

EXHIBIT

A

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA

Case No. CV-06-1268-PHX-ROSI (Lead)
CV-06-1362-PCT-ROS
CV-06-1575-PCT-ROS

DEPOSITION OF JEFFREY STEPHEN ZAX March 12, 2008

Maria M. Gonzalez, et al.,

Plaintiffs,

vs.

State of Arizona, et al.,

Defendants.

APPEARANCES:

MEXICAN AMERICAN LEGAL DEFENSE AND
EDUCATIONAL FUND

By Nina Perales, Esq.

110 Broadway, Suite 300

San Antonio, Texas 78205

Appearing on behalf of Plaintiffs.

BARBARA A. BAILEY, ESQ.

Office of the Attorney General

State of Arizona

1275 West Washington

Phoenix, Arizona 85007

Appearing on behalf of State of

Arizona and Arizona Secretary of

State.

Also Present: Louis Lanier

1 recommending -- not that I am recommending -- in
2 the specification that I have discussed.

3 It must -- it should be clear that, as
4 I said before, I have not set myself the task of
5 solving this particular problem, and therefore
6 anything I say right now is based on my analysis
7 of the question as it's presented to me at this
8 moment.

9 Having said that, yes, I believe there
10 is a way to ask the question of whether Prop 200
11 has had a consistent effect on registrations in a
12 specification which uses dummy variables for each
13 of the years in the sample.

14 Q And before you mentioned that possibly
15 by using something called a non-singular
16 transformation or maybe even something else.
17 However, I'm working on trying to get a more
18 specific answer from you regarding what happens
19 when you use year specific dummy variables. So
20 let me ask you this question: I don't think I
21 asked it before, but if you use a set of year
22 specific dummy variables, are you able to measure
23 -- no, I think I did ask you this question.

24 A You're welcome to try again.

25 Q I think I just need to back up a little

1 bit because I need to know if my understanding of
2 using year specific dummy variables is correct.
3 Is it correct for me to understand that if you use
4 year specific dummy variables, you no longer use
5 or no longer could use a dummy variable that
6 measures a time trend; is that right?

7 A If you use year specific dummy
8 variables, then the time trend variable, as I
9 assumed Dr. Lanier constructed it, would be
10 perfectly colinear with the time specific -- the
11 year specific dummy variables, and therefore, yes,
12 you would not be able to estimate a linear trend
13 effect in the presence of a complete set of year
14 specific dummy variables. That is certainly true.

15 Q Is it also the case that if you use
16 year specific dummy variables, the dummy variable
17 for Proposition 200's effect is also perfectly
18 colinear?

19 A Yes.

20 Q And as a result, then, you would be
21 unable to generate a coefficient for the Prop 200
22 dummy variables; is that right?

23 A You would not be able to generate a
24 coefficient for the Prop 200 dummy variable,
25 that's correct.

1 Q Okay. So without the variable for
2 Prop 200 and without the coefficient for Prop 200,
3 is it also correct to say, then, that you would
4 not generate a measure of the specific effect of
5 Prop 200 when using year specific dummy variables?

6 A No.

7 Q Why is that?

8 A For example, the dummy variable for
9 2001 would indicate the year specific level of
10 registrations in 2001. The dummy variable for
11 2005 would indicate the same thing for 2005.

12 The difference between those two
13 effects would be the difference between
14 registration levels in the first year subsequent
15 to a presidential election prior to the
16 implementation of Prop 200 and the first year of
17 of a presidential election cycle subsequent to the
18 implementation of Prop 200.

19 The comparison of those two effects
20 therefore would hold constant the location in the
21 presidential election cycle.

22 The difference between the magnitude of
23 those effects would therefore incorporate any
24 effect of Proposition 200 and any effect of a
25 trend, if one was present.

1 The same difference -- and, again, I'm
2 making this up as I go -- the same difference
3 between the year effects for 2006 and 2002 would
4 again hold constant the location in the
5 presidential election cycle but incorporate the
6 effects of Prop 200, if any exist, and the effects
7 of a trend, if any exist.

8 Similarly, there is a third difference
9 between the year specific effect for 2007 and for
10 2003, which again purges the effects of the
11 presidential election cycle.

12 It seems to me you have three
13 differences there, each of which is potentially
14 comprised of two effects. With three differences
15 and two effects, you have an excess of information
16 relative to the quantities you want to identify,
17 and therefore it should be possible to identify
18 those quantities.

19 Q I understand that the difference in
20 magnitude when comparing the years that you just
21 mentioned would allow you to see the combined
22 effects of Proposition 200 and other possible
23 trends or other possible effects, but isn't it
24 true that it would not generate a number
25 associated with the effect of Prop 200? You would

1 have to infer the effect of Prop 200, in some way,
2 but you would not get a number, a coefficient?

3 A My instinct is that you would get a
4 number. It would not be a coefficient in the
5 sense that it was a direct product of a regression
6 calculation, but it would be -- my instincts tell
7 me it would be a linear combination of regression
8 coefficients, and therefore it would be well
9 defined in magnitude. Moreover, its standard
10 deviation would also be well defined, and
11 therefore it would be possible to form appropriate
12 tests of the statistical significance of these
13 differences.

14 Q Did you make any such test?

15 A Certainly not.

16 Q Now, what happens if you've got effects
17 going in different directions under the method
18 that you just discussed? For example, what if you
19 had voter registrations generally trending upwards
20 in a linear fashion, and you had voter
21 registrations dropping because of an effect of
22 Prop 200? If that were the case, would you still
23 be able to, looking across these years and looking
24 at the difference in magnitude, be able to sort
25 these things out?

1 A The opinion that I just rendered -- the
2 expert opinion that I just rendered in response to
3 your previous question is valid regardless of the
4 signs or magnitudes of the effects.

5 If the understanding is that there are
6 two underlying effects, and you have three
7 measurements regarding their combination, my
8 professional instinct is that you should be able
9 to identify the individual effects regardless of
10 their signs or magnitudes.

11 Q What if there's more than two effects?
12 What if there are other things going on? Does
13 your confidence in this approach decrease as the
14 number of effects increases?

15 A My confidence in the validity of the
16 inferences drawn from the approach that I have
17 just outlined and my confidence in the validity of
18 inferences derived from any other approach goes
19 down as the number of effects we believe are
20 present goes up.

21 What is held constant here is the
22 amount of data. As the amount of -- with a fixed
23 amount of data, the more we ask it to reveal, the
24 less confident we can be in the answer to any
25 specific question regardless of the precise

1 specification of the analysis.

2 Q Fair enough. Would the seven years
3 that we've been discussing that span the time
4 before and after the implementation of Prop 200
5 and your discussed approach of essentially pairing
6 years with each other to observe the difference in
7 the magnitude in voter registration, are you
8 certain that these three pairings are enough to
9 give you an exact sense of the effect on voter
10 registration that Prop 200 would have as opposed
11 to any other effect?

12 A As I said, I am creating this research
13 design as we speak. I have not examined its
14 properties formally. I have a very strong
15 empirical instinct that with three measures of two
16 effects, you have enough information, but I am
17 open to the possibility that there are subtleties
18 in this problem which I have not recognized in the
19 12 minutes for which I have considered it, period.

20 Q With respect to the inclusion by
21 Dr. Lanier of data from presidential election
22 years, is it your testimony that the inclusion of
23 such data in his analysis biased the analysis?

24 A No.

25 Q What is your opinion about the

1 inclusion by Dr. Lanier of the data from
2 presidential election years?

3 A My conclusion is that the manner in
4 which he controlled for those years in his
5 regression specification biased the analysis.

6 Q And do you understand that Dr. Lanier
7 did create a variable -- a dummy variable for the
8 presidential year effect?

9 A Yes.

10 Q And is there something wrong in doing
11 that, or is there something wrong with the way he
12 created the variable? Help me understand here.

13 A Yes.

14 Q Yes to both?

15 A I think I interpret them as the same
16 question. If you want me to answer them
17 separately, it would be helpful if you would
18 restate them.

19 Q Identify for me, if you can, the flaw
20 in Dr. Lanier's use of a dummy variable for
21 presidential years.

22 A Dr. Lanier's dummy variable for
23 presidential years requires the regression to
24 estimate a presidential year registration effect
25 that is the same in 2000 and in 2004.

1 compare the performance of those two sets of
2 regressions. If the second regression, in which
3 the regressions were compelled to estimate
4 identical effects for Hispanics and non-Hispanics,
5 if that second set of regressions was
6 substantially less satisfactory as an explanation
7 of the data, then the regressions in which that
8 restriction was not enforced, the regressions
9 which Dr. Lanier, in fact, reports, then one could
10 conclude that statistically significant evidence
11 of the effects of Proposition 200 on Hispanics was
12 different from the effects of proposition 200 on
13 non-Hispanics. That would be the conventional
14 direction in which to go.

15 Dr. Lanier has complicated things
16 substantially by comparing not the effects in the
17 regressions themselves but the effects as measured
18 relative to some calculation of the average level
19 of registrations for Hispanics and non-Hispanics.
20 That introduces an additional source of
21 statistical variation which is very difficult to
22 account for in the testing procedure. And I
23 personally have not worked through how one would
24 or even if one could account for it appropriately.

25 Q So would it be correct to say that the

1 do so.

2 Q So you didn't have a chance to look at
3 or visually inspect what the charts would look
4 like with the excised period taken out; is that
5 right?

6 A Well, I put my fingers over the
7 relevant parts of Dr. Espino's graph and made an
8 informal judgment. I did not reconstruct those
9 graphs formally with the indicated deletions.

10 Q That's what I would have done. Okay.
11 On Page 26, in the middle of the page, you have a
12 paragraph that says, "Dr. Espino's conclusions
13 regarding the alleged decline in the Hispanic
14 proportion of registrants in Greenlee and Yuma
15 Counties are based only on casual inspection of
16 his figure 3." Do you see that?

17 A Yes.

18 Q Would it also be true, however, that
19 your conclusions regarding whether or not there
20 are changes in the proportion of Hispanic
21 registrants, in your modified charts, are
22 similarly based on casual inspections?

23 A Yes.

24 Q Chart 4 on Page 27, tell me how this
25 chart came into existence, this modified chart.

1 A This chart came into existence, was
2 birthed, so to speak, in exactly the same fashion
3 as all the other charts in this report. The
4 graphic image from Dr. Espino's original report
5 was extracted by my graphic artist colleague. She
6 then, at my direction, overlaid these horizontal
7 lines.

8 Q Were you physically there with her when
9 she overlaid the horizontal lines?

10 A No.

11 Q And so her decision of where to put the
12 horizontal line was based on her recollection of
13 your instructions?

14 A Yes. Although, I believe there was one
15 revision of this graph where I asked her to adjust
16 the line to suit my sense as to where it should be
17 located.

18 Q Okay. And did she then go back and
19 adjust that line?

20 A Yes.

21 Q Do you remember which county it was
22 for?

23 A No.

24 Q And when you asked her to move the
25 line, describe for me your sense of where it ought

1 to have been.

2 A I was attempting to place a line -- a
3 horizontal line in each of these graphs in such a
4 way that it seemed to be truest to the underlying
5 sense of the data.

6 Q When you say, "underlying sense of the
7 data," you didn't have the data, however, did you?

8 A That's correct. I had only the
9 graphical version of the data.

10 Q So this is, in a sense, your decision
11 based on what you could see in the chart itself
12 about where a horizontal line might best go?

13 A Right. The placement of the horizontal
14 line is based on my professional intuition and
15 expertise and the graphical evidence in front of
16 me. It is my intuitive sense as to where an
17 actual regression line with a flat slope would end
18 up if a computer had been asked to calculate the
19 location of that line.

20 Q So then this is not a line that has
21 been generated as, for example, a line of best fit
22 by a computer program?

23 A That's correct. It is my informal
24 attempt to simulate what that would look like.

25 Q Have you ever, in any of your scholarly

1 work, presented a horizontal line or any other
2 line of best fit based on your visual sense of
3 where it ought to go as opposed to based on a
4 regression analysis?

5 A No.

6 Q The reason the line is horizontal,
7 then, is because you started with the proposition
8 that you would place a line with zero slope; is
9 that right?

10 A The reason a line is horizontal is
11 because the horizontal line represents a situation
12 in which the proportion of Hispanics among new
13 registrants is the same throughout the period.

14 The question I was posing here was does
15 that scenario, the scenario described by that
16 assumption, seem consistent with the actual
17 pattern of registrations or inconsistent? The
18 interest in the horizontal line, therefore, was
19 the extent to which the horizontal line seems to
20 capture a lot or a little of what the graph of
21 actual registration ratios seems to be expressing.

22 Q So would it be true to say, then, that
23 before you placed the line down, you had already
24 decided it would be a zero slope line?

25 A I had already decided that the relevant

1 comparison was between the actual experience and
2 what the experience would have been like had the
3 ratio of Hispanics among all registrants been the
4 same throughout the period.

5 Q And thus would have generated a zero
6 slope line?

7 A Yes.

8 Q Did your colleague, who placed the
9 line, have the capacity to tilt the line up or
10 down?

11 A She's a wizard. I imagine she can do
12 almost anything.

13 Q But you feel fairly confident that she
14 didn't tilt the line one way or the other when she
15 placed it into the chart?

16 A Yes. These lines look appropriately
17 horizontal to me, certainly horizontal enough to
18 make the comparison with the level of precision
19 that's possible given the precision that's
20 presented to us in the actual data.

21 Q Could it also be possible that if the
22 regressions were run and the lines of best fit
23 placed into Figure 3 of Dr. Espino's report, that
24 they would not have a zero slope?

25 A I think that's a very interesting