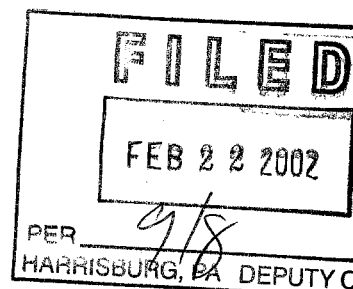


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**IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA**

RICHARD VIETH, et al,

Plaintiffs,

v.

THE COMMONWEALTH OF
PENNSYLVANIA, et al.

Defendants. :

No. 1:CV-01-2439
(Judge Rambo)

**MEMORANDUM OF LAW IN SUPPORT OF MOTION TO EXCLUDE
EXPERT TESTIMONY BY DR. ALLAN LICHTMAN**

This memorandum of law supports the motion to exclude the testimony of Dr. Allan Lichtman, proffered by Plaintiffs as an expert in quantitative methodology, political history, analysis of political systems, and voting rights. This case challenges the constitutionality of Act 1 of 2002, establishing 19 congressional districts in the Commonwealth of Pennsylvania pursuant to the 2000 Census. Discovery has closed. A hearing is set for March 11-12, 2002.

QUESTION PRESENTED

Whether Dr. Lichtman should be precluded from testifying as an expert.
Suggested answer: YES.

ARGUMENT

I. BURDEN OF PROOF

A trial court must assess, under F.R.E. 104(a), whether a proffered expert will testify to knowledge that will assist the fact-finder's understanding and

determination of the issues and whether the expert's reasoning or methodology is both scientifically valid and applicable to the issues.¹ *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 592-93 (1993). The proponent has the burden of establishing admissibility by a preponderance of the evidence. *Id.* at 592 n.10. In *In re Paoli R.R. Yard PCB Litigation*, the Third Circuit described the relative burdens in a *Daubert* challenge: "This does not mean that plaintiffs have to prove their case twice – they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are correct, they only have to demonstrate by a preponderance of evidence that their opinions are reliable." 35 F.3d 717, 744 (3d Cir. 1994), *cert. denied sub nom. G.E. v. Ingram*, 513 U.S. 1190 (1995)) (emphasis deleted). "Put differently, an expert opinion must be based on reliable methodology and must reliably flow from that methodology and the facts at issue – but it need not be so persuasive as to meet a party's burden of proof or even necessarily its burden of production." *Heller v. Shaw Industries, Inc.*, 167 F.3d 146, 152 (3d Cir. 1999).

II. DAUBERT REQUIREMENTS ARE NOT MET

A. Applicable Standard

F.R.E. 702 provides:

If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

¹ F.R.E. 104(a) provides:

Preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence shall be determined by the court, subject to the provisions of subdivision (b) [pertaining to conditional admissions]. In making its determination it is not bound by the rules of evidence except those with respect to privileges.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the Supreme Court outlined certain specific factors by which districts courts may determine the admissibility of expert testimony. The Third Circuit, in *Paoli*, summarized the *Daubert* factors and set forth four additional factors: (1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique's operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put. 35 F.3d at 742 n.8. A final factor required by *Daubert* is the "fit" between the methodology and the particular issues in the case. *Paoli*, 35 F.3d at 754. The district courts may examine other factors as necessary to accurately evaluate the proffered expert testimony in light of the facts and circumstances of the particular case. See *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999) (noting that the *Daubert* inquiry applies to all expert testimony).

B. Application

1. Dr. Lichtman's conclusions

Dr. Lichtman testified that Act 1 has a strong partisan tilt in favor of Republicans resulting from the way in which districts are configured and from the pairing of Democrats and Republicans within the plan. Dr. Lichtman testified that in comparison to various alternatives he reviewed, Act 1 is less compact on two measures of compactness (dispersion and perimeter measures); has more county, municipal, and precinct splits; a greater population deviation; and "in terms of the percent of persons from old districts and the new districts [Act 1] has a greater retention of Republican as opposed to Democratic constituents." Dr. Lichtman opined that voting for Democrat and Republican candidates is quite stable over

time at the precinct level. February 15, 2002 Deposition Testimony of Dr. Allan Lichtman ("DT") 15.²

Dr. Lichtman's conclusions are summarized in nine tables.³ Tables 1 through 4 purport to contain comparative assessments of party strength and incumbent pairings under (1) the 1992 court-ordered plan, (2) Act 1, and (3) various alternatives. Table 5 purports to show conclusions regarding the number and percentage of districts that "tilt" Republican or Democrat and the number of incumbents paired under (1) the 1992 plan, (2) Act 1, and (3) three alternatives. Table 6 purports to compare compactness for each of these five plans. Table 7 purports to contain, for each plan, Dr. Lichtman's assigned ranks on six factors and a mean rank for each plan. Table 8 purports to compare the percentages of Republican and Democrat constituents retained under Act 1 and the three alternatives. The ninth table is labeled "Correlations" and purports to reflect correlations over time at the precinct level in voting for Democrat and Republican candidates in these statewide elections. DT 47.

2. Testing and Dr. Lichtman's methodology

An expert's opinion is reliable if it is based on the methods and procedures of science rather than on subjective belief or unsupported speculation. *Daubert*, 509 U.S. at 589; *Paoli*, 35 F.3d at 742. An idiosyncratic or subjective judgment that cannot be duplicated or tested for validity generally implicates this *Daubert* standard, i.e., whether the methodology can be tested. *See Elcock v. Kmart Corp.*, 233 F.3d 734, 746 (3d Cir. 2000). To obtain Table 1's conclusions, Dr. Lichtman averaged all statewide elections within each district. DT 28. In the fourth and eighth columns of Table 1, Dr. Lichtman entered "DEM" if the percentage of the

² Dr. Lichtman's deposition testimony is appended at Tab A.

³ The nine tables in which his conclusions appear (Ex. 1 to his deposition transcript) are appended at Tab B.

averaged races for that district was above 50 percent or "REP" if the percentage of the averaged races for the district was below 50 percent. DT 30. Although Dr Lichtman outlined the steps he took to derive these percentages, he did not preserve his calculations. DT 72-74. Dr. Lichtman manipulated data, DT 26, but did not disclose how or to what effect. He also did not disclose his underlying assumptions or subjective choices, such as how he accounted for or distributed "Other" votes and whether or how he weighted the various statewide elections he analyzed. *See* Section II.B.6, below.

It cannot be determined whether Dr. Lichtman reliably applied his own methodology to the underlying data reflected in his conclusions in Tables 1 through 4. While he testified that the standard measure of partisan symmetry is the examination of how districts divide when the average is at 50-50, his own data do not indicate that Pennsylvania voters split evenly into 50% Democrat and 50 % Republican. *See* Tab B (Table 1 (reflecting an average Democrat vote under the 1992 plan of 50.3 percent and under the new plan of 49.8 percent)). Absent that information, it is not possible to replicate, verify, or validate Dr. Lichtman's results. No testimony was offered as to whether Dr. Lichtman had tested or validated his own assessment of "partisan tilt" in the congressional districts by comparing his results with actual results for congressional elections to assess the predictive capabilities of any statewide election. The lack of testimony or data showing that Dr. Lichtman validated his methodology or that other political scientists could understand or test his methodology, weighs in favor of exclusion.

Dr. Lichtman testified that he was given the set of compactness scores, which he recorded in Table 6. He did not compute these scores himself. DT 37. Two compactness factors, dispersion and perimeter, allegedly measure the extent to which a district deviates from the perfect shape of a circle. DT 38-39. It is unknown whether the same data points, same number of data points, or same

software program for calculating the measurements were used to measure each plan. This contributes to the risk of subjectivity or data manipulation. Also misleading is the implication that, if one district is not compact, the entire plan must be discarded. Moreover, Dr. Lichtman's conclusions as to the minimum and mean measures of compactness are meaningless absent an assessment of whether there is a statistically significant difference in compactness among the plans. See Richard H. Pildes & Richard C. Niemi, *"Bizarre Districts" and Voting Rights: Evaluating Election District Appearances After Shaw v. Reno*, 92 MICH. L.REV. 483, 563 n.223 (1993) ("Just as there is no bright line between compact and noncompact districts, there is no one number that determines whether the difference between compactness scores is significant."). Dr. Lichtman's testimony cannot meet the test of demonstrating the reliability of the methodology or conclusions reflected in Table 6.

In creating Table 7, Dr. Lichtman arbitrarily selected and assigned equal weight to six factors (two compactness measurements, splits, and total population deviation). He then ranked them and calculated a mean rank for the 1992 court-ordered plan, Act 1, and the three alternative plans. DT 40. The resulting "mean ranks" mislead by overstating the differences between plans. Such ranking does not constitute a testable methodology because it is purely subjective.

Table 8 and the Correlations Table are no more than an attempt to smuggle into evidence, under the guise of expert testimony, conclusory data for which no foundation was established and which Dr. Lichtman did not analyze.

As to Table 8 (data showing percentages of Democrat and Republican constituents retained), Dr. Lichtman testified that Plaintiffs' counsel provided him the retention information. DT 44. He did not analyze it but merely concluded upon review that "the difference is much greater in the conference plan than the other three plans." DT 45. A factfinder could draw such conclusions from Table 8

without expert assistance. Dr. Lichtman was unaware of the total percentage of constituents retained in each district from previous districts. DT 46-47.

Dr. Lichtman testified that he reviewed the correlations table and that he was given the precinct data underlying the conclusions reflected in the table. He explained that the table indicates that the percentage Democrat and Republican is very close from one year to the other. DT 50-51. Absent evidence of any methodology Dr. Lichtman may have used to re-analyze the precinct data and ratify the conclusions reflected on the table, it is impossible to assess the reliability of the methodology used.

3. Peer review and publication.

Dr. Lichtman testified that he had not published the methodology he applied in this case in any professional journals. DT 52. Asked if his methodology had been peer reviewed in any publication, Dr. Lichtman responded that numerous publications have defined partisan symmetry and its measurement and that he "didn't invent some new statistical technique." DT 52-54. He essentially conceded that his application of this methodology for this judicial purpose has not been published or peer reviewed. DT 52-57. Dr. Lichtman testified that King⁴ and Gelman⁵ defined partisan symmetry in the American Political Science Review in 1994. DT 54. But, when asked if his methodology conformed to what they advocated in that journal, Dr. Lichtman answered: "[T]hey're not looking at an individual plan, they're looking at something quite different but they define partisan symmetry in precisely the same way I define partisan symmetry here." *Id.* He added that the articles dealing with partisan symmetry use it for the purpose of measuring whether a plan or set of plans favors voters of one party. DT 55-56. There is a significant difference between defining or explaining partisan symmetry

⁴ Dr. Gary King, Department of Government, Harvard University.

⁵ Dr. Andrew Gelman, Department of Statistics, U.C. Berkeley.

and peer review of the use, and data, to which it was put here. This factor weighs in favor of exclusion.

4. General acceptance

Dr. Lichtman's method of selecting of elections results to establish the partisan effect of a redistricting plan is not generally accepted in the political science/statistical field. The academic literature evaluates the partisan fairness of a redistricting plan almost exclusively through partisan bias. *See* Andrew Gelman and Gary King, *A Unified Method of Evaluating Electoral Systems and Redistricting Plans*, 38 AMERICAN JOURNAL OF POLITICAL SCIENCE at 514 (May 1994) ("Gelman & King") (outlining statistical method to evaluate two-party electoral systems and applying method, *inter alia*, to estimate partisan bias); Bernard Grofman, William Koetzle & Thomas Brunell, *An Integrated Perspective on the Three Potential Sources of Partisan Bias: Malapportionment, Turnout Differences, and the Geographic Distribution of Party Vote Shares*. 16 ELECTORIAL STUDIES (1997) at 457-470. Dr. Lichtman did not measure partisan bias; he looked at which party would get more seats, which is not generally accepted in the political science community as a measure of partisan bias.

Dr. Lichtman testified that he used statewide elections held in even years (i.e., the same year as congressional elections), as well as "all federal legislative elections held in Pennsylvania" to arrive at the conclusions reflected in Tables 1 through 4. DT 18-19. However, the data set Dr. Lichtman used for his analysis also contained the results of the 1991 Wofford-Thornburg special Senate election. *See* spreadsheet entitled "U.S. Congressional Districts 2002 – Act 1 (2002) – Election Results" ("Election Results").⁶ Moreover, his dataset, contrary to his

⁶ Dr. Lichtman provided Presiding Officers' counsel with copies of all the data on which he relied in electronic format. *See* e-mail from Allan Lichtman, February 15, 2002, 1:08 PM with attachments (email and attachments appended at Tab C).

testimony, does not use the results of congressional elections, DT 30, or of statewide judicial elections. *See Election Results.*

Dr. Lichtman's subjective decision to use only elections held in even years is not generally accepted because it suggests bias in the selection and because generally more, rather than less, election data is preferred in order to eliminate the special circumstances of individual elections. *See Page v. Bartels*, 144 F.Supp.2d 346, 360 (D. N.J. 2001), *aff'd* 122 S. Ct. 914 (2002) (as defendants' expert in that case, Dr. Lichtman analyzed over 150 races). Analysis of statewide elections is not relevant in determining the outcome of the type of election at issue here – congressional elections – when no correlation has been established between the results of statewide races and congressional races. *See* February 20, 2002 Deposition Testimony of Dr. Thomas Brunell ("Brunell") at 15.⁷ Although analysis of statewide races might provide some insight into potential outcomes of congressional races, such an analysis would yield statistically relevant results only if the relationship between the statewide election results and the congressional elections results was determined by weighting the results of various elections, i.e., assigning a higher value to statewide races that are better predictors of the outcomes of congressional elections. Brunell at 50. Dr. Lichtman apparently assigned equal weight to all statewide elections, regardless of whether they were good predictors of congressional elections. For example, he used the results of the 1998 Governor's race in which Governor Ridge, a Republican, won 19 of 21 districts and the 1992 Treasurer's race in which Catherine Baker Knoll, a Democrat, won 20 of 21 districts. Neither of these lopsided-races correlates to the historical results of congressional elections in Pennsylvania. Thus neither race has predictive value in determining the likely outcomes of congressional races.

⁷ Referenced portions of Dr. Brunell's testimony are appended at Tab D.

In addition, Dr. Lichtman's selection of races is suspect and not generally accepted in the field because, after establishing a rule to use only statewide elections from even years, he then violated his rule by including one special Senate election held in 1991 but no other non-even year elections. Dr. Lichtman did not include the results of statewide judicial races. Because the candidates are typically unknown and the campaigns are devoid of discussion of issues, these judicial races are likely to provide a true measure of core party support. *See Good v. Austin*, 800 F. Supp. 557, 562 (W.D. Mich. 1992) (where Dr. Lichtman himself testified that he used the results of statewide elections for the state Board of Education to determine the partisan makeup of each district because "the partisan division of votes in those elections was least likely to be influenced by controversial issues or high profile 'glamour' candidates, resulting therefore in a 'truer' indication of the voters' straight party preference."). Analysis under this factor supports the exclusion of Dr. Lichtman's testimony.

5. Relationship to methods established as reliable

Resolution of the issues raised in a partisan gerrymandering claim requires surgical precision to clarify the line between partisan politics and an unconstitutional degree of partisan bias, the effect of which is to effectively shut a political group out of the political process. Accordingly, all best methods should be applied to all possible data sets to assist the court in resolving the issues. While Dr. Lichtman testified that he used "partisan symmetry" methodology, DT 52, he did not correctly apply this methodology. *See* Section II.B.2 above. His rough determination may suffice for politicians who need rough estimates for drawing redistricting maps or to get a sense of whether to enter a race, but this method is insufficient for the judicial purpose of determining the existence of unconstitutional partisan bias.

Dr. Lichtman testified about a number of methodologies used to establish partisan bias. One methodology known as *JudgeIt*, developed by Gary King, attempts to predict outcomes of elections given various characteristics of the district and a prediction equation using a baseline average vote. DT 58. *JudgeIt* makes use of many variables, including past legislative election results, statewide or nationwide elections results broken down by legislative district, incumbency status of candidates, whether race is contested, party control, demographics (such as race and population), campaign contributions, party registration figures, and measures of candidate quality and has the ability to calculate two types of standard error, making predictions testable. *See* Gelman & King at 514-54.

Another methodology looks at each individual election to examine the extent of partisan symmetry for that election. DT 59. This method, however, has not been published. DT 60. Dr. Lichtman also described a method called the "votes seats ratio," which looks at the relationship between the percentage of votes on average received by a party and the number of districts won. This methodology assumes that at the 50 percent point, the seats should be equal between the parties. DT 67-68. Another method used in partisan bias analysis to predict outcomes of elections is regression analysis. DT 61. Dr. Lichtman testified he used it in the past but did not use it here, because his purpose here was *not* to predict elections but to "simply look at the configuration of the districts and the pairings and how they affect the ability of Democrats and Republicans to compete." DT 61-62.

Dr. Lichtman acknowledged that many variables affect the outcome of a congressional campaign, including scandal, mistakes, spending, issues, debates, speeches, and incumbency, adding that incumbency is also part of the redistricting process. DT 63. Asked if incumbency is a "transient sort of thing," Dr. Lichtman answered that incumbency is a "pretty predictable characteristic." DT 63. While Dr. Lichtman recognizes incumbency as a predictable and significant variable in

elections and redistricting,⁸ he failed to accord it any weight in his calculations of partisan tilt reflected in Tables 1 through 4. For example, in Table 1, Dr. Lichtman implies that both Congressman Borski or Congressman Hoeffel, incumbent Democrats paired in new District 13, would likely lose the seat to a Republican candidate who does not have the incumbent advantages of name recognition, campaign financing, and an organization. Dr. Lichtman's methodology does not produce either reliable results or results useful for determining of the constitutionality of a redistricting statute. This factor weighs in favor of exclusion.

6. "Fit" with the ultimate issue in this litigation.

Fit refers to whether the expert testimony is relevant to the facts of the specific case such that it would be helpful to the factfinder. *Daubert*, 509 U.S. at 591.⁹ Put another way, while the scientific methodology might be valid viewed in a vacuum, it may not be valid to prove the particular point at issue in the litigation. *See Paoli*, 35 F.3d at 743 (fit depends on "the proffered connection between the

⁸ See Peter Schuck, *Partisan Gerrymandering: A Political Problem Without Judicial Solution*, PARTISAN GERRYMANDERING AND THE COURTS, 240, 248-49 (Grofman, ed. 1990):

The electoral advantages associated with incumbency today, especially in the House of Representatives on the national level, are already great and probably increasing. The very high reelection rate is said to reflect incumbents' ability to use their perquisites of office (such as free mailings, constituent service, and media coverage) and their superior name recognition and access to campaign funds to discourage primary battles and overwhelm their opponents. ... [U]nless the court can actually distinguish between that portion of the majority party's seat/vote ratio (or other putative index of gerrymandering activity) that is attributable to the gerrymander and that portion that is instead attributable to the independent advantage that all incumbents (regardless of party) enjoy, it cannot know with confidence whether a gerrymander has really occurred and been effective, much less know how to begin to remedy it.

⁹ While most of the *Daubert* factors consider the reliability of the evidence, "fit" focuses on the relevance of the evidence to the case before the court. *See United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985) (the *Daubert* Court relied on *Downing* in discussing fit).

scientific research or test result to be presented and particular disputed factual issues in the case").

Dr. Lichtman's testimony is not sufficiently relevant to assist this Court to determine the issues in this case. The primary issue for which Dr. Lichtman's testimony seems to be offered is partisan gerrymandering. The issues underlying proof of this claim are whether Pennsylvania Democrat voters constitute an identifiable political group,¹⁰ whether Defendants engaged in intentional discrimination against that group in creating new congressional districts under Act 1, and whether there is an actual discriminatory effect on that group that achieves an unconstitutional result. *See Davis v. Bandemer*, 478 U.S. 109, 127 (1986). To show actual discriminatory effect requires proof of an actual or projected history of disproportionate results and arrangement of the electoral system in a manner that will consistently degrade a voter's or group of voters' influence on the political process as a whole. *Terrazas v. Slagle*, 821 F. Supp. 1162, 1172 (W.D. Texas 1993) (quoting *Bandemer*, 478 U.S. at 132).

Dr. Lichtman's testimony does not assist understanding of previous elections in Pennsylvania, especially congressional elections, and does not provide insight into the likely results of future congressional elections in Pennsylvania. He testified that his purpose is not to predict who will win or lose but to look at how the districting process will affect the ability of candidates in those elections. DT 62. Dr. Lichtman's methodology is a blunt and inexact tool to assist the court in

¹⁰ This is perhaps the thorniest issue in this case and one rarely addressed by the courts. Plaintiffs' experts provide nothing in the way of proof of an identifiable political group. Plaintiffs are registered Democrats who live in new Districts 16 and 13, who generally (but not always) vote Democrat, and who are not paying for this litigation. *See* February 13, 2002 Deposition Testimony of Plaintiffs Norma Jean Vieth, Richard Vieth, and Susan Furey (all three transcripts appended together at Tab E). Dr. Lichtman thinks "Democratic interests in the state of Pennsylvania" are Plaintiffs' counsel's clients. DT 17. Mr. Ceisler thinks Democrat congressmen are paying for the litigation. Ceisler DT 83-84 (Tab B to Memorandum in Support of Motion to Preclude Expert Testimony by Larry Ceisler).

drawing a very precise legal line between acceptable partisan politics and unconstitutional partisan discrimination.¹¹ His failure to analyze past congressional elections, to account for the varying levels of predictive value in the statewide races he analyzed, to use all available data sets, and to apply all best methods robs his testimony of any probative value in this case. Dr. Lichtman's conclusions regarding the partisan tilt of under Act 1 is an unreliable, incomplete, and insufficient basis to establish, or from which to infer, an actual or projected history of disproportionate results and consistent degradation of Democrat voters' influence on the political process as a whole.

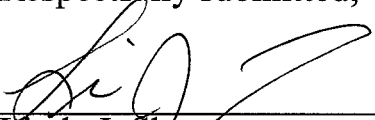
¹¹ Dr. Lichtman testified he was given tables and charts produced by Dr. Lublin, an expert who testified for Plaintiffs' counsel at the *Erfer v. Commonwealth* at the hearing held February 1, 2002. Dr. Lichtman's underlying data and methodology for partisan tilt is the same as that used by Dr. Lublin in Commonwealth Court. *Compare* Petitioners Exhibit 56 in *Erfer* (spreadsheet titled "U.S. Congressional Districts 2002 – Act 1 (2002) – Election Results") (appended at Tab F) with Dr. Lichtman's Election Results spreadsheet (Tab C). In the *Erfer* case, responding to whether his method for determining how districts "lean" is "standard methodology in his field," Dr. Lublin testified: "it is considered a *good rough estimate*." *Erfer* Hearing Transcript at 56-57 (emphasis added) (relevant pages appended at Tab G).

CONCLUSION

Based on the foregoing, Plaintiffs' proposed expert witness, Dr. Allan Lichtman, should be precluded from testifying at the March 11-12, 2002 evidentiary hearing.

Respectfully submitted,

February 22, 2002



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Washington, DC

February 15, 2002

1

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

----- X

RICHARD VIETH, NORMA JEAN :

VIETH, and SUSAN FUREY, :

Plaintiff, :

v. : Case No. 1:CV-01-2439

COMMONWEALTH OF PENNSYLVANIA, :

et al., :

Defendants. :

----- X

Washington, D.C.

Friday, February 15, 2002

Deposition of ALLAN LICHTMAN, a witness
herein, called for examination by counsel for
Defendants Lieutenant Governor Jubelirer and Speaker
Ryan, in the above-entitled matter, pursuant to
notice, the witness being duly sworn by CYNTHIA R.
SIMMONS, a Notary Public in and for the District of
Columbia, taken at the offices of Kirkpatrick &
Lockhart LLP, 1800 Massachusetts, Suite 200,
Washington, D. C., at 9:00 a.m., Friday, February 15,
2002, and the proceedings being taken down by
Stenotype by CYNTHIA R. SIMMONS, RMR, CRR, and
transcribed under her direction.

Ex A

Dr. Allan Lichtman

Washington, DC

February 15, 2002

<p style="text-align: right;">2</p> <p>1 APPEARANCES:</p> <p>2</p> <p>3 On behalf of the Plaintiffs:</p> <p>4 PAUL M. SMITH, ESQ.</p> <p>5 SAM HIRSCH, ESQ.</p> <p>6 Jenner & Block</p> <p>7 601 Thirteenth Street, N.W.</p> <p>8 Washington, D. C. 20005</p> <p>9 (202) 639-6000</p> <p>10</p> <p>11 On behalf of the Defendants Lieutenant</p> <p>12 Governor Jubelirer and Speaker Ryan:</p> <p>13 JOHN P. KRILL, JR., ESQ.</p> <p>14 MARSHA A. SAJER, ESQ.</p> <p>15 Kirkpatrick & Lockhart, LLP</p> <p>16 Payne Shoemaker Building</p> <p>17 240 North Third Street</p> <p>18 Harrisburg, Pennsylvania 17101-1507</p> <p>19 (717) 231-4505</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">4</p> <p>1 CONTENTS</p> <p>2 WITNESS EXAMINATION BY COUNSEL FOR</p> <p>3 ALLAN LICHTMAN DEFENDANTS</p> <p>4 By Mr. Krill 5</p> <p>5</p> <p>6</p> <p>7 EXHIBITS</p> <p>8 DEPOSITION EXHIBIT NO. PAGE NO.</p> <p>9 1 Tables 1 through 8 Incumbent Pairing</p> <p>10 and Party Strength, Plan Comparisons 16</p> <p>11 2 Notice of Deposition 22</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>
<p style="text-align: right;">3</p> <p>1 APPEARANCES (Continued):</p> <p>2</p> <p>3 On behalf of the Defendants Commonwealth,</p> <p>4 Governor Schweiker, Secretary Pizzigrilli &</p> <p>5 Commissioner Filling:</p> <p>6 J. BART DELONE, ESQ.</p> <p>7 Senior Deputy Attorney General</p> <p>8 Office of Attorney General</p> <p>9 Appellate Litigation Section</p> <p>10 15th Floor, Strawberry Square</p> <p>11 Harrisburg, Pennsylvania 17120</p> <p>12 (717) 783-3226</p> <p>13</p> <p>14 ALSO PRESENT:</p> <p>15 CLARK BENSEN</p> <p>16 THOMAS BRUNELL</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">5</p> <p>1 PROCEEDINGS</p> <p>2 Whereupon,</p> <p>3 ALLAN LICHTMAN,</p> <p>4 was called as a witness by counsel for Defendants,</p> <p>5 and having been duly sworn by the Notary Public, was</p> <p>6 examined and testified as follows:</p> <p>7 EXAMINATION BY COUNSEL FOR DEFENDANTS</p> <p>8 BY MR. KRILL:</p> <p>9 Q. State your name, please?</p> <p>10 A. Allan J. Lichtman.</p> <p>11 Q. And it's Dr. Lichtman, right?</p> <p>12 A. Yes.</p> <p>13 Q. Your counsel has provided me with your</p> <p>14 curriculum vitae, Dr. Lichtman, and so I'm not going</p> <p>15 to go into that. Let me just ask, how are you this</p> <p>16 morning?</p> <p>17 A. I'm doing just fine, I hope you are too.</p> <p>18 Q. Thank you, yes. We're all doing our best</p> <p>19 to hold up under the frenetic pace of these</p> <p>20 proceedings.</p> <p>21 MR. SMITH: You're writing too many pages.</p> <p>22 You have to slow down.</p> <p>23 BY MR. KRILL:</p> <p>24 Q. Now, Dr. Lichtman, for the purposes of</p> <p>25 this case, how do you define your field of expertise?</p>

Dr. Allan Lichtman

Washington, DC

February 15, 2002

<p style="text-align: right;">6</p> <p>1 A. My field of expertise has to do with</p> <p>2 quantitative methodology, political history, analysis</p> <p>3 of political systems, voting rights.</p> <p>4 Q. Now you said that your expertise has to do</p> <p>5 with those things. Are you, do you consider yourself</p> <p>6 an expert in each of those four areas that you've</p> <p>7 enumerated?</p> <p>8 A. Yes.</p> <p>9 Q. All right. The first area is that, that</p> <p>10 you mentioned is quantitative methodology?</p> <p>11 A. Yes.</p> <p>12 Q. What is that?</p> <p>13 A. That's a methodology used for the</p> <p>14 statistical analysis of social science information</p> <p>15 and in particular for this matter, the analysis of</p> <p>16 political information. I have published a number of</p> <p>17 articles as well as a monograph in that area.</p> <p>18 Q. And you're familiar with a number of</p> <p>19 quantitative methods --</p> <p>20 A. Yes.</p> <p>21 Q. -- for analyzing political systems?</p> <p>22 A. Yes.</p> <p>23 Q. And you said your expertise is also in</p> <p>24 political history?</p> <p>25 A. That's correct.</p>	<p style="text-align: right;">8</p> <p>1 them in terms of how they treat political parties in</p> <p>2 terms of the, in terms of their opportunities. One</p> <p>3 analysis I'm doing has to do with the analysis of</p> <p>4 unincorporated versus incorporated areas within a</p> <p>5 jurisdiction. There are numerous purposes for which</p> <p>6 you can analyze political systems.</p> <p>7 Q. And the fourth area that you mentioned is</p> <p>8 voting rights, are you an expert in voting rights</p> <p>9 law?</p> <p>10 A. No, but what I have written on in a number</p> <p>11 of articles is the application of social science to</p> <p>12 voting rights.</p> <p>13 Q. You have been called a quantitative</p> <p>14 historian, haven't you?</p> <p>15 A. Yes.</p> <p>16 Q. What does that mean?</p> <p>17 A. That means I apply a mathematical and</p> <p>18 statistical methods to understanding history.</p> <p>19 Q. That doesn't mean, does it, that you apply</p> <p>20 mathematical and statistical methods to predict</p> <p>21 history?</p> <p>22 A. To predict the past? You mean retrodict</p> <p>23 the past, I have done that.</p> <p>24 Q. No to predict history, I mean that is to</p> <p>25 predict future events?</p>
<p style="text-align: right;">7</p> <p>1 Q. Are you appearing in this matter as a</p> <p>2 political historian?</p> <p>3 A. Only in the broadest sense that what one</p> <p>4 is looking at is electoral history. If you're asking</p> <p>5 me have I been asked to look at the political history</p> <p>6 of Pennsylvania or Pennsylvania redistricting to this</p> <p>7 point, no, although one never knows what lawyers may</p> <p>8 ask you to do.</p> <p>9 Q. And you said your expertise has to do with</p> <p>10 the analysis of political systems, would you explain</p> <p>11 that, please?</p> <p>12 A. Yes, I've had extensive experience in</p> <p>13 analyzing various systems for the election of public</p> <p>14 officials, at large systems, district systems,</p> <p>15 various districting plans.</p> <p>16 Q. For what purpose?</p> <p>17 A. I'm sorry, I don't understand the</p> <p>18 question.</p> <p>19 Q. For what purpose do you analyze such</p> <p>20 systems?</p> <p>21 A. You can analyze them for numerous</p> <p>22 purposes. You can analyze them in terms of the</p> <p>23 opportunities they provide for minorities to</p> <p>24 participate fully in the political process and to</p> <p>25 elect candidates of their choice. You can analyze</p>	<p style="text-align: right;">9</p> <p>1 A. I have used mathematical models based on</p> <p>2 history to predict future events, yes.</p> <p>3 Q. Yes. Can you give me some examples of</p> <p>4 your predictions?</p> <p>5 A. Yes. I've published a number of books</p> <p>6 starting with the 13 keys to the presidency and most</p> <p>7 recently the keys to the White House which examine</p> <p>8 the broad sweep of American political history roughly</p> <p>9 from the 1850s to the present to determine whether or</p> <p>10 not there are patterns in presidential elections,</p> <p>11 particularly whether there are patterns in whether or</p> <p>12 not the incumbent party retains or does not retain</p> <p>13 the White House and I've tried to some degree to</p> <p>14 quantify those patterns by developing what I call the</p> <p>15 13 keys, simple yes/no questions that can indicate</p> <p>16 whether or not the situation favors a popular vote</p> <p>17 victory by the incumbent party or the challenging</p> <p>18 party.</p> <p>19 Q. Well, what I'd like to know is this, can</p> <p>20 you give me a specific example of a political</p> <p>21 prediction that you've made?</p> <p>22 A. Yes.</p> <p>23 Q. That was published.</p> <p>24 A. Yes.</p> <p>25 Q. And that we can check.</p>

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<p style="text-align: right;">10</p> <p>1 A. Yes.</p> <p>2 Q. And see whether it came true.</p> <p>3 A. Yes. And first published political</p> <p>4 prediction I made was I believe in April 1982, gosh,</p> <p>5 it's that long ago, article in the Washingtonian</p> <p>6 magazine and I believe the date is correct from</p> <p>7 memory but I can check it if we need to.</p> <p>8 Q. April 1982?</p> <p>9 A. '82.</p> <p>10 Q. Washingtonian?</p> <p>11 A. Magazine, called, How to Bet in '84, in</p> <p>12 which I predicted that Ronald Reagan would be</p> <p>13 reelected in 1984. At least with a popular vote</p> <p>14 victory, my system predicts the popular vote.</p> <p>15 Q. Okay. Can you give me another prediction</p> <p>16 that you've published?</p> <p>17 A. Yes. In 1988, I believe it was the May</p> <p>18 Washingtonian, the reasons these appear in the</p> <p>19 Washingtonian is the coauthor of my book was one of</p> <p>20 the editors of the Washingtonian. We published a</p> <p>21 prediction which said despite the unfavorable -- this</p> <p>22 was, yeah, May 1988 -- despite the unfavorable polls</p> <p>23 that George Bush was going to be elected president</p> <p>24 come the November election.</p> <p>25 Q. Bush senior?</p>	<p style="text-align: right;">12</p> <p>1 advance of each --</p> <p>2 A. Yes.</p> <p>3 Q. -- presidential election a prediction as</p> <p>4 to the winner?</p> <p>5 A. Yes. As to the winner of the popular</p> <p>6 vote.</p> <p>7 Q. Winner of the popular vote, right?</p> <p>8 A. That becomes important only in 2000,</p> <p>9 obviously.</p> <p>10 Q. Okay. Any other published predictions</p> <p>11 other than presidential predictions?</p> <p>12 A. There are some Senate predictions but I</p> <p>13 don't think I published any formal articles on that</p> <p>14 I can recall in advance -- well, I think I did one.</p> <p>15 I think 1986 I published an article in the</p> <p>16 Washingtonian called Democrats take over the Senate</p> <p>17 in which I predicted the Democratic takeover of the</p> <p>18 Senate.</p> <p>19 Q. Okay. And that was, again, in the</p> <p>20 Washingtonian magazine?</p> <p>21 A. Yes.</p> <p>22 Q. And that was what issue?</p> <p>23 A. I don't remember exactly. It was 1986, is</p> <p>24 it in there? Here it is. Democrats take over the</p> <p>25 Senate, the Washingtonian, November 1986.</p>
<p style="text-align: right;">11</p> <p>1 A. Bush senior, yes. I'm not sure Bush</p> <p>2 junior was even old enough back then.</p> <p>3 Q. Okay. That's two correct predictions.</p> <p>4 Any other correct predictions?</p> <p>5 A. I've correctly predicted the popular vote</p> <p>6 in all of the last five, '84, '88, '92, '96, and</p> <p>7 2000.</p> <p>8 Q. Presidential elections?</p> <p>9 A. Yes.</p> <p>10 Q. Okay. And were they published?</p> <p>11 A. Yes.</p> <p>12 Q. And where were they published?</p> <p>13 A. I'm trying to remember. 1992 prediction,</p> <p>14 1996 and 2000 were both published in Social</p> <p>15 Education.</p> <p>16 Q. What is Social Education?</p> <p>17 A. It is the magazine, I believe, of the</p> <p>18 National Social Studies Association.</p> <p>19 Q. All right. And you made a 1992 prediction</p> <p>20 on the presidency?</p> <p>21 A. I made a 1996 and a 2000 prediction in</p> <p>22 social education. It was also a 2000 prediction in</p> <p>23 national forum, and in my book, The Keys to the White</p> <p>24 House.</p> <p>25 Q. All right. So you have published in</p>	<p style="text-align: right;">13</p> <p>1 Q. You're looking at your curriculum vitae</p> <p>2 there?</p> <p>3 A. Yeah.</p> <p>4 Q. Have you made any incorrect predictions?</p> <p>5 A. I'm sure I have on Senate elections.</p> <p>6 Q. Can you name some?</p> <p>7 A. Not off the top of my head where I've</p> <p>8 published them. But I'm sure I have.</p> <p>9 Q. We've all made some wrong bets, haven't</p> <p>10 we?</p> <p>11 A. Everyone in the world.</p> <p>12 Q. Have you published any predictions</p> <p>13 regarding elections for the House of Representatives?</p> <p>14 A. Perhaps in formal predictions but not</p> <p>15 formal, in other words, my own sense of things but</p> <p>16 not based on a formal model, no, I don't have a</p> <p>17 formal model that I've published on for the House of</p> <p>18 Representatives.</p> <p>19 Q. So you didn't predict then the takeover of</p> <p>20 the House of Representatives by the Republicans in</p> <p>21 1994, correct?</p> <p>22 A. I didn't have a formal model one way or</p> <p>23 the other to predict that, no. I might have said</p> <p>24 things about it.</p> <p>25 Q. All right. Let, I may have asked this and</p>

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<p style="text-align: right;">14</p> <p>1 you may have answered it but let me just make sure</p> <p>2 I'm clear on it. Have you published any predictions</p> <p>3 that turned out to be wrong?</p> <p>4 A. Quite possibly. Quite possibly on Senate</p> <p>5 elections. I've certainly not predicted all Senate</p> <p>6 elections correctly.</p> <p>7 Q. But can you recall any specific races?</p> <p>8 A. Not off the top of my head. If I</p> <p>9 published them it would have been like in a newspaper</p> <p>10 article or something. I didn't publish a full-blown</p> <p>11 article except I think in that 1986 Senate situation.</p> <p>12 Q. Have you ever published a prediction about</p> <p>13 the outcome of congressional races for a particular</p> <p>14 state delegation?</p> <p>15 A. As I said, you know, I might have said</p> <p>16 things about congressional races but I don't recall</p> <p>17 publishing formal predictions of state delegations.</p> <p>18 Q. So predicting history before it happens is</p> <p>19 pretty difficult, isn't it, Dr. Lichtman?</p> <p>20 A. Predicting is a difficult task, yes.</p> <p>21 Q. Now, have you formed opinions regarding</p> <p>22 this matter that you are prepared to share with us</p> <p>23 this morning?</p> <p>24 A. Yes.</p> <p>25 Q. And let me jump right to your conclusions.</p>	<p style="text-align: right;">16</p> <p>1 A. Yes.</p> <p>2 Q. And may I just compare? Because your</p> <p>3 counsel gave me a set of documents and it looks like</p> <p>4 you were consulting the same thing that I was. And</p> <p>5 it looks like we have eight pages here, plus one,</p> <p>6 correlations.</p> <p>7 A. Yeah.</p> <p>8 Q. Correlations. I would like to mark one</p> <p>9 set of these as a deposition exhibit. And if you</p> <p>10 don't mind, counsel, I'd like to mark the one that</p> <p>11 the witness is using.</p> <p style="padding-left: 40px;">(Deposition Exhibit No. 1 was</p> <p style="padding-left: 40px;">marked for identification.)</p> <p>12 BY MR. KRILL:</p> <p>13 Q. Now, so Dr. Lichtman, your bottom line</p> <p>14 conclusion is that the redistricting statute in</p> <p>15 Pennsylvania has a strong partisan tilt?</p> <p>16 A. Correct.</p> <p>17 Q. Now you've referred to it as the</p> <p>18 conference plan. Are you aware that it is a law of</p> <p>19 the Commonwealth of Pennsylvania?</p> <p>20 A. That's my understanding.</p> <p>21 Q. Okay. We've been referring to it as Act I</p> <p>22 or Act I of 2002 rather than the conference plan but</p> <p>23 I just want to make sure that we have our terms</p>
<p style="text-align: right;">15</p> <p>1 Can you tell me what your conclusions are?</p> <p>2 A. Yes. My bottom line conclusions are that</p> <p>3 the conference plan has a very strong partisan tilt</p> <p>4 in favor of Republicans that results both from the</p> <p>5 way in which districts are configured and from the</p> <p>6 pairing of Democrats and Republicans within the plan.</p> <p>7 Q. Have you formed any other conclusion?</p> <p>8 A. Well, there are some subsidiary</p> <p>9 conclusions obviously, you know, which we can look at</p> <p>10 as we look at the individual tables but, you know, to</p> <p>11 put it in more general terms I've also done analyses</p> <p>12 which demonstrate that with respect to alternative</p> <p>13 plans the conference plan has, is less compact on</p> <p>14 dispersion, perimeter measures, has more county</p> <p>15 splits, more municipal splits, more precinct splits</p> <p>16 and a greater population deviation and that the</p> <p>17 conference plan also in terms of the percent of</p> <p>18 persons from old districts and the new districts has</p> <p>19 a greater retention of Republican as opposed to</p> <p>20 Democratic constituents.</p> <p>21 And I've also formed a conclusion that</p> <p>22 over time at the precinct level voting for Democrat</p> <p>23 and Republican candidates is quite stable.</p> <p>24 Q. Now, as you were reciting those subsidiary</p> <p>25 conclusions you were consulting some documents?</p>	<p style="text-align: right;">17</p> <p>1 straight. When I say Act I I'm referring to what</p> <p>2 you, I think are calling the conference plan?</p> <p>3 A. Fair enough.</p> <p>4 Q. Now, would you describe the methodology</p> <p>5 that you -- well, strike that, please.</p> <p>6 When were you engaged for this case?</p> <p>7 A. I'm not exactly sure, maybe a couple of</p> <p>8 weeks ago.</p> <p>9 Q. By whom were you engaged?</p> <p>10 A. By Jenner and Block.</p> <p>11 Q. Who is paying your fee in this case?</p> <p>12 A. I assume they will from whomever their</p> <p>13 clients are.</p> <p>14 Q. Have you received any fee payment yet?</p> <p>15 A. No.</p> <p>16 Q. Do you know who their clients are?</p> <p>17 A. Not exactly. I presume they're Democratic</p> <p>18 interests in the state of Pennsylvania.</p> <p>19 Q. Now, when you were engaged, what did you</p> <p>20 understand to be the scope of your engagement?</p> <p>21 A. To examine issues pertaining to partisan</p> <p>22 fairness with respect to the Pennsylvania</p> <p>23 congressional redistricting plan and to respond to</p> <p>24 and deal with any analyses and information being</p> <p>25 developed by the other side in this litigation.</p>

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<p style="text-align: right;">18</p> <p>1 Q. And did you immediately accept the</p> <p>2 engagement when you were contacted?</p> <p>3 A. I'm not sure immediately but fairly</p> <p>4 quickly.</p> <p>5 Q. Did you request information?</p> <p>6 A. Yes.</p> <p>7 Q. What did you ask for?</p> <p>8 A. The standard information that one looks</p> <p>9 for in such matters, most specifically election</p> <p>10 returns during the last cycle of the 1990s,</p> <p>11 information about the placement and pairing of</p> <p>12 incumbents. Information about the placement of cores</p> <p>13 of old districts in the new districts and the</p> <p>14 subsidiary information was also provided to me on</p> <p>15 compactness and precinct, county and municipal place.</p> <p>16 Q. Was that something you asked for?</p> <p>17 A. Don't recall if I asked for that or not.</p> <p>18 They sent me a whole mass of data and that was</p> <p>19 included in it.</p> <p>20 Q. You said you asked for information on</p> <p>21 elections. Did you specify what elections you</p> <p>22 wanted, you referred to elections over the last cycle</p> <p>23 of the '90s?</p> <p>24 A. Yes. Yes, in particular statewide</p> <p>25 elections held during the same year as the</p>	<p style="text-align: right;">20</p> <p>1 A. I got a data set which had all that</p> <p>2 information in it.</p> <p>3 Q. Did you bring that with you this morning?</p> <p>4 A. You mean my computerized data set? This</p> <p>5 was all electronically given to me.</p> <p>6 Q. Okay.</p> <p>7 A. There's no paper.</p> <p>8 Q. Did you bring a printout of your</p> <p>9 electronic data set?</p> <p>10 A. I don't think I ever printed it out. I</p> <p>11 used it electronically.</p> <p>12 Q. Do you have it on a laptop?</p> <p>13 A. I do.</p> <p>14 Q. Do you have your laptop with you?</p> <p>15 A. No.</p> <p>16 Q. How many files, how many separate</p> <p>17 electronic files did you receive?</p> <p>18 A. I never counted, maybe 30.</p> <p>19 Q. Do you know how many megabytes of</p> <p>20 information you received?</p> <p>21 A. No, but it wasn't huge because, you know,</p> <p>22 we're dealing with 19 to 21 districts. The only</p> <p>23 large file I received was a precinct level file which</p> <p>24 had data by precinct so I could look at that last</p> <p>25 thing I mentioned to you, the stability over time of</p>
<p style="text-align: right;">19</p> <p>1 congressional elections, as well as congressional</p> <p>2 senatorial legislative elections, federal legislative</p> <p>3 elections held within Pennsylvania.</p> <p>4 Q. All right. So you asked for all federal</p> <p>5 legislative elections in Pennsylvania and all</p> <p>6 statewide elections?</p> <p>7 A. Held during the same years as</p> <p>8 congressional elections, so the even numbered years.</p> <p>9 Q. And why did you specify that, let's call</p> <p>10 it a data set of information?</p> <p>11 A. By looking at statewide elections you can</p> <p>12 get some assessment of how Republican leaning voters</p> <p>13 and Democratic leaning voters are allocated into the</p> <p>14 districts and get a, and then do an analysis of</p> <p>15 whether the districts are fairly configured with</p> <p>16 respect to Republican and Democratic leaning voters</p> <p>17 over the period of the last redistricting.</p> <p>18 Q. But you say you only asked for elections</p> <p>19 in even numbered years, is that right?</p> <p>20 A. Yes, that's what I've typically looked at</p> <p>21 because those are the years in which congressional</p> <p>22 elections take place. You can get some different</p> <p>23 patterns in elections on the odd years.</p> <p>24 Q. And what did you get? In response to your</p> <p>25 request?</p>	<p style="text-align: right;">21</p> <p>1 voting for Democrats and Republicans. The other</p> <p>2 files were all very small files.</p> <p>3 Q. All right. That last file, the precinct</p> <p>4 specific file, did you just recently receive that?</p> <p>5 A. Yes.</p> <p>6 Q. When did you receive that?</p> <p>7 A. I got that yesterday if I'm not mistaken.</p> <p>8 Q. From whom did you get it?</p> <p>9 A. Mr. Hirsch.</p> <p>10 Q. Who provided you with the other files?</p> <p>11 A. Mr. Hirsch.</p> <p>12 Q. Have you spoken with anyone other than</p> <p>13 Mr. Hirsch about the provenance of the data?</p> <p>14 A. Mr. Hirsch and Mr. Smith.</p> <p>15 Q. So only your counsel Mr. Paul Smith and</p> <p>16 your other counsel Mr. Sam Hirsch?</p> <p>17 A. I don't know if they're my counsel. They</p> <p>18 explained to me where the data came from.</p> <p>19 Q. But you've only talked to</p> <p>20 them?</p> <p>21 A. Yes, at this point.</p> <p>22 Q. Now, were you provided a copy of the</p> <p>23 notice of deposition that was issued in this case?</p> <p>24 A. I don't think so. I don't recall seeing</p> <p>25 it.</p>

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<p style="text-align: right;">22</p> <p>1 (Deposition Exhibit No. 2 was 2 marked for identification.) 3 THE WITNESS: Are you asking me to read 4 this? 5 BY MR. KRILL: 6 Q. I'm just having it marked for the record. 7 A. Okay. 8 Q. And that is a copy of the notice of 9 deposition that was issued in this matter. We did 10 ask you to bring with you for our examination all 11 documents you considered in forming your conclusions. 12 Did you bring any documents with you? 13 A. I brought all the documents I have. 14 Everything else as I said is electronic. 15 Q. So all the documents that you have are the 16 documents that have been marked as Exhibit 1? 17 A. These are the documents formed in my 18 conclusion plus they gave me some tables and charts 19 produced by Mr. -- Dr. Lublin. 20 Q. May I see those? When you say they gave 21 them to you, do you mean Mr. Hirsch and Mr. Smith? 22 A. Correct. 23 MR. KRILL: Mr. Smith, I'd be happy to 24 have some quick copies made of the papers 25 Dr. Lichtman has just handed me so I can mark one set</p>	<p style="text-align: right;">24</p> <p>1 MR. KRILL: Yeah. 2 MR. SMITH: But electronic files which is 3 what we gave him and what we gave you. 4 MR. KRILL: What I do recall getting from 5 you yesterday, in fact is a very large spreadsheet 6 with precinct data. 7 MR. SMITH: Yes. 8 MR. KRILL: On it. And I do recall 9 getting six e-mails with, six e-mail packets with 10 data sets in them. And I take it that's what you're 11 referring to. 12 MR. SMITH: I am referring to some e-mail 13 sets of transmission of data. I'm not sure which one 14 you're referring to because I know we sent you some 15 stuff for Dr. Lublin in the other case, the state 16 case, and we sent you some stuff more recently than 17 that after the state trial from Dr. Lichtman, not 18 just stuff that was sent yesterday but an earlier 19 transmission. 20 MS. SAJER: I have those, but we had relied 21 on Tom Perrelli's assertion that Dr. Lichtman was 22 relying on the same information that was provided to 23 Dr. Lublin. 24 MR. KRILL: Yes, in Mr. Perrelli's letter 25 to me he said the data were the same.</p>
<p style="text-align: right;">23</p> <p>1 of exhibit. 2 MR. SMITH: That's fine. 3 BY MR. KRILL: 4 Q. And while we're waiting for the copies, 5 let me ask Mr. Smith if you would kindly provide us 6 with the electronic documents that Dr. Lichtman has 7 received. 8 MR. SMITH: We already did that. 9 MR. KRILL: Can you tell me what they are. 10 MR. SMITH: The data he just described was 11 transmitted to you by us some days ago. The election 12 data, the other data that he described was all 13 transmitted. 14 MR. KRILL: All right, now, we have, we 15 know the exhibits that Dr. Lublin used in the 16 Commonwealth court proceeding, were those the data 17 that you transmitted to Dr. Lichtman. 18 MR. SMITH: No the electronic data that we 19 transmitted to you electronically on the deadline 20 several days ago for transmission of expert data that 21 we were given by Judge Rambo, it was sent to you by 22 e-mail, I believe. 23 It may well be the same, certainly similar 24 if not the same stuff, but it has Exhibit 56 which I 25 see you're looking at from the state trial.</p>	<p style="text-align: right;">25</p> <p>1 MR. SMITH: It may well be the same. I 2 don't know that personally but I have no reason to 3 think it's not. If that's what Mr. Perrelli's 4 letter said then I'm sure it's true. 5 MR. KRILL: Okay. That could lead to an 6 awkward issue here because the one person who 7 actually can authenticate what he received so that we 8 all know we're on the same page is Dr. Lichtman. And 9 the data that he received would be the data that I am 10 requesting. So I would, it may, since it's all 11 electronic and just requires the push of a button to 12 transmit and for purposes of just making sure that 13 we're all on the same page in terms of disclosing the 14 data, I ask Dr. Lichtman to please arrange for the 15 electronic transmission to me directly of the data 16 sets that he received from you. 17 MR. SMITH: Is there any reason why you 18 can't do that? 19 THE WITNESS: No reason I can't do that. 20 It might not be immediate but as soon as I get a 21 chance I can certainly do that if you give me the 22 appropriate e-mail address. 23 MR. KRILL: Let me give you my e-mail 24 address right now, it's Jkrill at KL.com. 25 THE WITNESS: And perhaps the easiest</p>

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<p style="text-align: right;">26</p> <p>1 thing so that we are certain we're on the same page</p> <p>2 is I can forward to you the e-mails that were sent to</p> <p>3 me.</p> <p>4 MR. KRILL: Perfect.</p> <p>5 THE WITNESS: Because once the data gets</p> <p>6 into my system I might be manipulating it in some</p> <p>7 ways that you wouldn't, so you want the raw data of</p> <p>8 course.</p> <p>9 MR. KRILL: Well, actually I think I would</p> <p>10 like both, the raw data and the manipulated data so</p> <p>11 that we can understand your starting point,</p> <p>12 understand your methodology, understand your end</p> <p>13 point.</p> <p>14 THE WITNESS: So the e-mails and then the</p> <p>15 e-mails as I've modified them.</p> <p>16 MR. KRILL: Yes.</p> <p>17 THE WITNESS: Just very slightly modified</p> <p>18 actually just to make the variables clear. That may</p> <p>19 take me a little longer because then I'll have to</p> <p>20 sort it all out.</p> <p>21 BY MR. KRILL:</p> <p>22 Q. Do you have assistants who work with you</p> <p>23 on this project?</p> <p>24 A. I do.</p> <p>25 Q. And who are they?</p>	<p style="text-align: right;">28</p> <p>1 A. Right, okay.</p> <p>2 Q. So what was the first thing you did?</p> <p>3 A. First thing I did was, as I said, look at</p> <p>4 the data but in terms of the methodology that you're</p> <p>5 asking me what I did was I looked at the existing,</p> <p>6 the old plan, the one that was in effect for the</p> <p>7 cycle post 1990 census which I believe had two more</p> <p>8 districts than the current plan, 21 versus 19. And I</p> <p>9 looked at the incumbent placement within those 21</p> <p>10 districts with particular attention to the placements</p> <p>11 by party, Republican and Democrat. And then I</p> <p>12 averaged all the elections statewide that I had</p> <p>13 within each district. I believe there were 19</p> <p>14 elections altogether to look at the average percent</p> <p>15 Democrat across those statewide elections for each</p> <p>16 individual district.</p> <p>17 I also looked at the overall average for</p> <p>18 all districts, that is if you look down your page I</p> <p>19 averaged down the page and that is to see on average</p> <p>20 looking at all the districts what was the Democratic</p> <p>21 versus the Republican vote.</p> <p>22 Q. All right. Now, is this summarized in</p> <p>23 table 1 of Exhibit 1?</p> <p>24 A. Yes. What I've told you so far.</p> <p>25 Q. Now, let me see if I understand it. The</p>
<p style="text-align: right;">27</p> <p>1 A. Bernard Unti, U-n-t-i, a Ph.D. student.</p> <p>2 Q. Now, what we're going to do I guess just</p> <p>3 for the moment here is assume that Mr. Perrelli's</p> <p>4 representation was accurate and that Dr. Lublin's</p> <p>5 statistics are your statistics, that is the</p> <p>6 statistics you received. We'll look forward to</p> <p>7 seeing your data set transmitted. Would you be able</p> <p>8 to do that this afternoon at the close of this</p> <p>9 deposition, Doctor?</p> <p>10 A. I'm not certain. I will try.</p> <p>11 Q. Tomorrow morning.</p> <p>12 A. Certainly by tomorrow morning. No later</p> <p>13 than tomorrow morning.</p> <p>14 Q. Thank you very much. Now, I would</p> <p>15 appreciate it if you would slowly and carefully walk</p> <p>16 me through your methodology.</p> <p>17 A. Yeah.</p> <p>18 Q. From your starting point to your end point</p> <p>19 in reaching your ultimate conclusion.</p> <p>20 A. So you want to walk through each of these</p> <p>21 tables? Is that what you want to do?</p> <p>22 Q. I'd like to know how you started from the</p> <p>23 data that you received to reach your ultimate</p> <p>24 conclusion that there was a strong partisan tilt to</p> <p>25 Act I?</p>	<p style="text-align: right;">29</p> <p>1 bottom row of table 1 has the heading Sum?</p> <p>2 A. Right.</p> <p>3 Q. And then the first, the third column has</p> <p>4 the figure 50.3 percent?</p> <p>5 A. Right.</p> <p>6 Q. And what is --</p> <p>7 A. That's the average for all of the</p> <p>8 districts instead of the individual -- the numbers</p> <p>9 above it are for each individual district. That's</p> <p>10 the average for the sum of all the districts.</p> <p>11 Q. So if this were in a spreadsheet the</p> <p>12 formula would be to add the percentages, the 21</p> <p>13 percentages above and then divide by 21?</p> <p>14 A. Right.</p> <p>15 Q. And you come up with 50.3 percent?</p> <p>16 A. Right. Now obviously these are rounded</p> <p>17 percentages but that's what you get when you average</p> <p>18 them all. Then I looked at whether a district on</p> <p>19 average for the 19 elections was majority Democrat or</p> <p>20 majority Republican. That's what that next column</p> <p>21 represents. It does not mean it has a Democrat or</p> <p>22 Republican incumbent, that's the first column.</p> <p>23 Q. All right. But the, all right, let's</p> <p>24 start with column labels. 1992 plan, we understand</p> <p>25 what that means?</p>

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<p>30</p> <p>1 A. Correct.</p> <p>2 Q. Incumbent we all know what that means?</p> <p>3 A. Right.</p> <p>4 Q. Percent DEM 1991 to 2000, that would be</p> <p>5 the average of five congressional elections, is that</p> <p>6 correct?</p> <p>7 A. No, these are statewide elections.</p> <p>8 Q. Oh, all right. So --</p> <p>9 A. There are 19 of them.</p> <p>10 Q. All right. So you used the 19 statewide</p> <p>11 elections that you were provided by counsel and then</p> <p>12 averaged the Democratic vote in that district,</p> <p>13 correct?</p> <p>14 A. Yes and then the next column simply</p> <p>15 indicates whether the district is above 50 percent</p> <p>16 Democrat or below 50 percent Democrat on average for</p> <p>17 the 19 elections.</p> <p>18 Q. When you say above or below 50 percent</p> <p>19 Democrat, are you talking about registered voters?</p> <p>20 A. It's always the 19 averaged elections.</p> <p>21 Q. Okay. So this fourth column in table 1</p> <p>22 has nothing to do with registration?</p> <p>23 A. Nothing.</p> <p>24 Q. It's only with how ballots were cast for a</p> <p>25 candidate?</p>	<p>32</p> <p>1 average across all districts, and the same analysis</p> <p>2 of whether a district is over 50 percent Democratic</p> <p>3 or under 50 percent Democratic and then just a</p> <p>4 variable which indicates the change in percent</p> <p>5 Democratic as compared to the 1992 plan.</p> <p>6 Q. Now, in looking at these, in arriving at</p> <p>7 these percentage results for both of the percentage</p> <p>8 columns, were you basing your percentages on the</p> <p>9 total vote?</p> <p>10 A. Excuse me?</p> <p>11 Q. That is the total popular vote in the</p> <p>12 statewide races?</p> <p>13 A. In each, for each district, I simply</p> <p>14 averaged the vote for that district across all the</p> <p>15 elections. I did not sum totals.</p> <p>16 Q. Okay. All right. And the two columns</p> <p>17 that are labeled REP or DEM Dis are simply putting</p> <p>18 party labels on whether a district had a percentage</p> <p>19 that was above or below 50 percent, right?</p> <p>20 A. For the Democrat, yes.</p> <p>21 Q. Yes. And if it was above 50 percent you</p> <p>22 labeled it DEM, if it was below 50 percent you</p> <p>23 labeled it REP?</p> <p>24 A. Correct. So on average was the district</p> <p>25 won by DEMs or REPs.</p>
<p>31</p> <p>1 A. Correct. But not for a candidate.</p> <p>2 Q. Right.</p> <p>3 A. For 19.</p> <p>4 Q. For 19 candidates.</p> <p>5 A. Yes.</p> <p>6 Q. Yeah.</p> <p>7 A. And then the sum simply indicates how many</p> <p>8 of them were over 50 percent Democratic and under 50</p> <p>9 percent Democratic. Then I looked at what you call,</p> <p>10 I think what did you call Act I or the conference</p> <p>11 plan, the plan under scrutiny and this does several</p> <p>12 things.</p> <p>13 First of all, it looks at the placement</p> <p>14 and pairings of incumbents in the new plan. So it's</p> <p>15 a little bit different from incumbent in the second</p> <p>16 column in that obviously there are no pairings in the</p> <p>17 1992 plan but there are a number of pairings of</p> <p>18 incumbents in the new plan. And so you will get in a</p> <p>19 couple of cases some repetition of the same district</p> <p>20 because if you look, for example, at Borski, he's</p> <p>21 paired with Hoeffel in district 13. And then when</p> <p>22 you look at Hoeffel he's paired with Borski in</p> <p>23 district 13.</p> <p>24 Then it computes the same average for the</p> <p>25 19 elections for each individual district, the same</p>	<p>33</p> <p>1 Q. Okay. Now let's see, down at the, for</p> <p>2 what you've labeled the conference plan the districts</p> <p>3 are not listed in numeric order?</p> <p>4 A. No.</p> <p>5 Q. And I'm just trying to eyeball this.</p> <p>6 A. You want me to explain how the districts</p> <p>7 are listed? Will that help you?</p> <p>8 Q. Yes, please.</p> <p>9 A. They're following the incumbents. So in</p> <p>10 other words if you look at district 3 in the 1992</p> <p>11 plan you see Borski. He is reallocated to district</p> <p>12 13 under the new plan. And that's why district 13 is</p> <p>13 paired up with district 3. In many cases the</p> <p>14 incumbents are in the same district number but</p> <p>15 particularly when there is pairings they often are</p> <p>16 not.</p> <p>17 Q. Okay. Now, the final column on the right</p> <p>18 in table 1, change in percent DEM, what is that?</p> <p>19 A. That is if you look at the average percent</p> <p>20 DEM in 1992 as compared to the average percent DEM in</p> <p>21 the new plan, the difference between the two.</p> <p>22 Q. Okay. And what was your purpose in</p> <p>23 performing this exercise that's represented in table</p> <p>24 1?</p> <p>25 A. To examine both simultaneously the way in</p>

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<p style="text-align: right;">34</p> <p>1 which Republican and Democratic leaning voters were 2 allocated into districts to see if the distribution 3 of voters into district matches the overall balance 4 between Democrats and Republicans and secondly to see 5 the effects of pairings upon the new plan. 6 Q. Okay. And what did you do next? 7 A. I then did the same procedure for a series 8 of plans that were presented to me called alternative 9 plans. And these are alternative 2, 3, and 4. So 10 tables 2, 3, and 4 do the same thing we did with 11 respect to table 1 for the conference or Act I, did 12 you call it, plan. 13 Q. Act I, yes. 14 A. Act I for alternative 2, 3, and 4. 15 MR. SMITH: Excuse me a second. 16 (Discussion off the record.) 17 BY MR. KRILL: 18 Q. And what did you do next? 19 A. I did a summary. 20 Q. And is that in Exhibit 1? 21 A. That is in table 5. Simply summarizes 22 information on tables 1 through 4. 23 Q. All right. Now, let's go over it to make 24 sure we understand it. The first column in table 5 25 simply labels the different plans that you examined,</p>	<p style="text-align: right;">36</p> <p>1 specific way of saying average. Generally in the 2 common language when we say average we mean although 3 it doesn't technically have to be that. 4 Q. And then the fourth column in table 5 5 says, number of DEM districts, correct? 6 A. Right. That's again just picked off the 7 bottom row of each individual one of the tables. 8 Remember I explained how I labeled a district DEM or 9 REP. 10 Q. The fifth column in table 5 says percent 11 of districts, what does that mean? 12 A. That's just 9 divided by 21, 5 divided by 13 19, it's just a percent of districts that fall into 14 the DEM and REP categories. 15 Q. Okay. And then you have similar figures 16 in columns 6 and 7? 17 A. Yes. 18 Q. And the last column, pairings? 19 A. That sums up the pairings of incumbents in 20 each individual plan, again, from tables 1 through 4. 21 Q. And there's a parentheses or a 22 parenthetical -- forgive me, an asterisk in the last 23 column? 24 A. Right. 25 Q. For district 17?</p>
<p style="text-align: right;">35</p> <p>1 correct? 2 A. Right. 3 Q. Second column has the heading Mean 4 Percentage DEM, what does that mean? 5 A. That corresponds to the average across all 6 districts for each plan. It's that bottom row 50.3 7 and all the others are 49.8. 8 Q. And mean percentage for Republican is 9 similar? 10 A. Yes, same thing. It's just the 100 minus. 11 Q. You're referring to these percentages as a 12 mean in table 5 but we seem to be looking at 13 averages. The same numbers labeled or considered 14 averages in tables 1 through 4, is that correct? 15 A. Averages or means, the particular average 16 being used as the mean. 17 Q. So you're using average as the mean? 18 A. Right. Remember we said it's adding up 19 all of the individual percentages and dividing the 20 total number of districts. That's what I explained 21 for each of the individual tables. That is a mean. 22 Q. Now in mathematics a mean is different 23 than an average, isn't it? 24 A. A mean is a kind of average. There can be 25 other kinds of averages but a mean is just a more</p>	<p style="text-align: right;">37</p> <p>1 A. Yes, it simply notes that if you go back 2 to table 1 on district 17 it's a heavily Republican 3 leaning district. It's 41.7 percent Democratic on 4 average for the 19 elections. 5 Q. District 17 remains heavily Republican 6 under any plan, any of the plans you've considered 7 here, doesn't it? 8 A. That's probably true. It's particularly 9 important to note it however and the reason I do that 10 is because of the pairing. The Act I or conference 11 plan is the only plan that pairs a Republican and a 12 Democrat together and therefore it is relevant to 13 look at the partisan leaning of the district as well 14 as the allocation of previous cores of each incumbent 15 in that district. 16 Q. And what was your next exercise after 17 completing table 5? 18 A. I was given a set of compactness scores 19 and simply recorded them. I did not compute them 20 myself to look at a comparison of the various plans 21 in terms of their compactness on two standard 22 measures of compactness. 23 Q. Okay. Let's go through table 6 then. 24 That's where this is summed up, right? 25 A. Yes.</p>

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1 Q. And under the heading 1992 Plan there is a
2 subheading DISP?
3 A. Right.
4 Q. What does that mean?
5 A. That's the dispersion measure.
6 Q. What is the dispersion measure?
7 A. That looks at the area of the smallest
8 circumscribing circle that you can draw around a
9 district and the ratio of the area of the district to
10 the area of the circle.
11 Q. So it's a purely mathematical calculation?
12 A. So was the perimeter, that looks at the
13 relationship between perimeter and area of a
14 district.
15 Q. Do you know what the formula is for
16 arriving at that?
17 A. I'm not sure I have it right in my head
18 since I haven't computed these recently. But these
19 are standard formulas that are used on these and
20 their ratios as I explained.
21 Q. So is it fair to say that both of these
22 measures, dispersion and perimeter factor are
23 measured, two different ways of measuring the extent
24 to which a district deviates from the perfect shape
25 of a circle?

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1 A. Correct.
2 Q. Now, table 6 in the last two columns on
3 the right refers to ATL4 plan, is that just a typo,
4 should that be alt 4 plan?
5 A. Yeah, that's just a typo.
6 Q. The two bottom rows of table 6 have the
7 label min and mean?
8 A. Right.
9 Q. What do those stand for?
10 A. The lowest value on each measure and the
11 mean value for each measure. Again the mean computed
12 just as the sum divided by the total number.
13 Q. Okay. And what conclusion did you draw
14 from looking at table 6?
15 A. That based upon these measures the
16 conference or Act I plan is less compact than the
17 other plans looked at.
18 Q. Just so we understand how to read these,
19 is the, for both dispersion and perimeter, is the
20 higher number the more compact?
21 A. Yes.
22 Q. So the row that shows it is minimum
23 compactness picks the least compact district and puts
24 that number in the next to the last row, correct?
25 A. Yes.

40

1 Q. And that's it that's your conclusion?
2 A. That's it.
3 Q. Table 7, is that, does that represent the
4 next stage of your work?
5 A. Yes.
6 Q. What does that show?
7 A. The first two rows simply repeat the mean
8 dispersion and perimeter scores from table 6. And
9 the next rows report information provided to me on
10 county splits, municipal splits, precinct splits and
11 population deviation.
12 Q. Okay. And the bottom row of table 7 is
13 labeled mean rank, what does that mean?
14 A. I ranked each of the plans on each of
15 these measures and that's the average of the ranks on
16 the individual measures or the mean, the sum of the
17 ranks divided by the six measures I looked at.
18 Q. All right. Let me ask you how you arrived
19 at your rank numbers in each column. Let's start
20 with the 1992 plan. You gave that a rank of one for
21 compactness dispersion.
22 A. Right. It has the highest compactness
23 score.
24 Q. All right. And for compactness perimeter
25 you gave it a rank of 1.5?

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1 A. It was tied with all three for the highest
2 perimeter score.
3 Q. Well, how did you select the number 1.5?
4 A. In between 1 and 2.
5 Q. That is correct. But why, its midpoint
6 between 1 and 2?
7 A. Right. Since they're tied I can't decide
8 which is 1 and which is 2 so I took the midpoint.
9 Q. But you could have scored them both 2,
10 couldn't you?
11 A. That would have been less accurate, less
12 sensitive to what this actually represents.
13 Q. What do you mean by sensitive?
14 A. That is you could score them one, you
15 could score them two. Neither 1 nor 2 would fully
16 reflect the fact that they share the ranks 1 and 2.
17 What most accurately reflects their shared ranking of
18 1 and 2 is to take 1 plus 2 and divide by 2 which is
19 1.5.
20 Q. Well, there are lots of contests, aren't
21 there, where there's a winner who gets first place
22 and then others are tied for second place and we call
23 it tied for second place not tied for a place and a
24 half?
25 A. This isn't a contest.

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<p style="text-align: right;">42</p> <p>1 Q. No it isn't, but let me go back to my 2 question. You used the term sensitivity and you said 3 that using a 2 instead of a 1.5 would be less 4 sensitive. Can you please explain that concept? 5 A. I just did. I'll explain it again. They 6 are tied for first. So I could give them both first 7 but I don't think that accurately reflects the fact 8 that they're tied. Because you could also say 9 they're tied for second. But really they're tied for 10 first because they're first ahead. So I think what 11 most sensitively reflects the fact that I want to 12 keep the number of ranks consistent so that the table 13 remains internally consistent is to give them the 14 midpoint between 1 and 2. 15 1 would be too high. 2 would be too low. 16 1.5 is the most sensitive to the reality of what 17 we're observing. 18 Q. All right. So your explanation of the 19 concept of sensitivity in this concept actually 20 incorporates the term sensitivity in at least two 21 instances. What I'm saying is, can you give me a 22 definition of sensitivity that is not tautological, 23 Dr. Lichtman? 24 A. I don't think my definition was 25 tautological. I think my 1.5 accurately reflects the</p>	<p style="text-align: right;">44</p> <p>1 A. That's it. 2 Q. What was the next step in your 3 methodology? 4 A. Was to look at the extent to which persons 5 from the 1992 districts are retained within the new 6 districts and to look at that in terms of the 7 Republican constituents retained and the Democratic 8 constituents retained, that is, to divide it 9 according to whether the incumbents are Republican or 10 Democratic. 11 Q. And the retention information was simply 12 given to you by your counsel, correct? 13 A. Yes. 14 Q. Now, did that, do you recall whether that 15 retention information also showed you some 16 information about racial composition of the 17 districts? 18 A. It may have. 19 Q. All right. But -- 20 A. I sort of do recall, I didn't pay 21 attention to that but I was looking at that but it 22 may well have had that on it. I think it did. 23 Q. But this is not a case where you're doing 24 any analysis of the racial impact or minority rights 25 impact of redistricting, are you?</p>
<p style="text-align: right;">43</p> <p>1 mid point between the ranking of 1 and the ranking of 2 2, and is internally consistent. That's not 3 tautological. 4 Q. But it is an arbitrary choice on your part 5 to use 1.5 instead of ranking them both as 2, isn't 6 it? 7 A. I think it would be more arbitrary to rank 8 them both as 2 because you could equally argue they 9 both should be ranked as 1. Therefore the 1.5 is the 10 most accurate way of ranking them. 11 Q. So these ranks are really just the order 12 in which these factors fall out under the different 13 plans, is that right? 14 A. Yes. 15 Q. And therefore they are labeled 1 through 5 16 and where there's a tie you split the difference? 17 A. Correct. 18 Q. Okay. And then you just average those 19 numbers to achieve a mean rank? 20 A. Correct. 21 Q. And what does the mean rank represent? 22 A. It represents looking at all of the 23 various measures on average how the various plans 24 fall in relationship to one another. 25 Q. That's it?</p>	<p style="text-align: right;">45</p> <p>1 A. To this point I've not been asked to look 2 at the minority rights impact of redistricting. 3 Q. Okay. Now why did you look at, why did 4 you perform the analysis in table 8? 5 A. To see if the plan was equally treating 6 Democratic and Republican incumbents in terms of 7 retention of core. I also looked, although it's not 8 in a table I did look specifically also at that 9 district 17 that we had mentioned that paired a 10 Republican and a Democrat. 11 Q. What did you see there? 12 A. That the majority that I think in terms of 13 persons retained, there were more from, substantially 14 more from the Republican's previous district than the 15 Democrat's previous district. It was about a 60-40 16 ratio approximately. 17 Q. Now, all of the plans that you looked at 18 appear to have a difference in the retention of 19 constituents, correct? 20 A. Correct. 21 Q. What conclusion do you draw from these 22 data? 23 A. That the difference is much greater in the 24 conference plan than the other three plans. 25 Q. So the conference plan retains more</p>

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<p style="text-align: right;">46</p> <p>1 Republicans than the other three plans?</p> <p>2 A. That is also true but that was not the</p> <p>3 conclusion I just mentioned to you.</p> <p>4 Q. Okay. I'm sorry. What was your</p> <p>5 conclusion?</p> <p>6 A. That with respect to the difference in</p> <p>7 constituents retained the difference is much greater</p> <p>8 for the conference plan than the other three plans.</p> <p>9 The statement you made is also correct.</p> <p>10 Q. Did you look at the total percent of</p> <p>11 constituents retained regardless of party</p> <p>12 affiliation?</p> <p>13 A. I did not to this point, although you</p> <p>14 could pretty much see it from this since there's a</p> <p>15 fairly equal if not exactly equal balance of</p> <p>16 Republicans and Democrats in the old plan.</p> <p>17 Q. Well, you can't merely add the percentages</p> <p>18 though, can you? You can't say let's say add the,</p> <p>19 for alternative 2 the 54 percent of Republicans</p> <p>20 retained to the 61 percent of Democrats retained?</p> <p>21 A. You certainly wouldn't add the two to give</p> <p>22 you 100 percent. No, no, I wasn't remotely</p> <p>23 suggesting that.</p> <p>24 Q. So as you sit here today is it fair to say</p> <p>25 that you don't know what the total percentage of</p>	<p style="text-align: right;">48</p> <p>1 variables don't necessarily have intuitive sense.</p> <p>2 That's just the elections in, held in the year, the</p> <p>3 statewide elections held in 2000.</p> <p>4 Q. Oh, so DSTR is not a reference to</p> <p>5 districts?</p> <p>6 A. No.</p> <p>7 Q. No.</p> <p>8 A. It's averaged -- no, no. I'm not sure why</p> <p>9 that particular variable was chosen, why that</p> <p>10 particular label was chosen, rather.</p> <p>11 Q. Who chose the label?</p> <p>12 A. I was just given a set of data that I</p> <p>13 analyzed.</p> <p>14 Q. And what data were analyzed to produce</p> <p>15 this table?</p> <p>16 A. The precinct by precinct election returns</p> <p>17 that I've already mentioned to you.</p> <p>18 Q. Okay. Now, the first row below the</p> <p>19 heading is labeled DSTR-00?</p> <p>20 A. That's 2000.</p> <p>21 Q. That's 2000. That represents the 19 races</p> <p>22 being viewed through the --</p> <p>23 A. Those are the 2000 races.</p> <p>24 Q. I see, I see. That's those of the 19</p> <p>25 races that occurred in 2000?</p>
<p style="text-align: right;">47</p> <p>1 constituents retained in each district from previous</p> <p>2 districts is?</p> <p>3 A. Not precisely, no.</p> <p>4 Q. All right. What did you do next?</p> <p>5 A. Next was to look at correlations over time</p> <p>6 at the precinct level in voting for Democrat and</p> <p>7 Republican candidates in these statewide elections.</p> <p>8 Q. And explain what you mean by correlations,</p> <p>9 please?</p> <p>10 A. Correlations are the extent to which two</p> <p>11 sets of numbers are linearly related to one another.</p> <p>12 Q. And let's see, there are five rows and six</p> <p>13 columns. Is it fair to say that the five columns to</p> <p>14 the right, the second through 6th column on the</p> <p>15 correlations table are labeled to refer to the</p> <p>16 congressional district elections in 2000, 1998, 1996,</p> <p>17 1994 and 1992?</p> <p>18 A. These are not congressional. These are</p> <p>19 the statewide elections. The same statewide</p> <p>20 elections we've been using.</p> <p>21 Q. All right. DSTR, what does that stand</p> <p>22 for?</p> <p>23 A. That's just a, that's a variable that came</p> <p>24 out of the, this is not my own table. This just was</p> <p>25 pumped out of the computer. That's why these</p>	<p style="text-align: right;">49</p> <p>1 A. Correct.</p> <p>2 Q. Okay. And you used the term Pearson</p> <p>3 correlation what is a Pearson correlation?</p> <p>4 A. That's just what I described to you, the</p> <p>5 linear relationship between two sets of, it's named</p> <p>6 Pearson after the inventor of the measure.</p> <p>7 Q. And I'm pretty dense on this stuff, can</p> <p>8 you explain it to me again?</p> <p>9 A. Yes it's the linear relationship between</p> <p>10 two sets of numbers and the correlation varies in</p> <p>11 value between minus 1 to zero to plus 1. So its</p> <p>12 minimum is minus 1 which would indicate a perfect</p> <p>13 negative correlation to an absolutely aligned but in</p> <p>14 opposite directions. A zero would indicate no</p> <p>15 particular linear relationship between the two sets</p> <p>16 of numbers and a plus 1 would indicate a perfect</p> <p>17 positive relationship between the two sets of</p> <p>18 numbers.</p> <p>19 Q. All right. Now, in the first box in the</p> <p>20 left hand column below the label Pearson correlation</p> <p>21 there's another designation, SIG.(2-tailed)?</p> <p>22 A. Right. The computer gives you an</p> <p>23 indication of whether or not that linear</p> <p>24 relationship, whatever it may be, is statistically</p> <p>25 significant that is what is the probability of</p>

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<p style="text-align: right;">50</p> <p>1 getting such a correlation under the hypothesis of 2 purely chance or random outcome. 3 Q. And below the sig designation is a capital 4 letter N as in negative, what does that mean? 5 A. It doesn't mean negative but it means the 6 number, it's just the number of precincts. 7 Q. It's the number of precincts that were 8 used in that calculation? 9 A. Correct. And usually signifies that the 10 size of the data set. 11 Q. There appears to be a difference in some 12 of the precinct numbers. They vary from 9,427 to 13 9,423, do you know why that is? 14 A. There was probably some missing data in 15 some of the years. It's only a variance of four 16 precincts, I believe, out of over 9,000. 17 Q. What conclusion do you draw from the 18 correlations table? 19 A. That there is a very strong correlation 20 over time across precincts for statewide elections in 21 the state of Pennsylvania. Correlations are all over 22 .9, as I said, the maximum value, if its absolutely 23 perfect relationship is 1. So at the precinct level 24 there are these very high year by year correlations 25 even for years that are pretty far separated like</p>	<p style="text-align: right;">52</p> <p>1 the other side, what the lawyers ask me to do. 2 Q. Right. 3 A. But at this point this, my conclusions are 4 based on what you see in front of you. 5 Q. Now, the methodology that you used, does 6 it have a name? 7 A. I'm not sure it's got a specific name 8 because it's an examination both of pairings and of 9 the relationship between the overall average 10 distribution of the Democratic and Republican vote 11 and the distribution of a vote within each district. 12 That's the standard measure of partisan bias is to 13 see at a point which we precisely have here where the 14 districts average 50-50 overall, how many districts 15 are won by one party and how many districts are won 16 by the other party. This is often called partisan 17 symmetry, and that aspect of the analysis is a 18 measure of partisan symmetry. 19 Q. All right. The methodology that you 20 described this morning, have you published any 21 description of it in a professional journal? 22 A. Not per se, no. 23 Q. All right. Has the methodology that you 24 described this morning been peer reviewed in any 25 publication?</p>
<p style="text-align: right;">51</p> <p>1 1992 and 2000. 2 Q. All right. And by correlation you mean 3 that -- are you saying that the precincts usually end 4 up voting a certain way? 5 A. Correct. In a very similar fashion, 6 exactly. 7 Q. Is it fair to say that you conclude that 8 some precincts are almost always going Republican and 9 others are almost always going Democrat? 10 A. This doesn't quite measure that. This 11 actually measures something even more precise, that 12 the percentage Democrat and Republican is very close 13 from one year to the other. 14 Is this a good time to take a quick break. 15 MR. KRILL: Yeah, I think it would be. 16 (Recess.) 17 BY MR. KRILL: 18 Q. All right. Dr. Lichtman, we've gone 19 through the tables in Exhibit 1 up through the last 20 table on correlations and let me ask you what if 21 anything you did next by way of reaching your 22 conclusion. 23 A. My conclusions to this point are based on 24 these tables. Whether I might do anything more, I 25 don't know, depends, you know, what is produced by</p>	<p style="text-align: right;">53</p> <p>1 A. The examination of partisan symmetry has 2 been expressed in numerous publications. 3 Q. All right. Can you, and you say the 4 examination of partisan symmetry? 5 A. That is the examination of how districts 6 divide when the average is at 50-50, that's a 7 standard measure of partisan symmetry which is one 8 aspect of what I've measured here. 9 Q. All right. Now can you identify a 10 publication that peer reviewed the methodology that 11 you used here today? 12 A. The examination of partisan symmetry? 13 There certainly is lots of publications, and I can 14 name them, that define partisan symmetry and its 15 measurement. 16 Q. No, I'm talking about the whole 17 methodology. Is there any publication that's peer 18 reviewed your, the package of methodology that you've 19 used here today? 20 A. It is certainly all publications that talk 21 about these kinds of examinations. I'm not sure what 22 you mean beyond that. The methodology is simply 23 looking at the districts and the district averages 24 and looking at the pairings. It's not that I've 25 invented some new statistical technique, if that's</p>

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<p style="text-align: right;">54</p> <p>1 what you're driving at.</p> <p>2 Q. I'd just kind of like to double check what</p> <p>3 you're saying.</p> <p>4 A. Okay.</p> <p>5 Q. So could you please identify a publication</p> <p>6 that has peer reviewed your methodology in whole or</p> <p>7 in part?</p> <p>8 A. As I said, I've not invented a new</p> <p>9 methodology. If you want publications that define</p> <p>10 partisan symmetry and how to measure partisan</p> <p>11 symmetry, I can certainly give you that.</p> <p>12 Q. Okay. Could you please?</p> <p>13 A. Yes.</p> <p>14 Q. What do you have?</p> <p>15 A. There is an article for example by King</p> <p>16 and Gelman in the American Political Science Review</p> <p>17 in 1994 in which they define partisan symmetry.</p> <p>18 Q. Does your methodology conform to what they</p> <p>19 advocated in that journal?</p> <p>20 A. Well, they're doing some -- they're not</p> <p>21 looking at an individual plan, they're looking at</p> <p>22 something quite different but they define partisan</p> <p>23 symmetry in precisely the same way I define partisan</p> <p>24 symmetry here.</p> <p>25 Q. All right. Are there any publications</p>	<p style="text-align: right;">56</p> <p>1 which and, you know, I can certainly cite a number of</p> <p>2 authors whose work you can look at if you would like</p> <p>3 me to.</p> <p>4 Q. Please, yes.</p> <p>5 A. I think I mentioned Gelman and King.</p> <p>6 Q. Yes?</p> <p>7 A. Bernard Grofman.</p> <p>8 Q. Grofman and what article would we look at</p> <p>9 or publication?</p> <p>10 A. There's a lot of publications that these</p> <p>11 authors have done. Grofman has a fairly recent one</p> <p>12 with some coauthors in electoral studies, in 1997</p> <p>13 which he talks about looking at the difference</p> <p>14 between the averages.</p> <p>15 Q. Is it a book or an article?</p> <p>16 A. I think it's part of -- I don't remember</p> <p>17 exactly, I think it's part, it's maybe a chapter</p> <p>18 within a book. I can get you the exact cite if you</p> <p>19 want me to.</p> <p>20 Q. Please. You can just e-mail it to me?</p> <p>21 A. Okay. Bruce Cain has two books.</p> <p>22 Q. Ka?</p> <p>23 A. K-a-i-n.</p> <p>24 Q. K- as?</p> <p>25 A. Did I say K, sorry, C-a-i-n.</p>
<p style="text-align: right;">55</p> <p>1 that have peer reviewed your methodology for the</p> <p>2 purpose to which it is being put here?</p> <p>3 A. I don't understand the question.</p> <p>4 Q. In other words, peer reviewed it as</p> <p>5 suitable for a particular use?</p> <p>6 A. I still don't quite understand what you're</p> <p>7 driving at.</p> <p>8 Q. Well, having a methodology is one thing,</p> <p>9 Dr. Lichtman, but any, a methodology can be used for</p> <p>10 different purposes. Do you recognize that?</p> <p>11 A. Yes.</p> <p>12 Q. And you also recognize, don't you, that a</p> <p>13 methodology may be more suited to one purpose than to</p> <p>14 another purpose.</p> <p>15 A. That's conceivable.</p> <p>16 Q. All right. So what I'm asking is, is</p> <p>17 there any published material that we can look at that</p> <p>18 has reviewed the use of the methodology you've</p> <p>19 described this morning for the purpose to which</p> <p>20 you're putting it this morning?</p> <p>21 A. All of these articles that deal with the</p> <p>22 question of partisan symmetry are putting it to the</p> <p>23 purpose of measuring whether or not a plan or a whole</p> <p>24 set of plans favor voters of one party or voters of</p> <p>25 another party which is precisely the same purpose to</p>	<p style="text-align: right;">57</p> <p>1 Q. And what are his books?</p> <p>2 A. One thing is called The Reapportionment</p> <p>3 Puzzle and I don't remember the exact title of the</p> <p>4 other one but something like, you know, Redistricting</p> <p>5 Analysis. I mean he only has two dealing with this</p> <p>6 topic.</p> <p>7 Q. Okay. And can you cite to any other</p> <p>8 publications?</p> <p>9 A. There has been work by J. Morgan Kousser.</p> <p>10 Q. How do you spell Kousser?</p> <p>11 A. K-o-u-s-s-e-r. He's also looked into</p> <p>12 these matters as well.</p> <p>13 Q. And this is a book?</p> <p>14 A. No. He's written an article on this</p> <p>15 point. I don't remember the exact citation but if</p> <p>16 you want I can get that to you as well.</p> <p>17 Q. Sure. Do you remember the name of the</p> <p>18 journal?</p> <p>19 A. I don't.</p> <p>20 Q. And can you recall any others?</p> <p>21 A. There are others but I think this is a</p> <p>22 pretty good list of leading authorities in the field.</p> <p>23 Q. And the leading authorities are the ones</p> <p>24 who come to mind first I guess?</p> <p>25 A. Yeah, but I don't mean to say there aren't</p>

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<p style="text-align: right;">58</p> <p>1 other authorities in the field. And I don't mean to 2 rank anybody or anything like that. You've asked me 3 for some examples and these are examples. 4 Q. I'm sure there will be no hard feelings 5 among your peers? 6 A. There are many others who have written in 7 this field. There's lots of work. 8 Q. Now, aren't there also other methodologies 9 that are used for analyzing the partisan lean of 10 districts? 11 A. You can use other methodologies for 12 analyzing the partisan leaning of districts. 13 Q. Okay. And what other methodologies are 14 you aware of? 15 A. You can, for example, actually try to 16 predict whether a Democrat or Republican will win the 17 district as opposed to laying out whether the 18 district leans Republican or Democrat. 19 Q. Is there a name for that methodology? 20 A. Gary King has developed one approach to 21 that. There are others. It's called JudgeIt in 22 which he actually attempts to predict outcomes of 23 elections given various averages for a baseline vote. 24 Q. Have you ever used that? 25 A. I have not.</p>	<p style="text-align: right;">60</p> <p>1 software? 2 A. There is such a piece of software that he 3 calls JudgeIt that he has developed. 4 Q. Okay. But this other technique that 5 you're talking about is not a software package? 6 A. No, no. It's just looking at an 7 individual election as I said in terms of the 8 partisan symmetry. For that one you don't need a 9 software package for that. 10 Q. And is that usable for congressional 11 districts? 12 A. You could use it for any set of districts. 13 Q. Have you used that alternative? 14 A. I have. 15 Q. Have you used it for congressional 16 districts? 17 A. I have. 18 Q. Is there a published description of that 19 methodology? 20 A. Again, it's not, you know, it's not like 21 JudgeIt where it's a, you know, a statistical 22 technique that someone has developed as I said 23 applying the partisan symmetry concept to an 24 individual election. 25 Q. I take it you have not used this</p>
<p style="text-align: right;">59</p> <p>1 Q. Are you familiar with it? 2 A. I'm familiar with it but I've not used it. 3 Q. How does it work? 4 A. He has a prediction equation based on 5 various characteristics of the district and from that 6 prediction equation given a certain baseline average, 7 he attempts to predict within each individual 8 district whether it would go Republican or Democrat 9 across a reasonable range of about 45 to 55 percent 10 average Democrat or Republican. It's designed 11 likewise to measure this partisan symmetry concept 12 we've looked at. 13 Q. Is there any other methodology that you're 14 aware of? 15 A. Yes. You can, it's a similar methodology 16 to what I've used but you can also look at each 17 individual election and see the extent to which for 18 an individual election, there is partisan symmetry 19 for that one election. 20 Q. Does that methodology have a name or an 21 author attached to it? 22 A. No, I don't, it's -- no. There's no 23 particular statistical technique there. 24 Q. When you referred to Gary King and JudgeIt 25 that sounds like a, that sounds like a piece of</p>	<p style="text-align: right;">61</p> <p>1 alternative individual district by district technique 2 in this case? 3 A. I've looked at it but I think a more 4 complete measure is provided by tables 1 through 4 5 because they combine the analysis of individual 6 districts with the pairing. I think that's 7 particularly appropriate in analyzing the plan we're 8 looking at here. 9 Q. What other methodologies besides the one 10 you've used, JudgeIt, and then I'll call it the 11 individual district methodology, are there? 12 A. You could also attempt to produce 13 predictions not using, you know, Gary King's 14 particular package but using standard statistical 15 methods like regression analysis. 16 Q. All right. And have you used regression 17 analysis in other cases? 18 A. Not recently but I think I did 10 years 19 ago. 20 Q. Why have you given up using regression 21 analysis? 22 A. My purpose is not to predict the outcome 23 of elections. I had in some cases. Ten years ago I 24 had that purpose. They were different kinds of 25 cases. The purpose here is simply to look at the</p>

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<p style="text-align: right;">62</p> <p>1 configuration of the districts and the pairings and</p> <p>2 how they affect the ability of Democrats and</p> <p>3 Republicans to compete.</p> <p>4 Q. All right. So just so we're clear on</p> <p>5 that, then your conclusion is not a prediction of</p> <p>6 outcomes in Pennsylvania congressional elections, is</p> <p>7 it?</p> <p>8 A. I am not making a formal prediction of who</p> <p>9 is going to win or lose. I am simply looking at how</p> <p>10 the districting process has affected the ability of</p> <p>11 candidates in these elections. In the end, strange</p> <p>12 things can happen.</p> <p>13 Q. Now, there -- are you saying that there</p> <p>14 are, let's say variables that affect outcomes of</p> <p>15 campaigns?</p> <p>16 A. There are always variables that affect</p> <p>17 outcomes of campaigns.</p> <p>18 Q. What kinds of variables could affect the</p> <p>19 outcome of a congressional campaign?</p> <p>20 A. Say someone, take Gary Condit, someone</p> <p>21 gets involved in a major scandal. That's obviously</p> <p>22 the kind of thing that would be independent of the</p> <p>23 districting process that could affect the outcome of</p> <p>24 a campaign.</p> <p>25 Q. Scandal. Okay. What else?</p>	<p style="text-align: right;">64</p> <p>1 correct?</p> <p>2 A. Correct.</p> <p>3 Q. But you don't know who they're going to be</p> <p>4 in two years, do you?</p> <p>5 A. You mean after the next election?</p> <p>6 Q. Yes.</p> <p>7 A. They can change during an election, that's</p> <p>8 correct.</p> <p>9 Q. Right. Let me give you an example. Are</p> <p>10 you familiar with the former 18th district under the</p> <p>11 1992 Pennsylvania plan?</p> <p>12 A. Not especially. Not as an expert.</p> <p>13 Q. Do you recall who the incumbent was when</p> <p>14 that plan was promulgated by the Pennsylvania Supreme</p> <p>15 Court in 1992?</p> <p>16 A. I don't.</p> <p>17 Q. If I told you that it was a Republican</p> <p>18 named Rick Santorum, would that surprise you?</p> <p>19 A. No.</p> <p>20 Q. And if I told you that he won reelection</p> <p>21 in that district but shortly thereafter moved up to</p> <p>22 the United States Senate, would that surprise you?</p> <p>23 A. No.</p> <p>24 Q. And would it surprise you to learn that</p> <p>25 after he moved on, his district went from Republican</p>
<p style="text-align: right;">63</p> <p>1 A. Major gaffs, mistakes.</p> <p>2 Q. What else?</p> <p>3 A. Now are we talking about anything that</p> <p>4 could affect a campaign or things that are</p> <p>5 independent of the districting process? Or anything?</p> <p>6 Q. I'm talking about the variables that</p> <p>7 affect the outcome of a campaign, aside from the</p> <p>8 districting process.</p> <p>9 A. Almost anything could affect the outcome</p> <p>10 of a campaign. Spending, issues, debates, speeches,</p> <p>11 advertising.</p> <p>12 Q. Incumbency?</p> <p>13 A. Well, incumbency is part of the</p> <p>14 redistricting process but of course incumbency could</p> <p>15 affect the outcome of a campaign.</p> <p>16 Q. But incumbency is a transient sort of</p> <p>17 thing, isn't it?</p> <p>18 A. I don't understand the question.</p> <p>19 Q. That is an incumbent today could be hit by</p> <p>20 a bus or move on to another public office tomorrow?</p> <p>21 A. Strange and unusual events can happen in</p> <p>22 any set of human affairs but incumbency beyond that</p> <p>23 is a pretty predictable characteristic. You know who</p> <p>24 the incumbents are.</p> <p>25 Q. Well you know who they are at the moment,</p>	<p style="text-align: right;">65</p> <p>1 to Democrat in terms of its representation?</p> <p>2 A. Wouldn't surprise me.</p> <p>3 Q. And that it has stayed Democrat?</p> <p>4 A. Wouldn't surprise me.</p> <p>5 Q. So you would agree then that incumbency is</p> <p>6 a factor that can be considered for the immediate</p> <p>7 future but that can change very drastically over,</p> <p>8 from one election cycle to another?</p> <p>9 A. It can but the balance of incumbencies do</p> <p>10 not usually change drastically from one election</p> <p>11 cycle to another.</p> <p>12 Q. Well, do you know who the incumbent is in</p> <p>13 District 4, that appears on table 1?</p> <p>14 A. Hart.</p> <p>15 Q. Hart, do you know who Hart is?</p> <p>16 A. Do I know who Hart is? I'm not sure I</p> <p>17 understand the question.</p> <p>18 Q. Do you know who Congressperson Hart is?</p> <p>19 A. Am I specifically familiar with that</p> <p>20 person? No.</p> <p>21 Q. No. Your table shows that Congressperson</p> <p>22 Hart, that's Melissa Hart is in a district with a</p> <p>23 majority of registered -- well, a district that's</p> <p>24 actually gone Democratic on the average?</p> <p>25 A. Correct.</p>

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<p style="text-align: right;">66</p> <p>1 Q. If I were to tell you that she's a young 2 and talented and ambitious congresswoman who might 3 seek higher office or statewide office within a 4 couple of years, would that strike you as a very 5 unusual thing to take place? 6 MR. SMITH: Objection to form. 7 BY MR. KRILL: 8 Q. But you may answer. 9 A. I wouldn't say it's very unusual but as I 10 said, the bulk of incumbencies don't change over an 11 election. 12 Q. Let's look at some other variables. 13 Coattail factors? 14 A. Can be. 15 Q. How about weather? 16 A. Remotely. Very remotely. 17 Q. You're not familiar with Pennsylvania 18 politics? 19 A. No, I'm not an expert. Just what I read 20 and study in general. 21 Q. So all of these variables make it a risky 22 business to predict election outcomes, don't they? 23 A. It's always a risky business to predict. 24 That doesn't mean that you can't do it or that it 25 wouldn't for the great bulk of them be quite</p>	<p style="text-align: right;">68</p> <p>1 concept is at the 50 percent point it should be equal 2 between the two parties. And we have the 50 percent 3 point here empirically. 4 Q. All right. We don't have proportional 5 representation in this country, do we? 6 A. No. 7 Q. We have a winner take all systems, 8 correct? 9 A. Correct. 10 Q. And that does lead to disproportionate 11 results, correct? 12 A. Disproportionate to what? 13 Q. Well, that is that the overall election 14 results can, in terms of who gets what votes can be 15 disproportionate to what gets elected. 16 A. I still don't follow you, who gets what 17 votes, the winner will get elected. 18 Q. Yes, yeah, but in a, you know, in a 19 national race, for example -- well, let's look at, 20 you know, Reagan Mondale? 21 A. Okay. 22 Q. Do you recall what percentage of the 23 popular vote Ronald Reagan got? 24 A. About 60. 25 Q. And what percentage of the popular vote</p>
<p style="text-align: right;">67</p> <p>1 accurate. 2 Q. Now, of the different methods that you've 3 described, is there anyone that you use the most in 4 your work? 5 A. As I said, I've not used the JudgeIt 6 method and I have not used it recently attempt to 7 predict outcomes through regression analysis. 8 What I've done in my work is similar to 9 what I've done here, looking at the composition of 10 the districts as compared to some overall district 11 average for partisan symmetry and looking at the 12 effect of pairings, if there are pairings. 13 Q. By the way, I'd like to ask you if we've 14 covered the list of known methodologies that are used 15 in your field for looking at partisan impact in 16 districting? 17 A. Not entirely, no. 18 Q. What others are there? 19 A. One that's similar to this and similar to 20 what Gary King does is sometimes called a vote seats 21 ratio and that is to, again, using this concept of 22 partisan symmetry look at the relationship between 23 the percentage of votes on average received by a 24 party and the number of districts won. That's quite 25 similar to what I've done here because the basic</p>	<p style="text-align: right;">69</p> <p>1 did Vice President Mondale get? 2 A. About 40. 3 Q. About 40. Did Vice President Mondale get 4 40 percent of the states? 5 A. No. 6 Q. So the outcome there was not proportional 7 to the popular vote, was it? 8 A. That's correct. 9 Q. And the same thing can happen on a -- 10 let's say, a statewide basis when you look at 11 congressional districts, correct? 12 A. Yes. If you get 55 percent of the average 13 vote, you will typically get more than 55 percent of 14 the seats. And that would be true of either party 15 and that's why you're looking at partisan symmetry, 16 not that if you get 55 percent of the seats, of the 17 votes rather, that means 55 percent of the seats. 18 The only point at which that would apply is at the 50 19 percent market. 20 Q. Now, you're aware, aren't you, that there 21 are concentrations of registered Democrat voters and 22 of actual Democrat votes in certain parts of 23 Pennsylvania? 24 A. Yes. 25 Q. And do you know where they are?</p>

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<p style="text-align: right;">70</p> <p>1 A. Philadelphia, Pittsburgh, and I believe 2 there's some, one or two other areas where there are 3 some heavier concentrations of Democrats than others. 4 Q. You're also aware that there are 5 concentrations of minorities in certain areas of 6 Pennsylvania and that those, those areas, you know, 7 very roughly are coterminous with those 8 concentrations of registered Democrats? 9 A. Very roughly. There are areas, I believe, 10 that have Democrats that are not heavy minority 11 areas, but the heavy minority areas in my 12 understanding do tend to be Democrat. 13 Q. Do you know what congressional districts 14 in Pennsylvania are, let's say, majority-minority 15 districts? 16 A. I haven't looked at that specifically but 17 just from my general knowledge I think it would be 18 most likely to be Districts 1 and 2. 19 Q. So those two districts would tend to have 20 heavy concentrations of people who vote Democratic, 21 correct? 22 A. Correct. Heavier at least in other parts 23 of the state. 24 Q. And in fact, according to your table 1 25 they do, don't they?</p>	<p style="text-align: right;">72</p> <p>1 talked with any other people in your field? 2 A. No. 3 Q. You haven't compared notes with any other 4 experts? 5 A. No. I've looked at material that 6 Dr. Lublin prepared, as you know, but I've not spoken 7 to him. 8 MR. KRILL: Why don't we take a break. 9 (Recess.) 10 MR. KRILL: Tom Brunell has signed off of 11 the conference call so we now just have Bart Delone 12 here on the phone. 13 BY MR. KRILL: 14 Dr. Lichtman, does Exhibit 1 which you've 15 explained this morning show all of the calculation 16 that you've done in this matter? 17 A. I'm sure I've done calculations that are 18 not in these tables but this is, to this point what 19 my opinion is based upon. 20 Q. Oh, I see. So you've done side 21 calculations but you're not relying on them, is that 22 what you're saying? 23 A. I'm relying on what's in Exhibit 1 to this 24 point, yes. 25 Q. Okay. What side calculations have you</p>
<p style="text-align: right;">71</p> <p>1 A. Yes. 2 Q. Now you can't really spread them out. You 3 can't start a district line in, on the Delaware River 4 front in Philadelphia and draw a congressional 5 district that streams across the state, can you? 6 MR. SMITH: Objection to form. 7 THE WITNESS: I'm sure you can. 8 BY MR. KRILL: 9 Q. Would you do so? 10 A. I've not looked at the drawing of 11 districts in Pennsylvania so I can't answer that. 12 Q. Now, are you, between now and, you know, 13 March 11th, are you planning to conduct any other 14 analyses? 15 A. That would depend of course upon what the 16 other side produces and whether the lawyers ask me to 17 consider other issues. I never know what lawyers 18 might ask me so it's possible. 19 Q. Okay. At the moment are you working on 20 any other analyses? 21 A. No. 22 Q. Is your assistant of whom you mentioned 23 earlier working on any other analyses? 24 A. No. 25 Q. In connection with this case, have you</p>	<p style="text-align: right;">73</p> <p>1 done on which you are not relying? 2 A. I always do a lot of calculations when 3 you're doing a project. I did that calculation that 4 I mentioned to you, looking at individual elections. 5 I think that may be. In terms of calculations, that 6 may be the only other significant calculation that 7 isn't reflected in here. I can't recall any others 8 but it's possible as you go through a project that 9 you do things that you discard and move on. 10 Q. Right. Right. Now, is your calculation 11 of the individual like something that you've 12 preserved in a spreadsheet or database or in hard 13 copy format? 14 A. I do not have a hard copy anymore. It's 15 in the data. In other words, each individual 16 election return is in the database that I am going to 17 give you. 18 Q. Okay. 19 A. So any one could do that based on that 20 database. 21 Q. I'm wondering if you save and printed out 22 or forwarded to someone else a version of that 23 spreadsheet that had the calculation in it? 24 A. I did at one point forward it to the 25 attorneys. Whether they've saved it or not, I can't</p>

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1 say.

2 Q. All right.

3 A. I didn't because as I said, I've saved
4 what I'm planning to rely on.5 Q. Let me request that it also be provided to
6 me by e-mail so that I can take a look at the
7 underlying formula. I assume when you use a
8 spreadsheet you can, your form you lie are
9 transparent in the spreadsheet, you can look at them,
10 peek in the cell and see what's there?11 A. The spread sheets I'm giving you are just
12 data, period.

13 Q. Okay. I'm looking for calculation.

14 A. I haven't preserved the calculations.

15 Q. Okay. But you think that you may have
16 sent calculations to your attorneys?

17 A. I'm sure that I did.

18 Q. And that's what I'm requesting.

19 A. As I've said, I have no idea if they've
20 saved them or not.21 Q. Okay. So what you're relying on is what
22 we see here in Exhibit 1?23 A. Correct. To this point as I've explained
24 several times.

25 MR. KRILL: I guess that's it.

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1 MR. SMITH: Okay.

2 THE WITNESS: And I should be able to
3 e-mail you the raw data today.

4 BY MR. KRILL:

5 Q. Terrific. I would appreciate that since
6 I'm doing you a favor here by finishing early?7 A. Understood. The one thing I'm not sending
8 you here today is where all I did is change the label
9 on top to get rid, the data you will have, will say
10 like Bush, Clinton or, you know, Gore, I changed it
11 to DEM, REP, if you need that, that I have in my
12 laptop at home. But I do have the original e-mail if
13 that's sufficient.

14 MR. KRILL: Yes, that's fine.

15 (Whereupon, at 11:40 a.m., the taking of
16 the instant deposition ceased.)

17

18

19 _____
Signature of the Witness20 SUBSCRIBED AND SWORN to before me this _____ day of
21 _____, 20____.

22

23

24 _____
Notary Public

25 My Commission Expires: _____

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T 4:1,1,7 table 28:23 29:1 30:21 33:18,23 34:11,21,24 35:12 36:4,10 37:2,17 37:23 39:2,6,14 40:3,8,12 42:12 45:4,8 47:15,24				

Dr. Allan Lichtman

Washington, DC

February 15, 2002

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34:11,20,22 35:14 36:20 37:2 41:4,6 41:8,15,16,18,18 42:14,15 43:1,9 43:15 49:11,11,12 49:16 50:23 51:19 61:4 65:13 70:18 70:24 72:14,23 74:22 1.5 40:25 41:3,19 42:3,16,25 43:5,9 1:CV-01-2439 1:7 10 61:18 100 35:10 46:22 11th 71:13 11:40 75:15 13 9:6,15 31:21,23 33:12,12 15 1:13,22 15th 3:10 16 4:10 17 36:25 37:2,5 45:9 17101-1507 2:18 17120 3:11 18th 64:10 1800 1:21 1850s 9:9 19 20:22 28:8,13 29:19 30:9,10,17 30:20 31:3,4,25 36:13 37:4 48:21 48:24 1982 10:4,8 1984 10:13 1986 12:15,23,25 14:11 1988 10:17,22 1990 28:7 1990s 18:10 1991 30:4 1992 11:13,19 29:24 31:17 32:5 33:10 33:20 38:1 40:20 44:5 47:17 51:1 64:11,15 1994 13:21 47:17 54:17 1996 11:14,21 47:16 1997 56:12 1998 47:16	2000 5 2:8 2002 1:13,23 16:24 202 2:9 21 20:22 28:8,9 29:12,13 36:12 22 4:11 231-4505 2:19 240 2:17 3 3 33:10,13 34:9,10 34:14 30 20:18 4 4 34:9,10,14,22 35:14 36:20 39:4 61:4 65:13 40 69:2,3,4 41.7 37:3 45 59:9 49.8 35:7 5 5 4:4 34:21,24 35:12 36:4,10,12 37:17 43:15 50 30:15,16,18 31:8 31:8 32:2,3,19,21 32:22 68:1,2 69:18 50-50 52:14 53:6 50.3 29:4,15 35:6 54 46:19 55 59:9 69:12,13,16 69:17 56 23:24 6 6 36:16 37:23 39:2,6 39:14 40:8 6th 47:14 60 68:24 60-40 45:15 601 2:7 61 46:20 639-6000 2:9 7 7 36:16 40:3,12 717 2:19 3:12 783-3226 3:12 8 8 4:9 45:4 82 10:9 84 10:11 11:6 88 11:6 9 9 36:12 50:22 9,000 50:16 9,423 50:13	9,427 50:12 9:00 1:22 90s 18:23 92 11:6 96 11:6		
2 4:11 22:1 34:9,10 34:14 41:4,6,8,9 41:15,16,18,18,18 42:3,14,15 43:2,5 43:8 46:19 70:18 2-tailed 49:21 20 75:21 200 1:21 2000 11:7,14,21,22 12:8 30:4 47:16 48:3,20,21,23,25 51:1				

TABLE 1
INCUMBENT PAIRING & PARTY STRENGTH, 1992 PLAN & CONFERENCE PLAN COMPARED

1992 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	CONF PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	CHAN IN % DEM
DIST 1	BRADY (D)	79.7%	DEM	DIST 1	BRADY (D)	77.3%	DEM	-2.4%
DIST 2	FATTAH (D)	83.0%	DEM	DIST 2	FATTAH (D)	81.7%	DEM	-1.3%
DIST 3	BORSKI (D)	59.5%	DEM	DIST 13	BORSKI (D) HOEFFEL (D)	48.9%	REP	-10.6%
DIST 4	HART (R)	52.0%	DEM	DIST 4	HART (R)	48.6%	REP	-3.4%
DIST 5	PETERSON (R)	41.2%	REP	DIST 5	PETERSON (R)	42.1%	REP	+0.9%
DIST 6	HOLDEN (D)	44.0%	REP	DIST 17	HOLDEN (D) GEKAS (R)	41.7%	REP	-2.3%
DIST 7	WELDON (R)	42.9%	REP	DIST 7	WELDON (R)	43.1%	REP	+0.2%
DIST 8	GREENWOOD (R)	45.6%	REP	DIST 8	GREENWOOD (R)	46.0%	REP	+0.4%
DIST 9	SHUSTER (R)	37.7%	REP	DIST 9	SHUSTER (R)	39.9%	REP	+2.2%
DIST 10	SHERWOOD (R)	46.1%	REP	DIST 10	SHERWOOD (R)	41.5%	REP	-4.6%
DIST 11	KANJORSKI (D)	50.9%	DEM	DIST 11	KANJORSKI (D)	53.5%	DEM	+2.6%
DIST 12	MURTHA (D)	51.9%	DEM	DIST 12	MURTHA (D)	59.5%	DEM	+7.6%
DIST 13	HOEFFEL (D)	46.9%	REP	DIST 13	HOEFFEL (D) BORSKI (D)	48.9%	REP	+2.0%
DIST 14	COYNE (D)	60.0%	DEM	DIST 14	COYNE (D) DOYLE (D)	66.1%	DEM	+6.1%
DIST 15	TOOMEY (R)	47.5%	REP	DIST 15	TOOMEY (R)	47.0%	REP	-0.5%
DIST 16	PITTS (R)	36.5%	REP	DIST 16	PITTS (R)	34.6%	REP	-1.9%
DIST 17	GEKAS (R)	36.9%	REP	DIST 17	GEKAS (R) HOLDEN (D)	41.7%	REP	+4.8%
DIST 18	DOYLE (D)	53.9%	DEM	DIST 14	DOYLE (D) COYNE (D)	66.1%	DEM	+12.2%
DIST 19	PLATTS (R)	38.2%	REP	DIST 19	PLATTS (R)	38.0%	REP	-0.2%
DIST 20	MASCARA (D)	54.4%	DEM	DIST 18	MASCARA (D)	46.8%	REP	-7.6%
DIST 21	ENGLISH (R)	47.7%	REP	DIST 3	ENGLISH (R)	46.4%	REP	-1.3%
SUM		50.3%	12 REP 9 DEM	DIST 6	OPEN	44.5%	REP	
						49.8%	14 REP 5 DEM	

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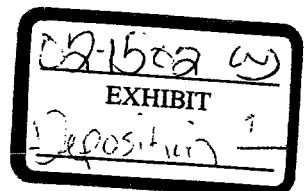


TABLE 2 INCUMBENT PAIRING & PARTY STRENGTH, 1992 PLAN & ALTERNATIVE 2 PLAN COMPARED								
1992 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	ALT 2 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	CHANGE IN % DEM
DIST 1	BRADY (D)	79.7%	DEM	DIST 1	BRADY (D)	76.8%	DEM	-2.9%
DIST 2	FATTAH (D)	83.0%	DEM	DIST 2	FATTAH (D)	81.8%	DEM	-1.2%
DIST 3	BORSKI (D)	59.5%	DEM	DIST 3	BORSKI (D)	54.3%	DEM	-5.2%
DIST 4	HART (R)	52.0%	DEM	DIST 4	HART (R)	44.3%	REP	-7.7%
DIST 5	PETERSON (R)	41.2%	REP	DIST 5	PETERSON (R)	42.5%	REP	+1.3%
DIST 6	HOLDEN (D)	44.0%	REP	DIST 6	HOLDEN (D)	44.7%	REP	+0.7%
DIST 7	WELDON (R)	42.9%	REP	DIST 7	WELDON (R)	40.7%	REP	-2.2%
DIST 8	GREENWOOD (R)	45.6%	REP	DIST 8	GREENWOOD (R)	39.0%	REP	-6.6%
DIST 9	SHUSTER (R)	37.7%	REP	DIST 19	SHUSTER (R) PLATTS (R)	38.0%	REP	+0.3%
DIST 10	SHERWOOD (R)	46.1%	REP	DIST 10	SHERWOOD (R)	37.6%	REP	-8.5%
DIST 11	KANJORSKI (D)	50.9%	DEM	DIST 11	KANJORSKI (D)	53.8%	DEM	+2.9%
DIST 12	MURTHA (D)	51.9%	DEM	DIST 12	MURTHA (D)	53.8%	DEM	+1.9%
DIST 13	HOEFFEL (D)	46.9%	REP	DIST 13	HOEFFEL (D)	46.3%	REP	-0.6%
DIST 14	COYNE (D)	60.0%	DEM	DIST 18	COYNE (D) DOYLE (D)	61.7%	DEM	+1.7%
DIST 15	TOOMEY (R)	47.5%	REP	DIST 15	TOOMEY (R)	47.7%	REP	+0.2%
DIST 16	PITTS (R)	36.5%	REP	DIST 16	PITTS (R)	34.3%	REP	-2.2%
DIST 17	GEKAS (R)	36.9%	REP	DIST 17	GEKAS (R)	39.7%	REP	+2.8%
DIST 18	DOYLE (D)	53.9%	DEM	DIST 18	DOYLE (D) COYNE (D)	61.7%	DEM	+7.8%
DIST 19	PLATTS (R)	38.2%	REP	DIST 19	PLATTS (R) SHUSTER (R)	38.0%	REP	-0.2%
DIST 20	MASCARA (D)	54.4%	DEM	DIST 14	MASCARA (D)	60.3%	DEM	+5.9%
DIST 21	ENGLISH (R)	47.7%	REP	DIST 9	ENGLISH (R)	49.2%	REP	+1.5%
SUM		50.3%	12 REP 9 DEM			49.8%	12 REP 7 DEM	

TABLE 3
INCUMBENT PAIRING & PARTY STRENGTH, 1992 PLAN & ALTERNATIVE 3 PLAN COMPARED

1992 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	ALT 3 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	CHANGE IN % DEM
DIST 1	BRADY (D)	79.7%	DEM	DIST 1	BRADY (D)	73.7%	DEM	-6.0%
DIST 2	FATTAH (D)	83.0%	DEM	DIST 2	FATTAH (D)	81.5%	DEM	-1.5%
DIST 3	BORSKI (D)	59.5%	DEM	DIST 3	BORSKI (D)	56.8%	DEM	-2.7%
DIST 4	HART (R)	52.0%	DEM	DIST 4	HART (R)	45.6%	REP	-6.4%
DIST 5	PETERSON (R)	41.2%	REP	DIST 5	PETERSON (R)	41.2%	REP	0.0%
DIST 6	HOLDEN (D)	44.0%	REP	DIST 6	HOLDEN (D)	44.5%	REP	+0.5%
DIST 7	WELDON (R)	42.9%	REP	DIST 7	WELDON (R)	42.1%	REP	-0.8%
DIST 8	GREENWOOD (R)	45.6%	REP	DIST 8	GREENWOOD (R)	42.2%	REP	-3.4%
DIST 9	SHUSTER (R)	37.7%	REP	DIST 9	SHUSTER (R)	38.9%	REP	+1.2%
DIST 10	SHERWOOD (R)	46.1%	REP	DIST 10	TOOMEY (R) SHERWOOD (R)	45.9%	REP	-0.2%
DIST 11	KANJORSKI (D)	50.9%	DEM	DIST 11	KANJORSKI (D)	53.7%	DEM	+2.8%
DIST 12	MURTHA (D)	51.9%	DEM	DIST 12	MURTHA (D)	53.9%	DEM	+2.0%
DIST 13	HOEFFEL (D)	46.9%	REP	DIST 13	HOEFFEL (D)	45.5%	REP	-1.4%
DIST 14	COYNE (D)	60.0%	DEM	DIST 18	COYNE (D) DOYLE (D)	64.4%	DEM	+4.4%
DIST 15	TOOMEY (R)	47.5%	REP	DIST 10	TOOMEY (R) SHERWOOD (R)	45.9%	REP	-1.6%
DIST 16	PITTS (R)	36.5%	REP	DIST 16	PITTS (R)	34.5%	REP	-2.0%
DIST 17	GEKAS (R)	36.9%	REP	DIST 17	GEKAS (R)	37.9%	REP	+1.0%
DIST 18	DOYLE (D)	53.9%	DEM	DIST 18	DOYLE (D) COYNE (D)	64.4%	DEM	+10.5%
DIST 19	PLATTS (R)	38.2%	REP	DIST 19	PLATTS (R)	37.9%	REP	-0.3%
DIST 20	MASCARA (D)	54.4%	DEM	DIST 15	MASCARA (D)	56.7%	DEM	+2.3%
DIST 21	ENGLISH (R)	47.7%	REP	DIST 14	ENGLISH (R)	48.4%	REP	+0.7%
SUM		50.3%	12 REP 9 DEM			49.8%	12 REP 7 DEM	

TABLE 4
INCUMBENT PAIRING & PARTY STRENGTH, 1992 PLAN & ALTERNATIVE 4 PLAN COMPARED

1992 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	ALT 4 PLAN	INCUMBENT	% DEM 1991- 2000	REP OR DEM DIST	CHANGE IN % DEM
DIST 1	BRADY (D)	79.7%	DEM	DIST 1	BRADY (D)	75.8%	DEM	-3.9%
DIST 2	FATTAH (D)	83.0%	DEM	DIST 2	FATTAH (D)	82.1%	DEM	-0.9%
DIST 3	BORSKI (D)	59.5%	DEM	DIST 3	BORSKI (D)	55.0%	DEM	-4.5%
DIST 4	HART (R)	52.0%	DEM	DIST 4	HART (R)	45.1%	REP	-6.9%
DIST 5	PETERSON (R)	41.2%	REP	DIST 5	PETERSON (R)	42.5%	REP	+1.3%
DIST 6	HOLDEN (D)	44.0%	REP	DIST 6	HOLDEN (D)	44.6%	REP	+0.6%
DIST 7	WELDON (R)	42.9%	REP	DIST 7	WELDON (R)	40.8%	REP	-2.1%
DIST 8	GREENWOOD (R)	45.6%	REP	DIST 8	GREENWOOD (R)	39.4%	REP	-6.2%
DIST 9	SHUSTER (R)	37.7%	REP	DIST 19	SHUSTER (R) PLATTS (R)	38.1%	REP	+0.4%
DIST 10	SHERWOOD (R)	46.1%	REP	DIST 10	SHERWOOD (R)	37.9%	REP	-8.2%
DIST 11	KANJORSKI (D)	50.9%	DEM	DIST 11	KANJORSKI (D)	53.7%	DEM	+2.8%
DIST 12	MURTHA (D)	51.9%	DEM	DIST 12	MURTHA (D)	52.7%	DEM	+0.8%
DIST 13	HOEFFEL (D)	46.9%	REP	DIST 13	HOEFFEL (D)	46.0%	REP	-0.9%
DIST 14	COYNE (D)	60.0%	DEM	DIST 18	COYNE (D) DOYLE (D)	65.1%	DEM	+5.1%
DIST 15	TOOMEY (R)	47.5%	REP	DIST 15	TOOMEY (R)	47.7%	REP	+0.2%
DIST 16	PITTS (R)	36.5%	REP	DIST 16	PITTS (R)	34.4%	REP	-2.1%
DIST 17	GEKAS (R)	36.9%	REP	DIST 17	GEKAS (R)	39.5%	REP	+2.6%
DIST 18	DOYLE (D)	53.9%	DEM	DIST 18	DOYLE (D) COYNE (D)	65.1%	DEM	+11.2%
DIST 19	PLATTS (R)	38.2%	REP	DIST 19	PLATTS (R) SHUSTER (R)	38.1%	REP	-0.1%
DIST 20	MASCARA (D)	54.4%	DEM	DIST 14	MASCARA (D)	56.7%	DEM	+2.3%
DIST 21	ENGLISH (R)	47.7%	REP	DIST 9	ENGLISH (R)	49.7%	REP	+2.0%
SUM		50.3%	12 REP 9 DEM			49.8%	12 REP 7 DEM	

TABLE 5
SUMMARY OF TABLES 1-4: REPUBLICAN AND DEMOCRATIC DISTRICTS & PAIRINGS IN EACH PLAN

	MEAN % DEM	MEAN % REP	# OF DEM DISTRICTS	% OF DISTRICTS	# OF REP DISTRICTS	% OF REP DISTRICTS	PAIRINGS
1992 PLAN	50.3%	49.7%	9	43%	12	57%	NA
CONF PLAN	49.8%	50.2%	5	26%	14	74%	2 D/DIST 13 2D/DIST 14 1D,1R/DIST 17*
ALT 2 PLAN	49.8%	50.2%	7	37%	12	63%	2D/DIST 18 2R/DIST 19
ALT 3 PLAN	49.8%	50.2%	7	37%	12	63%	2D/DIST 18 2R/DIST 10
ALT 4 PLAN	49.8%	50.2%	7	37%	12	63%	2D/DIST 18 2R/DIST 19

* DISTRICT 17 IS A HEAVILY REPUBLICAN LEANING DISTRICT

TABLE 6 COMPARISON OF PLANS ON COMPACTNESS, DISPERSION & PERIMETER MEASURES										
DIST	1992 PLAN		CONF PLAN		ALT 2 PLAN		ALT 3 PLAN		ATL 4 PLAN	
	DISP	PERI	DISP	PERI	DISP	PERI	DISP	PERI	DISP	PERI
1	.167	.092	.140	.068	.149	.065	.166	.084	.165	.094
2	.433	.178	.432	.165	.434	.170	.476	.274	.486	.225
3	.307	.302	.410	.142	.340	.286	.244	.256	.269	.248
4	.270	.207	.301	.252	.402	.136	.392	.176	.396	.115
5	.322	.237	.381	.227	.400	.173	.237	.205	.400	.173
6	.275	.213	.338	.090	.409	.360	.355	.390	.418	.244
7	.426	.203	.507	.172	.172	.110	.529	.289	.186	.127
8	.343	.431	.340	.319	.317	.206	.252	.208	.290	.167
9	.428	.255	.271	.126	.404	.223	.268	.151	.329	.223
10	.318	.305	.315	.182	.284	.118	.332	.200	.274	.114
11	.306	.285	.283	.243	.347	.245	.393	.262	.340	.198
12	.461	.237	.218	.053	.363	.137	.406	.243	.349	.129
13	.317	.236	.187	.104	.386	.294	.275	.218	.455	.285
14	.461	.139	.312	.098	.402	.195	.392	.342	.456	.153
15	.360	.342	.332	.222	.437	.350	.421	.161	.263	.260
16	.495	.279	.332	.221	.370	.198	.374	.343	.382	.170
17	.358	.223	.313	.301	.376	.226	.280	.221	.490	.331
18	.538	.127	.228	.063	.340	.109	.458	.201	.294	.123
19	.312	.357	.321	.388	.196	.144	.385	.422	.193	.132
20	.414	.216								
21	.432	.275								
MIN	.167	.092	.140	.053	.149	.065	.166	.084	.165	.094
MEAN	.369	.245	.314	.181	.344	.197	.349	.245	.339	.185

TABLE 7 COMPARISON OF PLANS, COMPACTNESS MEASURES, COUNTY SPLITS, MUNICIPAL SPLITS, PRECINCT SPLITS, POPULATION DEVIATION										
	1992 PLAN	RANK	CONF PLAN	RANK	ALT 2 PLAN	RANK	ALT 3 PLAN	RANK	ALT 4 PLAN	RANK
COMPACTNESS DISPERSION MEAN SCORE	.369	1	.314	5	.344	3	.349	2	.339	4
COMPACTNESS PERIMETER MEAN SCORE	.245	1.5	.181	5	.197	3	.245	1.5	.185	4
NUMBER OF COUNTY SPLITS	18	1	25	4.5	23	2.5	23	2.5	25	4.5
NUMBER OF MUNICIPAL SPLITS	13	1	65	5	18	2	20	3	40	4
NUMBER OF PRECINCT SPLITS	3	4	6	5	0	2	0	2	0	2
TOTAL POPULATION DEVIATION	57	5	19	3.5	15	2	19	3.5	1	1
MEAN RANK		2.3		4.7		2.4		2.4		3.3

TABLE 8
PERCENT OF PERSONS FROM 1992 DISTRICT IN NEW
DISTRICTS, BY PLAN & PARTY

		% REPUBLICAN CONSTITUENTS RETAINED		% DEMOCRATIC CONSTITUENTS RETAINED
CONF PLAN		76%		51%
ALT 2 PLAN		54%		61%
ALT 3 PLAN		60%		66%
ALT 4 PLAN		55%		63%

Correlations

Correlations

		DSTR_00	DSTR_98	DSTR_96	DSTR_94	DSTR_92
DSTR_00	Pearson Correlation	1.000	.931**	.966**	.942**	.924**
	Sig. (2-tailed)	.	.000	.000	.000	.000
	N	9427	9427	9427	9427	9423
DSTR_98	Pearson Correlation	.931**	1.000	.936**	.935**	.934**
	Sig. (2-tailed)	.000	.	.000	.000	.000
	N	9427	9427	9427	9427	9423
DSTR_96	Pearson Correlation	.966**	.936**	1.000	.960**	.937**
	Sig. (2-tailed)	.000	.000	.	.000	.000
	N	9427	9427	9427	9427	9423
DSTR_94	Pearson Correlation	.942**	.935**	.960**	1.000	.942**
	Sig. (2-tailed)	.000	.000	.000	.	.000
	N	9427	9427	9427	9427	9423
DSTR_92	Pearson Correlation	.924**	.934**	.937**	.942**	1.000
	Sig. (2-tailed)	.000	.000	.000	.000	.
	N	9423	9423	9423	9423	9423

**. Correlation is significant at the 0.01 level (2-tailed).

Krill, John P.

From: lichtman@american.edu
Sent: Friday, February 15, 2002 1:08 PM
To: jkrill@kl.com
Subject: FW: Installment 2



Act 1 (2002)
Splits.xls



Act 1 2002
Compactness.xls



Act 1 Election
Data.xls



Act 1 Population.xls

----- Forwarded by Allan Lichtman/lichtman/Faculty/History/CAS/AmericanU on
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Thomas J"
<TPerrelli@jen
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To: "'lichtman@american.edu'"
<lichtman@american.edu>
cc:
Subject: FW: Installment 2

> Attached.

>

> <<Act 1 (2002) Splits.xls>> <<Act 1 2002 Compactness.xls>> <<Act 1
> Election Data.xls>> <<Act 1 Population.xls>>
(See attached file: Act 1 (2002) Splits.xls) (See attached file: Act 1 2002
Compactness.xls) (See attached file: Act 1 Election Data.xls) (See attached
file: Act 1 Population.xls)

Exc

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	Dem_Str	President 2000			President 1996			Governor 1994		
		Bush	Gore	Other	Dole	Clinton	Other	Ridge	Singel	Other
1	81.98%	31,717	182,154	4,055	28,921	167,499	13,261	39,148	108,122	10,621
2	85.75%	29,295	221,013	4,554	27,062	206,171	10,086	29,752	137,180	10,016
3	46.08%	128,404	117,241	8,623	99,249	112,943	28,086	124,480	51,940	28,834
4	47.59%	152,314	134,704	7,518	122,251	120,680	26,821	98,658	79,611	42,952
5	41.66%	137,675	89,122	8,040	102,219	90,344	30,310	98,810	57,144	25,748
6	45.37%	128,820	130,377	8,057	102,687	104,900	25,537	88,695	61,039	26,783
7	44.94%	141,774	151,267	8,870	119,507	126,392	31,141	109,493	68,912	35,659
8	46.92%	130,554	145,213	9,130	102,040	113,103	31,472	94,652	60,711	26,369
9	39.07%	149,317	80,116	5,596	110,029	80,791	25,473	90,318	58,969	28,968
10	42.67%	140,271	100,880	9,215	104,911	89,309	30,419	97,658	62,329	20,667
11	56.19%	101,451	127,241	9,665	79,027	112,550	28,788	73,025	81,468	18,895
12	59.40%	106,349	132,886	7,266	77,796	127,798	31,081	64,058	109,206	32,839
13	51.39%	117,806	156,203	7,482	96,132	128,290	27,914	95,429	78,074	30,706
14	67.38%	74,091	183,711	9,266	66,151	163,254	24,528	64,141	115,343	31,233
15	47.16%	116,612	119,296	9,117	91,172	99,922	26,851	83,791	58,672	17,309
16	34.79%	144,667	82,651	6,355	115,220	71,772	18,885	85,057	39,772	32,654
17	42.63%	139,499	103,922	7,761	109,736	94,982	26,858	93,034	66,260	33,566
18	45.68%	154,172	139,441	7,557	126,100	117,674	28,292	105,678	79,906	39,547
19	37.96%	153,693	90,045	7,531	117,551	84,625	22,106	89,523	54,242	33,627
1		14.55%	83.59%	1.86%	13.79%	79.88%	6.32%	24.79%	68.48%	6.73%
2		11.49%	86.72%	1.79%	11.12%	84.73%	4.15%	16.81%	77.53%	5.66%
3		50.50%	46.11%	3.39%	41.31%	47.01%	11.69%	60.65%	25.31%	14.05%
4		51.71%	45.73%	2.55%	45.32%	44.74%	9.94%	44.60%	35.99%	19.42%
5		58.63%	37.95%	3.42%	45.86%	40.54%	13.60%	54.38%	31.45%	14.17%
6		48.20%	48.78%	3.01%	44.05%	45.00%	10.95%	50.25%	34.58%	15.17%
7		46.96%	50.10%	2.94%	43.14%	45.62%	11.24%	51.15%	32.19%	16.66%
8		45.82%	50.97%	3.20%	41.38%	45.86%	12.76%	52.08%	33.41%	14.51%
9		63.53%	34.09%	2.38%	50.87%	37.35%	11.78%	50.67%	33.08%	16.25%
10		56.03%	40.29%	3.68%	46.70%	39.76%	13.54%	54.06%	34.50%	11.44%
11		42.56%	53.38%	4.05%	35.86%	51.07%	13.06%	42.12%	46.99%	10.90%
12		43.14%	53.91%	2.95%	32.87%	54.00%	13.13%	31.08%	52.99%	15.93%
13		41.85%	55.49%	2.66%	38.10%	50.84%	11.06%	46.73%	38.23%	15.04%
14		27.74%	68.79%	3.47%	26.05%	64.29%	9.66%	30.44%	54.74%	14.82%
15		47.59%	48.69%	3.72%	41.83%	45.85%	12.32%	52.44%	36.72%	10.83%
16		61.91%	35.37%	2.72%	55.97%	34.86%	9.17%	54.01%	25.25%	20.73%
17		55.54%	41.37%	3.09%	47.39%	41.02%	11.60%	48.24%	34.36%	17.40%
18		51.19%	46.30%	2.51%	46.35%	43.25%	10.40%	46.94%	35.49%	17.57%
19		61.17%	35.84%	3.00%	52.41%	37.73%	9.86%	50.47%	30.58%	18.96%

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	President 1992			Voter Registration 2000			US Senate 2000		Attorney Gen 2000	
	Bush	Clinton	Other	Republican	Democratic	Other	Santorum	Klink	Fisher	Eisenhow
1	51,225	173,368	26,920	83,648	314,419	26,967	38,357	163,741	33,065	162,67
2	41,874	215,743	20,858	62,564	360,599	35,312	36,174	200,635	31,817	199,21
3	91,402	112,745	55,695	171,435	182,454	35,263	139,345	100,443	142,974	88,26
4	101,286	132,230	58,171	168,115	225,631	42,353	155,708	132,956	165,262	109,26
5	98,602	88,144	54,517	190,842	145,735	38,481	145,686	75,344	142,000	72,37
6	101,887	99,654	51,882	209,105	150,634	59,605	149,990	104,120	142,915	104,02
7	133,273	120,262	56,806	279,835	119,762	51,547	170,507	116,542	162,543	115,50
8	103,353	107,598	60,287	208,392	160,289	58,791	155,440	112,853	142,202	116,73
9	103,957	78,768	44,467	190,087	137,561	31,714	152,469	73,037	156,602	65,57
10	108,266	81,683	51,706	198,012	147,823	34,520	151,389	81,154	151,066	73,27
11	87,542	106,174	47,244	135,536	217,168	35,389	111,666	105,001	110,665	94,90
12	69,296	146,654	50,118	108,110	259,972	27,538	107,258	129,496	114,667	114,66
13	108,887	127,744	52,116	209,502	187,967	40,882	141,063	122,773	132,114	122,43
14	64,649	191,562	46,717	78,425	335,453	39,235	79,607	171,757	92,074	145,89
15	85,852	95,119	51,126	164,599	174,188	53,273	132,702	95,574	121,305	97,58
16	108,644	64,970	38,168	214,334	106,083	52,213	153,163	69,694	154,237	63,87
17	111,313	86,094	50,603	203,089	141,621	39,443	147,078	90,459	155,250	78,83
18	103,618	127,125	63,254	167,486	242,122	42,457	157,937	130,741	177,647	100,78
19	110,090	78,199	46,319	207,675	126,830	49,318	156,705	80,358	167,188	65,87
1	20.37%	68.93%	10.70%	19.68%	73.98%	6.34%	18.98%	81.02%	16.89%	83.11%
2	15.04%	77.47%	7.49%	13.65%	78.65%	7.70%	15.28%	84.72%	13.77%	86.23%
3	35.18%	43.39%	21.43%	44.05%	46.89%	9.06%	58.11%	41.89%	61.83%	38.17%
4	34.72%	45.33%	19.94%	38.55%	51.74%	9.71%	53.94%	46.06%	60.20%	39.80%
5	40.87%	36.53%	22.60%	50.88%	38.86%	10.26%	65.91%	34.09%	66.24%	33.76%
6	40.20%	39.32%	20.47%	49.86%	35.92%	14.21%	59.03%	40.97%	57.87%	42.13%
7	42.94%	38.75%	18.30%	62.03%	26.55%	11.43%	59.40%	40.60%	58.46%	41.54%
8	38.10%	39.67%	22.23%	48.75%	37.50%	13.75%	57.94%	42.06%	54.92%	45.08%
9	45.76%	34.67%	19.57%	52.90%	38.28%	8.83%	67.61%	32.39%	70.48%	29.52%
10	44.80%	33.80%	21.40%	52.06%	38.86%	9.08%	65.10%	34.90%	67.34%	32.66%
11	36.33%	44.06%	19.61%	34.92%	55.96%	9.12%	51.54%	48.46%	53.83%	46.17%
12	26.04%	55.12%	18.84%	27.33%	65.71%	6.96%	45.30%	54.70%	50.00%	50.00%
13	37.71%	44.24%	18.05%	47.79%	42.88%	9.33%	53.47%	46.53%	51.90%	48.10%
14	21.34%	63.24%	15.42%	17.31%	74.03%	8.66%	31.67%	68.33%	38.69%	61.31%
15	36.99%	40.98%	22.03%	41.98%	44.43%	13.59%	58.13%	41.87%	55.42%	44.58%
16	51.30%	30.68%	18.02%	57.52%	28.47%	14.01%	68.73%	31.27%	70.71%	29.29%
17	44.88%	34.71%	20.40%	52.87%	36.87%	10.27%	61.92%	38.08%	66.32%	33.68%
18	35.24%	43.24%	21.52%	37.05%	53.56%	9.39%	54.71%	45.29%	63.80%	36.20%
19	46.93%	33.33%	19.74%	54.11%	33.04%	12.85%	66.10%	33.90%	71.74%	28.26%

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	Auditor Gen 2000		Treasurer 2000	
	True	Casey	Hafer	Knoll
1	24,827	174,999	34,152	163,630
2	23,750	209,927	34,886	197,445
3	95,481	135,142	117,477	116,131
4	118,117	157,378	148,287	131,241
5	110,292	104,709	128,507	87,577
6	110,729	136,329	139,428	107,042
7	129,794	150,495	157,733	119,746
8	116,470	144,823	140,510	118,892
9	121,741	100,803	141,601	80,812
10	112,682	114,929	136,286	89,782
11	71,227	140,645	94,324	112,830
12	75,758	153,146	97,173	134,854
13	100,671	156,610	127,881	126,917
14	55,123	180,759	86,700	158,881
15	93,085	128,331	117,840	102,710
16	141,706	80,295	142,672	74,514
17	115,163	121,457	149,576	86,115
18	117,483	156,150	154,667	127,473
19	128,637	108,111	158,628	75,211
1	12.42%	87.58%	17.27%	82.73%
2	10.16%	89.84%	15.02%	84.98%
3	41.40%	58.60%	50.29%	49.71%
4	42.87%	57.13%	53.05%	46.95%
5	51.30%	48.70%	59.47%	40.53%
6	44.82%	55.18%	56.57%	43.43%
7	46.31%	53.69%	56.85%	43.15%
8	44.57%	55.43%	54.17%	45.83%
9	54.70%	45.30%	63.67%	36.33%
10	49.51%	50.49%	60.29%	39.71%
11	33.62%	66.38%	45.53%	54.47%
12	33.10%	66.90%	41.88%	58.12%
13	39.13%	60.87%	50.19%	49.81%
14	23.37%	76.63%	35.30%	64.70%
15	42.04%	57.96%	53.43%	46.57%
16	63.83%	36.17%	65.69%	34.31%
17	48.67%	51.33%	63.46%	36.54%
18	42.93%	57.07%	54.82%	45.18%
19	54.33%	45.67%	67.84%	32.16%

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	Governor 1998			U S Senate 1998		Attorney Gen 1996		Auditor Gen 1996		Treasurer
	Ridge	Itkin	Other	Specter	Lloyd	Fisher	Kohn	Nyce	Casey	
1	36,787	74,134	4,880	39,736	72,646	32,699	156,559	28,546	158,088	39,518
2	36,876	98,402	6,087	45,022	92,580	29,950	192,369	30,340	188,181	41,258
3	98,937	40,912	28,726	99,231	54,335	119,952	98,398	97,571	117,559	116,553
4	99,866	57,032	32,174	116,568	61,684	139,235	113,969	107,860	141,433	132,329
5	97,547	36,205	21,230	101,182	45,421	125,060	80,816	89,602	114,675	111,855
6	96,723	42,505	15,702	103,656	43,269	118,528	97,999	109,284	101,963	127,862
7	120,883	44,814	18,292	125,291	47,867	141,242	110,952	129,770	118,969	149,590
8	101,859	43,235	12,767	100,051	46,589	119,436	103,489	109,622	110,114	124,815
9	97,823	33,132	21,712	97,228	49,403	130,010	74,027	95,768	107,518	114,889
10	112,093	42,391	14,110	113,694	46,049	120,088	80,920	87,321	118,252	104,916
11	85,726	53,540	12,794	85,957	53,581	86,413	104,279	64,969	134,544	76,475
12	73,057	61,223	30,434	81,709	74,835	93,208	125,149	66,714	149,501	89,703
13	107,842	50,387	15,664	112,718	51,127	111,036	117,150	100,834	122,248	121,989
14	64,421	75,192	21,495	76,733	71,259	82,718	145,985	58,503	163,422	88,056
15	102,566	45,871	8,772	98,370	47,610	99,492	92,626	103,279	90,350	108,356
16	93,286	24,159	15,399	91,207	30,357	127,984	63,411	106,907	80,244	112,937
17	106,734	36,746	18,852	110,251	44,333	127,381	88,647	99,638	115,235	118,656
18	94,133	53,496	35,035	112,960	56,342	151,131	102,243	113,658	132,375	139,481
19	109,203	27,710	14,513	102,720	38,884	132,050	75,264	106,310	101,354	121,331
1	31.77%	64.02%	4.21%	35.36%	64.64%	17.28%	82.72%	15.30%	84.70%	21.09%
2	26.09%	69.61%	4.31%	32.72%	67.28%	13.47%	86.53%	13.88%	86.12%	18.64%
3	58.69%	24.27%	17.04%	64.62%	35.38%	54.94%	45.06%	45.35%	54.65%	54.89%
4	52.82%	30.16%	17.02%	65.40%	34.60%	54.99%	45.01%	43.27%	56.73%	54.34%
5	62.94%	23.36%	13.70%	69.02%	30.98%	60.75%	39.25%	43.86%	56.14%	56.25%
6	62.43%	27.43%	10.13%	70.55%	29.45%	54.74%	45.26%	51.73%	48.27%	60.84%
7	65.70%	24.36%	9.94%	72.36%	27.64%	56.01%	43.99%	52.17%	47.83%	60.98%
8	64.52%	27.39%	8.09%	68.23%	31.77%	53.58%	46.42%	49.89%	50.11%	57.44%
9	64.08%	21.70%	14.22%	66.31%	33.69%	63.72%	36.28%	47.11%	52.89%	58.74%
10	66.49%	25.14%	8.37%	71.17%	28.83%	59.74%	40.26%	42.48%	57.52%	53.75%
11	56.38%	35.21%	8.41%	61.60%	38.40%	45.32%	54.68%	32.56%	67.44%	40.99%
12	44.35%	37.17%	18.48%	52.20%	47.80%	42.69%	57.31%	30.86%	69.14%	42.39%
13	62.02%	28.98%	9.01%	68.80%	31.20%	48.66%	51.34%	45.20%	54.80%	55.16%
14	39.99%	46.67%	13.34%	51.85%	48.15%	36.17%	63.83%	26.36%	73.64%	39.12%
15	65.24%	29.18%	5.58%	67.39%	32.61%	51.79%	48.21%	53.34%	46.66%	57.04%
16	70.22%	18.19%	11.59%	75.03%	24.97%	66.87%	33.13%	57.12%	42.88%	62.35%
17	65.75%	22.64%	11.61%	71.32%	28.68%	58.97%	41.03%	46.37%	53.63%	57.26%
18	51.53%	29.29%	19.18%	66.72%	33.28%	59.65%	40.35%	46.20%	53.80%	56.94%
19	72.12%	18.30%	9.58%	72.54%	27.46%	63.70%	36.30%	51.19%	48.81%	61.19%

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	1996		U S Senate 1994	
	Knoll		Santorum	Wofford
1	147,894		34,419	115,819
2	180,059		26,446	145,280
3	95,773		108,732	83,002
4	111,192		118,204	96,144
5	86,982		104,652	67,552
6	82,283		94,609	71,674
7	95,704		114,200	85,634
8	92,471		92,111	73,205
9	80,712		102,955	66,061
10	90,276		100,881	69,372
11	110,094		74,301	88,394
12	121,901		80,466	115,063
13	99,167		94,904	94,118
14	137,056		70,845	132,707
15	81,597		81,679	69,173
16	68,198		100,353	45,895
17	88,550		105,666	74,121
18	105,463		123,684	92,161
19	76,958		103,951	61,359
1	78.91%		22.91%	77.09%
2	81.36%		15.40%	84.60%
3	45.11%		56.71%	43.29%
4	45.66%		55.15%	44.85%
5	43.75%		60.77%	39.23%
6	39.16%		56.90%	43.10%
7	39.02%		57.15%	42.85%
8	42.56%		55.72%	44.28%
9	41.26%		60.91%	39.09%
10	46.25%		59.25%	40.75%
11	59.01%		45.67%	54.33%
12	57.61%		41.15%	58.85%
13	44.84%		50.21%	49.79%
14	60.88%		34.80%	65.20%
15	42.96%		54.15%	45.85%
16	37.65%		68.62%	31.38%
17	42.74%		58.77%	41.23%
18	43.06%		57.30%	42.70%
19	38.81%		62.88%	37.12%

U. S. Congressional Districts 2002 - Act 1 (2002) - Election Results

District	U S Senate 1992		Attorney Gen 1992		Auditor Gen 1992		Treasurer 1992		U S Senate 1991	
	Specter	Yeakel	Preate	Kohn	Hafer	Lewis	Henry	Knoll	Thornburg	Wofford
1	90,692	146,791	64,451	153,692	62,822	151,644	41,784	168,346	44,609	128,904
2	90,025	176,326	57,224	188,732	56,787	183,905	35,434	200,811	34,670	154,114
3	117,509	115,000	129,640	104,312	138,267	91,696	74,894	153,066	84,816	97,413
4	141,710	129,068	130,076	142,205	147,133	123,187	77,924	189,867	89,924	116,724
5	115,186	103,954	127,138	95,996	137,663	82,334	82,825	136,767	93,050	79,794
6	127,235	108,819	128,887	104,615	135,794	90,793	96,423	130,233	81,677	74,082
7	164,637	125,446	169,759	112,387	166,071	108,859	135,228	137,212	104,866	99,419
8	133,891	118,950	135,136	107,178	125,625	112,813	102,644	129,174	80,451	84,912
9	119,137	88,189	124,534	89,453	132,556	78,217	84,396	128,088	92,267	73,793
10	122,933	98,599	152,699	70,881	129,607	85,938	93,659	124,869	93,023	82,886
11	110,020	114,136	139,130	81,690	102,521	105,612	63,493	136,715	69,898	107,451
12	113,780	134,685	99,139	149,393	109,814	136,584	51,032	194,067	68,104	133,235
13	154,721	114,028	140,983	114,712	133,566	113,464	100,703	141,216	92,539	112,041
14	122,935	158,072	90,679	180,234	108,764	160,721	42,153	222,981	60,575	150,519
15	105,303	109,268	106,931	98,559	110,054	90,738	76,250	121,138	69,523	74,846
16	111,674	74,210	122,066	71,923	117,403	64,338	103,675	85,725	82,710	44,099
17	134,109	96,089	139,763	91,871	138,039	88,935	93,300	133,958	94,286	78,352
18	153,347	119,636	130,502	140,081	150,065	118,886	80,124	184,430	97,026	107,398
19	124,608	90,243	128,411	87,195	133,920	78,033	95,883	113,837	87,558	61,706
1	38.19%	61.81%	29.55%	70.45%	29.29%	70.71%	19.88%	80.12%	25.71%	74.29%
2	33.80%	66.20%	23.27%	76.73%	23.59%	76.41%	15.00%	85.00%	18.36%	81.64%
3	50.54%	49.46%	55.41%	44.59%	60.13%	39.87%	32.85%	67.15%	46.54%	53.46%
4	52.33%	47.67%	47.77%	52.23%	54.43%	45.57%	29.10%	70.90%	43.52%	56.48%
5	52.56%	47.44%	56.98%	43.02%	62.57%	37.43%	37.72%	62.28%	53.83%	46.17%
6	53.90%	46.10%	55.20%	44.80%	59.93%	40.07%	42.54%	57.46%	52.44%	47.56%
7	56.76%	43.24%	60.17%	39.83%	60.40%	39.60%	49.64%	50.36%	51.33%	48.67%
8	52.95%	47.05%	55.77%	44.23%	52.69%	47.31%	44.28%	55.72%	48.65%	51.35%
9	57.46%	42.54%	58.20%	41.80%	62.89%	37.11%	39.72%	60.28%	55.56%	44.44%
10	55.49%	44.51%	68.30%	31.70%	60.13%	39.87%	42.86%	57.14%	52.88%	47.12%
11	49.08%	50.92%	63.01%	36.99%	49.26%	50.74%	31.71%	68.29%	39.41%	60.59%
12	45.79%	54.21%	39.89%	60.11%	44.57%	55.43%	20.82%	79.18%	33.83%	66.17%
13	57.57%	42.43%	55.14%	44.86%	54.07%	45.93%	41.63%	58.37%	45.23%	54.77%
14	43.75%	56.25%	33.47%	66.53%	40.36%	59.64%	15.90%	84.10%	28.70%	71.30%
15	49.08%	50.92%	52.04%	47.96%	54.81%	45.19%	38.63%	61.37%	48.16%	51.84%
16	60.08%	39.92%	62.92%	37.08%	64.60%	35.40%	54.74%	45.26%	65.22%	34.78%
17	58.26%	41.74%	60.34%	39.66%	60.82%	39.18%	41.05%	58.95%	54.61%	45.39%
18	56.17%	43.83%	48.23%	51.77%	55.80%	44.20%	30.29%	69.71%	47.46%	52.54%
19	58.00%	42.00%	59.56%	40.44%	63.18%	36.82%	45.72%	54.28%	58.66%	41.34%

In The Matter Of:

*Richard Vieth, et al. v.
Commonwealth of Pennsylvania, et al.*

*Thomas L. Brunell
February 19, 2002*

*Filius & McLucas Reporting Service, Inc.
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EX
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Thomas L. Brunell
February 19, 2002

Richard Vieth, et al. v.
Commonwealth of Pennsylvania, et al.

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[1] Q: And you made some statistical analysis about the
[2] statistical significance of differentials
[3] between the various plans in the area of
[4] compactness?

[5] A: Whether the mean compactness score differed.

[6] Q: Statistically?

[7] A: Statistically.

[8] Q: Did you come to some conclusion about that?

[9] A: Yes.

[10] Q: What was your conclusion?

[11] A: I think that, again this is all from memory,
[12] there were two scores for each plan. The Act
[13] One Plan did not differ significantly for one of
[14] the scores on both alternate plans one and two.
[15] And then for the second score for Act One it
[16] differed significantly for one of the alternate
[17] plans, but not the other one. I believe that's
[18] what it was. Again, I just did it really
[19] quickly.

[20] Q: Is there a document that exists that reflects
[21] these calculations?

[22] A: No.

[23] Q: Can you tell me what method you used to arrive
[24] at these conclusions?

[25] A: I used Microsoft Excel. Put in the data and ran

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[1] the number really quickly.

[2] Q: What is the nature of the statistical test that
[3] you were doing?

[4] A: It's a T test. A difference of means test.

[5] Q: You found some statistical differences, some
[6] statistically significant differences and some
[7] that weren't statistically significant; is that
[8] right?

[9] A: There was one that was statistically
[10] significantly different. All the others were
[11] not.

[12] Q: Can you tell me which difference you found
[13] statistically significant?

[14] A: I don't recall quite frankly. Again, there were
[15] two scores for each of the plans and then there
[16] was two alternate plans. I don't know which one
[17] of the two it was. I don't know which of the
[18] two measures it was for Act One. Then I also
[19] don't remember if it was Alternate Plan One or
[20] Alternate Plan Two.

[21] Q: It was a difference between one of the alternate
[22] plans and Act One as to one of the compactness
[23] measures that you found to be significant?

[24] A: I believe that's the case.

[25] Q: Other than that compactness analysis, you've

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[1] done no other analysis related to this matter?

[2] A: No.

[3] Q: Now, do you have opinions about the analysis and
[4] testimony of Dr. Lichtman?

[5] A: Yes.

[6] Q: Can you tell me what those opinions are, please?

[7] A: If you want me to catalogue them, I will reserve
[8] the right to misremember all of them.

[9] Q: Why don't you tell me what the major opinions
[10] are and then we can go back and discuss subtexts
[11] in each case?

[12] A: I will do my best. One of my objections is that
[13] he didn't use congressional data anywhere. He
[14] only used statewide election data. So there is
[15] no connection to what we are really concerned
[16] about, which is the congressional election
[17] outcomes.

[18] Second, I'm not entirely sure how he chose
[19] which statewide elections to use. I think he
[20] said he only wanted even-yearly elections and I
[21] think that there is a '91 special election,
[22] senatorial election in the data and I'm not sure
[23] why he left out other data, other statewide
[24] election data that are available — were
[25] available.

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[1] Q: Do you have any other criticisms?

[2] A: I was expecting them to conduct a partisan bias
[3] analysis and it isn't a partisan analysis. I
[4] don't understand his methods per se and I don't
[5] think it gives any leverage into an
[6] understanding about the fairness of a proposed
[7] plan.

[8] Q: Can you tell me about what you mean by saying it
[9] doesn't give any leverage?

[10] A: He presents some averages from statewide
[11] elections whose relation to congressional
[12] election outcomes nobody knows. So that's the
[13] first major problem.

[14] Q: Can you tell me what you mean by the relation to
[15] congressional elections?

[16] A: I mean nobody knows, we don't know if there is
[17] any relationship, any correlation.

[18] Q: How would you find that out?

[19] A: You could run a correlation analysis, regression
[20] analysis.

[21] Q: Can you continue in explaining what it was you
[22] meant by saying it doesn't give you any
[23] leverage?

[24] A: I mean, his analysis indicates to me that there
[25] are alternate, possible alternate plans whereby

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[1] Democratic state averages, statewide candidates
[2] that are Democrats may have done better in some
[3] of the districts relative to the Act One Plan.
[4] So I don't know what the conclusion to draw from
[5] that is.

[6] Q: Let me ask you, you used a term "partisan bias
[7] analysis" saying Dr. Lichtman didn't do one.
[8] Can you tell me what you meant by that term?

[9] A: Partisan bias is a social scientific, a notion
[10] developed by social scientists, really, with
[11] regards to fairness of electoral systems. There
[12] is really two major metrics for electoral
[13] systems and one is responsiveness and the other
[14] one is partisan bias and it deals with the
[15] treatment of the two parties with respect to the
[16] translation of votes into seats.

[17] Q: And how would you go about a partisan bias
[18] analysis?

[19] A: First, I would start with congressional election
[20] outcomes, not statewide races, and I would,
[21] there are a number of methods to use. I would
[22] probably use a software problem called JudgeIt
[23] which analyzes, which was developed to analyze
[24] electoral systems and can calculate partisan
[25] bias estimates and measures of confidence.

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[1] Q: Then what would you do?

[2] A: Then you would have an estimate of the, you have
[3] a number, an estimate for the bias in a proposed
[4] electoral system.

[5] Q: Your testimony is that if you were going to do a
[6] partisan bias analysis, you would use
[7] congressional election data and use JudgeIt, the
[8] program JudgeIt to analyze the congressional
[9] data and come up to a conclusion using JudgeIt
[10] whether there is bias in the map. Is that
[11] right?

[12] A: Generally, yes. You use other data as
[13] explanatory variables in the initial run-through
[14] on JudgeIt to try to explain congressional vote
[15] percentages. So I would — those would be
[16] included as well.

[17] Q: Now, is it your testimony that that's the only
[18] acceptable way to go about a partisan bias
[19] analysis?

[20] A: No, there are other methods as well.

[21] Q: Can you tell me what other methods you're aware
[22] of? These are other acceptable methods in your
[23] view; is that right?

[24] A: Right. Another method, I believe it's generally
[25] called hypothetical swing. What you do is you

Page 1

[1] take congressional elections district by
[2] district and you get the overall average for one
[3] party or the other, it doesn't matter as long as
[4] you do everything in terms of Democrats or
[5] Republicans. So let's just say the overall
[6] Democratic vote share and the overall Democratic
[7] seat share. And then you increase each district
[8] by one percentage point which is to say you
[9] artificially increase every district by one
[10] percent for the Democratic share of the vote and
[11] then you can recalculate. So we know that the
[12] average is going to up by one since we increase
[13] every one by a constant the average will go up
[14] by one and then you could recheck to see how
[15] many seats change hands. You can do that over
[16] maybe ten, 20 percentage points around
[17] 50 percent. But using that measure you can also
[18] get an estimate for partisan bias.

[19] Q: That method also uses congressional election
[20] data if you're analyzing the bias of a
[21] congressional election map; is that right?

[22] A: Correct.

[23] Q: Are there other acceptable methods in your view?

[24] A: There is at least one other one that I know that
[25] political science typically used. JudgeIt has

Page 1

[1] kind of surpassed them all and that is kind of
[2] the go-to program in my opinion. There are some
[3] other methods, but I don't remember how to do
[4] them off the top of my head.

[5] Q: Is it your opinion that it is unacceptable to do
[6] a partisan bias analysis of a legislative or a
[7] congressional map using statewide election data?

[8] A: I would start with the data that we are most
[9] interested in.

[10] Q: I'd like an answer to my question.

[11] A: If I were running JudgeIt, I don't think, I
[12] don't know why you would use the state election,
[13] statewide election data rather than the
[14] congressional election data.

[15] Q: I didn't confine my question to using the
[16] JudgeIt, Professor, so maybe that's confusing.
[17] I'm asking is it unacceptable in any form of
[18] partisan bias analysis to rely on statewide
[19] election data as the basis of your analysis?

[20] A: If I don't know what method you want me to talk
[21] about, then I don't know what data you expect me
[22] to talk about.

[23] Q: Are you sitting here today telling me you're not
[24] aware of any method that would be professionally
[25] acceptable that could use statewide data?

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- [1] Q: Can you tell me why not?
- [2] A: A map, a congressional map depends on lots of
- [3] things, including the distribution of votes. I
- [4] mean one party might be, might get, if one
- [5] party's votes are distributed more evenly across
- [6] the state, that could be an inherited advantage,
- [7] just an accident of geography in the way that we
- [8] usually, the way the districts many times get
- [9] drawn could benefit that party. In a vacuum,
- [10] your hypothetical, I don't think, I could make
- [11] any, I don't know if that gives us any leverage
- [12] or not.
- [13] Q: When you say leverage, you mean information?
- [14] A: Right.
- [15] Q: Is it your view that it's more appropriate to
- [16] look at election data than registration data in
- [17] assessing the fairness of a map?
- [18] A: What method am I assessing a map by?
- [19] Q: Whichever method you want. It's a general
- [20] question. If you can't answer it generally,
- [21] then answer it specifically.
- [22] A: If I were doing a partisan bias analysis, I'm
- [23] using election results.
- [24] Q: And not registration data?
- [25] A: Not as the dependent variable.

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- [1] Q: Is it true that in some parts of the country
- [2] registration data and election results diverge
- [3] substantially in terms of the party registration
- [4] versus party electoral support?
- [5] A: I don't know specifically, but I could certainly
- [6] imagine that it might.
- [7] Q: You've never run across that phenomenon before?
- [8] A: I don't study registration, so I can't tell you
- [9] specifically.
- [10] Q: Are you familiar with any article in the
- [11] literature in which registration figured into an
- [12] analysis of partisan fairness or partisan bias?
- [13] MR. KRILL: I'm going to object to the form
- [14] of the question because counsel is using and has
- [15] used repeatedly the words "fair" and "fairness"
- [16] defining them. I would ask counsel to restate
- [17] the question.
- [18] BY MR. SMITH:
- [19] Q: Are you aware of any article in the literature
- [20] in which registration data figured into an
- [21] analysis of partisan bias?
- [22] A: Not off the top of my head.
- [23] Q: Now, we can go back to Exhibit 3, Table 1. I
- [24] asked you before the reasons why you thought Dr.
- [25] Lichtman was wrong to draw conclusions about

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- [1] partisan bias based on Table 1 and you mentioned
- [2] the absence of the study of correlation between
- [3] statewide elections and Congressional elections
- [4] in Pennsylvania. Are there other aspects of
- [5] this table that lead you to conclude that Dr.
- [6] Lichtman was in error?
- [7] A: Again, it's not that there's not even a
- [8] correlation, there is no reference whatsoever to
- [9] what we are really interested in which is
- [10] Congressional elections. In terms of, again, I
- [11] had a problem with his choice of elections and
- [12] then how he calculated the share of the vote,
- [13] for instance, the 79.7 in the first one, how he
- [14] calculated the percent Democratic just seemed —
- [15] he simply took the average and there are many
- [16] ways you can take an average. You can weight
- [17] the averages. He chose to weight them equally
- [18] each individual election. Some elections might
- [19] have more explanatory powers than others,
- [20] perhaps. So that can be another issue. From
- [21] memory, those were the major issues.
- [22] Q: And with respect to none of those issues have
- [23] you done any analysis to determine whether
- [24] changing his approach would have made any
- [25] difference in the terms of the results obtained;

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- [1] is that right?
- [2] A: I haven't done any analysis, no.
- [3] Q: And you have no opinion yourself about whether
- [4] Dr. Lichtman was right or wrong in stating the
- [5] conclusion that Act One creates 14
- [6] Republican-leading districts and five
- [7] Democrat-leading districts?
- [8] A: I don't think he established a connection.
- [9] Q: But you don't have any opinion yourself about
- [10] whether that's true or not; is that right?
- [11] A: I have not conducted analyses. I haven't
- [12] generated predictions, just like Dr. Lichtman
- [13] said he didn't generate any predictions. I
- [14] haven't made any predictions either about them.
- [15] Q: And you don't have any opinion about that; is
- [16] that right?
- [17] A: I have not conducted any analyses on that issue
- [18] to date.
- [19] Q: Is it your opinion that the analysis you
- [20] presented in state court in Texas is more
- [21] prohibitive than the analysis that Dr. Lichtman
- [22] presented in his deposition on Friday?
- [23] A: I think it was more appropriate for me to
- [24] conduct those analyses in light of the fact that
- [25] JudgeIt results had already been presented.

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

.....
RICHARD VIETH, NORMA JEAN VIETH, . NO. 1:CV-01-2439
and SUSAN FUREY, .
Plaintiffs, . Judge Sylvia H. Rambo
vs. .
COMMONWEALTH OF PENNSYLVANIA, .
et al., .
Defendants. .
.....

Deposition of: RICHARD VIETH
Taken by: Defendants
Date: February 13, 2002, 2:40 p.m.
Before: Emily Clark, RMR, Reporter-Notary
Place: Kirkpatrick & Lockhart
240 North Third Street
Harrisburg, Pennsylvania

APPEARANCES:

JENNER & BLOCK
BY: DANIEL MACH, ESQUIRE
BRUCE V. SPIVA, ESQUIRE

For - Plaintiffs

KIRKPATRICK & LOCKHART
BY: JOHN P. KRILL, JR., ESQUIRE
MARSHA SAJER, ESQUIRE

For - Defendants

EX
E

ORIGINAL

I N D E X

WITNESS

Richard ViethExamination

By Mr. Krill

3, 8

By Mr. Mach

8

EXHIBITS

(None marked)

* * * * *

1 **RICHARD VIETH**, called as a witness, being duly
2 sworn, was examined and testified, as follows:

3 BY MR. KRILL:

4 Q State your name, please.

5 A. Richard Vieth.

6 Q Mr. Vieth, have you appeared here today pursuant to a
7 Notice of Deposition in the case of Richard Vieth, Norma
8 Jean Vieth and Susan Furey versus the Commonwealth of
9 Pennsylvania, et al.?

10 A. I guess so. I heard about it by phone. I have not been
11 subpoenaed or received anything in writing. Is that
12 what you're asking?

13 Q Yes. Thank you. How are you employed?

14 A. Retired.

15 Q Before you retired, what was your means of employment?

16 A. I taught at Lancaster Theological Seminary.

17 Q Are you a registered voter?

18 A. Yes.

19 Q How long have you been a registered voter?

20 A. Let's see. 53 years.

21 Q Where do you live?

22 A. Lancaster, Pennsylvania. You want the full address?

23 Q Please.

24 A. 632 Laurel Lane, Lancaster, Pennsylvania, 17601.

25 Q Under the new congressional districting plan enacted by

1 the Pennsylvania General Assembly, in what congressional
2 district do you live?

3 A. 16.

4 Q And under the previous plan, who was your Congressman?

5 A. Joseph Pitts.

6 Q And under the new plan, is there a Congressman resident
7 in your district? An incumbent Congressman?

8 A. Yes.

9 Q And who is that?

10 A. Joseph Pitts.

11 Q And what is --

12 A. Did I understand the question correctly?

13 Q Yes, you did, and you answered it.

14 A. All right.

15 Q Thank you.

16 A. It's just a strange question.

17 Q And what is his party affiliation?

18 A. Republican.

19 Q Are you registered with one party as a voter?

20 A. Yes.

21 Q Which party?

22 A. Democratic.

23 Q Now, in 53 years of voting, Mr. Vieth, you haven't
24 always pulled a straight party lever, have you?

25 A. Not every time.

1 Q So sometimes you vote for Republicans; is that correct?

2 A. School board, yes.

3 Q Now, do you look at the qualifications of candidates to
4 make your decision as to whom to vote for?

5 A. Yes.

6 Q Now, you've heard the term yellow dog Democrat, haven't
7 you?

8 A. I think I have.

9 Q What's your understanding of it?

10 A. I don't have an understanding of it.

11 Q If you felt that a Democrat was less qualified for a
12 position than a Republican opponent in a given political
13 race, you'd vote for the more qualified candidate,
14 wouldn't you?

15 A. If I thought that the Republican stood for the
16 principles of the Democratic party better than the
17 Democratic candidate would, I would consider voting for
18 him or her.

19 Q Now, are you represented by counsel this morning?

20 A. Yes.

21 Q This afternoon, excuse me.

22 A. Yes.

23 Q And who is that?

24 A. It's Mr. Mach.

25 Q And do you know what firm he's with?

1 A. No, I don't.

2 Q How did you meet Mr. Mach?

3 A. I talked to him over the telephone.

4 Q Before you became a plaintiff, or afterwards?

5 A. Afterwards.

6 Q How did you become a plaintiff in this matter?

7 A. I was asked if I would be willing to support this
8 Complaint.

9 Q Who asked you?

10 A. My son.

11 Q And what does your son do?

12 A. My son is the administrative assistant to Congressman
13 Borski.

14 Q Now, are you paying the attorneys' fees and costs in
15 this lawsuit?

16 A. No.

17 Q Who is?

18 A. I don't know.

19 Q Are you under any obligation that you know of to your
20 counsel to pay them any fees or costs?

21 A. I am not.

22 Q You said you would be willing to support any candidate
23 who supports the principles of the Democratic party.
24 You're aware, aren't you, that in many political races
25 that Democrats and Republicans move towards the center,

1 to try to occupy the center ground on the issues?

2 A. Yes.

3 Q And there are many cases, therefore, aren't there,
4 Mr. Vieth, where the lines are really blurred on the
5 issues?

6 MR. MACH: Objection, vague.

7 THE WITNESS: I mean, I'll try to think of one, and
8 I can't think of one that would illustrate your point.

9 BY MR. KRILL:

10 Q Well, do you recall when President Clinton adopted the
11 strategy of triangulating and, in fact, moved towards
12 the Republican party, towards the end of his first term
13 in office?

14 A. Can you explain triangulating? It's not a term I'm
15 familiar with.

16 Q You've never heard of that?

17 A. Never heard of that.

18 Q Do you recall President Clinton supporting deficit
19 reduction as a top priority of his administration?

20 A. That's a good Democratic principle.

21 Q I see. It was also a good Republican principle, wasn't
22 it?

23 A. They took it away from the Democrats on occasion, yes.

24 Q Now, have you ever had the chance to review the Amended
25 Complaint in this case?

1 A. Yes.

2 Q You didn't draft it, though, did you?

3 A. No. I'm not a lawyer.

4 Q You didn't provide any factual input yourself to the
5 lawyers who drafted the Complaint, did you?

6 A. No.

7 MR. KRILL: I have no further questions. Thanks.

8 MR. MACH: I have a few.

9 BY MR. MACH:

10 Q How long have you lived in Pennsylvania?

11 A. Since 1972. That's 30 years.

12 Q And in that time have you voted in congressional
13 elections?

14 A. Yes, every one.

15 Q Is there a party that you have consistently voted for?

16 A. Democratic party.

17 Q Do you intend to do the same in the future?

18 A. Yes.

19 MR. MACH: Nothing further.

20 BY MR. KRILL:

21 Q Okay. Let me ask you this. You say you've
22 consistently voted in congressional elections for
23 Democrats; is that right?

24 A. Yes.

25 Q All right. By that did you mean that you consistently

1 voted for Democratic candidates for the House of
2 Representatives in Congress?

3 A. Yes.

4 Q Now, how about for United States Senator, did you
5 support Senator Specter in his campaign for re-election
6 a few years ago?

7 A. No, I did not.

8 Q But you've supported other Republicans in other races,
9 other than in races for House?

10 A. Local races, yes. Some of these I know, you know,
11 they're personal friends, school board.

12 Q Now, you say you've voted in Pennsylvania basically all
13 your adult life; is that right?

14 A. I've only lived in Pennsylvania the last 30 years.

15 Q Okay. All right, 30 years, then. Under the new
16 congressional districting law, you intend to go to the
17 polls and vote in the spring primary, don't you?

18 A. Yes, I do.

19 Q You're not aware of any impediment in the law that will
20 block you or hinder you from going to the polls and
21 voting, are you?

22 A. No.

23 Q Now, you're aware, aren't you, that if you don't like
24 either of the candidates in a race for Congress, that
25 you can write in the name of a candidate of your choice,

1 correct?

2 A. Yes.

3 Q Have you ever done that?

4 A. I don't believe so.

5 Q How about in a primary election?

6 A. No, I don't believe so .

7 MR. KRILL: I'm going to ask counsel's indulgence
8 because I'm certainly going beyond the scope of his
9 cross-examination, but I'll wrap this up very shortly.

10 BY MR. KRILL:

11 Q Did you vote in the municipal election last fall, last
12 November?

13 A. I do not live in the City of Lancaster so I could not
14 vote in the municipal election. I live in Lancaster
15 County.

16 Q All right. But you're aware, aren't you, that there
17 were seven statewide judicial races for appellate courts
18 last year?

19 A. Yes.

20 Q Did you vote for any of those candidates?

21 A. I voted for -- yeah, I voted for those offices, yes.

22 Q Okay. Do you recall for whom you voted for the State
23 Supreme Court?

24 A. No, I really don't.

25 Q Do you recall for whom you voted for Superior Court?

1 A. No, I do not.

2 Q Do you recall for whom you voted for Commonwealth Court?

3 A. No, I do not.

4 Q Let me see if I can just refresh your memory briefly,
5 and then I think we're done.

6 Let's for Commonwealth Court, do you recall whether
7 you voted for Renee Cohn? Does that name ring a bell?

8 A. I'm afraid not. You know, those offices come up and go
9 so quickly, I do my homework, I make my choice, and then
10 I forget about it.

11 Q Okay. Are you sure, though, that you did vote for those
12 offices?

13 A. Yes, I am. Yes, because I can remember the difficult
14 preparation of reading all of those credentials for the
15 different offices.

16 Q Okay. So you didn't just pull a straight party lever,
17 you know, automatically for those offices, did you?

18 A. No, I did not. In fact, I don't think there was a party
19 lever for -- I may be wrong on that. I don't recall
20 that they were on the lever.

21 Q All right. But you looked at the records of the
22 individual candidates; is that right?

23 A. Yes. I always read the League of Women Voters material.

24 Q But you can't think of a single candidate that you voted
25 for?

1 MR. MACH: Asked and answered.

2 THE WITNESS: Yeah, I answered that. No, if I
3 tried to answer I couldn't be sure that I would be right
4 on that.

5 MR. KRILL: Okay. All right. Thanks very much.

6 THE WITNESS: Okay.

7 (Whereupon, the deposition was concluded at
8 3:02 p.m.)

9
10 * * * * *

COMMONWEALTH OF PENNSYLVANIA)
) SS.
COUNTY OF DAUPHIN)

I, Emily R. Clark, Reporter and Notary Public in and for the Commonwealth of Pennsylvania and County of Dauphin, do hereby certify that the foregoing testimony was taken before me at the time and place hereinbefore set forth, and that it is the testimony of:

RICHARD VIETH

I further certify that said witness was by me duly sworn to testify the whole and complete truth in said cause; that the testimony then given was reported by me stenographically, and subsequently transcribed under my direction and supervision; and that the foregoing is a full, true and correct transcript of my original shorthand notes.

I further certify that I am not counsel for nor related to any of the parties to the foregoing cause, nor employed by them or their attorneys, and am not interested in the subject matter or outcome thereof.

Dated at Harrisburg, Pennsylvania, this 14th day of February, 2002.

NOTARIAL SEAL
EMILY R. CLARK, Notary Public
Harrisburg, Dauphin County
My Commission Expires July 9, 2005

Emily K. Clark
Reporter - Notary Public

(The foregoing certification does not apply to any reproduction of the same by any means unless under the direct control and/or supervision of the certifying reporter.)

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

.....
RICHARD VIETH, NORMA JEAN VIETH, . NO. 1:CV-01-2439
and SUSAN FUREY, .
Plaintiffs, . Judge Sylvia H. Rambo
vs. .
COMMONWEALTH OF PENNSYLVANIA, .
et al., .
Defendants. .
.....

Deposition of: NORMA JEAN VIETH
Taken by: Defendants
Date: February 13, 2002, 3:04 p.m.
Before: Emily Clark, RMR, Reporter-Notary
Place: Kirkpatrick & Lockhart
240 North Third Street
Harrisburg, Pennsylvania

APPEARANCES:

JENNER & BLOCK
BY: DANIEL MACH, ESQUIRE
BRUCE V. SPIVA, ESQUIRE

For - Plaintiffs

KIRKPATRICK & LOCKHART
BY: JOHN P. KRILL, JR., ESQUIRE
MARSHA SAJER, ESQUIRE

For - Defendants

ORIGINAL

I N D E X

WITNESS

Norma Jean ViethExamination

By Mr. Krill

3

By Mr. Mach

15

EXHIBITS

(None marked)

* * * * *

1 NORMA JEAN VIETH, called as a witness, being duly
2 sworn, was examined and testified, as follows:

3 BY MR. KRILL:

4 Q State your name, please.

5 A. Norma Jean Vieth.

6 Q And where do you live, Mrs. Vieth?

7 A. 632 Laurel Lane, Lancaster, PA.

8 Q By the way, I called you Mrs. Vieth. Are you married to
9 the plaintiff in this matter, Richard Vieth?

10 A. Yes.

11 Q And how are you employed, Mrs. Vieth?

12 A. I'm retired.

13 Q Before you retired, how were you employed?

14 A. I was an educator.

15 Q Taught school?

16 A. (Witness nodded head affirmatively.)

17 Q Please answer yes or no so the reporter can take down
18 your answer.

19 A. Yes.

20 Q This transcript will be typed up and it will just be
21 words.

22 Are you represented by counsel today?

23 A. Yes.

24 Q And who is your counsel?

25 A. Mr. Mach.

1 Q Mr. Mach. And do you know what firm he's with?

2 A. You're Jenner Block.

3 Q And when did you meet Mr. Mach?

4 A. I met Mr. Mach today for the first time physically.

5 Q Have you met any other lawyers at Jenner and Block?

6 A. No.

7 Q When was your first conversation with any lawyer at
8 Jenner and Block?

9 A. That would have been on the telephone a few days ago
10 with that -- now wait.

11 Q Well, is your answer a few days ago?

12 A. Well, no. I'm trying to think. The lawyer I first
13 talked to, he was with that firm in Washington. I want
14 to be correct about that.

15 Q And that was just a few days ago?

16 A. No. We talked with a lawyer, I'm not sure of the firm,
17 that I first talked to about a month ago.

18 Q A month ago?

19 A. Yes.

20 Q Now, you said a few days ago. Did you have another
21 discussion?

22 A. I'm talking about Mr. Mach.

23 Q Okay. And who was the lawyer a month ago?

24 A. Pirelli. Mr. Pirelli. Pirelli. Yes.

25 Q And --

1 A. And he's from Washington.

2 Q How did you come into contact with Mr. Pirelli?

3 A. Through my son.

4 Q And your son is an administrative assistant to
5 Congressman Borski; is that right?

6 A. That's correct.

7 Q And what did your son tell you about Mr. Pirelli?

8 A. That he would contact us.

9 Q And what did Mr. -- well, that was about a month ago.
10 Can you pin down the date?

11 A. I can tell you it was before Christmas, so that would be
12 November. That would be more than a month ago.

13 Q Now --

14 A. I believe that's correct. I believe that's correct.

15 Q Have you ever seen the Amended Complaint in your
16 lawsuit?

17 A. May I ask for clarification? Is that the last one,
18 called the amended one?

19 Q Yes.

20 A. The current?

21 Q Yes.

22 A. Yes, I have.

23 Q When did you see that?

24 A. I had seen that, I just saw it for sure to read
25 carefully a couple days ago. I had seen it before and

1 finally -- well, that's it.

2 Q You didn't draft the Amended Complaint, did you?

3 A. No.

4 Q You didn't provide your lawyers with any factual input
5 into the Amended Complaint, did you?

6 A. No.

7 Q Are you paying for your lawyers' fees for this lawsuit?

8 A. No.

9 Q Are you paying the costs for this lawsuit?

10 A. No.

11 Q Who is?

12 A. I don't know.

13 Q Are you under any obligation to pay your lawyers
14 anything in this case?

15 A. No.

16 Q To your knowledge, is there any contingent fee agreement
17 in this case?

18 A. Again, clarify. With the lawyers, you're talking?

19 Q With the lawyers.

20 A. Between the lawyers and me?

21 Q Yeah.

22 A. No.

23 Q How about, would your husband have one?

24 A. Well, you would have to ask my husband that.

25 Q Well, I'm just asking you if you know.

1 A. I don't know, no.

2 Q To your knowledge, your husband has no agreement?

3 A. No.

4 Q Now, are you a registered voter in Pennsylvania?

5 A. Yes, I am.

6 Q Are you registered with a party?

7 A. Yes.

8 Q What party?

9 A. Democratic.

10 Q How long have you been a registered voter in
11 Pennsylvania?

12 A. In Pennsylvania, 1972.

13 Q And have you always been a registered Democrat?

14 A. Yes.

15 Q Have you missed voting in any elections since 1972?

16 A. I may have missed in some judge's elections in
17 Lancaster, if that's what you're referring to. Any
18 election, you just said?

19 Q Yes.

20 A. That might have happened, but -- okay.

21 Q Now, but you're a pretty regular voter, right?

22 A. Very.

23 Q And you care about the issues, don't you?

24 A. Absolutely.

25 Q And you evaluate candidates based on the issues that

1 they stand for; isn't that right?

2 A. That's one of the things. Yes, the answer's probably
3 yes to that, yes, um-hum.

4 Q Well, you would also look at the character of the
5 candidate, too, wouldn't you?

6 A. Yes.

7 Q And the issues and the character of the candidate matter
8 more to you than how a candidate is affiliated with a
9 political party; isn't that right?

10 A. I take each candidate as it comes and look at that
11 person and weigh it that way.

12 Q Now, do you know what congressional district you live
13 in?

14 A. 16th.

15 Q And that's under the newly enacted districting law?

16 A. That's been the 16th.

17 Q And you're still in the 16th?

18 A. That's correct.

19 Q Now, because you look at the issues that the candidate
20 stands for and the quality of the candidate's character
21 and so forth, is it fair to say, Mrs. Vieth, that you
22 don't just automatically pull a straight party lever
23 when you vote?

24 A. I can say that most of the time I vote Democratic.

25 Q And does that mean that some of the time you vote for

1 Republican candidates?

2 A. I can't remember if I ever did or when I did.

3 Q But is it fair to say that some of the time you think
4 that you have, without being able to identify particular
5 candidates?

6 A. I'm not sure. I'm not sure.

7 Q Now, you plan to vote in the spring primary election,
8 don't you?

9 A. Yes.

10 Q Are you aware of any obstacles to your getting to the
11 polls and exercising your right to vote that have been
12 placed in your way by Pennsylvania's new congressional
13 districting statute?

14 A. Would you mind repeating that again? That question,
15 please.

16 MR. KRILL: Would you read it back, please.

17 (Question read.)

18 THE WITNESS: No, I don't.

19 BY MR. KRILL:

20 Q So you're as free to exercise your vote as you ever
21 were, aren't you?

22 A. That's correct.

23 Q Now, are you aware, Mrs. Vieth, that if you go to the
24 polls and you don't like any of the candidates who
25 appear on the ballot, that you are free to write in the

1 name of a candidate of your choice?

2 A. Yes.

3 Q Have you ever done that?

4 A. Probably not. And I can't remember exactly because it's
5 been a long time.

6 Q But you've been in the situation, haven't you, when you
7 go to the polls and you either don't know any candidates
8 for a particular office, or know them and don't like any
9 of them?

10 A. When you say I don't know, I do my homework, so I don't
11 know what you mean by I don't know, because I do know a
12 lot. I try as much as possible to know a lot.

13 Q Excellent.

14 A. When I vote for a candidate, I look at many things, not
15 one issue. So I have to make a choice, and I do.

16 Q Did you vote in last year's general election for
17 statewide judicial candidates?

18 A. That's the judges, isn't it, that you're talking about?

19 Q Yes.

20 A. I don't recall if it was -- I think I did. I don't
21 recall if that was the one I'm referring to with the
22 judges, but usually I do. So I can't answer yes or no
23 to that one.

24 Q So you might not have voted?

25 A. I might not have voted in that one.

1 Q Let me see if I can refresh your recollection. Do you
2 recall voting last November for a candidate for the
3 Pennsylvania Supreme Court?

4 A. I can't recall.

5 Q Do you recall that you were entitled last November to
6 vote for three candidates for the State Superior Court?

7 A. Was I able to, you asked me?

8 Q Do you recall that you were entitled to?

9 A. Entitled to. I don't remember the numbers.

10 Q Now, do you recall voting for, let me suggest some names
11 of candidates, for the Superior, Court Mary Jane Boas?

12 A. I don't remember, sorry.

13 Q Mary Flaherty?

14 A. The name is somewhat familiar.

15 Q Sounds familiar?

16 A. Sounds familiar.

17 Q Do you think you might have voted for her?

18 A. That's what I'm saying to you, I'm not sure.

19 Q Okay. Do you recall that last November you were
20 entitled to vote for up to three candidates for the
21 Commonwealth Court of Pennsylvania, which is another
22 statewide court?

23 A. Don't know.

24 Q All right. Let me see if I can refresh your memory by
25 suggesting some names. Do you recall seeing a name on

1 the ballot of a candidate Renee Cohn?

2 A. Don't remember, sorry.

3 Q James Didaro?

4 A. I don't remember.

5 Q Robin Simpson?

6 A. Don't remember. That name is familiar.

7 Q Mary Hannah Levitt?

8 A. Don't remember the name, sorry.

9 Q Do you recall voting for any of the candidates that I've
10 named?

11 A. Don't remember, sorry.

12 Q Do you recall when Senator Specter ran for re-election a
13 few years ago?

14 A. I recall him being in elections.

15 Q Did you vote for him?

16 A. I don't know who was running against him at the time,
17 and I don't know when you're referring to.

18 Q Well, let's see. How about in 1998, do you recall
19 Senator Specter running then?

20 A. I don't recall which year.

21 Q Okay. And you know what? Neither do I, frankly, and
22 this is not a quiz, you won't be graded on it. But what
23 I'd like to know is, do you recall him running for
24 reelection in recent memory?

25 A. Certainly. Yes.

1 Q Did you vote for him?

2 A. I don't remember that. I need to know who the other
3 person was. I don't remember.

4 Q Governor Ridge ran for governor twice. Did you vote for
5 him either time?

6 A. No.

7 Q No?

8 A. No.

9 Q Now, in last year's election there were some statewide
10 races for executive branch offices. Forgive me, not
11 last year but in 1999.

12 Do you recall Auditor General Bob Casey Jr. running
13 against State Representative Katie True?

14 A. Yes.

15 Q Who did you vote for in that race?

16 A. I voted for Casey.

17 Q You voted for Bob Casey Jr.; is that right?

18 A. Um-hum, that's correct.

19 Q And do you recall State Treasurer Barbara Hafer running
20 for reelection recently?

21 A. Yes.

22 Q Did you vote for Treasurer Hafer?

23 A. Don't remember.

24 Q So you might have voted for Treasurer Hafer; is that
25 correct?

1 A. I don't remember, sorry.

2 Q Okay. You're telling me, then, that you can't swear
3 that you did not vote for Barbara Hafer; is that right?

4 A. All I'm saying is I don't remember.

5 Q So you can't remember voting for certain Republicans who
6 are considered liberal Republicans; is that correct?

7 A. That's correct.

8 Q Is it fair to say that the closer a Republican gets to
9 the, let's say, to liberal principles, that the less
10 likely you are to remember whether or not you voted for
11 that Republican?

12 MR. MACH: Objection, vague, and mischaracterizes
13 the testimony, and asked and answered.

14 BY MR. KRILL:

15 Q So you've studied the candidates, you always study
16 candidates and their issues, and yet you cannot say that
17 you've always voted for a Democrat; isn't that true?

18 A. If you're asking me --

19 MR. MACH: Objection, vague. And in all elections
20 are you asking about?

21 MR. KRILL: Yes.

22 THE WITNESS: Would you rephrase that question
23 again, please? Say that again.

24 MR. KRILL: Read it back.

25 (Question read.)

1 THE WITNESS: I cannot say that I have always voted
2 for a Democrat.

3 MR. KRILL: Nothing further. Thank you.

4 MR. MACH: I have a couple questions.

5 BY MR. MACH:

6 Q In races for the United States House of
7 Representatives, is there a party for which you have
8 consistently voted?

9 A. Absolutely. It's been Democratic.

10 Q Do you intend to do so in the future?

11 A. Yes.

12 MR. MACH: Nothing further.

13 MR. KRILL: Nothing further. Thanks very much.

14 (Whereupon, the deposition was concluded at
15 3:22 p.m.)

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COMMONWEALTH OF PENNSYLVANIA)
) SS.
 COUNTY OF DAUPHIN)

I, Emily R. Clark, Reporter and Notary Public in and for the Commonwealth of Pennsylvania and County of Dauphin, do hereby certify that the foregoing testimony was taken before me at the time and place hereinbefore set forth, and that it is the testimony of:

NORMA JEAN VIETH

I further certify that said witness was by me duly sworn to testify the whole and complete truth in said cause; that the testimony then given was reported by me stenographically, and subsequently transcribed under my direction and supervision; and that the foregoing is a full, true and correct transcript of my original shorthand notes.

I further certify that I am not counsel for nor related to any of the parties to the foregoing cause, nor employed by them or their attorneys, and am not interested in the subject matter or outcome thereof.

Dated at Harrisburg, Pennsylvania, this 14th day of February, 2002.

NOTARIAL SEAL
 EMILY R. CLARK, Notary Public
 Harrisburg, Dauphin County
 My Commission Expires July 9, 2005

Emily R. Clark

Emily R. Clark
 Reporter - Notary Public

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IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

.....
RICHARD VIETH, NORMA JEAN VIETH, . NO. 1:CV-01-2439
and SUSAN FUREY, .
Plaintiffs, . Judge Sylvia H. Rambo
vs. .
COMMONWEALTH OF PENNSYLVANIA, .
et al., .
Defendants. .
.....

Deposition of: SUSAN FUREY
Taken by: Defendants
Date: February 13, 2002, 2:05 p.m.
Before: Emily Clark, RMR, Reporter-Notary
Place: Kirkpatrick & Lockhart
240 North Third Street
Harrisburg, Pennsylvania

APPEARANCES:

JENNER & BLOCK
BY: DANIEL MACH, ESQUIRE
BRUCE V. SPIVA, ESQUIRE
For - Plaintiffs

KIRKPATRICK & LOCKHART
BY: JOHN P. KRILL, JR., ESQUIRE
MARSHA SAJER, ESQUIRE
For - Defendants

ORIGINAL

I N D E X

WITNESS

Susan FureyExamination

By Mr. Krill

3

By Mr. Mach

12

EXHIBITS

(None marked)

* * * * *

1 **SUSAN FUREY**, called as a witness, being duly
2 sworn, was examined and testified, as follows:

3 BY MR. KRILL:

4 Q State your name, please.

5 A. My name is Susan Furey.

6 Q Where do you live?

7 A. I live at 507 Bryn Mawr Avenue in Bala Cynwyd,
8 Pennsylvania.

9 Q Is that your only residence?

10 A. Yes, um-hum.

11 Q How are you employed?

12 A. I am employed, really, self-employed as a consultant,
13 and I work --

14 Q All right. What is the nature of your consulting work?

15 A. I work with an organization and it's called the Five-
16 County Democratic Women's Coalition.

17 Q What is that organization?

18 A. It's a network of women and people that care about the
19 issues that they care about, that work together to
20 empower and enable others for political action for the
21 issues they care about.

22 Q All right. So it's an organization that focuses more on
23 issues than on particular candidates; is that correct?

24 A. It can do that. Sometimes does, um-hum, or either,
25 um-hum.

1 Q And are you compensated by this organization?

2 A. Yes.

3 Q Is the Five-County Democratic Women's organization a
4 client of yours?

5 A. Well, it's hard -- it's really what I am, I work in a
6 role in which I guide them and I work as someone that
7 organizes them. So in a way you could say that, yes.

8 Q Do they pay you as an employee?

9 A. No. They pay me as a consultant.

10 Q All right. So you are self-employed?

11 A. Um-hum.

12 Q Okay. Now, do you have any other clients or consulting
13 arrangements?

14 A. Not at this time.

15 Q Are you doing any volunteer work of a political nature?

16 A. I do that occasionally, depending on -- I might do that
17 in certain races, if I'm asked, um-hum.

18 Q Are you working right now for any candidates or
19 prospective candidates for public office?

20 A. By working you mean volunteering?

21 Q Yes.

22 A. Or do you mean --

23 Q Let's start with volunteering. Are you volunteering
24 your services for any prospective candidate for public
25 office?

1 A. It's hard to say. I am doing some work for, if you want
2 to call it, for the governor's race for Pennsylvania.

3 Q For which candidate?

4 A. Ed Rendell.

5 Q Who is your Congressman?

6 A. Well, it had been Joe Hoeffel.

7 Q Are you doing any work for Congressman Hoeffel?

8 A. No.

9 Q Have you done any work for Congressman Hoeffel?

10 A. I volunteered.

11 Q Are you a registered voter?

12 A. Yes.

13 Q How long have you been a registered voter?

14 A. Since I was 18. I'm trying to remember, it's a long
15 time ago, but I believe I was registered when I could
16 register to vote, um-hum. I think I was 18.

17 Q Now, when you vote, you don't always pull a straight
18 party lever, do you?

19 A. Each time I vote, I think about the issues and the
20 candidates, so I vote my conscience at the time.

21 Q And does that mean that you don't always pull a straight
22 party lever?

23 A. Sometimes not. It's been probably -- most times I would
24 say I would vote for those candidates that reflect my
25 issues, and so oftentimes that is Democratic, but there

1 might have been one time or other I didn't do that.

2 Q Can you bring yourself to say that there have been
3 occasions when you've actually voted for Republicans?

4 A. I can say that I have done that once.

5 Q Now, I'm talking about all elections, elections for
6 governor, elections for U.S. Senator, elections for
7 Congress, elections for state legislature.

8 Can you recall more than one Republican candidate
9 for whom you voted in any federal, state or local
10 election?

11 A. I can only recall the one time.

12 Q Who was that?

13 A. That was for Specter, Arlen Specter.

14 Q Did you vote in last year's statewide judicial races?

15 A. Oh, yes, um-hum.

16 Q For whom did you vote for Supreme Court?

17 A. Do you want me to tell you who I voted for?

18 Q Yes, please.

19 A. Okay. I voted for Kate Ford Elliott.

20 Q For whom did you vote for Superior Court?

21 A. I'm trying to remember. Oh, dear. I think it was David
22 Wecht. I believe it was Wecht. I think it's W-E-C-H-T.

23 Q All right. There were three seats open.

24 A. I know there were, right, yeah.

25 Q Did you vote for three candidates for the Superior

1 Court?

2 A. If indeed there were three candidates open, I voted for
3 three candidates.

4 Q Okay. You know it's possible to do what they call
5 bullet voting and just vote for one?

6 A. For one, I know.

7 Q But you think you voted for three?

8 A. Yes, because I think we needed three. Yes.

9 Q Did you vote for Mary Jane Boas for Superior Court?

10 A. No.

11 Q For Commonwealth Court there were also three races. Do
12 you recall? Three seats open in last year's election.

13 A. Um-hum.

14 Q Excuse me. Would you please say yes or no?

15 A. Oh, okay. I'm trying to remember. I'm not sure if I
16 can remember all these things, so I'm not -- I don't
17 want to give you any misinformation.

18 Q That's fine. Let me try to refresh your memory. For
19 Commonwealth Court, did you vote for Robin Simpson?

20 A. No.

21 Q Did you vote for Mary Hannah Levitt?

22 A. No.

23 Q Did you vote for Renee Cohn?

24 A. I don't recall. I really can't tell you, I can't
25 remember.

1 Q Okay. So you're saying you might have voted for one of
2 those three?

3 A. Well, my recollection -- I'm trying to think. I
4 remember voting for Barbara Holland, and she was for
5 municipal court, and -- but I can't remember exactly
6 how -- I cannot remember exactly how I voted. That's
7 the fairest answer I can give you.

8 Q Okay. Now, are you one of the plaintiffs in the case
9 that is now pending in the United States District Court
10 for the Middle District of Pennsylvania at docket number
11 CV-01-2439?

12 A. I believe -- if that's the Complaint, yes. If that's
13 the Complaint.

14 Q Yeah. I'm handing you a document. Do you recognize
15 that?

16 A. Yes, I do.

17 Q All right. The record should show that I've handed the
18 witness a copy of the Amended Complaint in this matter.

19 A. Yes. When you gave all the numbers, I just was not
20 zeroing in on all numbers.

21 MR. KRILL: Rather than clutter the record by
22 attaching this as an exhibit to the transcript, I'd just
23 appreciate if counsel would stipulate that I've shown
24 the witness the Amended Complaint.

25 MR. MACH: Yes, it appears to be the Amended

1 Complaint.

2 BY MR. KRILL:

3 Q You're represented here by counsel today, aren't you,
4 Ms. Furey?

5 A. Yes, I am.

6 Q And that's the lawfirm of Jenner and Block; is that
7 correct?

8 A. Yes, I am, um-hum.

9 Q And how did you meet counsel, your counsel?

10 A. I met them through and talked with them through another
11 source, someone who called me up and told me about this
12 case and asked if I would consider being a plaintiff in
13 the case, and that's how I got to them.

14 Q Who was that person?

15 A. Her name is Nora Winkelman.

16 Q Who is Nora Winkelman?

17 A. Nora is the -- she's a lawyer and she is the head of
18 the, Democratic head of the Lower Marion Narberth
19 Democrats. That's in Montgomery county.

20 Q Now, are you familiar with the allegations of the
21 Amended Complaint that I showed you?

22 A. Yes, I am familiar, right, um-hum.

23 Q When you agreed to become a plaintiff in this case, did
24 you agree to pay counsel fees?

25 A. No.

1 Q Did you agree to pay the costs of litigation or to share
2 in the costs of litigation?

3 A. No.

4 Q Did you incur any financial obligation with respect to
5 the cost of litigation?

6 A. No.

7 Q To your knowledge, who is paying for the lawsuit?

8 A. I really don't know.

9 Q Have you met Richard Vieth?

10 A. Yes. The other -- you mean the other plaintiffs?

11 Q Yes. Have you met Mr. Vieth?

12 A. Yes, I met Mr. Vieth.

13 Q Have you Norma Jean Vieth?

14 A. Yes.

15 Q When did you first meet them?

16 A. I just met them actually today for the first time.

17 Q Now, you're aware, aren't you, that the Commonwealth of
18 Pennsylvania has a new statute for congressional
19 districting?

20 A. Yes, I am aware, um-hum.

21 Q And you're aware, aren't you, that it is Act 1 of 2002?

22 A. Let me -- you're asking me if I'm aware if it's called
23 Act 1?

24 Q Yes.

25 A. I didn't know it was called Act 1, but I know that it

1 was -- it's now in, it's been enacted.

2 Q And under Act 1, in which district do you believe that
3 you reside?

4 A. I will currently then reside in District 6, I mean, as
5 the new law would be enacted.

6 Q And do you intend to go to the polls and vote in the
7 primary election in District 6?

8 A. Yes, I would imagine, um-hum.

9 Q Has any obstacle been put in your way of getting to the
10 polls and voting?

11 A. No physical, no. There's nothing that's stopping me
12 from going, no.

13 Q All right. And you intend to vote in the general
14 election in the fall, don't you?

15 A. Um-hum, yes, I do.

16 Q And Pennsylvania law is not putting any obstacles in the
17 way of you getting to the polls and voting for the
18 candidate of your choice in the fall, is it?

19 A. I guess it depends on what you mean getting in my way.
20 No, I can go and vote for the person I suppose I would
21 like to vote for, yes, I can do that. I can physically
22 walk in and vote for that person, yes.

23 Q All right. And if you don't like either of the two
24 candidates, or three candidates, if there are minor
25 party candidates on the ballot, when you vote, you can

1 write in a candidate of your choice on the ballot, can't
2 you?

3 A. Technically I could do that, yes.

4 Q Have you ever done that? Have you ever written in a
5 candidate?

6 A. No.

7 Q But you're aware that you can do that?

8 A. I'm aware, um-hum.

9 Q You haven't done any analysis of the voting statistics
10 or of the population configuration of your congressional
11 district, have you?

12 A. Are you referring to the congressional district as it is
13 or as it was?

14 Q As it is, yes.

15 A. I have not had the opportunity, no, at this point, no.

16 Q All right. So when the Complaint --

17 MR. MACH: I'm sorry, I just want to register an
18 objection after the fact as vague, analysis being vague.

19 MR. KRILL: I have no further questions.

20 MR. MACH: We might, if you just give us one
21 minute.

22 MR. KRILL: Sure.

23 MR. MACH: I have just a couple questions.

24 BY MR. MACH:

25 Q As a general matter, would you say that you

1 consistently vote for Democratic candidates for
2 Congress?

3 MR. KRILL: Objection, leading.

4 BY MR. MACH:

5 Q You can answer.

6 A. Answer it? In general, yes, I vote for candidates who
7 reflect my issues and my values, and which for the most
8 part that is a Democratic candidate.

9 Q And do you intend to do so in the future?

10 A. Most probably, yes, um-hum.

11 MR. MACH: Okay.

12 MR. KRILL: That's it. Thank you very much.

13 (Whereupon, the deposition was concluded at
14 2:21 p.m.)

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COMMONWEALTH OF PENNSYLVANIA)
) SS.
COUNTY OF DAUPHIN)

I, Emily R. Clark, Reporter and Notary Public in and for the Commonwealth of Pennsylvania and County of Dauphin, do hereby certify that the foregoing testimony was taken before me at the time and place hereinbefore set forth, and that it is the testimony of:

SUSAN FUREY

I further certify that said witness was by me duly sworn to testify the whole and complete truth in said cause; that the testimony then given was reported by me stenographically, and subsequently transcribed under my direction and supervision; and that the foregoing is a full, true and correct transcript of my original shorthand notes.

I further certify that I am not counsel for nor related to any of the parties to the foregoing cause, nor employed by them or their attorneys, and am not interested in the subject matter or outcome thereof.

Dated at Harrisburg, Pennsylvania, this 13th day of February, 2002.

NOTARIAL SEAL
EMILY R. CLARK, Notary Public
Harrisburg, Dauphin County
My Commission Expires July 9, 2005

Emily R. Clark

Emily R. Clark
Reporter - Notary Public

(The foregoing certification does not apply to any reproduction of the same by any means unless under the direct control and/or supervision of the certifying reporter.)

District	Dem_Str	President 2000			President 1996			Governor 1994			President 1992		
		Bush	Gore	Other	Dole	Clinton	Other	Ridge	Singel	Other	Bush	Clinton	Other
1		24,218	157,485	3,206	21,881	148,679	9,192	28,443	92,874	7,017	38,915	149,391	18,453
2		22,091	186,306	3,758	20,709	173,975	7,919	22,193	116,716	7,557	31,850	183,740	16,178
3		63,734	135,184	5,125	51,770	114,669	21,752	61,413	74,067	22,191	75,122	124,587	41,064
4		125,636	117,367	6,326	96,207	106,840	25,136	73,434	73,199	38,716	76,083	118,512	51,251
5		122,850	79,776	7,431	91,668	79,881	27,699	91,356	48,195	22,503	89,209	78,015	48,935
6		114,826	94,994	7,921	89,663	83,747	27,796	83,322	55,571	21,590	89,713	78,307	51,225
7		131,018	138,303	8,247	111,916	116,017	28,025	101,849	63,739	32,239	123,765	111,275	51,773
8		128,022	138,705	8,885	99,417	107,460	30,383	91,412	57,384	24,989	99,364	101,726	58,471
9		138,734	69,024	5,152	102,728	70,145	22,768	86,837	48,849	25,065	97,738	66,947	40,636
10		121,947	114,029	9,154	91,478	95,555	28,053	86,627	67,084	17,997	95,659	88,128	49,549
11		98,751	104,692	8,778	76,769	97,252	27,185	70,222	70,537	18,540	84,037	91,517	43,229
12		110,290	94,686	6,009	80,859	93,510	27,531	63,132	80,906	30,183	72,580	102,700	45,447
13		123,000	154,996	7,373	102,796	124,762	24,422	94,845	74,821	28,520	105,263	117,007	45,207
14		79,877	142,979	7,558	70,270	126,535	19,075	63,685	87,050	26,423	65,844	145,111	40,013
15		109,301	114,581	8,761	85,581	96,269	25,617	79,433	56,831	15,730	81,347	92,425	49,247
16		147,341	97,609	6,997	114,133	80,446	21,228	87,044	43,370	31,233	108,188	72,049	43,975
17		145,370	89,143	6,378	116,599	80,978	20,004	86,771	52,751	38,587	114,374	72,393	41,412
18		101,147	140,905	7,162	89,372	119,765	22,860	81,510	82,399	33,335	80,600	137,296	48,184
19		147,609	85,695	7,212	111,734	81,376	21,533	84,986	51,906	32,415	104,978	75,368	44,645
20		110,556	120,878	6,289	84,906	109,185	25,214	74,540	82,572	26,853	69,618	121,638	48,903
21		112,163	110,146	7,936	87,305	105,953	24,517	112,346	48,079	25,310	80,769	105,704	49,177
1		13,10%	85.17%	1.73%	12.17%	82.71%	5.11%	22.16%	72.37%	5.47%	18.82%	72.25%	8.92%
2		10.41%	87.82%	1.77%	10.22%	85.87%	3.91%	15.15%	79.69%	5.16%	13.74%	79.28%	6.98%
3		31.24%	66.25%	2.51%	27.51%	60.93%	11.56%	38.95%	46.98%	14.07%	31.20%	51.74%	17.06%
4		50.39%	47.07%	2.54%	42.16%	46.82%	11.02%	39.62%	39.49%	20.89%	30.95%	48.21%	20.85%
5		58.48%	37.98%	3.54%	46.01%	40.09%	13.90%	56.37%	29.74%	13.89%	41.27%	36.09%	22.64%
6		52.74%	43.63%	3.64%	44.56%	41.62%	13.81%	51.92%	34.63%	13.45%	40.92%	35.72%	23.36%
7		47.20%	49.83%	2.97%	43.72%	45.33%	10.95%	51.48%	32.22%	16.30%	43.15%	38.80%	18.05%
8		46.45%	50.33%	3.22%	41.90%	45.29%	12.81%	52.60%	33.02%	14.38%	38.28%	39.19%	22.53%
9		65.16%	32.42%	2.42%	52.51%	35.85%	11.64%	54.02%	30.39%	15.59%	47.60%	32.61%	19.79%
10		49.75%	46.52%	3.73%	42.53%	44.43%	13.04%	50.45%	39.07%	10.48%	41.00%	37.77%	21.24%
11		46.53%	49.33%	4.14%	38.15%	48.33%	13.51%	44.08%	44.28%	11.64%	38.41%	41.83%	19.76%
12		52.27%	44.88%	2.85%	40.05%	46.32%	13.64%	36.24%	46.44%	17.32%	32.88%	46.53%	20.59%
13		43.10%	54.31%	2.58%	40.80%	49.51%	9.69%	47.86%	37.75%	14.39%	39.35%	43.74%	16.90%
14		34.67%	62.05%	3.28%	32.55%	58.61%	8.84%	35.95%	49.14%	14.91%	26.24%	57.82%	15.94%
15		46.98%	49.25%	3.77%	41.25%	46.40%	12.35%	52.26%	37.39%	10.35%	36.48%	41.44%	22.08%
16		58.48%	38.74%	2.78%	52.89%	37.28%	9.84%	53.85%	26.83%	19.32%	48.25%	32.13%	19.61%
17		60.35%	37.01%	2.65%	53.59%	37.22%	9.19%	48.72%	29.62%	21.66%	50.12%	31.73%	18.15%
18		40.59%	56.54%	2.87%	38.52%	51.62%	9.85%	41.32%	41.78%	16.90%	30.29%	51.60%	18.11%
19		61.37%	35.63%	3.00%	52.06%	37.91%	10.03%	50.20%	30.66%	19.15%	46.66%	33.50%	19.84%
20		46.51%	50.85%	2.65%	38.72%	49.79%	11.50%	40.52%	44.88%	14.60%	28.99%	50.65%	20.36%
21		48.71%	47.84%	3.45%	40.09%	48.65%	11.26%	60.49%	25.89%	13.63%	34.27%	44.86%	20.87%

EXHIBIT

56

District	Dem_Str	President 2000			President 1996			Governor 1994			President 1992			
		Bush	Gore	Other	Dole	Clinton	Other	Ridge	Singel	Other	Bush	Clinton	Other	
	1	81.98%	31,717	182,154	4,055	28,921	167,499	13,261	39,148	108,122	10,621	51,225	173,368	26,920
	2	85.75%	29,295	221,013	4,554	27,062	206,171	10,086	29,752	137,180	10,016	41,874	215,743	20,858
	3	46.08%	128,404	117,241	8,623	99,249	112,943	28,086	124,480	51,940	28,834	91,402	112,745	55,695
	4	47.59%	152,314	134,704	7,518	122,251	120,680	26,821	98,658	79,611	42,952	101,286	132,230	58,171
	5	41.66%	137,675	89,122	8,040	102,219	90,344	30,310	98,810	57,144	25,748	98,602	88,144	54,517
	6	45.37%	128,820	130,377	8,057	102,687	104,900	25,537	88,695	61,039	26,783	101,887	99,654	51,882
	7	44.94%	141,774	151,267	8,870	119,507	126,392	31,141	109,493	68,912	35,659	133,273	120,262	56,806
	8	46.92%	130,554	145,213	9,130	102,040	113,103	31,472	94,652	60,711	26,369	103,353	107,598	60,287
	9	39.07%	149,317	80,116	5,596	110,029	80,791	25,473	90,318	58,969	28,968	103,957	78,768	44,467
	10	42.67%	140,271	100,880	9,215	104,911	89,309	30,419	97,658	62,329	20,667	108,266	81,683	51,706
	11	56.19%	101,451	127,241	9,665	79,027	112,550	28,788	73,025	81,468	18,895	87,542	106,174	47,244
	12	59.40%	106,349	132,886	7,266	77,796	127,798	31,081	64,058	109,206	32,839	69,296	146,654	50,118
	13	51.39%	117,806	156,203	7,482	96,132	128,290	27,914	95,429	78,074	30,706	108,887	127,744	52,116
	14	67.38%	74,091	183,711	9,266	66,151	163,254	24,528	64,141	115,343	31,233	64,649	191,562	46,717
	15	47.16%	116,612	119,296	9,117	91,172	99,922	26,851	83,791	58,672	17,309	85,852	95,119	51,126
	16	34.79%	144,667	82,651	6,355	115,220	71,772	18,885	85,057	39,772	32,654	108,644	64,970	38,168
	17	42.63%	139,499	103,922	7,761	109,736	94,982	26,858	93,034	66,260	33,566	111,313	86,094	50,603
	18	45.68%	154,172	139,441	7,557	126,100	117,674	28,292	105,678	79,906	39,547	103,618	127,125	63,254
	19	37.96%	153,693	90,045	7,531	117,551	84,625	22,106	89,523	54,242	33,627	110,090	78,199	46,319
	1	14.55%	83.59%	1.86%	13.79%	79.88%	6.32%	24.79%	68.48%	6.73%	20.37%	68.93%	10.70%	
	2	11.49%	86.72%	1.79%	11.12%	84.73%	4.15%	16.81%	77.53%	5.66%	15.04%	77.47%	7.49%	
	3	50.50%	46.11%	3.39%	41.31%	47.01%	11.69%	60.65%	25.31%	14.05%	35.18%	43.39%	21.43%	
	4	51.71%	45.73%	2.55%	45.32%	44.74%	9.94%	44.60%	35.99%	19.42%	34.72%	45.33%	19.94%	
	5	58.63%	37.95%	3.42%	45.86%	40.54%	13.60%	54.38%	31.45%	14.17%	40.87%	36.53%	22.60%	
	6	48.20%	48.78%	3.01%	44.05%	45.00%	10.95%	50.25%	34.58%	15.17%	40.20%	39.32%	20.47%	
	7	46.96%	50.10%	2.94%	43.14%	45.62%	11.24%	51.15%	32.19%	16.66%	42.94%	38.75%	18.30%	
	8	45.82%	50.97%	3.20%	41.38%	45.86%	12.76%	52.08%	33.41%	14.51%	38.10%	39.67%	22.23%	
	9	63.53%	34.09%	2.38%	50.87%	37.35%	11.78%	50.67%	33.08%	16.25%	45.76%	34.67%	19.57%	
	10	56.03%	40.29%	3.68%	46.70%	39.76%	13.54%	54.06%	34.50%	11.44%	44.80%	33.80%	21.40%	
	11	42.56%	53.38%	4.05%	35.86%	51.07%	13.06%	42.12%	46.99%	10.90%	36.33%	44.06%	19.61%	
	12	43.14%	53.91%	2.95%	32.87%	54.00%	13.13%	31.08%	52.99%	15.93%	26.04%	55.12%	18.84%	
	13	41.85%	55.49%	2.66%	38.10%	50.84%	11.06%	46.73%	38.23%	15.04%	37.71%	44.24%	18.05%	
	14	27.74%	68.79%	3.47%	26.05%	64.29%	9.66%	30.44%	54.74%	14.82%	21.34%	63.24%	15.42%	
	15	47.59%	48.69%	3.72%	41.83%	45.85%	12.32%	52.44%	36.72%	10.83%	36.99%	40.98%	22.03%	
	16	61.91%	35.37%	2.72%	55.97%	34.86%	9.17%	54.01%	25.25%	20.73%	51.30%	30.68%	18.02%	
	17	55.54%	41.37%	3.09%	47.39%	41.02%	11.60%	48.24%	34.36%	17.40%	44.88%	34.71%	20.40%	
	18	51.19%	46.30%	2.51%	46.35%	43.25%	10.40%	46.94%	35.49%	17.57%	35.24%	43.24%	21.52%	
	19	61.17%	35.84%	3.00%	52.41%	37.73%	9.86%	50.47%	30.58%	18.96%	46.93%	33.33%	19.74%	

District	Voter Registration 2000			US Senate 2000		Attorney Gen 2000		Auditor Gen 2000		Treasurer 2000	
	Republican	Democratic	Other	Santorum	Klink	Fisher	Eisenhower	True	Casey	Hafer	Knoll
1	83,648	314,419	26,967	38,357	163,741	33,065	162,677	24,827	174,999	34,152	163,630
2	62,564	360,599	35,312	36,174	200,635	31,817	199,211	23,750	209,927	34,886	197,445
3	171,435	182,454	35,263	139,345	100,443	142,974	88,267	95,481	135,142	117,477	116,131
4	168,115	225,631	42,353	155,708	132,956	165,262	109,264	118,117	157,378	148,287	131,241
5	190,842	145,735	38,481	145,686	75,344	142,000	72,375	110,292	104,709	128,507	87,577
6	209,105	150,634	59,605	149,990	104,120	142,915	104,023	110,729	136,329	139,428	107,042
7	279,835	119,762	51,547	170,507	116,542	162,543	115,506	129,794	150,495	157,733	119,746
8	208,392	160,289	58,791	155,440	112,853	142,202	116,733	116,470	144,823	140,510	118,892
9	190,087	137,561	31,714	152,469	73,037	156,602	65,578	121,741	100,803	141,601	80,812
10	198,012	147,823	34,520	151,389	81,154	151,066	73,274	112,682	114,929	136,286	89,782
11	135,536	217,168	35,389	111,666	105,001	110,665	94,907	71,227	140,645	94,324	112,830
12	108,110	259,972	27,538	107,258	129,496	114,667	114,665	75,758	153,146	97,173	134,854
13	209,502	187,967	40,862	141,063	122,773	132,114	122,431	100,671	156,610	127,881	126,917
14	78,425	335,453	39,235	79,607	171,757	92,074	145,896	55,123	180,759	86,700	158,881
15	164,599	174,188	53,273	132,702	95,574	121,305	97,589	93,085	128,331	117,840	102,710
16	214,334	106,083	52,213	153,163	69,694	154,237	63,877	141,706	80,295	142,672	74,514
17	203,089	141,621	39,443	147,078	90,459	155,250	78,838	115,163	121,457	149,576	86,115
18	167,486	242,122	42,457	157,937	130,741	177,647	100,782	117,483	156,150	154,667	127,473
19	207,675	126,830	49,318	156,705	80,358	167,188	65,873	128,637	108,111	158,628	75,211
1	19.68%	73.98%	6.34%	18.98%	81.02%	16.89%	83.11%	12.42%	87.58%	17.27%	82.73%
2	13.65%	78.65%	7.70%	15.28%	84.72%	13.77%	86.23%	10.16%	89.84%	15.02%	84.98%
3	44.05%	46.89%	9.06%	58.11%	41.89%	61.83%	38.17%	41.40%	58.60%	50.29%	49.71%
4	38.55%	51.74%	9.71%	53.94%	46.06%	60.20%	39.80%	42.87%	57.13%	53.05%	46.95%
5	50.88%	38.86%	10.26%	65.91%	34.09%	66.24%	33.76%	51.30%	48.70%	59.47%	40.53%
6	49.86%	35.92%	14.21%	59.03%	40.97%	57.87%	42.13%	44.82%	55.18%	56.57%	43.43%
7	62.03%	26.55%	11.43%	59.40%	40.60%	58.46%	41.54%	46.31%	53.69%	56.85%	43.15%
8	48.75%	37.50%	13.75%	57.94%	42.06%	54.92%	45.08%	44.57%	55.43%	54.17%	45.83%
9	52.90%	38.28%	8.83%	67.61%	32.39%	70.48%	29.52%	54.70%	45.30%	63.67%	36.33%
10	52.06%	38.86%	9.08%	65.10%	34.90%	67.34%	32.66%	49.51%	50.49%	60.29%	39.71%
11	34.92%	55.96%	9.12%	51.54%	48.46%	53.83%	46.17%	33.62%	66.38%	45.53%	54.47%
12	27.33%	65.71%	6.96%	45.30%	54.70%	50.00%	50.00%	33.10%	66.90%	41.88%	58.12%
13	47.79%	42.88%	9.33%	53.47%	46.53%	51.90%	48.10%	39.13%	60.87%	50.19%	49.81%
14	17.31%	74.03%	8.66%	31.67%	68.33%	38.69%	61.31%	23.37%	76.63%	35.30%	64.70%
15	41.98%	44.43%	13.59%	58.13%	41.87%	55.42%	44.58%	42.04%	57.96%	53.43%	46.57%
16	57.52%	28.47%	14.01%	68.73%	31.27%	70.71%	29.29%	63.83%	36.17%	65.69%	34.31%
17	52.87%	36.87%	10.27%	61.92%	38.08%	66.32%	33.68%	48.67%	51.33%	63.46%	36.54%
18	37.05%	53.56%	9.39%	54.71%	45.29%	63.80%	36.20%	42.93%	57.07%	54.82%	45.18%
19	54.11%	33.04%	12.85%	66.10%	33.90%	71.74%	28.26%	54.33%	45.67%	67.84%	32.16%

District	Governor 1998			U S Senate 1998		Attorney Gen 1996		Auditor Gen 1996		Treasurer 1996		U S Senate 1994		
	Ridge	Itkin	Other	Specter	Lloyd	Fisher	Kohn	Nyce	Casey	Hafer	Knoll	Santorum	Wofford	
	1	36,787	74,134	4,880	39,736	72,646	32,699	156,559	28,546	158,088	39,518	147,894	34,419	115,819
	2	36,876	98,402	6,087	45,022	92,580	29,950	192,369	30,340	188,181	41,258	180,059	26,446	145,280
	3	98,937	40,912	28,726	99,231	54,335	119,952	98,398	97,571	117,559	116,553	95,773	108,732	83,002
	4	99,866	57,032	32,174	116,568	61,684	139,235	113,969	107,860	141,433	132,329	111,192	118,204	96,144
	5	97,547	36,205	21,230	101,182	45,421	125,060	80,816	89,602	114,675	111,855	86,982	104,652	67,552
	6	96,723	42,505	15,702	103,656	43,269	118,528	97,999	109,284	101,963	127,862	82,283	94,609	71,674
	7	120,883	44,814	18,292	125,291	47,867	141,242	110,952	129,770	118,969	149,590	95,704	114,200	85,634
	8	101,859	43,235	12,767	100,051	46,589	119,436	103,489	109,622	110,114	124,815	92,471	92,111	73,205
	9	97,823	33,132	21,712	97,228	49,403	130,010	74,027	95,768	107,518	114,889	80,712	102,955	66,061
	10	112,093	42,391	14,110	113,694	46,049	120,088	80,920	87,321	118,252	104,916	90,276	100,881	69,372
	11	85,726	53,540	12,794	85,957	53,581	86,413	104,279	64,969	134,544	76,475	110,094	74,301	88,394
	12	73,057	61,223	30,434	81,709	74,835	93,208	125,149	66,714	149,501	89,703	121,901	80,466	115,063
	13	107,842	50,387	15,664	112,718	51,127	111,036	117,150	100,834	122,248	121,989	99,167	94,904	94,118
	14	64,421	75,192	21,495	76,733	71,259	82,718	145,985	58,503	163,422	88,056	137,056	70,845	132,707
	15	102,566	45,871	8,772	98,370	47,610	99,492	92,626	103,279	90,350	108,356	81,597	81,679	69,173
	16	93,286	24,159	15,399	91,207	30,357	127,984	63,411	106,907	80,244	112,937	68,198	100,353	45,895
	17	106,734	36,746	18,852	110,251	44,333	127,381	88,647	99,638	115,235	118,656	88,550	105,666	74,121
	18	94,133	53,496	35,035	112,960	56,342	151,131	102,243	113,658	132,375	139,481	105,463	123,684	92,161
	19	109,203	27,710	14,513	102,720	38,884	132,050	75,264	106,310	101,354	121,331	76,958	103,951	61,359
	1	31.77%	64.02%	4.21%	35.36%	64.64%	17.28%	82.72%	15.30%	84.70%	21.09%	78.91%	22.91%	77.09%
	2	26.09%	69.61%	4.31%	32.72%	67.28%	13.47%	86.53%	13.88%	86.12%	18.64%	81.36%	15.40%	84.60%
	3	58.69%	24.27%	17.04%	64.62%	35.38%	54.94%	45.06%	45.35%	54.65%	54.89%	45.11%	56.71%	43.29%
	4	52.82%	30.16%	17.02%	65.40%	34.60%	54.99%	45.01%	43.27%	56.73%	54.34%	45.66%	55.15%	44.85%
	5	62.94%	23.36%	13.70%	69.02%	30.98%	60.75%	39.25%	43.86%	56.14%	56.25%	43.75%	60.77%	39.23%
	6	62.43%	27.43%	10.13%	70.55%	29.45%	54.74%	45.26%	51.73%	48.27%	60.84%	39.16%	56.90%	43.10%
	7	65.70%	24.36%	9.94%	72.36%	27.64%	56.01%	43.99%	52.17%	47.83%	60.98%	39.02%	57.15%	42.85%
	8	64.52%	27.39%	8.09%	68.23%	31.77%	53.58%	46.42%	49.89%	50.11%	57.44%	42.56%	55.72%	44.28%
	9	64.08%	21.70%	14.22%	66.31%	33.69%	63.72%	36.28%	47.11%	52.89%	58.74%	41.26%	60.91%	39.09%
	10	66.49%	25.14%	8.37%	71.17%	28.83%	59.74%	40.26%	42.48%	57.52%	53.75%	46.25%	59.25%	40.75%
	11	56.38%	35.21%	8.41%	61.60%	38.40%	45.32%	54.68%	32.56%	67.44%	40.99%	59.01%	45.67%	54.33%
	12	44.35%	37.17%	18.48%	52.20%	47.80%	42.69%	57.31%	30.86%	69.14%	42.39%	57.61%	41.15%	58.85%
	13	62.02%	28.98%	9.01%	68.80%	31.20%	48.66%	51.34%	45.20%	54.80%	55.16%	44.84%	50.21%	49.79%
	14	39.99%	46.67%	13.34%	51.85%	48.15%	36.17%	63.83%	26.36%	73.64%	39.12%	60.88%	34.80%	65.20%
	15	65.24%	29.18%	5.58%	67.39%	32.61%	51.79%	48.21%	53.34%	46.66%	57.04%	42.96%	54.15%	45.85%
	16	70.22%	18.19%	11.59%	75.03%	24.97%	66.87%	33.13%	57.12%	42.88%	62.35%	37.65%	68.62%	31.38%
	17	65.75%	22.64%	11.61%	71.32%	28.68%	58.97%	41.03%	46.37%	53.63%	57.26%	42.74%	58.77%	41.23%
	18	51.53%	29.29%	19.18%	66.72%	33.28%	59.65%	40.35%	46.20%	53.80%	56.94%	43.06%	57.30%	42.70%
	19	72.12%	18.30%	9.58%	72.54%	27.46%	63.70%	36.30%	51.19%	48.81%	61.19%	38.81%	62.88%	37.12%

District	U S Senate 1992	Attorney Gen 1992	Auditor Gen 1992	Treasurer 1992	U S Senate 1991					
	Specter Yeakel	Preate Kohn	Hafer Lewis	Henry Knoll	Thornburg Wofford					
1	90,692	146,791	64,451	153,692	62,822	151,644	41,784	168,346	44,609	128,904
2	90,025	176,326	57,224	188,732	56,787	183,905	35,434	200,811	34,670	154,114
3	117,509	115,000	129,640	104,312	138,267	91,696	74,894	153,066	84,816	97,413
4	141,710	129,068	130,076	142,205	147,133	123,187	77,924	189,867	89,924	116,724
5	115,186	103,954	127,138	95,996	137,663	82,334	82,825	136,767	93,050	79,794
6	127,235	108,819	128,887	104,615	135,794	90,793	96,423	130,233	81,677	74,082
7	164,637	125,446	169,759	112,387	166,071	108,859	135,228	137,212	104,866	99,419
8	133,891	118,950	135,136	107,178	125,625	112,813	102,644	129,174	80,451	84,912
9	119,137	88,189	124,534	89,453	132,556	78,217	84,396	128,088	92,267	73,793
10	122,933	98,599	152,699	70,881	129,607	85,938	93,659	124,869	93,023	82,886
11	110,020	114,136	139,130	81,690	102,521	105,612	63,493	136,715	69,898	107,451
12	113,780	134,685	99,139	149,393	109,814	136,584	51,032	194,067	68,104	133,235
13	154,721	114,028	140,983	114,712	133,566	113,464	100,703	141,216	92,539	112,041
14	122,935	158,072	90,679	180,234	108,764	160,721	42,153	222,981	60,575	150,519
15	105,303	109,268	106,931	98,559	110,054	90,738	76,250	121,138	69,523	74,846
16	111,674	74,210	122,066	71,923	117,403	64,338	103,675	85,725	82,710	44,099
17	134,109	96,089	139,763	91,871	138,039	88,935	93,300	133,958	94,286	78,352
18	153,347	119,636	130,502	140,081	150,065	118,886	80,124	184,430	97,026	107,398
19	124,608	90,243	128,411	87,195	133,920	78,033	95,883	113,837	87,558	61,706
1	38.19%	61.81%	29.55%	70.45%	29.29%	70.71%	19.88%	80.12%	25.71%	74.29%
2	33.80%	66.20%	23.27%	76.73%	23.59%	76.41%	15.00%	85.00%	18.36%	81.64%
3	50.54%	49.46%	55.41%	44.59%	60.13%	39.87%	32.85%	67.15%	46.54%	53.46%
4	52.33%	47.67%	47.77%	52.23%	54.43%	45.57%	29.10%	70.90%	43.52%	56.48%
5	52.56%	47.44%	56.98%	43.02%	62.57%	37.43%	37.72%	62.28%	53.83%	46.17%
6	53.90%	46.10%	55.20%	44.80%	59.93%	40.07%	42.54%	57.46%	52.44%	47.56%
7	56.76%	43.24%	60.17%	39.83%	60.40%	39.60%	49.64%	50.36%	51.33%	48.67%
8	52.95%	47.05%	55.77%	44.23%	52.69%	47.31%	44.28%	55.72%	48.65%	51.35%
9	57.46%	42.54%	58.20%	41.80%	62.89%	37.11%	39.72%	60.28%	55.56%	44.44%
10	55.49%	44.51%	68.30%	31.70%	60.13%	39.87%	42.86%	57.14%	52.88%	47.12%
11	49.08%	50.92%	63.01%	36.99%	49.26%	50.74%	31.71%	68.29%	39.41%	60.59%
12	45.79%	54.21%	39.89%	60.11%	44.57%	55.43%	20.82%	79.18%	33.83%	66.17%
13	57.57%	42.43%	55.14%	44.86%	54.07%	45.93%	41.63%	58.37%	45.23%	54.77%
14	43.75%	56.25%	33.47%	66.53%	40.36%	59.64%	15.90%	84.10%	28.70%	71.30%
15	49.08%	50.92%	52.04%	47.96%	54.81%	45.19%	38.63%	61.37%	48.16%	51.84%
16	60.08%	39.92%	62.92%	37.08%	64.60%	35.40%	54.74%	45.26%	65.22%	34.78%
17	58.26%	41.74%	60.34%	39.66%	60.82%	39.18%	41.05%	58.95%	54.61%	45.39%
18	56.17%	43.83%	48.23%	51.77%	55.80%	44.20%	30.29%	69.71%	47.46%	52.54%
19	58.00%	42.00%	59.56%	40.44%	63.18%	36.82%	45.72%	54.28%	58.66%	41.34%

1 IN THE COMMONWEALTH COURT OF PENNSYLVANIA
2 JOANN ERFER AND JEFFREY B. ALBERT, :
3 Petitioners :
4 vs. : NO. 10 M.D. 2002
5 THE COMMONWEALTH OF PENNSYLVANIA, :
6 et al., :
7 Respondents :

7 TRANSCRIPT OF PROCEEDINGS

8 BEFORE: The Honorable Dan Pellegrini, Judge
9 DATE: February 1, 2002
10 PLACE: Courtroom No. 1
11 South Office Building
12 Fifth Floor
Harrisburg, Pennsylvania

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1 lean to their party -- that were placed in districts that
2 lean to their party would be reelected, and I assumed
3 that incumbents -- that's with the exception of paired
4 incumbents. Paired incumbents who were thrown into
5 districts, if there was one of each party, if it leaned
6 to the republican, I awarded it to them, if it leaned to
7 the democrats, I gave it to them. For incumbents who
8 were previously in a district that leaned against their
9 party, I looked to see how much the district changed.
10 Generally if the district didn't change very much, I
11 assumed they would still win even if the district still
12 leaned against them somewhat.

13 Q Can you explain to the Court how you came
14 to conclusions about which way districts leaned, to use
15 your term?

16 A Essentially, districts that performed
17 above the average district in the state for the
18 republicans. For example, when I looked at the
19 presidential race, if President Bush garnered a higher
20 share of the votes in say District 4 than in the average
21 district, then it was a more republican district than the
22 average district and I said it leaned to republicans.

23 Q Is that a standard methodology in your
24 field for ascertaining how districts lean one way or the
25 other in this kind of situation?

1 A Yes, I would say it is considered a good
2 rough estimate.

3 THE COURT: It's not registration, you are
4 depending on voting pattern?

5 THE WITNESS: Yes. What I talked about so
6 far is that, but I did also look at registration, Your
7 Honor.

8 BY MR. SMITH:

9 Q Let me put up Exhibit 44 and ask you to
10 explain, using it, how you looked at the 19 races and
11 plugged them in to make judgments about the four
12 different plans we are looking at here. Again, the four
13 plans are the '92 plan, the Conference Plan, which is the
14 one that was passed last month, and the first two
15 alternative plans that we presented today. Is that
16 right?

17 A Yes, it is.

18 Q Can you tell me what Exhibit 44 shows?

19 A Sure. If you look at, for example, just
20 the first line and maybe the upper left cell where
21 President 2000 and Conference intersect, essentially it's
22 the percentage of districts in the conference point of
23 the 19 districts that were above average in strength to
24 the republicans. So that 63 means that 3 percent of the
25 districts drawn under the new Conference Plan, the

CERTIFICATE OF SERVICE

I certify that on February 22, 2002, I caused a copy of the foregoing Memorandum of Law in Support of Presiding Officers' Motion to Preclude Expert Testimony by Dr. Allan Lichtman to be served on the following in the manner indicated:

Fax and First class mail

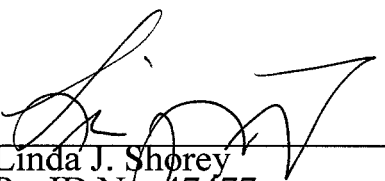
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