How Many Democrats per Republican at UC-Berkeley and Stanford?
Voter Registration Data Across 23 Academic Departments
by

Daniel B. Klein
Associate Professor
Department of Economics
Santa Clara University
Santa Clara, CA 95053
Tel. 1-408-554-6951
Email: dklein@scu.edu
And Associate Fellow, Ratio Institute, Stockholm

Andrew Western
Undergraduate student
Economics and Political Science
Santa Clara University
Santa Clara, CA 95053
Tel. 1-602-790-8359
Email: awestern@scu.edu

To appear in Academic Questions.


#### Abstract

Using the records of the seven San Francisco Bay Area counties that surround University of California, Berkeley and Stanford University, we conducted a systematic and thorough study of the party registration of the Berkeley and Stanford faculty in 23 academic departments. The departments span the social sciences, humanities, hard sciences, math, law, journalism, engineering, medicine, and the business school. Of the total of 1497 individual names on the cumulative list, we obtained readings on 1005 , or 67 percent. The findings support the "one-party campus" conjecture. For UC-Berkeley, we found an overall Democrat:Republican ratio of 9.9:1. For Stanford, we found an overall D:R ratio of 7.6:1. Moreover, the breakdown by faculty rank shows that Republicans are an "endangered species" on the two campuses. This article contains a link to the complete data (with individual identities redacted).


Keywords: Democrat, Republican, party registration, UC-Berkeley, Stanford, one-party campus, academia, political culture.

Investigation Homepage: http://lsb.scu.edu/~dklein/Voter/default.htm

## I. INTRODUCTION

There is increasing public discussion about whether the cultural institutions of the United States are ideologically skewed, relative to the general population. The major realms of political culture include the news media, K-12 schooling, academia, governmental institutions, cause-directed organizations, grant-making private foundations, the entertainment industries, and the arts. There is increasing belief that these institutions are dominated by people who vote Democratic. Where evidence is available, it generally backs up the claim that the D to R ratios in such settings are very lopsided. However, the evidence is much less abundant than one might guess. Much of the evidence that does exist is generated by openly conservative organizations, and the research is rarely reported in a scholarly manner. This paper contributes to the task of ascertaining the basic facts about ideological lopsidedness in academia by reporting the results of a systematic study of voter registration of large parts of the faculty at University of California, Berkeley and Stanford University.

## II. WAYS OF SLICING THE DATA

America has a two-party system, and conventional discourse employs a onedimensional formulation of politics, "liberal vs. conservative," which corresponds closely to Democratic vs. Republican. But voting data includes Greens, Libertarians, and so on. When the magazine The American Enterprise (Zinsmeister 2002) presented voter registration data, it grouped together Democrats, Greens, and Working Families Party
members as "Left", and Republicans and Libertarians as "Right." From a variety of data we know that in academia third-party voters are very few in number. By getting a few Libertarians into the "denominator," the Left to Right approach might decrease the degree of lopsidedness, but only very slightly. ${ }^{1}$ As it happens, there are almost no Libertarians at Berkeley and Stanford (we found none at Berkeley and two at Stanford). Here we focus simply on the D to R ratio.

Next, there is the matter of defining the D to R ratio. There are many different departments. There are many different "schools" or "colleges" or "divisions" within a single university. There are many different universities. Data issues aside, defining the D to R ratio would be a non-issue only if Ds and Rs were found in the same proportion uniformly over all departments, divisions, and universities throughout the country. But that is not the case.

It is straight-forward to compute the D to R ratio department by department. But issues arise in coming up with an overall ratio. One approach is to average the department ratios. But if a department has 6 Ds and 0 Rs , then the D to R ratio is infinity. Even if there are no infinities, averaging the department ratios gives undue power to the few extreme departments. Suppose there are just two departments, Economics with 6 Ds and 4 Rs, and Sociology with 9 Ds and 1 R. Averaging the ratios means averaging 1.5 to 1 and 9 to 1 , yielding 5.25 to 1 . But between Economics and Sociology there are 15 Ds and 5 Rs, a one-big-pool ratio of 3 to 1 .

[^0]The one-big-pool ratio maximizes the diluting effect of the Rs. Whether the one-big-pool ratio is really the most relevant will depend on the problem addressed. For an undergraduate student majoring in sociology, it is the ratio in the sociology department that matters most, and for a graduate student in sociology, it is all that matters.

In this paper we present the Berkeley and Stanford voter registration data by department and as one-big-pool. The "pool" is variously defined as "social sciences," "hard sciences," etc. To avoid overstatement, we do not compute averages of the department ratios.

## III. PREVIOUS RESEARCH ON THE D to R RATIO IN ACADEMIA

## Survey Studies

Two kinds of instruments, surveys and voter registration, have been used to research the political views and voting of academics. The virtues of surveys are the ability to tailor questions as desired, investigate particular target populations, and obtain self-reported information. The problem with surveys is that one is never sure that the sampling and response propensities approximate perfect randomness among the target population. Hence, one is never sure how faithfully the survey data represent the target population.

During the past 35 years, Seymour Martin Lipset and his collaborators have generated a series of studies and reports on the political alignment in academia (Lipset 1972; Ladd and Lipset 1975; Lipset 1982; Lipset 1994). They have all found the social
sciences and humanities to be preponderantly Democratic. In recent years, the most definitive research project is that of Klein and Stern (2004), based on a detailed survey of anthropologists, economists, historians, philosophers, political scientists, and sociologists. Obtaining mailing lists from major professional associations, they asked respondents their opinion on 18 policy issues. One question asked which political party the respondent most voted for in the past ten years. That question will elicit either "Democratic" or "Republican" even from most "independent" voters. Of the 1678 respondents, 95.6 percent answered the voting question. Based on their survey results and educated guesses about disciplines not surveyed, Klein and Stern conclude that it is safe to refer to the one-big-pool D to R ratio in the social sciences and humanities as at least 7 to 1 . That may be taken as a responsible lower-bound representation of the ratio. Klein and Stern suggest that the ratio is probably at least 8 to 1 . The greatest doubts one could raise about those conclusions would be membership bias (Democrats being more likely to belong to the professional associations) and response bias (Democrats being more likely to respond).

A survey commissioned by the Brookings Institution and conducted by Princeton Survey Research Associates surveyed members of professional associations in economics, history, political science, and sociology. They selected "2,004 academics who specialize in either modern American history, American government, social policy, or public policy" (Light 2001: 3). Across the four fields, a total of 550 responded. The D to R ratios were as follows: Economics 3.7 to 1; History 4.1 to 1; Political Science 4.8 to 1; Sociology 47.0 to 1 (Brookings 2001: 54). A smaller scale study found specialized
ratios for Labor Economists 4.0 to 1 and for Public Economists 3.2 to 1 (Fuchs et al 1998: 1400).

## Voter Registration Studies

The great virtue of voter registration studies is that the information does not depend on the "observation's" voluntary response, so there is no issue of response bias. The problems with the voter registration are, first, that the variable-political party registration-is a very crude indicators of political views, and second, that the data are spotty and somewhat uncertain.

The most significant set of faculty voter registration data is study done by the Center for the Study of Popular Culture (CSPC) and The American Enterprise magazine (Zinsmeister 2002) (we will refer to the CSPC/TAE data as simply the "CSPC data"). David Horowitz and Eli Lehrer (2002) describe the investigation of 32 leading colleges and universities: "We compiled lists of tenured or tenure-track professors of the Economics, English, History, Philosophy, Political Science, and Sociology departments . . . We compared these lists to the voter registration lists of the counties or states in which the colleges were located, and attempted to match individual names." Overall, they found 1397 Democrats and 134 Republicans, a ratio of about 10 to 1.

A number of factors make the study troublesome:

1. CSPC and The American Enterprise are forwardly conservative.
2. The report is not produced to scholarly standards.
3. CSPC has not made the data readily available (although CSPC did furnish us with their data).
4. The comprehensive list in CSPC's investigation of 32 institutions contained 4255 faculty names, so the 1397 identified as Ds make only 33 percent. Fully 64 percent of the comprehensive list could not be identified as either D or R , being absent from the voter rolls, unaffiliated, indeterminate because of multiple records, or registered to minor parties. One could well imagine, therefore, more faculty members voting Republican than is suggested by the 10 to 1 ratio.

In addition to the CSPC data on 32 institutions, there have been numerous scattered studies of individual campuses, usually conducted by a student group, newspaper, or faculty member at that campus. Many of these findings were included in The American Enterprise (Zinsmeister 2002), and others have appeared since. All of these studies have found extreme lopsidedness. But none have been conducted, reported, and disseminated according to the standards of professional scholarship.

## IV. OUR POLITICS

The present topic is inherently political. Readers will naturally and rightly ask who is doing the investigation, and why.

The lead author here, Daniel Klein, is an economist with libertarian sensibilities. His family members were uniformly Democratic, but around age 17 he went from
apolitical to libertarian. In 1980 he voted for the Libertarian presidential candidate, but never since has he voted for an office seeker. Nowadays he is registered nonpartisan and makes a practice of voting on referenda. He has never in any way supported the Republican Party. His motivation for this study was to understand why our political culture does not more readily and thoroughly embrace libertarian ideas, which to him seem so worthy.

The second author here, Andrew Western, is a third-year Santa Clara University student majoring in Economics and Political Science. At age 18 he registered and voted Democratic in 2002, but in 2003 he re-registered Republican, though has not yet voted Republican. When Klein invited him to participate in this project, he readily accepted, partly because as a student the lopsidedness problem was evident to him and partly because the project was an opportunity to participate in scholarly research related to his fields of study.

## V. METHODOLOGY

Although the social sciences and humanities departments are of primary importance to our society's political culture, we included numerous departments from other parts of campus. We decided to investigate the following departments:

- Social Sciences: Anthropology, Economics, Political Science, Psychology and Sociology.
- Humanities: English, French and Italian², History, Linguistics, Music, Philosophy, and Religious Studies.
- Hard Sciences and Math: Biology, Chemistry, Mathematics, Neurobiology/ Neurology, ${ }^{3}$ and Physics.
- Professional schools and departments: Civil and Environmental Engineering, Electrical Engineering, Law, Journalism, ${ }^{4}$ Accounting, and Marketing.

No previous survey or voter registration study is nearly as broad as our coverage here. After deciding which departments to investigate, the investigation involved two tasks:

1. Accumulating lists of current tenure-track faculty. ${ }^{5}$ For Stanford, we used a single printed source: Stanford Directory 2003-2004, published 2003 by Stanford Student Enterprises. This telephone book of more than 700 pages includes a breakdown of faculty by department. For Berkeley, there was no encompassing printed directory with information by department, so instead we worked from the department webpages as they existed in December 2003.

[^1]2. Voter registration is based on residence, and a professor might not live in the county he works in. The second task was going to the voter registrars of the seven counties that surround Berkeley and Stanford, to ascertain as accurately as possible the party registration of each faculty member on the list.

Berkeley is situated in Alameda County. Determining party registration of Berkeley professor John Doe involves a number of challenges. He may not be registered at all. And even if registered, he might have declined to state the party he is registered to, or registered nonpartisan/independent. Further challenges call for a system of uniform treatment: There might be multiple John Does registered in Alameda County, and not to the same party, or there is a John Doe registered Republican in Alameda County and another in San Francisco County registered Democrat.

We ranked the seven counties based on transportation and demographic considerations:

For UC-Berkeley

1. Alameda and Contra Costa
2. San Francisco
3. Santa Clara
4. Solano and San Mateo
5. Marin

## County hierarchy

For Stanford University

1. San Mateo and Santa Clara
2. San Francisco
3. Alameda
4. Contra Costa and Marin
5. Solano

For Berkeley professor John Doe, if the first-level records showed a determinate party registration (either because there was only one John Doe, or because all the John Does were registered to the same party), then we marked the party irrespective of lower-level
information. If the first-level information was multiple and conflicting, we marked it "indeterminate" irrespective of lower-level information. If the first-level counties had no John Doe, then the information at the next level would become decisive, and so on.

## VI. FINDINGS

## Overall Pie Charts

All the selected departments for both universities yielded a cumulative list of 1497 individual names. Of those, we obtained a reading (including nonpartisan and "declined to state") for 1005 names, or 67 percent. By comparison, the CSPC’s combined reading rate for the seven departments they researched at both Berkeley and Stanford was only 50 percent. ${ }^{6}$ In Appendix 1, find a link to the Excel file containing the complete raw data, with individual names redacted.

The following pie-charts convey the basic proportions.

[^2]
## Party registration of UC-Berkeley faculty ( $\mathrm{N}=909$ )




Each minor party makes only a tiny sliver. The most significant is the Green Party, with 2.1 percent at Berkeley and 0.9 percent at Stanford. As for the Libertarian Party, there was zero percent at Berkeley and 0.3 percent at Stanford. All minor parties combined made 2.5 percent at Berkeley and 2.2 percent at Stanford.

## Democrats and Republicans by Department

The following bar-graphs show Democrats and Republicans by department. The bars have been normalized to show one Republican and the corresponding number of Democrats, so as to convey the ratio. When there are no Republicans, the absolute number of Democrats is shown. The actual number is given just above each bar. Each figure also tells the total N searched for.

## Social Science Departments



## Economics departments' D:R ratios



Political Science departments' D:R ratios


Psychology departments' D:R ratios


Sociology departments' D:R ratios


Humanities Departments

English departments' D:R ratios


French \& Italian departments' D:R ratios


History departments' D:R ratios


Linguistics departments' D:R ratios


Music departments' $\mathrm{D}: \mathrm{R}$ ratios


Philosophy departments' D:R ratios


Religious Studies departments' D:R ratios


## Hard Sciences and Mathematics

Biology departments' D:R ratios


Chemistry departments' D:R ratios


Mathematics departments' D:R ratios


Neurology/Neurobiology departments' D:R ratios


Physics departments' D:R ratios


Professional Schools and Departments

Civil \& Environmental Engineering departments' D:R ratios


Electrical Engineering departments' D:R ratios



Law schools' D:R ratios


As for the two business school fields investigated, the Accounting departments and Marketing departments, of 31 combined faculty, we were able out to identify only 9
as either Democratic or Republican. Rather than show department bar-graphs, the following pie-chart shows that we do not have a good reading of party affiliation in the business schools. The matter of the business school is important because when claims of political lopsidedness are raised, people often suggest that the business school leans in the opposite direction and helps balance things out. Our investigation provides evidence to the contrary, but we did not get as good a reading as we had hoped to.


Ds and Rs by Broad Groupings

The following bar-graph shows the D to R data by broad groupings of departments/schools. We see that lopsidedness is most extreme in the social sciences and humanities. This is significant, because those disciplines most directly explore and instill values and basic interpretations of the social world. We also see that lopsidedness runs across campus. This is significant because casual commentators sometimes suggest that lopsidedness is found only in the social sciences and humanities. The data indicate that the one-party character of academia is quite uniform across campus.

Some might suggest that Berkeley and Stanford are non-representative, because the San Francisco Bay Area is significantly more Democratic that the national average. We suspect that this point deserves some weight. However, we doubt that geography has very much to do with the intellectual character of academics and researchers. By selfsorting, training, and professional immersion, they identify (intellectually) primarily with their discipline, not their institution or their locale, and the "invisible college" of their respective disciplines cuts laterally across geography. The Klein \& Stern survey evidence helps to mount a general case that all academic disciplines, including economics, range from predominately to rock-solidly Democratic.

We conjecture that if Berkeley and Stanford are non-representative, it has less to do with geography than with the elite character of those institutions. That is, we would conjecture that the more elite institutions tend to be more rock-solidly Democratic and statist. This conjecture is in line with Lipset’s findings about academic elites (Lipset 1982: 151). (Here, the Klein \& Stern survey is of no help, because it collected no information about the "tier" of the respondent's institution.)

UC-Berkeley broad groupings' D:R ratios


Stanford University broad groupings' D:R ratios


[^3]The following two bar-graphs show the breakdown by rank. Combining Berkeley and Stanford, over the two lower ranks (assistant and associate professor), we find 183 Democrats and 6 Republicans, for a ratio of 30.5 to 1. Five of the 6 Republicans are assistant professors, and quite possibly they will not survive tenure. This rank profile of lopsidedness strongly suggests that the problem has gotten worse over the past decades, and suggests that selection mechanisms have been working in ways that eliminates Republicans. Unless we believe that current professors occasionally mature into Republicans, the data imply that the situation will get worse before it gets better. The full professors, where Republicans are to be found, are the ones who will exit the population soonest. This general pattern, though less extreme, is also found in the Klein \& Stern survey data. The Klein \& Stern survey asked birth-year, rather than rank, but the age profile of D to R ratios has the pattern that fits the rank profile. Moreover, the Klein \& Stern survey asked whether the association member is in academic employment, and the results clearly indicated the selection of Republicans out of academia.

UC-Berkeley faculty rank $D: R$ ratios


Stanford University faculty rank D:R ratios


## Ds and Rs by Gender

The following two bar-graphs show that that the D to R ratio is especially extreme for women faculty.

UC-Berkeley faculty gender $D: R$ ratios


Stanford University faculty gender D:R ratios


## From Conjecture to Fact, from Fact to Awareness

There are now several parts to the body of evidence concerning the "one-party campus" question. A major part is the association-survey research that asks how the respondent has voted. That approach, represented especially by Klein and Stern (2004), avoids the many problems associated with voter registration research; it doesn't matter if the respondent is registered non-partisan, registered elsewhere, or has a common name that makes it impossible to determine her registered party. Also, that approach gets a better reading in that it asks about behavior over an extended period (a decade, in the Klein \& Stern survey), whereas the individual's voter registration might change tomorrow and might not even reflect how one actually votes.

However, the association-survey approach is potentially vulnerable to concerns about bias in association membership and in survey response. These problems are entirely avoided by the voter-registration approach. Thus, the two approaches have disjoint sets of weaknesses. Each avoids the weakness of the other. If the two approaches agree, the common conclusion is powerfully supported.

The voter-registration studies by CSPC and other scattered conservative and libertarian groups find extreme lopsidedness, but there remains a question of credibility. The present study of Berkeley and Stanford is the first voter-registration study to be conducted with refinement and reported and disseminated according to academic standards. It too finds extreme lopsidedness.

Significantly, Berkeley and Stanford were two of the campuses among the 32 institutions investigated by CSPC/TAE. Our investigation may be regarded as a random
"spot check" of CSPC/TAE's integrity, with an evaluation that is positive. We have done a line by line comparison of our data and their data. Our data is much more complete and refined, but the D to R ratios are basically the same. ${ }^{7}$ As scholarly research, the CSPC/TAE work on Berkeley and Stanford was found to be substandard, but essentially honest and sound. In that sense we extend a confidence from our scholarly work on Berkeley and Stanford forward to the general conclusion (not the exact numbers) for all 32 campuses covered by CSPC/TAE.

Thus, the two approaches to the "one-party campus" question agree: they find that the social sciences and humanities has a D to R ratio upwards of 7 to 1 , and probably at least 8 to 1 . The other parts of campus also show extreme lopsided. That amounts to a one-party system. It is no longer a matter of conjecture. It is established fact.

The meaning of lopsidedness for university life is a topic for another occasion. Here we offer a single point: University governance consists primarily of departmental autonomy, and departments operate on the basis of majoritarianism (and to a small extent chair prerogative). A ratio of even 2 to 1 is deadly to the minority. A ratio of 5 to 1 means marginalization. Someone of a minority viewpoint is dependent frequently on the cooperation of her departmental colleagues for many small considerations. Lopsidedness

[^4]means that dissenters are avoided or expelled, and that any who survive are very unlikely to be vocal critics of the dominant viewpoints.

These facts are inherently important. Academia is a major part of the political culture; it profoundly influences how tens of millions of Americans will understand social affairs and, indeed, their own personal selfhood. The next step, then, is full awareness. All interested parties-students, parents, taxpayers, and the faculty themselves-should become aware of the facts.

APPENDIX 1: Link to Excel file with the complete data, with individual names redacted. (We will release the file with the names intact to those who assure us that the information will be used discreetly and only for purposes of verification of the data.)

## References

Alston, Richard M., James R. Kearl, and Michael B. Vaughan. 1992. "Is There a Consensus among Economists in the 1990s? American Economic Review, Papers and Proceedings 82 (May): 203-09.

Brookings Institution. 2001. "National Survey on Government Endeavors," Prepared by Princeton Survey Research Associates, dated November 9, online at: http://www.brookings.edu/comm/reformwatch/rw04/surveydata.pdf.

Fuchs, Victor. R., Alan B. Krueger, and James M. Poterba. 1998. "Economists’ Views about Parameters, Values, and Policies: Survey Results in Labor and Public Economics." Journal of Economic Literature 36 (3): 1387-425.
Fuller, D. A., and D. Geide-Stevenson. 2003. "Consensus among Economists: Revisited." Journal of Economic Education 34 (4): 369-387.

Horowitz, David and Eli Lehrer. 2002. Political Bias in the Administrations and Faculties of 32 Elite Colleges and Universities. A Report of the Center for the Study of Popular Culture. Online http://www.frontpagemag.com/Content/read.asp?ID=55. Accessed May 3, 2004.
Kearl, J. R., Clayne L. Pope, Gordon C. Whiting, and Larry T. Wimmer. 1979. "A confusion of economists." American Economic Review, Papers and Proceedings 69 (May): 28-37.
Klein, Daniel B. and Charolotta Stern. 2004. How Politically Diverse Are the Social Sciences and Humanities? Survey Evidence from Six Fields. Academic Questions, forthcoming.

Ladd, Everett Carll, Jr. and Seymour Martin Lipset. 1975. The Divided Academy: Professors \& Politics. New York: McGraw-Hill.

Light, Paul C. 2001. "Government’s Greatest Priorities of the Next Half Century," Reform Watch, No. 4, Brookings Institution, December, online at: http://www.brookings.edu/dybdocroot/comm/reformwatch/rw04/rw4.pdf.

Lipset, Seymour Martin. 1972. "The Politics of American Sociologist." American Journal of Sociology, 78 (1), June: 67-104.
Lipset, Seymour Martin. 1982. "The Academic Mind at the Top: The Political Behavior and Values of Faculty Elites." Public Opinion Quarterly, 46 (2), Summer: 143168.

Lipset, Seymour Martin. 1994. "The State of American Sociology." Sociological Forum, 9 (2), June: 199-220.

Zinsmeister, Karl. 2002. "The Shame of America’s One-Party Campuses." The American Enterprise 13(6), September: 18-25.


#### Abstract

About the Authors:

Daniel Klein is Associate Professor of Economics at Santa Clara University, where he is also the Director of the Civil Society Institute. He is also an Associate Fellow of the Ratio Institute in Stockholm, where he spends part of the year. His interests are in public policy and social theory. He is the editor of What Do Economists Contribute? (Macmillan/Palgrave, 1999) and Reputation: Studies in the Voluntary Elicitation of Good Conduct (University of Michigan Press, 1997). Klein can be reached by email: dklein@scu.edu or Tel: 408-554-6951.


Andrew Western is a third-year student at Santa Clara University majoring in Economics and Political Science.


[^0]:    ${ }^{1}$ A second reason not to do the analysis as Left to Right is that, as found in Klein \& Stern's surveys of policy opinions (described below), although Rs are closer to Libertarians than Ds are, Rs are much closer to Ds than to Libertarians, so it doesn't make much sense to group Rs and Libertarians together.

[^1]:    ${ }^{2}$ Stanford has a French and Italian department, while Berkeley has a French department and an Italian Studies department, which we treat as one departmental group.
    ${ }^{3}$ Stanford has a medical school and Berkeley does not. We specifically wanted to investigate at least one major department medical school department, and selected the Neurology department at Stanford. To create a match at Berkeley, we selected the neurobiology division of the Department of Molecular and Cell Biology.
    ${ }^{4}$ Journalism was investigated for Berkeley only; Stanford does not have a journalism school or department.
    ${ }^{5}$ That is, Assistant, Associate and Full Professors of the department (we did not include emeriti faculty).

[^2]:    ${ }^{6}$ Specifically, CSPS obtained readings on 271 of 544 names for economics, English, history, philosophy, political science, sociology, and civil and environmental engineering at both schools.

[^3]:    Ds and Rs by Rank

[^4]:    ${ }^{7}$ CSPC's report (Horowitz and Lehrer 2002) included findings uniformly across all schools for six departments: economics, English, history, philosophy, political science, and sociology, while their Berkeley and Stanford datasets in Excel files (obtained from Mr. Andrew Jones) also include Civil and Environmental Engineering. For all seven departments, our study arrives at a one-big-pool ratio for Berkeley of 13.6 to 1 , versus CSPC’s 8.1 to 1 , and for Stanford 8.2 to 1, versus CSPC’s 9.6 to 1 . On a department by department basis, in 10 cases our D to R ratio was greater than CSPC's, and in four cases theirs was greater (this counts 17 -to- 0 as greater than 14-to-0). The data generally match up, except that ours more reliably obtained a reading, and that the lists differed somewhat. Because our investigation was conducted two years after CSPC's, discrepancies need not be indicative of error.

