DISCOVERY AND PRESENTATION OF EVIDENCE IN ADVERSARY AND NONADVERSARY PROCEEDINGS

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I. INTRODUCTION

In one important respect, the judicial process is analogous to the scientific method. Each must be seen by the public as objective and rational, exhibiting procedures that combat bias and irrelevancy. This analogy suggested to us that the capacity of the Anglo-American adversary system1 to produce objective and rational decisions could be empirically tested. Specifically, we devised an experiment in which a series of planned variations in the judicial process was introduced into a controlled setting. By comparing the measurable effects of these changes, the variable that maximizes the quality of the decision making may be identified. A similar research design was used in two prior studies in which the decision maker was the center of interest. The first investigated the ability of the adversary system to combat decision maker bias;2 the second examined decision maker bias caused by the order of presentation at trial.3 The present study shifts attention to the attorney, and asks how attorney discovery and transmission of evidence affects another important potential source of bias: the factual basis of a decision.

This investigation began, as did our first study, with the exami-
nation of a major advantage claimed on behalf of the Anglo-American adversary system: that attorneys in an adversary system provide better discovery and transmission of information to legal decision makers than do attorneys in an inquisitorial system. As one American legal theorist has written: "The adversary system presupposes that the most effective means of determining truth is to place upon a skilled advocate for each side the responsibility for investigating and presenting the facts from a partisan perspective. Thus, the likelihood is maximized that all relevant facts will be ferreted out and placed before the ultimate fact finder in as persuasive a manner as possible."

A combination of two elements identifies the variations necessary to evaluate the claim. The first element is the assignment of the attorney's own role. In the Anglo-American adversary system he is conditioned to be "client-centered." This conditioning is further reinforced by contingent fees and attorney compensation based on services rendered. The second element is the attorney's perception of his opponent's role. In the adversary system, the attorney understands that because his opponent is also client-centered by instruction and incentive, the relationship of the two advocates is largely oppositional. These two elements can be easily altered to simulate the other systems in order to test the claimed advantage. If the attorney's own role assignment remains client-centered, but his perception of his opponent's role is changed from client-centered to court-centered, the model becomes equivalent to a partly inquisitorial or "mixed" system. This model is similar to the process employed in German criminal courts, where the defense counsel is client-centered, but the

4. E. Morgan, Some Problems of Proof Under the Anglo-American System of Litigation 3 (1956); Barret, The Adversary System and the Ethics of Advocacy, 57 Notre Dame Law. 479, 481 (1952). While the attorney in a pure adversary system has no counterpart in the ideal inquisitorial system, where the decision maker actively investigates the claims of unrepresented litigants, in practice inquisitorial systems have made substantial use of attorneys in the production of evidence. See Lacy, supra note 1, at 75-82; Thibaut, Walker & Lind, supra note 2, at 388-89.


6. The attorney's role is explained in Canon 7 of the Code of Professional Responsibility: "The duty of a lawyer, both to his client and to the legal system, is to represent his client zealously within the bounds of the law . . . ." ABA, Code of Professional Responsibility, Canon EC 7-1.

7. The traditional private financing arrangements are outlined in Canon 2 of the Code of Professional Responsibility. The contingent fee, which is expressly allowed by Canon EC 2-20, probably provides the strongest reinforcement of the role assignment.

8. This change can be made by informing one attorney that his opponent's first responsibility is to assist the court in producing a just result and that his opponent's outcome will be determined by the court based on his performance.
prosecutor is less of an advocate for the state than in the Anglo-American adversary system. If the attorney's perception of his own role is also changed to court-centered, the new model becomes still more inquisitorial and antithetical to the adversary system and its claimed advantage. This model is similar to the Soviet criminal system, where the primary duty of both attorneys seems to be assisting the court in reaching a just result.

In order to evaluate fully the advantage claimed for the adversary model we sought to add a third element that would test the hypothesis under a variety of conditions. The degree to which the evidence discovered in a case favors one party at the expense of another appeared to meet this criterion. This fact-distribution element is a pervasive condition of legal conflict resolution that, intuition suggests, may significantly influence information search and transmission. Further, this variable could be easily and accurately controlled by regulating the flow of favorable information acquired by the subjects during the experiment.

The remainder of this article reports a laboratory experiment intended to cast light on both the specific claim made on behalf of the adversary system and the nature of information processing in legal systems generally.

II. METHOD

A. Procedure

The one hundred and four first-year law students participating in the experiment were told to act as attorneys in a criminal case. The role of the West German defense counsel is described in BRAO § 1, Schönfelder, Deutsche Gesetze (C.H. Beck 1969). See also K. Peters, Strafprozess 182-83 (2d ed. 1969). The prosecutor's role is illustrated in STPO § 160(2), Schönfelder, Deutsche Gesetze (C.H. Beck 1970). See also K. Peters, supra, at 199; Schweichel, Die Zukunft der Staatsanwaltschaft, 1970 Zeitschrift für Rechtspolitik 171-74.


11. The case was written to turn on the single issue of whether the defendant's violent response to an assault was justified. The case was described to the law students by a brief summary which stated that Adams and Zemp had been close friends for years. The two friends had begun to gamble heavily together and eventually met at a tavern to discuss their now involved relationship. After a period of conversation, Zemp knocked Adams to the floor and threw an object in his direction. Adams responded by stabbing Zemp in the stomach with a piece of glass. The summary concluded with the statement of a self-defense rule: "The law provides that it is unlawful to use more force in repelling an attack than a person believes necessary, or than a reasonable person would believe necessary in the same or similar circumstances." Additional facts about the case were created for use in the development and presentation task, and...
It was explained that there would be two phases to the task: The first phase would consist of an investigation; the second would comprise the transmission of facts to the trier.\textsuperscript{12} The investigation involved purchasing facts from the experimenter. The students were given five opportunities to purchase as many or as few facts as they wished. Any purchase required a specified expenditure of points, which the students were instructed to maximize.\textsuperscript{13} The expenditure of points was intended to be analogous to the expenditure of time and effort by an attorney in an actual investigation.\textsuperscript{14}

The second phase of the experiment began as soon as both attorneys had completed all five fact-buying opportunities. During this phase the attorneys selected the facts that they wished to transmit to the trier of fact. When both attorneys had decided which facts they wished to present, a post-experimental questionnaire was administered to assess their perceptions of the experimental situation.\textsuperscript{16}

\textbf{B. Experimental Manipulations}

Three factors were systematically varied within the experimental situation described above. Before they began the investigation phase, half of the students were given client-centered role instructions, while the remaining half were given court-centered role instructions. Attorneys who received client-centered role instructions were told that they were to advance the interests of one of the parties and that their own monetary outcomes in the experiment were partially contingent upon a favorable verdict. In contrast, the court-centered role instructions told the attorneys to help the judge arrive at "as fair and accurate a decision as possible." Attorneys who received court-centered role instructions were told that their monetary outcomes would be partially determined by the number of points they had at the end of the task.

\textsuperscript{12} The law students participated in the experiment two at a time. During the entire experiment they were separated in cubicles, and hence neither had knowledge of the specific actions of the other.

\textsuperscript{13} The students were led to believe that their monetary outcomes would be partially determined by the number of points they had at the end of the task.

\textsuperscript{14} The cost of the facts followed a positively accelerated function so that the more facts the law student purchased the greater was the cost of each new fact, just as the discovery of facts at hand is presumably less costly to an attorney than the later discovery of more remote facts.

\textsuperscript{15} The questionnaire asked for ratings on seven-point Likert-type scales concerning reactions to the experimental situation. For example, the law students were asked to rate their own and their opponents' actions on a number of dimensions including cooperativeness, fairness, and peacefulness.
tered roles were instructed that their monetary outcomes in the experiment were not dependent upon the result in the case.

The second factor varied in the experiment was the attorneys' perceptions of the role of the other attorney in the legal system. Half of the law students given client-centered instructions were told the other attorney had also received client-centered role instructions; half were told the other had received court-centered role instructions. The same procedure was repeated with the law students receiving court-centered role instructions. Thus, client-centered attorneys opposed client-centered opponents (the adversary situation), client-centered attorneys confronted court-centered opponents (the "mixed" legal system as seen by its adversary members), court-centered attorneys faced client-centered opponents (the "mixed" system as seen by its inquisitorial members), and court-centered attorneys were paired with court-centered opponents (the inquisitorial system).

The experiment was designed to permit control over a third factor—the percentage of favorable facts discovered by attorneys during their investigations. As the attorneys purchased facts they might find that 25 per cent, 50 per cent, or 75 per cent of the facts advanced their clients' interests.

III. Results

A. Perception of the Experimental Situation

The answers to several questions on the post-experimental questionnaire provided assurance that the attorneys were perceiving the experimental manipulations as intended. Statistical analyses of responses to these questions revealed that attorneys who received client-

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16. In fact, the purported vis-à-vis was not always physically present. This was necessary in order to allow random assignment of individuals to experimental conditions, which, in turn, is necessary to allow examination of individual behavior.

17. When the attorney had received court-centered instructions and was in a mixed system (i.e., with a client-centered vis-à-vis), the percentage of favorable facts was defined as the proportion of facts unfavorable to the contentions of the client-centered other. For court-centered attorneys with court-centered others it was necessary to arbitrarily define the percentage of "favorable facts" as the proportion of facts favorable to one of the parties.

18. The significance of the results reported in this section, including ratings on the questionnaire and behavior in the experiment, was assessed by the appropriate multivariate or univariate analysis of variance technique. A difference between two experimental conditions is tested for statistical significance by comparing the magnitude of the difference to the variation within each condition. The difference is said to be "significant" if it would occur less than five times out of a hundred by chance alone (written as $p < .05$). Smaller values of "$p" provide greater assurance that the difference was not the result of chance. Only those differences that are reported to be significant should be regarded as "true" or real differences.
centered instructions saw their own actions as less cooperative (p < .001), less fair (p < .002), less peaceful (p < .004), less likeable (p < .01), and more biased (p < .001) than did attorneys who received court-centered instructions. These results verify that the client-centered attorneys were indeed more contentious or adversarial in their approach to the case. The attorneys' views of their opponents' behavior similarly suggested an effective manipulation of their perceptions of the other. Attorneys who were assigned client-centered opponents rated the other attorney as less cooperative (p < .001), less peaceful (p < .004), less likeable (p < .005), and more biased (p < .001) than did those facing court-centered attorneys.

The degree to which the attorneys were aware of the distribution of favorable facts was assessed by a question asking them to estimate the distribution of favorable facts from the total population of facts about the case. Responses to this question corresponded quite closely to the experimentally manipulated percentage of favorable facts.19

B. Diligence of Investigation

The willingness of attorneys to purchase facts from the experimenter served as an index of the diligence of investigation engendered by the various experimental conditions. The average number of facts bought by attorneys in each of the conditions is presented in Table 1. Analyses of these results revealed no statistically signifi-

<table>
<thead>
<tr>
<th>Percentage of Facts Favorable to Attorney</th>
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<tr>
<td></td>
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<tr>
<td>Attorney's Role</td>
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<tr>
<td>Court</td>
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<tr>
<td>Client</td>
</tr>
</tbody>
</table>

* Number of law students in each category is indicated in parentheses.

19. The mean estimates of the percentage of favorable facts in the total population of facts were 31.1%, 51.7%, and 69.5% respectively, in the 25%, 50%, and 75% favorable conditions.
of the discovered evidence was favorable, however, client-centered attorneys purchased significantly more facts than did court-centered attorneys \((p < .033)\).

### C. Presentation of Evidence

Attorney bias in the presentation of discovered evidence is described by an index constructed to reflect the degree to which the attorneys did not transmit to the trier the same distribution of facts they received. The closer an index value is to +1.00, the more the attorney biased his presentation by transmitting a higher proportion of favorable facts than was present in the facts he discovered. Values close to zero indicate that the attorney transmitted approximately the same distribution of facts he discovered. The average values of this index in each of the conditions is reported in Table 2.

<table>
<thead>
<tr>
<th>Percentage of Facts Favorable to Attorney</th>
<th>Court</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Opponent's Role</td>
<td>.023 (8)</td>
<td>.010 (8)</td>
</tr>
<tr>
<td>50% Opponent's Role</td>
<td>.013 (10)</td>
<td>.007 (8)</td>
</tr>
<tr>
<td>75% Opponent's Role</td>
<td>.013 (10)</td>
<td>.147 (8)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role</th>
<th>Court</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Court</td>
<td>.825 (8)</td>
<td>.812 (8)</td>
</tr>
<tr>
<td>Client</td>
<td>.948 (8)</td>
<td>.969 (10)</td>
</tr>
</tbody>
</table>

* Number of law students in each category is indicated in parentheses.

TABLE 2

Presentation Biasing Index for Individual Attorneys

Inspection of Table 2 reveals two statistically significant differences in the presentations of attorneys in the various experimental conditions. First, as might be expected, the values of the index were relatively high when the attorney’s own role was client-centered and relatively low when the attorney’s own role was court-centered. \((p < .001)\). Client-centered attorneys transmitted almost no evidence contrary to their clients’ interests, while court-centered attorneys transmitted virtually the same distribution of facts they received during the investigation.

Second, although the values of the index are quite high for all client-centered attorneys, the average value was lower when a client-
centered attorney confronted a client-centered opponent rather than a court-centered opponent ($p < .08$).

This effect is evident from the values presented in the bottom row of Table 2. Apparently, when the opponent was client-centered, the attorney transmitted more facts that were unfavorable to his own client (according to the impartial scaling of facts)—a somewhat unexpected finding.\(^\text{21}\)

The importance of these individual results is emphasized when arranged to show the effects of the varied roles and fact distributions upon all the information reaching the judge from both attorneys. These effects were assessed by matching in pairs the subjects whose joint role structures represented adversary, mixed, and inquisitorial legal systems.\(^\text{22}\) Adversary pairs consisted of two opposing client-centered attorneys, mixed pairs consisted of one client-centered and one court-centered attorney, and inquisitorial pairs consisted of two court-centered attorneys. In each pair, the attorney matched the description of the other’s vis-à-vis and discovered from the same pool of facts. The distribution of facts discovered by the pair is indicated by the numbers following the name of the system. For adversary and inquisitorial pairs the balanced fact distribution is indicated by “50%-50%,” and the uneven fact distribution by “25%-75%.” The distribution of facts received by mixed pairs is designated by “50%-50%” for the balanced case, “25%-75%” for an unbalanced case unfavorable to the client-centered attorney, and “75%-25%” for an unbalanced case favorable to the client-centered attorney.\(^\text{23}\)

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\(^\text{21}\) A possible explanation for this effect may be advanced on the basis of social psychological research by Pepitone who found that individuals highly motivated in their attempts to achieve a desired goal tended to distort in a favorable direction any factors that might facilitate goal attainment. Pepitone, *Motivational Effects in Social Perception*, 3 Human Relations 87 (1950). Similarly, client-centered attorneys in this experiment may have been most highly motivated to work for a favorable verdict when they were actively opposed by client-centered opponents. If this was the case, these attorneys may have overestimated their ability to achieve the desired verdict by misinterpreting some of the unfavorable facts to render them favorable to their own clients. The transmission of these facts in the mistaken belief they were favorable could have caused the observed decrease in the objective index. There is some evidence from the questionnaire data that supports this explanation. A significant correlation was found between the transmission-biasing index and estimates of the over-all proportion of favorable facts. In this case the correlation revealed that attorneys who overestimated the over-all proportion of favorable facts tended also, to a degree greater than would be expected from chance, to transmit a lower proportion of favorable facts. This would be expected from the reinterpretation explanation since the reinterpretation of some unfavorable facts would result in lower values of the transmission biasing index and higher estimates of the over-all proportion of favorable facts. The value of the correlation was $-.60$.

\(^\text{22}\) The composition of the pairs was necessary because of the procedure described in note 16 supra.

\(^\text{23}\) The seven possible pair situations are listed on the top row of Table 3.
TABLE 3
PRESENTATION CHARACTERISTICS OF LEGAL SYSTEMS IN THE EXPERIMENT

<table>
<thead>
<tr>
<th>Legal System and Percentage of Facts Favorable to the Attorneys</th>
<th>Inquisitorial 50%-50%</th>
<th>Mixed 50%-50%</th>
<th>Adversary 50%-50%</th>
<th>Inquisitorial 25%-75%</th>
<th>Mixed 25%-75%</th>
<th>Mixed 75%-25%</th>
<th>Adversary 25%-75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presentation Biasing Index For Pairs</td>
<td>.024 (5)</td>
<td>.103 (10)</td>
<td>.041 (5)</td>
<td>.017 (8)</td>
<td>.132 (6)</td>
<td>.034 (8)</td>
<td>.114 (5)</td>
</tr>
</tbody>
</table>

* Number of pairs of law students in each category is indicated in parentheses.
Table 3 presents average values for two characteristics of the pairs' presentation of evidence to the trier. The first row reports the alteration or biasing in the pairs' transmissions of the discovered distribution of information. That is, values of this index greater than zero indicate that the distribution of facts the pair presented to the judge differed from the distribution discovered during the investigation. Analysis of this index revealed distinct patterns of alteration for each of the three legal systems. As may be seen from the table, the average values of the index were relatively high for mixed pairs regardless of the distribution of facts discovered by these pairs. Inspection of the presentations upon which this distortion index was based revealed that the biasing of the fact distribution consistently favored the client-centered attorney; the information that mixed pairs transmitted to the judge contained a higher proportion of facts favorable to the claims of the party represented by the client-centered attorney than was present in the original, experimentally controlled distribution of evidence. Inquisitorial pairs, in contrast, almost perfectly reflected the distribution they discovered, as indicated by the relatively low average values of the index for these pairs. Again, the original distribution of facts did not affect the degree of biasing.

Adversary role structures produced more complex effects upon the distribution of facts reaching the trier than did inquisitorial and mixed role structures. When the original distribution of evidence was balanced, the presentations of adversary pairs, like the transmissions of inquisitorial pairs, almost perfectly reflected the original distribution, indicated by the relatively low average values in the top row of Table 3, for both adversary 50%-50% and inquisitorial 50%-50% pairs. However, when the original distribution of facts was uneven, adversary pairs did not present the same distribution of evidence they discovered, as may be seen from the high average value of the biasing index (.114) for adversary 25%-75% pairs. In this case, inspection of the transmissions revealed that adversary pairs with uneven original fact distributions altered the distribution to render them more favorable to the attorney whose contentions were least supported by the original distribution of evidence.

In summary, inquisitorial pairs presented to the trier approximately the same distribution of facts they discovered: If the distribution discovered was 50%-50%, the distribution presented was about 50%-50%; if the original distribution was 25%-75%, the dis-
tribution presented was 25%-75%. Mixed pairs consistently biased the evidence distribution in favor of the party represented by a client-centered attorney: If the original distribution was 50%-50%, the distribution presented was 60%-40%24 if the original distribution was 25%-75%, the presented distribution was approximately 33%-67%, and if the original distribution was 75%-25%, the presented distribution was 88%-12%. Adversary pairs altered the evidence distribution only when one party was disadvantaged, and always in favor of that party. Thus, if the original distribution was 50%-50%, the presented distribution was also approximately 50%-50%, but if the original distribution was 25%-75%, the presented evidence distribution was about 36%-64%.25

The second row of numbers in Table 3 reports the number of unique facts in the presentations by pairs of attorneys.26 Statistical analysis of these data revealed no reliable differences between any of the seven possible combinations of legal systems and original evidence distributions (p < .50).

D. Perception of the Legal Situation

In addition to assessing the effectiveness of the experimental manipulations, the responses to the post-experimental questionnaire also provided data on the attorneys’ psychological reactions to the various conditions created within the experiment. The responses to one question—asking for ratings of the “fairness” of the other attorney’s actions—showed a particularly interesting, but rather complex pattern. When the distribution of facts was balanced (p < .01) or unfavorable to their opponent (p < .05), court-centered attorneys rated the actions of client-centered opponents to be less fair than the actions of court-centered opponents. However, when the distribution was favorable to the opponent (i.e., when 75 per cent of the facts favored the opponent’s contentions and only 25 per cent of the facts were unfavorable to his position), no difference in the ratings of client-centered and court-centered opposing attorneys was detected.

24. The first percentage represents the proportion of evidence favorable to the client-centered attorney.

25. This perspective of the results was developed independently of the biasing index by direct examination of the distributions of evidence presented by pairs in the various conditions. Since these values were generated from the same data used to compute the biasing index, the meaning of the results is substantially the same.

26. Each fact was counted only once, whether it was presented by one or both attorneys.
Apparently court-centered attorneys, constrained to nonadversary presentation of evidence, felt that partisan advocacy by the other attorney was unfair if the evidence discovered did not obviously support the other's position. But when the discovered distribution of evidence actually supported the position advocated by the other attorney, the advocacy was congruent with the court-centered attorney's own opinion and apparently was not seen as unfair.

Client-centered attorneys perceived the actions of client-centered others as less fair than the actions of court-centered others only when the discovered distribution of facts was unfavorable to the attorney himself ($p < .01$). There was no difference in the fairness ratings of client-centered others and court-centered others when the attorney himself was client-centered and the distribution of facts was balanced or favorable. The actions of the other attorney, then, were seen as relatively unfair by client-centered attorneys when both the distribution of evidence and the contentions of the other opposed the attorney's position. Attorneys in this unpleasant situation may have felt that there was little need for the other to behave in an adversary manner, even though he had been assigned such a role.27

IV. DISCUSSION

The results of this study suggest that the characteristics of legal systems may be quite different from the characteristics legal theorists have postulated, at least with regard to the discovery and presentation of evidence. For example, implicit in the statement that in an adversary role structure "the likelihood is maximized that all relevant facts will be ferreted out . . . "28 is the assumption that client-centered attorneys are generally more diligent in their investigation of a case. But no pervasive difference due to the attorney's role was observed in the information-search phase of this experiment. Only when the distribution of facts was unfavorable to the client-centered

27. The experimental analogs of the adversary, mixed, and inquisitorial systems created within the context of this study were "pure" or ideal examples of the situations produced by various combinations of attorney roles. It is necessary that the reader, in contemplating the results of the study and the discussion of these results, remember that the application of these findings to particular real legal systems is dependent not only upon the usual constraints of scientific generalization, but also upon the extent to which the real system in question approaches in its characteristics the relevant "pure" example.

28. See text accompanying note 5 supra.
attorneys did these attorneys seek more information than court-centered attorneys.

The fact-search differences noted above may be explained by considering the information requirements of attorneys in the different experimental conditions.\(^\text{29}\) Facts were useful to court-centered attorneys to the extent the facts aided them in forming a stable belief about the case. Court-centered attorneys, with their interest in a fair and just decision, could be expected to cease their fact search as soon as they became confident of their assessment of the legal conflict. For client-centered attorneys, in contrast, the major utility of the facts lay in obtaining a favorable verdict. Thus, it is not surprising that the discovered fact distribution affected the information search of client-centered attorneys more than it affected the information search of court-centered attorneys. It appears that client-centered attorneys who found the initial distribution of facts to be favorable or balanced were content to cease their investigation relatively early (i.e., at about the same point as court-centered attorneys). When the distribution of evidence was obviously unfavorable to the client-centered attorney, however, the utility of any available favorable facts was especially high. Only by continuing their investigations long enough to acquire a relatively large supply of favorable facts could client-centered attorneys with difficult cases hope to win a verdict.\(^\text{30}\)

As will be seen below, the relatively extensive investigation engendered by the combination of a client-centered role and an unfavorable distribution of facts produced the major distinctive feature of information presentation by adversary legal systems.

It was noted earlier that, contrary to the assumption of adversary system theorists, no reliable differences were obtained in the number of unique facts attorneys transmitted to the legal decision maker in the experimental analogs of inquisitorial, mixed, and adversary legal systems. But each legal system exerted a distinctive effect upon the distribution of evidence presented to the decision maker. The distribution of the facts presented to the trier by inquisitorial pairs was

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29. This explanation is based primarily upon a theoretical analysis by Kelley and Thibaut of the processes involved in group problem solving, of which the legal situation is a special case. See Kelley & Thibaut, Group Problem Solving, in 4 THE HANDBOOK OF SOCIAL PSYCHOLOGY 1 (2d ed. G. Lindzey & E. Aronson 1969).

30. More extensive search for information when the information is presumed to have high utility has been found in previous studies. See Canon, Self-Confidence and Selective Exposure to Information, in CONFLICT, DECISION AND DISSONANCE 83 (L. Festinger ed. 1964) and Freedman, Confidence, Utility, and Selective Exposure: A Partial Replication, 2 J. PERSONALITY & SOCIAL PSYCHOLOGY 778 (1965).
virtually identical to the distribution discovered by the attorneys, regardless of the nature of the original distribution. The outstanding characteristic of inquisitorial systems, then, is the lack of any change in the distribution of facts during discovery and transmission by the attorneys. Such "unbiased" presentation may, of course, create problems. If, for some reason, the evidentiary distribution discovered by the attorneys is not representative of the "true" or total distribution of all evidence, the inaccuracy will be retained in the attorneys' presentation. In other words, the inquisitorial model does not systematically compensate for "sampling error." 31

The presentations by mixed pairs of attorneys showed consistent bias in favor of the party who was represented by the client-centered attorney.32 This bias probably resulted from the transmission of all available favorable facts by the client-centered attorneys and the transmission of only some of the available facts unfavorable to the client-centered attorney by court-centered attorneys. The mixed system appears to serve best when conditions require a consistent decision-making bias in favor of one party to the legal conflict. For example, if public policy demands that a constant advantage be given the defendant in criminal proceedings regardless of the apparent distribution of evidence, the use of a mixed-role structure and the designation of the client-centered attorney as defense counsel may best realize the principle.

Equally reliable, but more complex, was the biasing pattern of adversary pairs. When the original evidentiary distribution was balanced, no biasing of the distribution was observed. When the original distribution was uneven, however, the adversary role structure resulted in a bias favoring the party whose contentions were least supported by the initial distribution of evidence. This "conditional" bias in the presentations of adversary pairs appears to be caused by

31. The term "sampling error," as used here, refers to the possibility that the distribution of discovered evidence is not identical, for some reason irrelevant to the basic legal question, to the distribution of all evidence about the case. Sampling error is a major concern of statistical decision theory, which attempts to discriminate actual differences in the distributions of scientific evidence from differences occurring by chance. See G. Ferguson, Statistical Analysis in Psychology and Education 135-37, 144-46 (1966); R. Young & D. Veldman, Introductory Statistics for the Behavioral Sciences 109-11 (1965).

32. The distribution of evidence in the presentations of these pairs was approximately 10% more favorable to the client-centered attorney than was the original, discovered distribution—an effect that was observed in all tested initial distributions. See text accompanying note 25 supra.
the more diligent investigation of adversary attorneys who were confronted with unfavorable fact distributions. By accumulating and then presenting a relatively large number of favorable facts, these attorneys were able to render the distribution presented by their pair more favorable to their own clients' interests. Therefore, the adversary role structure seems most congruent with a public policy requiring overwhelming proof before a verdict can be rendered. In contrast to the inquisitorial model, the adversary system systematically compensates for possible sampling error.\textsuperscript{3}\textsuperscript{3}\textsuperscript{3} The presentation bias evident with adversary systems serves to decrease the impact of any deviations in the discovered distribution of evidence from the "true" or total distribution. Thus, one important function of the adversary system may be to eliminate chance differences in the distribution of favorable evidence.

V. CONCLUSION

This experiment suggests several important conclusions about information processing in an adversary system. First, the adversary system apparently does not provoke a generally more vigorous search for facts, but does instigate significantly more thorough investigation by advocates initially confronted with plainly unfavorable evidence. Thus, the claimed general investigatory advantage for the system appears to be limited, but limited to situations of great social and humanitarian concern. Second, the total number of unique facts presented to the fact finder is apparently not greater in an adversary system than in the ideal alternative systems. However, this study identified a major, and heretofore unsuspected, effect of adversary decision making: The model introduces a systematic evidentiary bias in favor of the party disadvantaged by the discovered facts. In a criminal case this process may work to the advantage of the prosecution or the defense; the distortion introduced is in favor of the underdog, regardless of identity.\textsuperscript{3}\textsuperscript{4}\textsuperscript{3}\textsuperscript{4} This characteristic of an adversary system stands in significant contrast to a mixed system of decision making, which introduces a systematic bias in favor of the party represented by an advocate (typically a criminal defendant), and to the inquisitorial system, which apparently introduces no distortion in the pre-

\begin{itemize}
\item \textsuperscript{33} However, there is a cost associated with this protection. If the discovered distribution is an accurate representation of all the facts about the case, the full strength of the favored party's claim will not be evident.
\item \textsuperscript{34} It seems likely that the same effect would occur in civil litigation.
\end{itemize}
sented facts. This systematic effect of the adversary system on the factual basis for decision is a product that must be given careful consideration in any general evaluation of the quality of the adversary system.