction of court appointed experts in mainstream litigation will continue to be problematic until other factors are explored to mitigate this discrepancy.

An examination of bias ratings of the court appointed and adversarial experts showed that the biased court appointed expert was rated more biased than the neutral court appointed expert ($t(62)=2.601$, $p<.05$), demonstrating that subjects recognized that the expert intended to be more biased was, in fact, more biased. Subjects found the adversarial expert witness for both the defense and the prosecution to be equally biased regardless of the role of the defendant or whether or not a court appointed expert testified as well. The court appointed expert bias ratings were averaged to provide a more realistic measure of perceived bias, as court appointed experts may be relatively neutral in some cases but are likely to be more obviously biased towards one side in general (due to the nature of the evidence) ($M_{CourtAppointed}=5.105$, see table 1.0 for individual means). Including the more extreme biased expert mean allows for a better representation of the "worst case scenario" for neutral observer ratings of bias, as testimony was notably skewed towards the defense. The aggregated court appointed expert bias ratings were compared with the adversarial experts' bias ratings using a within-subjects general linear model.

Adversarial expert witnesses were rated as significantly more biased than court appointed experts, even with the inclusion of the biased court appointed expert rating ($F(1,58)=52.049$, $p<.001$). This is the logical finding, as adversarial experts are selected and prepared for testimony by a lawyer, the result of which is unavoidably a partisan

relationship (Gross, 1991). Though a logical finding, these results illustrate that despite neutral observers being cognizant of the biases of expert witnesses, those observers still prefer the "somewhat biased" adversarial experts to "neither biased nor unbiased" court appointed ones.

Procedural Fairness Ratings and Role of the Defendant

It was previously hypothesized that as a plaintiff loses to entities that hold greater levels of power, procedural justice evaluations will decline. For example, an individual plaintiff losing to another individual will result in higher procedural justice evaluations than a plaintiff losing to a corporation, or even more so, a government agency. This hypothesis was partially supported in the current experiment, with increased fairness ratings in the individual v. corporation condition compared with the individual v. government condition ($t(95)=-2.213$, $p<.05$). This suggests that although subjects did not provide significantly different ratings in the individual v. individual condition compared with the other two conditions ($t(95)=.178$, $p=.859$, n.s.), subjects found cases in which the plaintiff lost to a corporation to be significantly more procedurally fair than when the plaintiff lost the same case to a government agency. Procedural fairness ratings may be lower for the government condition because individuals may associate government agencies in general with the government-run court system. In the case of a loss, subjects may have a difficult time separating the victorious government-affiliated defendant from the government system running the courts, thus rating procedural fairness lower than if the defendant were a corporation, another individual, etc.

Recoding the contrast variables so as to compare the individual and corporation condition resulted in nonsignificant findings ($t(95)=.968$, $p=.336$, n.s.), suggesting no difference in procedural fairness ratings when the defendant is an individual compared with when the individual is a corporation. One significant finding after recoding was lower procedural fairness ratings in the government condition compared with the average of the other two conditions ($t(95)=-2.023$, $p<.05$). Though comparing results across the original and recoded model may result in reanalyzing variance, which is an important factor to consider when interpreting results, these findings do reinforce the original model that demonstrates differences only between the corporation and government conditions.

One possibility for the lack of significant differences in procedural fairness ratings between the individual condition and the other two relates to verbal feedback from subjects after the early stages of running the experiment. Though not officially measured through questionnaires or statistically analyzed, a number of subjects reported that they did not feel the individual being sued in the individual condition should be held responsible in that particular case. If this feeling was widespread, it may have resulted in procedural fairness ratings reflecting not only responses about the treatment of the plaintiff, but about the entire case scenario as well. This could pose a problem with between group comparisons if similar sentiments were not held about the corporation and government conditions.

The use of court appointed experts in higher conditions of defendant power tends to exacerbate the loss of the plaintiff in the eyes of a neutral observer, as reflected in procedural fairness judgments. This effect is the strongest in the difference between

the neutral court appointed expert and biased court appointed expert conditions in the individual condition compared with the corporation and government conditions. In other words, an interaction exists where procedural fairness ratings are lower in the neutral court appointed condition compared with the biased court appointed condition when the plaintiff is against an individual as opposed to another category of defendant ($t(95)=2.689$, $p<.01$). The mean rating of the individual condition in which a neutral court appointed expert testified ($M=6.00$, $SD=1.789$) does not follow the trends of both decreasing means with the addition of court appointed testimony and decreasing means with the increase in power from individual to government (see table 2.0). This may be the result of the previously discussed distorted fairness ratings based on a defendant whom subjects believed should not be the target of the lawsuit.

The Procedural Justice Effect

The underlying concept of procedural justice is that it is the fairness of the procedures used that increase people's willingness to work within a system, and this procedural fairness is more predictive of cooperativeness than how fair people perceive particular outcomes to be (Tyler, 2001). In the current experiment, subjects posing as neutral observers rated procedural fairness highest when only adversarial testimony was present in the courtroom, and lowest when the defendant was affiliated with the government. To examine how this particular experiment fits the framework of procedural justice, a series of regression analyses were run to understand the effects outcome fairness and procedural fairness have on the willingness to deter future problems to the legal system.

The post-trial questionnaire item referring to the plaintiff's willingness to defer future problems to the legal system was used as the core dependent measure, as the deterrence of problems and willingness to cooperate with proper authorities is a common measure of procedural justice (see Tyler, 2003). Outcome fairness was the only significant predictor of the two ($t(94)=3.106$, $p<.01$), suggesting that outcome fairness is a better predictor of future deterrence than procedural fairness. However, procedural fairness and outcome fairness are highly positively correlated with each other ($r=.691$, $p<.001$, $N=95$), and both are significantly positively correlated with the outcome variable ($r_{OutcomeFairness}=.363$, $p<.001$; $r_{ProceduralFairness}=.212$, $p<.05$). Therefore, people who tend to think the outcome is fair, think the procedures are fair, and are likely to deter future problems to proper authorities, and the same goes for the opposite scenario. This makes differentiating the two effects complicated and an issue that cannot be solved with the current data. Had the verdict been manipulated, as in Johnstone (1996), the effect of procedural fairness could have been teased out. Future research may consider including verdict manipulation to avoid similar complications.

It is important to note the wording of the questionnaire item in combination with the role being played by subjects. Subjects were instructed to read the transcript as though they were a neutral observer attending the trial, whereas the questionnaire item asked the neutral observers to rate the likelihood that the plaintiff would deter future decisions to the legal system. The neutral observers are making a judgment as to whether or not the party involved will continue to work within the legal system in the future – not whether they themselves would deter future decisions based on this trial

experience. However, the procedural justice effect can be further explored in the current data set by looking at legal system fairness.

A series of regression analyses were performed to examine the greater question of the role of outcome and procedural fairness on neutral observers' judgments of legal system fairness. An initial model with pre-trial evaluations of procedural fairness and legal system fairness as predictors for post-trial legal system fairness accounted for a significant amount of variance (R^2=.262 (adjusted), F change (2,93)=17.826, p<.001). As to be expected, neutral observers' pre-trial system fairness ratings were a significant predictor (t(94)=3.667, p<.001), suggesting that previous impressions of the fairness of the legal system strongly predict impressions of legal system fairness after the trial experience. Pre-trial procedural fairness ratings approached significance (t(94)=1.673), p=.098, n.s.).

Adding outcome fairness ratings to the model resulted in a significant leap in variance explained (R^2 change=.367, F change (3,92)=94.980, p<.001), bringing the model up from .262 to .636 (R^2 adjusted values). Outcome fairness ratings are a strong predictor of legal system fairness for neutral observers (t(94)=9.746, p<.001). The addition of post-trial procedural fairness to the model is not significant (R^2 change=.001, F change (4,91)=.255, p=.615, n.s.). This suggests that the perceived fairness of a particular outcome within the legal system is going to have a significant effect on a neutral observer's overall perception of the legal system, even when that outcome does not directly affect the observer (as in the current experiment). This effect seems to be a very powerful and immediate one, whereas procedural fairness may have a more gradual effect. A negative verdict may ignite strong emotional responses, which

could account for the immediate dramatic effect outcome has on fairness ratings. Though outcome does seem to drive ratings of post-trial legal system fairness, fair procedures may be subtly contributing to greater feelings of legal system legitimacy and fairness.

Outcome Fairness Ratings, Expert Type, and Role of the Defendant

No significant main effects in outcome fairness ratings existed across expert type or role of the defendant. However, the same significant interaction was present involving the difference between the neutral court appointed expert and biased court appointed expert conditions in the individual condition compared with the corporation and government conditions ($t(95)=2.161$, $p<.05$). The mean rating in the neutral court appointed condition where the defendant is another individual is 5.90 ($SD=2.514$; see table 3.0) – like the procedural fairness ratings, a mean strikingly lower than the other expert conditions with an individual defendant.

This finding is difficult to interpret considering the otherwise predictable trends in the data. However, an explanation does exist if in fact the majority of subjects felt that the individual (a doctor) should not have been sued. Reasons vocalized for this sentiment in post-experiment discussions include the belief that the doctor was just doing his job, bad things can happen but may be products of [necessary] risks in the medical field, and that the drug manufacturing and distributing company should be targeted instead.

The adversarial testimony ratings for outcome fairness ($M=6.91$, $SD=.831$) and procedural fairness ($M=7.64$, $SD=.674$) in the individual condition set the hypothesized trends for the rest of the data, suggesting that those ratings may be seriously considered

even if the subject feels the doctor should not be the defendant. The court system is designed to try those suspect of crimes, and occasionally those suspect are not guilty – courtroom procedures are intended to identify these individuals as well as the guilty ones. These adversarial ratings should not necessarily be affected, especially if the outcome is in favor of the doctor, because then those who do not think the doctor should be tried end up with a relatively fair verdict.

In the biased court appointed expert ratings for the individual condition, the outcome fairness (M=7.45, SD=1.753) and procedural fairness (M=7.64, SD=1.326) logic is similar to the adversarial ratings. If the subjects believe the doctor should not be sued, then having an expert biased in favor of the defense with a verdict ultimately in favor of the defense may actually increase the fairness ratings.

The low means in the neutral court appointed testimony ($M_{Outcome}$=5.90, $M_{Procedural}$=6.00) might represent the danger of court appointed testimony when neutral observers feel that the defendant is wrongly accused. Johnstone (1996) and the current study found decreased fairness ratings when court appointed testimony was given compared with strictly adversarial testimony, partially explaining the low fairness ratings due to the sheer presence of court appointed testimony. In the Johnstone (1996) study, neutral observers rated fairness measures lower after a loss than after a win when the court appointed expert was biased in favor of the losing party. In the current experiment, the court appointed testimony is biased in favor of the defendant in one expert condition. In this case the defendant turns out to be the winning party, but what would the ramifications have been had the plaintiff been victorious? Court appointed testimony will in reality often favor one side over the other, because evidence in general

may favor one side over the other. If neutral observers follow court proceedings in which a party loses despite expert evidence presented in its favor, fairness ratings would likely drop below even those seen in relation to the mere presence of court appointed testimony. Scenarios where parties are falsely accused or convicted with varying degrees of evidence against them do occur in the legal system, and naturally would be hypothesized to affect perceived fairness of procedures. The addition of court appointed testimony to these scenarios is likely to lower procedural justice evaluations even more.

Motive-Based Trust

An aspect related to procedural justice that is either included within the procedural justice framework or considered complementary to it is motive-based trust. Motive-based trust is the notion that people are more willing to accept decisions made by authorities when they trust the motives of those authorities (Tyler & Huo, 2002). It was hypothesized that as the plaintiff lost to defendants who possessed more power or who could be more closely related to the court system itself, motive-based trust judgments would decline. This was based on the rationale that neutral observers would be less trusting of the motives of authorities when entities closer to those authorities had a verdict in their favor. However, no significant findings supported this hypothesis, and the best predictor of post-trial motive-based trust was pre-trial ratings of motive-based trust ($t(95)=5.544$, $p<.001$). This finding is reassuring in the sense that losing a case to a variety of defendant types with or without the presence of court appointed testimony does not significantly affect judgments of motive-based trust. In a simple examination of the means, motive-based trust evaluations were highest in the adversarial only condition compared with court appointed conditions, but these results were not

significant (t(95)=1.420, p=.159, n.s.). These lower means are consistent with the procedural fairness findings and do weakly support a preference for adversarial testimony over court appointed (see table 4.0).

The motive-based trust means in general are also lower than procedural fairness ratings in a comparison of the mean tables (see 4.0 and 2.0), but statistical analyses would need to be done to check for significance. Generally, motive-based trust judgments post-trial fell in the 5.20 – 6.82 range, on a scale where 1 represents "No Trust," 5 represents "Some Trust," and 9 represents "Complete Trust." Procedural fairness ratings were in the 6.0 – 7.64 range on an identical scale measuring fairness instead of trust. This trend of lower motive-based trust scores before and after the trial experience suggest that, regardless of expert testimony present in the courtroom or the type of defendant, legal authorities may want to take action to better themselves in the eyes of the public. In the current sample, individuals rated that they only slightly more than somewhat trust that legal authorities act in good faith – that is, with good intentions. Improving the motive-based trust of authorities would play a role in increasing procedural justice evaluations, as motive-based trust works hand in hand with perceived fairness of decision making and quality of interpersonal treatment.

Limitations

The current study has a number of limitations that may help explain certain findings and guide future directions of research. As a natural consequence of many college campus based research studies, the research presented here focused on a university sample comprised primarily of European Americans between the ages of 18 and 24. This brings to mind questions of personal experience with the legal system and

how such experience – or, more importantly, lack of experience – affects procedural justice evaluations. The current sample underrepresents African Americans, which are overrepresented in types of court proceedings. For example, an examination of incarceration rate by state reveals that African Americans are six times more likely than whites to be imprisoned (Sentencing Project, 2007). This is a problem because research has shown that African Americans in particular are very likely to base future cooperation with the legal system on judgments about whether the courts treat different groups unfairly (Tyler, 2001). If this sample is composed of individuals who have had limited experience with the legal system, due to age, race/ethnicity, or related forms of privilege, the results might not be as generalizable to certain populations which have had more direct experience with the legal system.

Previous research has suggested that those with prior court experience are particularly concerned about quality of treatment, whereas those without experience tend to focus on more abstract policy issues and their general confidence in the government (Tyler, 2001; Olson & Huth, 1998). People who have experienced rude treatment firsthand will place more weight on this aspect of procedural justice than those who have not been in a similar position (Tyler, 2001). If there is more mistrust of authorities and lower perceived fairness of proceedings and outcomes in populations with excessive run-ins with the law, then the current results would underestimate the impact of the use of court appointed experts. With perceived fairness of the legal system at stake, and in result the perceived legitimacy of the system and willingness of individuals to cooperate with legal authorities also at stake, demographic and

experience-related limitations should be remedied in future research to address these issues of generalizability.

A few technical issues with materials may also serve as limitations to the presented results. In the trial transcripts, no cross-examination of the court appointed expert witnesses was presented. The court appointed expert only fended questions from the judge. This type of set-up is not true to actual trial proceedings and puts the court appointed expert in a rather exclusive position. Adversarial expert witnesses are subject to extensive cross-examination, a practice referred to as "the essential feature of common law fact finding" (Gross, 1991, p.1165). The court appointed expert witness was exempt from this practice in the transcripts, possibly giving his testimony a more authoritarian slant, uniting him with the judge and, in turn, the body of court, and ultimately resulting in lower procedural fairness ratings than the adversarial conditions. If subjects prefer the adversarial methods of trial, this lack of cross-examination of the expert witness sets him apart from the preferred methods, and may play a role in explaining lower procedural fairness ratings with the introduction of such a witness. Previous research has not presented court appointed expert witness testimony with the opportunity for cross-examination nor has it presented such testimony in conjunction with adversarial testimony. Future research addressing these issues will shed light on the role cross-examination, when coupled with court appointed expert testimony, may have on procedural justice judgments.

Conclusions

In general, the results of the current study followed the trends of the hypotheses. Subjects rated procedural fairness higher when presented with only adversarial

testimony compared with court appointed testimony, despite the fact that adversarial experts were rated as more biased than court appointed experts. This continues the pattern of problematic results in related psychological research involving expert witness testimony, and is discouraging for the movement to increase the use of court appointed experts as a way to increase procedural justice in the legal system.

Subjects rated procedural fairness lower when the plaintiff lost to a government defendant than when the loss was to a corporate defendant. This stresses possible associations people have between entities with high levels of power and the courtroom, suggesting that fairness ratings may decline as plaintiffs lose to those whom they may associate with the government system. This is a problem in cases where government agencies or the State play the role of the defendant, and these scenarios may be exacerbated with the presence of court appointed expert testimony.

The results found were from a sample of neutral observers, as the subjects were to read the transcripts as though they were a neutral observer watching the courtroom proceedings take place. Though there are some differences in elements of fairness depending on whether an individual has personal experience with the legal system or not (Tyler, 2001), the majority of individuals will not be in a situation where they are involved in a case that goes to court. Therefore, having procedural justice evaluations made by neutral observers allows for the greatest generalizability to the population. In the recursive system of procedural justice and legitimacy, it is also important for individuals to believe the legal system is fair and legitimate even if they have no personal experience with the system. Therefore, when and if they do end up in a

position where legal authorities may be called in, they are more willing to cooperate with those authorities.

Though neutral observer fairness ratings tend to be higher than fairness ratings of subjects role-playing the plaintiff (see Johnstone, 1996), it is important to recognize that although subjects rated procedural fairness lower in certain conditions, those ratings are not necessarily "low" in general. The scales provided allowed for ratings between 1 and 9, where 1 is "Not at all Fair," 9 is "Very Fair," and 5 is "Somewhat Fair." Means ranged from 6.00 to 7.64 (see table 2.0), which suggests that subjects generally rated procedural fairness for the experimental trial to be more than somewhat fair. Though it is unknown whether a different sample would rate the trial at a comparable level of fairness, or whether a different court case would receive similar ratings, it is encouraging that the fairness ratings were relatively high. It may be that the benefits to the legal system with the introduction of court appointed experts would ultimately outweigh any drop to fairness ratings initially observed with the implementation of more widespread use. This could especially be the case if the drop results in ratings that are still "somewhat fair" or above.

There are numerous variables that may affect how fair people rate proceedings in the courtroom, including the two explored in the current study – expert witness type and role of the defendant. These fairness ratings in the courtroom reflect on the perceived fairness of the legal system itself. Individuals who do not believe that trial procedures are fair may generalize those ill feelings to the entire legal system. The consequences of this include a lack of deterrence of future problems to proper legal authorities, a lower level of cooperation with the legal system in general, and perhaps

the breakdown of Tyler's (2003) self-regulating society. Results of the current study suggest that neutral observers prefer the use of adversarial experts, and losses to "powerful" entities such as government agencies will result in lower procedural fairness ratings. Cases will always be tried where individuals lose to corporations or the government, but the legal system should be particularly careful when introducing court appointed testimony into these situations. More research needs to be done to determine what manipulations, if any, allow for a greater acceptance of court appointed witness testimony in the courtroom so as to maximize perceptions of fairness in the legal system.

Appendix A: Tables

Table 1.0. *Expert Mean Bias Ratings*

	Court Appointed Expert			Adversarial Expert - Plaintiff			Adversarial Expert - Defense		
Variable	Ind.	Corp.	Gov't	Ind.	Corp.	Gov't	Ind.	Corp.	Gov't
Adversarial	-	-	-	7.36 (1.433)	7.09 (2.166)	6.73 (2.005)	7.00 (1.613)	6.545 (1.753)	7.182 (1.537)
Court Appointed Neutral	4.64 (1.912)	4.50 (1.958)	4.45 (1.968)	7.45 (1.128)	6.80 (1.135)	6.82 (.874)	6.636 (2.11)	6.650 (1.765)	6.000 (2.098)
Court Appointed Biased	6.18 (.874)	5.50 (1.900)	5.36 (1.963)	6.73 (1.794)	7.60 (1.265)	6.18 (2.183)	6.909 (1.70)	6.600 (1.955)	6.636 (2.292)

Notes: Standard deviations in parentheses. All variables were rated on 9 point scales with endpoints of 1 and 9. Higher scores represent greater bias.

Table 2.0. *Procedural Fairness Mean Ratings*

Variable	Individual	Corporation	Government
Adversarial	7.64	7.45	7.36
	(.674)	(1.036)	(1.433)
Court Appointed Neutral	6.00	7.50	6.91
	(1.789)	(1.080)	(1.514)
Court Appointed Biased	7.64	7.30	6.00
	(1.362)	(.823)	(2.324)

Notes: Standard deviations in parentheses. All variables were rated on 9 point scales with endpoints of 1 and 9. Higher scores represent higher procedural fairness.

Table 3.0. *Outcome Fairness Mean Ratings*

Variable	Individual	Corporation	Government
Adversarial	6.91	6.91	6.36
	(.831)	(2.427)	(2.111)
Court Appointed Neutral	5.90	7.30	6.55
	(2.514)	(1.494)	(1.968)
Court Appointed Biased	7.45	6.40	5.82
	(1.753)	(1.897)	(2.750)

Notes: Standard deviations in parentheses. All variables were rated on 9 point scales with endpoints of 1 and 9. Higher scores represent higher outcome fairness.

Table 4.0. *Motive-Based Trust Mean Ratings*

Variable	Individual	Corporation	Government
Adversarial	6.36	6.18	6.82
	(1.502)	(1.328)	(1.991)
Court Appointed Neutral	5.73	5.80	6.64
	(2.284)	(1.398)	(1.362)
Court Appointed Biased	6.82	5.20	5.64
	(1.722)	(2.201)	(1.567)

Notes: Standard deviations in parentheses. All variables were rated on 9 point scales with endpoints of 1 and 9. Higher scores represent higher motive-based trust.

Appendix B: Pre-Trial Questionnaire

Please take a moment to read over and thoughtfully answer the following questions.

1. In general, do you feel that **the legal system** is fair?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

2. In general, do you feel that **judges** are fair?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

3. Do you feel that **society** has respect for your views?

1	2	3	4	5	6	7	8	9
No Respect				Some Respect				Complete Respect

4. Do you feel that **the legal system** has respect for your views?

1	2	3	4	5	6	7	8	9
No Respect				Some Respect				Complete Respect

5. Do you feel that **judges** have respect for your views?

1	2	3	4	5	6	7	8	9
No Respect				Some Respect				Complete Respect

6. In general, do you feel that the average citizen involved in a legal proceeding has the capability to affect a trial's outcome?

1	2	3	4	5	6	7	8	9
No Ability				Some Ability				Complete Ability

7. In general, do you feel that trial proceedings are fair?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

8. In general, do you feel that the average citizen involved in a trial has control over the proceedings at trial – that is, what evidence is presented, what arguments are made for the individual's side, etc.?

1	2	3	4	5	6	7	8	9
No Control				Some Control				Complete Control

9. Do you feel that the legal system ought to make decisions in a consistent fashion?

1	2	3	4	5	6	7	8	9
Definitely No				No Opinion				Definitely Yes

10. Do you feel that everyone – even a serial murderer, rapist, or terrorist – has a right to have his or her arguments heard at trial?

1	2	3	4	5	6	7	8	9
Definitely No				No Opinion				Definitely Yes

11. Do you feel that everyone – even a serial murderer, rapist, or terrorist – should have an equal chance of success at trial?

1	2	3	4	5	6	7	8	9
Definitely No				No Opinion				Definitely Yes

12. Do you feel that the methods used in a trial are unbiased (equally fair to both sides) or biased (favor one side over another)?

1	2	3	4	5	6	7	8	9
Definitely Unbiased				Neither Biased Nor Unbiased				Definitely Biased

13. In general, do you trust that legal authorities, such as law enforcement officers and judges, act in good faith – that is, with good intentions?

1	2	3	4	5	6	7	8	9
No Trust				Some Trust				Complete Trust

Appendix C: Post-Trial Questionnaire

Please take a moment to read over and thoughtfully answer the following questions. Remember that you are answering these questions from the viewpoint of a neutral observer who watched the trial proceedings described in the transcript. Please answer the questions as though you actually observed the trial taking place.

Section 1

1. On the whole, do you feel that **the legal system** is **fair**?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

2. Do you feel that **the trial procedure** (i.e. what evidence was presenting, the order in which it was presented, any rulings made by the judge, etc.) that led to the verdict in this case was **fair**?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

3. Do you feel that the actual **verdict** in this case was **fair**?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

4. Did you feel that the plaintiff, Sgt. Patricia Longman, had **control** over the proceedings at trial?

1	2	3	4	5	6	7	8	9
No Control				Some Control				Complete Control

5. Were the methods used at trial **biased** towards one side, or were they equally fair to both sides?

1	2	3	4	5	6	7	8	9
Definitely Unbiased				Neither Biased Nor Unbiased				Definitely Biased

6. On the whole, do you think the plaintiff feels **frustrated** with the trial proceedings?

1	2	3	4	5	6	7	8	9
Not at all Frustrated				Somewhat Frustrated				Very Frustrated

7. On the whole, how hard did you feel the judge **tried** to be **fair** to the plaintiff?

1	2	3	4	5	6	7	8	9
Did Not Try				Tried Somewhat				Tried Very Hard

8. On the whole, how **politely** was the plaintiff treated at trial?

1	2	3	4	5	6	7	8	9
Not Politely				Somewhat Politely				Very Politely

9. After having observed the trial, do you feel that **the legal system** has **respect** for the average citizen's (your) views?

1	2	3	4	5	6	7	8	9
No Respect				Some Respect				Complete Respect

10. During the trial, did you feel that the **judge** had **respect** for the plaintiff's views?

1	2	3	4	5	6	7	8	9
No Respect				Some Respect				Complete Respect

11. Did you feel that the plaintiff was able to have an **effect** on the outcome of the trial?

1	2	3	4	5	6	7	8	9
No Effect				Some Effect				Strong Effect

12. Did you feel that the plaintiff's lawyer was able to have an **effect** on the outcome of the trial?

1	2	3	4	5	6	7	8	9
No Effect				Some Effect				Strong Effect

13. It is possible that the plaintiff may appeal the judge's verdict in this case. Given the option, how likely do you think it is that the plaintiff would appeal the decision?

1	2	3	4	5	6	7	8	9
Very Unlikely				Somewhat Likely				Very Likely

14. After having observed the trial, do you trust that legal authorities, such as law enforcement officers and judges, act in good faith – that is, with good intentions?

1	2	3	4	5	6	7	8	9
No Trust				Some Trust				Complete Trust

15. How likely do you think it is that the plaintiff would defer future problems to legal authorities?

1	2	3	4	5	6	7	8	9
Very Unlikely				Somewhat Likely				Very Likely

16. How happy are you with the verdict of the trial?

1	2	3	4	5	6	7	8	9
Very Unhappy				Somewhat Happy				Very Happy

Section 2

1. How **competent** was the judge, Judge Leonard, in this case?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

2. On the whole, how **fair** was the judge in arriving at his decision?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

3. How **competent** was Dr. Jae Yang, the plaintiff's expert witness, in this case?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

4. How **convincing** was the testimony of Dr. Yang?

1	2	3	4	5	6	7	8	9
Very Unconvincing				Not convincing Nor unconvincing				Very Convincing

5. How much **influence** did Dr. Yang have on the verdict of the judge?

1	2	3	4	5	6	7	8	9
No Influence				Some Influence				Strong Influence

6. Do you think that Dr. Yang was **biased** (favored one side over the other) or **unbiased** (neutral)?

1	2	3	4	5	6	7	8	9
Definitely Unbiased				Neither Biased Nor Unbiased				Definitely Biased

7. Do you believe that Dr. Yang testified with **good intentions**?

1	2	3	4	5	6	7	8	9
Strongly Disagree				Neither Agree Nor Disagree				Strongly Agree

8. How **competent** was Dr. Kathy Johnson, the defendant's expert witness, in this case?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

9. How **convincing** was the testimony of Dr. Johnson?

1	2	3	4	5	6	7	8	9
Very Unconvincing				Not convincing Nor unconvincing				Very Convincing

10. How much **influence** did Dr. Johnson have on the verdict of the judge?

1	2	3	4	5	6	7	8	9
No Influence				Some Influence				Strong Influence

11. Do you think that Dr. Johnson was **biased** (favored one side over the other) or **unbiased** (neutral)?

1	2	3	4	5	6	7	8	9
Definitely Unbiased				Neither Biased Nor Unbiased				Definitely Biased

12. Do you believe that Dr. Johnson testified with **good intentions**?

1	2	3	4	5	6	7	8	9
Strongly Disagree				Neither Agree Nor Disagree				Strongly Agree

13. How **competent** was Dr. James Graham, the court appointed expert witness, in this case?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

14. How **convincing** was the testimony of Dr. Graham?

1	2	3	4	5	6	7	8	9
Very Unconvincing				Not convincing Nor unconvincing				Very Convincing

15. How much **influence** did Dr. Graham have on the verdict of the judge?

1	2	3	4	5	6	7	8	9
No Influence				Some Influence				Strong Influence

16. Do you think that Dr. Graham was **biased** (favored one side over the other) or **unbiased** (neutral)?

1	2	3	4	5	6	7	8	9
Definitely Unbiased				Neither Biased Nor Unbiased				Definitely Biased

17. Do you believe that Dr. Graham testified with **good intentions**?

1	2	3	4	5	6	7	8	9
Strongly Disagree				Neither Agree Nor Disagree				Strongly Agree

18. How **competent** was the attorney for the plaintiff?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

19. How **convincing** were the arguments of the attorney for the plaintiff?

1	2	3	4	5	6	7	8	9
Very Unconvincing				Not convincing Nor unconvincing				Very Convincing

20. How much **influence** did the attorney for the plaintiff have on the judge's verdict?

1	2	3	4	5	6	7	8	9
No Influence				Some Influence				Strong Influence

21. On the whole, do you feel that the attorney for the plaintiff was **fair**?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

22. How **competent** was the attorney for the defense?

1	2	3	4	5	6	7	8	9
Very Incompetent				Average Competence				Very Competent

23. How **convincing** were the arguments of the attorney for the defense?

1	2	3	4	5	6	7	8	9
Very Unconvincing				Not convincing Nor unconvincing				Very Convincing

24. How much **influence** did the attorney for the defense have on the judge's verdict?

1	2	3	4	5	6	7	8	9
No Influence				Some Influence				Strong Influence

25. On the whole, do you feel that the attorney for the defense was **fair**?

1	2	3	4	5	6	7	8	9
Not at all Fair				Somewhat Fair				Very Fair

Appendix D: Trial Transcript

PATRICIA LONGMAN

vs.

UNITED STATES DEPARTMENT OF DEFENSE MILITARY HEALTH SERVICES

ENCLOSED IS A CASE FILE SUMMARIZING THE EVENTS SURROUNDING THE TRIAL OF LONGMAN V. US DEPARTMENT OF DEFENSE MILITARY HEALTH SERVICES. READ THE CONTENTS OF THE CASE FILE CAREFULLY. REMEMBER, YOUR TASK IS TO READ AND REACT TO THE EVENTS AT TRIAL AS THOUGH YOU WERE A NEWSPAPER REPORTER OBSERVING THE TRIAL.

Case Overview
Longman v. United States Department of Defense Military Health Services

Patricia Longman suffered a near-fatal heart attack on October 10th, 2004. She was in her home when the heart attack occurred, and her husband called an ambulance, which transported her to her hometown hospital. She had been taking the prescription drug Navoprex at a high dose for ten months to treat rheumatoid arthritis, an autoimmune disease in which the body's immune system attacks the joints. This disease resulted in her honorable discharge from the Army. Once at the hospital, the emergency room staff of doctors suggested that she discontinue the Navoprex immediately to decrease the chance of further heart attacks. Sgt. Longman has reason to believe that a prescription of Navoprex without regard to her medical history may have caused her heart attack due to the drug's promotion of clotting in the body, and has named the United States Department of Defense Military Health Services, her government healthcare agency, as the defendant.

Opening Statement of William Jeffreys,
Attorney for Plaintiff Patricia Longman

Judge Leonard: Does the Counsel for the Plaintiff wish to make any opening remarks?

Counsel for the Plaintiff: Yes, your honor. Counsel for the Defense, Judge Leonard, good afternoon. I would like to start with some background information necessary to understand the entirety of the tragedy that has befallen my client, Sgt. Patricia Longman. Patricia Longman is a very health-conscious and hard-working woman who never smoked, eats well, and has kept to a strict regimen of physical training since her days in the Army. She is an unlikely candidate for a heart attack at this age. A number of years ago, Sgt. Longman was diagnosed with the painful and life-altering condition of rheumatoid arthritis. Because of her medical condition, she was forced to leave the Army, a career that she loved.

The treatment recommended to her at the time was the prescription drug Navoprex. Due to the severity of her condition, the United States Department of Defense Military Health Services put Sgt. Longman on a high dose. Over time, Sgt. Longman's rheumatoid arthritis interfered with her life less and less, which she took as a sign that Navoprex was doing its job and made sure to take her medication exactly as prescribed.

Unfortunately, Sgt. Longman had no way of knowing that Navoprex was also increasing the chances of blood clots, which can lead to heart attacks and strokes. Had Sgt. Longman not had a history of angina chest pain, which is often a product of heart disease, a regimen of Navoprex could have been an appropriate prescription. However, the United States Department of Defense

Military Health Services neglected to consider this critical aspect of her medical history, and went ahead with the Navoprex prescription. Government healthcare agencies are responsible for considering all available information and making an informed decision. Sgt. Longman, trusting the recommendation of her government healthcare agency, agreed to begin taking Navoprex unaware of the increased risk due to her angina. The negligence by the United States Department of Defense Military Health Services has resulted in what could have been a fatal heart attack.

A government healthcare agency following the standard of practice in the field would not have prescribed a drug that would promote clotting to a patient suffering from angina. During the trial, you will hear expert medical testimony that will demonstrate that the United States Department of Defense Military Health Services was negligent and is therefore liable for the requested damages of $1,200,000.

Opening Statement of Joshua Banks,
Attorney for the Defendant, United States Department of Defense Military Health Services

Judge Leonard: Does the Counsel for the Defense wish to make any opening remarks?

Counsel for the Defense: Yes, you honor, may it please the Court. The United States Department of Defense Military Health Services would like to express its moral support and concern for Sgt. Longman, in response to the heart attack that occurred. Heart attacks strike many people every day. There is no doubt that such a life-threatening event results in the urge to point fingers, to find someone to blame. However, we will make it clear over the course of this trial that the United States Department of Defense Military Health Services is not to blame. The United States Department of Defense Military Health Services followed standard medical practices and provided Sgt. Longman with high quality medical care.

Navoprex underwent extensive clinical testing and was ultimately deemed safe by not only the producer of the drug, Entco Pharmaceuticals, but the FDA as well. Doctors across the United States commend the drug for the significant improvement it makes in the lives of those suffering from rheumatoid arthritis. The available evidence suggests that the increase in the risk of heart attack from Navoprex is small, and this risk can be justified by the marked improvement observed in the conditions of patients who take the drug.

The United States Department of Defense Military Health Services adequately took Sgt. Longman's medical history into account before recommending a drug. There is no published research stating that the use of

Navoprex with patients suffering from angina places them at an unusually high risk of heart attacks. The United States Department of Defense Military Health Services carefully considered all aspects of the plaintiff's condition when deciding on a treatment. Many government healthcare agencies prescribe Navoprex and with much success in regard to patient improvement, so there is no question that the prescription of the drug itself was appropriate.

We will present testimony that demonstrates that Navoprex is a safe drug, even when prescribed to patients with possible heart problems. The United States Department of Defense Military Health Services made an appropriate choice of drug based on the information at hand. The United States Department of Defense Military Health Services followed the standard of practice in the field. It is not liable for the requested damages.

Testimony of the Medical Experts

Day 1

Judge Leonard: I would like to begin by calling a court-appointed expert witness to the stand, Dr. James Graham of the FDA's Office of Drug Safety. (Dr. Graham is seated and sworn in). Dr. James Graham, could you please state your name and occupation for the Court?

Dr. Graham, Court Appointed Witness: Dr. James Graham, Associate Director for Science and Medicine in the Food and Drug Administration's Office of Drug Safety.

Judge Leonard: Where did you obtain your degree?

Dr. Graham, Court Appointed Witness: I graduated from the John Hopkins University School of Medicine, where I completed a fellowship in pharmacoepidemiology and my Masters in Public Health. I've also trained in Internal Medicine at Yale and Adult Neurology at the University of Pennsylvania.

Judge Leonard: Could you briefly explain to the Court what pharmacoepidemiology is?

Dr. Graham, Court Appointed Witness: Pharmacoepidemiology is the study of the use and effect of drugs in a population. It involves determining the existence and extent of risks associated with drugs, and working to improve the quality and use of medications.

Judge Leonard: Dr. Graham, are you familiar with the medicine marketed under the name Navoprex?

Dr. Graham, Court Appointed Witness: I am.

Judge Leonard: Dr. Graham, would you explain how Navoprex works?

Dr. Graham, Court Appointed Witness: The important human enzymes related to this case are COX-1 and COX-2. COX-1 is necessary for the normal functioning of the stomach and platelets, whereas COX-2 is responsible for pain and swelling, much like what is experienced with rheumatoid arthritis. Over the counter drugs like Ibuprofen inhibit COX-1 and COX-2, meaning they are effective in reducing pain but in turn increase the risk of stomach bleeding. Drugs like Navoprex inhibit only COX-2, reducing pain without the side effects caused by inhibiting COX-1.

Judge Leonard: And would you explain what the body undergoes during a heart attack?

Dr. Graham, Court Appointed Witness: Under normal circumstances, a balance between clotting factors and factors that prevent clotting maintain the flow of blood in one's body. In a myocardial infarction – a heart attack – or in a stroke, a blood clot forms, often at the site of an injury, in a vessel that brings oxygen and nutrients to the heart or brain. When the flow of blood is stopped by the clot, a part of the heart or brain is injured or dies.

Judge Leonard: Thank you for your testimony, Dr. Graham. I have no further questions at this time, but. I will reserve the right to recall this witness (Dr. Graham removes himself from the stand). Does the plaintiff wish to call any witnesses at this time?

Counsel for the Plaintiff: Yes, your honor. The plaintiff would like to call Dr. Jae Yang, to the stand. (Dr. Yang is seated and sworn in). Dr. Yang, would you please state your name and occupation for the Court?

Dr. Yang, Witness for the Plaintiff: Dr. Yang, Adjunct Clinical Professor of Medicine at the Stanford University School of Medicine in Stanford, California, and a Chief Science Officer at the Institute of Clinical Outcomes Research and Education in Woodside, California.

Counsel for the Plaintiff: Dr, Yang, where did you obtain your degree?

Dr. Yang, Witness for the Plaintiff: I graduated from Harvard University and trained as a rheumatologist with concentrations in safety and epidemiology.

Counsel for the Plaintiff: Would you clarify for the Court what a rheumatologist does?

Dr. Yang, Witness for the Plaintiff: A rheumatologist diagnoses and treats rheumatoid diseases, which are mainly problems involving joints and related connective tissues.

Counsel for the Plaintiff: Are you familiar with the case of Patricia Longman?

Dr. Yang, Witness for the Plaintiff: Yes I am. I examined her on October 11th, 2004.

Counsel for the Plaintiff: What did you find during your examination?

Dr. Yang, Witness for the Plaintiff: I determined that Sgt. Longman had suffered a myocardial infarction.

Counsel for the Plaintiff: Was Sgt. Longman taking any medications at the time?

Dr. Yang, Witness for the Plaintiff: Yes, she was taking a high-dose prescription of Navoprex and had been doing so consistently for 10 months.

Counsel for the Plaintiff: Is there any connection between her high-dose prescription of Navoprex and the subsequent heart attack?

Dr. Yang, Witness for the Plaintiff: Yes. It is very probable that Navoprex is at least partially to blame for the attack, due to the patient's history of angina.

Counsel for the Plaintiff: Would you explain to the Court what angina is?

Dr. Yang, Witness for the Plaintiff: Certainly. Angina is chest pain that results when part of the heart is not getting enough oxygen-rich blood. It is often a symptom of an underlying condition such as coronary artery disease or other types of heart disease.

Counsel for the Plaintiff: What evidence did you use to make the determination that Navoprex is at least partially to blame for the heart attack?

Dr. Yang, Witness for the Plaintiff: Unlike Aspirin, which prevents platelets from clumping, Navoprex is believed to promote clotting and thus increase the risk of myocardial infarctions. Considering that Sgt. Longman had a clear medical history of angina, Navoprex might have further promoted clotting in a body already at risk for clots and ultimately heart attacks.

Counsel for the Plaintiff: Have any clinical studies been done that demonstrate the increased risk?

Dr. Yang, Witness for the Plaintiff: Yes, numerous studies have shown just that. Two studies done by Entco Pharmaceuticals, 090 and 095, have found nearly a 7-fold and 5-fold increase, respectively, in increased heart attack risk with high doses of Navoprex.

Counsel for the Plaintiff: And is it correct that Sgt. Longman was on a dosage that fell into the "high dose" range for Navoprex?

Dr. Yang, Witness for the Plaintiff: That is correct.

Counsel for the Plaintiff: Would a reasonably prudent physician following the standard of practice in the field prescribe a drug shown to promote clotting, such as Navoprex, in a high dose to a patient suffering from angina?

Dr. Yang, Witness for the Plaintiff: No. The risk of stroke and heart attacks would most certainly outweigh the benefits of a high dose treatment.

Counsel for the Plaintiff: Have any studies been done outside of the Entco Corporation to evaluate the effects of Navoprex?

Dr. Yang, Witness for the Plaintiff: A study funded by Kaiser Permanente that took three years to complete concluded that high dose prescriptions of Navoprex should not be given due to high risk of heart attack and sudden death. The authors estimated that nearly 28,000 excess cases of heart attack or sudden cardiac death were caused by Navoprex. This is a conservative estimate.

Counsel for the Plaintiff: No further questions, your Honor.

Judge Leonard: Counsel for the Defense, would you like to cross-examine this witness?

Counsel for the Defense: Yes, thank you, your Honor. Dr. Yang, can you state with absolute certainty that the heart attack suffered by Sgt. Longman was caused by Navoprex?

Dr. Yang, Witness for the Plaintiff: In the medical field doctors are often unable to be *absolutely* certain as to a single cause of –

Counsel for the Defense: A simple yes or no will suffice, Dr. Yang.

Dr. Yang, Witness for the Plaintiff: No, I cannot be absolutely certain.

Counsel for the Defense: And despite these clinical studies of which you speak, the FDA still chose to approve Navoprex for the market?

Dr. Yang, Witness for the Plaintiff: Well, yes, but the short-term studies by Entco were not adequate to evaluate the long-term effects of –

Counsel for the Defense: And these studies did not evaluate the effects of Navoprex on patients with angina, is that correct?

Dr. Yang, Witness for the Plaintiff: That is correct. It would be unethical to –

Counsel for the Defense: Thank you, Dr. Yang. No further questions.

Judge Leonard: If there are no further questions for Dr. Yang, this court is adjourned until tomorrow morning.

Day 2

Judge Leonard: I would like to recall yesterday's court-appointed witness, Dr. Graham (Dr. Graham is seated and sworn in). Dr. Graham, would you please restate your name and occupation for the Court?

Dr. Graham, Court Appointed Witness: Dr. James Graham, Associate Director for Science and Medicine in the Food and Drug Administration's Office of Drug Safety.

Judge Leonard: Are you familiar with the clinical trials that were published in regard to Navoprex and the risk of heart attack?

Dr. Graham, Court Appointed Witness: Yes, your honor, I am. In fact, in what I would consider one of the most comprehensive studies in regard to this issue, researchers found in 2002 that a high dose of Navoprex resulted in only a 2-fold increase in heart attack risk compared with no increased risk for the control.

Judge Leonard: Thank you for your testimony Dr. Graham. No further questions (Dr. Graham removes himself from the stand). Counsel for the Defense, will you be calling any witnesses at this time?

Counsel for the Defense: Yes, your Honor, thank you. We would like to call our expert witness, Dr. Kathy Johnson. (Dr. Johnson is seated and sworn in). Dr. Johnson, could you please state your name and occupation for the Court?

Dr. Johnson, Witness for the Defense: Dr. Kathy Johnson, Co-Director of the Cardiovascular Health Research Unit at the University of Seattle in Washington.

Counsel for the Defense: Where did you receive your medical training?

Dr. Johnson, Witness for the Defense: I graduated from Kansas State University Medical School, where I trained in pharmacoepidemiology and cardiovascular health.

Counsel for the Defense: Are you familiar with the studies cited by Dr. Yang?

Dr. Johnson, Witness for the Defense: I am familiar with the published data regarding Navoprex, including the 2002 meta-study that Dr. Yang neglected to mention, but that Dr. Graham brought up in his testimony.

Counsel for the Defense: Would you explain to the court the results of this particular study?

Dr. Johnson, Witness for the Defense: The results were exactly how Dr. Graham described them, and the increase in risk was hardly statistically significant.

Counsel for the Defense: What did the FDA do with this information?

Dr. Johnson, Witness for the Defense: The FDA had previously stated that, "With the available data, it is impossible to answer with complete certainty whether the risk of cardiovascular and thromboembolic events is increased in patients on Navoprex. A larger database will be needed to answer this and other safety comparison questions." This meta-study provided the "larger database" requested by the FDA, with the result being the approval of Navoprex for use by millions of patients.

Counsel for the Defense: Is it true that the FDA took these studies about heart attack risk into account when opting to approve Navoprex?

Dr. Johnson, Witness for the Defense: Yes.

Counsel for the Defense: Taking into account the clinical studies and actions of the FDA, what is your expert opinion about the cause of Sgt. Longman's heart attack?

Dr. Johnson, Witness for the Defense: It is clear to me that the risks of Navoprex are minimal and that the heart attack suffered by Sgt. Longman, though naturally very tragic, cannot solely be blamed on the prescription of Navoprex, even in conjunction with her angina.

Counsel for the Defense: Would you say that many physicians prescribe Navoprex at a high dosage to patients?

Dr. Johnson, Witness for the Defense: I would say that it's a fairly regular occurrence, yes.

Counsel for the Defense: Would a reasonable physician have prescribed Navoprex to Sgt. Longman at a high dosage, as the defendant did?

Dr. Johnson, Witness for the Defense: I wouldn't hesitate to do it myself.

Counsel for the Defense: Thank you, Dr. Johnson. No further questions.

Judge Leonard: Counsel for the Plaintiff, would you like to cross-examine the witness at this time?

Counsel for the Plaintiff: Yes, your honor, thank you. Dr. Johnson, you said that the results of the meta-study were "hardly statistically significant." "Hardly" statistically significant is still statistically significant, isn't that correct?

Dr. Johnson, Witness for the Defense: Yes, but –

Counsel for the Plaintiff: And would you please define "statistically significant" for the Court, Dr. Johnson.

Dr. Johnson, Witness for the Defense: Statistically significant is a way to describe results of a controlled study as very unlikely to have occurred just by chance, though there is naturally a margin of error –

Counsel for the Plaintiff: Therefore, the results of the meta-study suggesting that heart attacks increased 2-fold for high dose Navoprex patients were extremely unlikely to have occurred by chance, is that correct?

Dr. Johnson, Witness for the Defense: Yes.

Counsel for the Plaintiff: No further questions, your honor.

Closing Statement of William Jeffreys,
Attorney for Plaintiff Patricia Longman

Judge Leonard: Would the Counsel for the Plaintiff like to make a closing statement at this time?

Counsel for the Plaintiff: Yes, thank you your Honor. Though there is no way to prove with 100% certainty that Navoprex caused Patricia Longman's heart attack, it is reasonable to conclude that Navoprex played a significant role. The most comprehensive study done strongly concluded that Navoprex does increase the risk of heart attacks and sudden death and explicitly stated that the drug should not be prescribed. This three year long study was exactly what the FDA called for as an appropriate follow-up to the studies by Entco Pharmaceuticals, which, mind you, also relatively consistently showed an increase risk in heart attacks for those taking a high dose of the drug. Government healthcare agencies have a professional responsibility to be adequately informed about the medications that they prescribe. Reasonably competent government healthcare agencies would have studied these results before prescribing this medication. We don't know whether the United States Department of Defense Military Health Services knew of this research, but if it did not, it should have. The United States Department of Defense Military Health Services certainly knew of Sgt. Longman's angina. She reported it to the government healthcare agency and the United States Department of Defense Military Health Services noted the report in her medical records. Any competent government healthcare agency would know that angina is a symptom of cardiovascular problems. No reasonable government healthcare

agency would prescribe a high dose of a medication known to cause heart attacks to a patient suspected of having cardiovascular problems.

The evidence is clear. The United States Department of Defense Military Health Services did not act as we expect reasonably competent government healthcare agencies to act. It did not act according to the standards of practice of the profession. It is therefore liable for the trauma that it caused to Sgt. Longman and for the continuing loss of quality of life that she suffers. I urge you to find in favor of Sgt. Longman and award her the requested amount of $ 1,200,000. Thank you.

Closing Statement of Joshua Banks,
Attorney for the Defendant, United States Department of Defense Military Health Services

Judge Leonard: Would the Counsel for the Defense like to make a closing statement?

Counsel for the Defense: Yes. Thank you your honor. There is no doubt that something terrible happened to Sgt. Longman. Both rheumatoid arthritis and the heart attack have been painful, frightening, and life-altering experiences for the plaintiff. But this case is not about that. And it is not about whether Navoprex increases the risk of heart attacks. And it is not about whether the United States Department of Defense Military Health Services could have decided upon a different course of treatment. Government healthcare agencies must make difficult decisions every day. Sometimes the results of those decisions aren't what we or the government healthcare agency would hope for. But we don't hold government healthcare agencies responsible for the outcomes. For the plaintiffs to prevail in this case, they must demonstrate that the United States Department of Defense Military Health Services did something wrong and the evidence simply does not support this conclusion.

There is no direct evidence that Navoprex caused the plaintiff's heart attack. There are other factors that could have caused the heart attack and the plaintiff has not ruled these out. Furthermore, Navoprex was approved for use by the Food and Drug Administration after undergoing thorough tests. Although there is some evidence for a slight increase in the risk of heart attacks after taking Navoprex, thousands of physicians have prescribed this medication to hundreds of thousands of patients. Clearly, reasonably competent government

healthcare agencies do make the decision to prescribe Navoprex and they make this decision frequently. Furthermore, no study has concluded that Navoprex should not be prescribed to patients reporting angina and other than the report of angina, there was no reason to believe that the plaintiff could have been unusually susceptible to Navoprex.

In sum, the United States Department of Defense Military Health Services acted in accordance with the best standards of the profession. It made a reasonable decision based on the evidence available. We are truly sorry for the injury and pain that the plaintiff has suffered, but the United States Department of Defense Military Health Services is not responsible for it. The evidence is clear. The United States Department of Defense Military Health Services is not liable.

Verdict of Judge Leonard

Judge Leonard: I have considered the arguments of both counsel, as well as the testimony of the medical experts in this case. Let me again reiterate my sorrow, Sgt. Longman that you have had to deal with not only rheumatoid arthritis, but a recent heart attack as well. The plaintiff in this case has argued that the United States Department of Defense Military Health Services is to blame for this heart attack, because it disregarded relevant medical history and negligently prescribed a medication that by itself or in conjunction with conditions underlying the reported angina, led to the plaintiff's heart attack. While this argument is compelling due to the tragic nature of the current situation, I agree with the defendant that there is no definitive proof that Navoprex either exasperated Sgt. Longman's condition to the point of cardiac arrest or caused the attack in some other way.

Though studies did seem to show that Navoprex might increase the risk of heart attack, a lack of consensus on the extent of this risk made it so I could not rule against the defendant on these particular issues. It is simply not clear to me that a reasonably competent government healthcare agency applying the best standards of practice would not have advocated the same course of treatment as did the defendant.

Therefore, I hold for the defendant, the United States Department of Defense Military Health Services.

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