

1 UNITED STATES DEPARTMENT OF LABOR  
 2 OFFICE OF ADMINISTRATIVE LAW JUDGES  
 3  
 4 OFFICE OF FEDERAL CONTRACT ) OALJ Case No.  
 COMPLIANCE PROGRAMS, UNITED ) 2017-OFC-00006  
 5 STATES DEPARTMENT OF LABOR, )  
 ) OFCCP No.  
 6 Plaintiff, ) R00192699  
 )  
 7 v. )  
 )  
 8 ORACLE AMERICA, INC., )  
 )  
 9 Defendant. )  
 \_\_\_\_\_ )  
 10  
 11 CONFIDENTIAL  
 12 VIDEOTAPED DEPOSITION OF ALI SAAD, PH.D.,  
 13 October 11, 2019  
 14 Philadelphia, Pennsylvania  
 15  
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 18  
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 20  
 21  
 22  
 23  
 24 Reported by:  
 Ann Medis, RPR  
 NCRA No. 22052  
 25 JOB No. 191011AME

1 A P P E A R A N C E S  
 2 For Plaintiff:  
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 13 Also Present:  
 14 Jessica M. Flores, U.S. Department of Labor  
 Laura Bremer, U.S. Department of Labor  
 Michael Brunetti, U.S. Department of Labor  
 15 Janice Madden, Ph.D., Econsult Corporation  
 Adolf Green, legal video specialist  
 16  
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 8 ORACLE AMERICA, INC., )  
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 9 Defendant. )  
 \_\_\_\_\_ )  
 10  
 11  
 12 VIDEOTAPED DEPOSITION OF ALI SAAD, PH.D.,  
 13 a witness herein, called by the Plaintiff for  
 14 examination, taken by and before Ann Medis, Registered  
 15 Professional Reporter and Notary Public in and for the  
 16 Commonwealth of Pennsylvania, at the U.S. Department of  
 17 Labor Office of the Solicitor, The Curtis Center, 170  
 18 South Independence Mall West, Suite 630E, Philadelphia,  
 19 Pennsylvania 19106, on Friday, October 11, 2019,  
 20 commencing at 9:08 a.m.  
 21  
 22  
 23  
 24  
 25

1 I N D E X  
 2 WITNESS: ALI SAAD, PH.D. PAGE  
 3 EXAMINATION BY MR. SONG 6  
 4 E X H I B I T S  
 5 EX. DESCRIPTION PAGE  
 6 Exhibit 1 Amended Notice of Deposition of Oracle's 6  
 Expert Witness Dr. Ali Saad  
 7  
 Exhibit 2 Expert Report of Ali Saad, Ph.D. 27  
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 Exhibit 3 Expert Rebuttal Report of Ali Saad, 27  
 9 Ph.D., August 2019  
 10 Exhibit 4 Analysis of Gender and Racial Differences 28  
 in Compensation At Oracle, 2013-2018  
 11 by J. Madden, Ph.D., July 19, 2019  
 12 Exhibit 5 Expert Rebuttal Report, Response to 28  
 Dr. Ali Saad's Expert Report on Gender  
 13 and Racial Differences in Compensation  
 at Oracle USA, August 16, 2019  
 14  
 Exhibit 6 Dr. Saad article, "Schooling and 74  
 15 Occupational Choice in Nineteenth-Century  
 America" published in The Journal of  
 16 Economic History, 1989  
 17 Exhibit 7 Declaration of Ali Saad, Ph.D. in Support of 129  
 Defendant Oracle America, Inc.'s Opposition  
 18 to Plaintiffs' Motion for Class Certification  
 19 Exhibit 8 Pages 27 - 28 from A Guide to Econometrics, 155  
 Fourth Edition, by Peter Kennedy  
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 Exhibit 9 Declaration of Janice F. Madden 216  
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 Exhibit 10 Radford's Approach to Valuing Equity 295  
 22 Compensation, October 2017  
 23 Exhibit 11 Word clustering analysis 315  
 24 - - - -  
 25

1 PHILADELPHIA, PENNSYLVANIA; FRIDAY, OCTOBER 11, 2019  
 2 9:08 A.M.  
 3 - - - -  
 4 THE VIDEOGRAPHER: This is the start of tape  
 5 labeled No. 1 in the videotaped deposition of Ali Saad  
 6 in the matter of U.S. Department of Labor v. Oracle  
 7 America, Inc., in the United States Department of Labor,  
 8 Office of Administrative Law Judges, Case  
 9 No. 2017-OFC-00006.  
 10 This deposition is being held at 170 South  
 11 Independence Mall West, Philadelphia, Pennsylvania, on  
 12 October 11, 2019, at approximately 9:08.  
 13 My name is Adolph Green, and I'm the legal video  
 14 specialist. The court reporter is Ann Medis.  
 15 Will counsel please introduce yourselves.  
 16 MR. SONG: Charles Song on behalf of OFCCP.  
 17 MS. BREMER: Laura Bremer on behalf of the  
 18 Department of Labor.  
 19 MS. FLORES: Jessica Flores on behalf of the  
 20 Department of Labor.  
 21 MR. BRUNETTI: Michael Brunetti, Department of  
 22 Labor.  
 23 MS. MANTOAN: I'm Kathryn Mantoan for  
 24 defendant Oracle America, Inc.  
 25 MS. JAMES: Jessica James on behalf of Oracle.

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1 deposited a few times.  
 2 A. I have.  
 3 Q. Do you remember exactly how many times?  
 4 A. No, I don't.  
 5 Q. No. Okay.  
 6 So it doesn't seem like I need to go over all of  
 7 the kind of rules of the road with you since you've been  
 8 deposited so many times, but I'll just go over a few. But  
 9 if there's any questions that you have, please let me  
 10 know.  
 11 First is, obviously, that this is a sworn  
 12 deposition under oath, so it's just like you would do in  
 13 court. So I'm sure you recall that.  
 14 I also wanted to make sure that you knew that you  
 15 are entitled to breaks. I just would like to make sure  
 16 that you -- if I'm in mid question, that you answer my  
 17 question before we take a break.  
 18 Is that --  
 19 A. I understand.  
 20 Q. You understand. Okay.  
 21 There may be some questions that I ask you today  
 22 where -- and I'm sure you've heard Ms. Mantoan's  
 23 description, which is actually very similar to mine that  
 24 I use, about speculating versus estimating.  
 25 So there may be some questions where you're not

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1 DR. MADDEN: Janice Madden, Econsult  
 2 Corporation.  
 3 THE VIDEOGRAPHER: Will the court reporter  
 4 please swear in the witness.  
 5 ALI I. SAAD, Ph.D.,  
 6 having been first duly sworn, was examined  
 7 and testified as follows:  
 8 EXAMINATION  
 9 BY MR. SONG:  
 10 Q. Dr. Saad, it's good to see you again. Thank  
 11 you very much for coming.  
 12 A. Good morning.  
 13 Q. Good morning.  
 14 My understanding is that -- well, first let me  
 15 get -- do you understand why you're here today?  
 16 A. To be deposed in this case, yes.  
 17 MR. SONG: I'm going to mark as Exhibit 1 the  
 18 deposition notice.  
 19 (Saad Exhibit 1 was marked.)  
 20 BY MR. SONG:  
 21 Q. Have you seen this document before?  
 22 A. Yes, I have.  
 23 Q. This is the deposition notice for today?  
 24 A. Yes.  
 25 Q. And it's my understanding that you've been

6

1 sure, but I am entitled to your best estimate, but we  
 2 certainly don't want you to speculate. I'm sure you've  
 3 heard this a million times before as well.  
 4 Do you understand the difference between estimating  
 5 and speculating?  
 6 So, for example, you know, if we're -- if I ask you  
 7 to estimate the size of this desk, you could probably,  
 8 roughly, give an estimate of it just based on your  
 9 information. But if I asked you to estimate the size of  
 10 my desk, there's really no way you could do that without  
 11 wildly guessing or speculating.  
 12 A. Unless this is your desk.  
 13 Q. Yeah. That's a very good point. So that's  
 14 understood; correct?  
 15 A. Yes, it is.  
 16 Q. And are you on any medication today?  
 17 A. No, I'm not.  
 18 Q. And is there any reason why you can't give  
 19 your best testimony today?  
 20 A. No.  
 21 Q. Okay. Great.  
 22 Did you prepare for today's deposition?  
 23 A. Yes.  
 24 Q. And how did you prepare?  
 25 A. I reviewed the reports that I produced and

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1 that Dr. Madden produced. I reviewed backup material to  
 2 my report. I reviewed a variety of other materials that  
 3 were provided to me. And I met with counsel.  
 4 **Q.** How many times did you meet with counsel?  
 5 **A.** Once.  
 6 **Q.** Just once.  
 7 And do you recall when that was?  
 8 **A.** This past Monday.  
 9 **Q.** How long was that meeting?  
 10 **A.** It was several hours.  
 11 **Q.** And you mentioned that you reviewed some  
 12 materials provided to you.  
 13 **A.** Yes.  
 14 **Q.** Do you recall what those materials were?  
 15 MS. MANTOAN: I'm going to object to the  
 16 extent the question might invade attorney/work product.  
 17 If you're asking for materials that he reviewed  
 18 that refreshed his recollection, I think that's fair  
 19 game.  
 20 If you're asking for something broader that would  
 21 invade communications between counsel and Dr. Saad,  
 22 objection.  
 23 MR. SONG: Sure.  
 24 BY MR. SONG:  
 25 **Q.** Just materials that you reviewed to refresh

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1 compensation policies.  
 2 **A.** A variety of -- they were in the form of  
 3 PowerPoints, for the most part. Some of them were just  
 4 written documents, it appeared, that were not  
 5 PowerPoint, but prepared by Oracle in some capacity.  
 6 And I reviewed those.  
 7 **Q.** And do you remember which ones?  
 8 **A.** Well, there were many of them. And there were  
 9 many iterations in different years. Some of the titles:  
 10 Global Compensation Manual I think was one.  
 11 Compensation -- Introduction to Compensation I think was  
 12 another.  
 13 I don't recall the titles. There were a variety  
 14 of them.  
 15 **Q.** And you mentioned that you reviewed some  
 16 declarations. Do you remember whose?  
 17 **A.** There was one by Mr. Miranda, in particular,  
 18 that I reviewed. And there were several others. I'm  
 19 trying to recall.  
 20 If I recall -- I'm not recalling right now, but if  
 21 I recall, I'll tell you.  
 22 **Q.** Okay. So right now you just remember Miranda.  
 23 **A.** Miranda is the one that sticks out initially,  
 24 but there were several others as well.  
 25 **Q.** Do you remember approximately how many?

11

1 your recollection for this deposition.  
 2 **A.** Yes. It was materials provided to me in  
 3 connection with my work in this case.  
 4 **Q.** Do you remember any of the specific documents?  
 5 **A.** There were a variety of documents on  
 6 compensation policies. I reviewed those.  
 7 There were several depositions of Oracle --  
 8 individuals at Oracle. There was several declarations.  
 9 Just a variety of materials of that sort.  
 10 **Q.** Do you remember the depositions that you  
 11 reviewed?  
 12 **A.** Ms. Waggoner's. I think there are three  
 13 volumes, as I recall. And I reviewed all three of  
 14 those, plus the -- plus all of the attachments.  
 15 **Q.** Okay.  
 16 **A.** There was, I believe, a deposition of  
 17 Mr. Kidder, which I had been provided with I believe  
 18 previously, but also in connection with this case.  
 19 **Q.** Okay.  
 20 **A.** And there were depositions of two individuals  
 21 associated with, in one way or another, with the  
 22 Department of Labor, a Mr. Yu or Dr. Yu, I think it is,  
 23 and Dr. Brunetti. And they were each deposed in this  
 24 case, and I reviewed their depositions.  
 25 **Q.** And you mentioned that you reviewed some

10

1 **A.** Maybe three or four that I reviewed.  
 2 **Q.** Sounds like you spent a good amount of time  
 3 preparing for this deposition.  
 4 Do you remember how many hours that you spent?  
 5 **A.** In preparing for the deposition?  
 6 **Q.** Yes.  
 7 **A.** Probably 10 to 15.  
 8 **Q.** And when did you -- do you remember what date  
 9 you began preparing for the deposition?  
 10 **A.** Although I should say that there was a stop  
 11 and start quality to this. So I did start preparing  
 12 quite a while back. And it was my understanding the  
 13 depositions were going to occur very shortly after  
 14 reports were filed -- second reports were filed.  
 15 I then stopped that preparation when the schedule  
 16 changed. But then it stopped and started several  
 17 times, as I recall. I was told the depositions might  
 18 be on a particular day. I started to review. Then I  
 19 stopped again.  
 20 So the more recent review is about 10 to 15 hours.  
 21 **Q.** And what about the initial review?  
 22 **A.** I don't know how long those were. They were  
 23 aborted fairly quickly.  
 24 **Q.** Do you remember the approximate timeframes or  
 25 the dates, maybe when you started, when you stopped, and

12

1 when you started again?  
 2 **A.** Well, at one point, it was contemplated that  
 3 depositions might be the week after the rebuttal reports  
 4 were filed. So very, very shortly thereafter.  
 5 And at one point, it was actually contemplated  
 6 that I would be prepping for depo before the second  
 7 report was filed. So that was fairly quickly aborted.  
 8 So that would have been very little time.  
 9 **Q.** Okay.  
 10 **A.** But the second -- the second round, I'm not  
 11 sure. Maybe a couple of hours before --  
 12 **Q.** A couple of hours?  
 13 **A.** -- before it was clear to me or it was made  
 14 clear to me that the depositions were going to be pushed  
 15 until the current time.  
 16 **Q.** But do you remember the approximate dates?  
 17 **A.** No, I don't.  
 18 **Q.** When you first began preparing for your  
 19 deposition, did you prepare for a week?  
 20 MS. MANTOAN: Objection. Vague. Asked and  
 21 answered.  
 22 THE WITNESS: No, I don't think so.  
 23 BY MR. SONG:  
 24 **Q.** Less than a week?  
 25 **A.** It was just a very short time because it was

13

1 recent time that you prepared for this depo was over a  
 2 month ago?  
 3 **A.** No.  
 4 MS. MANTOAN: Objection. Misstates testimony.  
 5 THE WITNESS: No. Most recent time I prepared  
 6 for this deposition was this week. There was an  
 7 intermediate --  
 8 BY MR. SONG:  
 9 **Q.** Oh, I see.  
 10 **A.** As I recall it, there were dates contemplated  
 11 in between the first dates and today. And so I stopped  
 12 and started several times.  
 13 **Q.** Okay.  
 14 **A.** And that was one of them.  
 15 **Q.** Sorry. I was trying to ask about the most  
 16 recent time that you prepared for this deposition.  
 17 So that was this week, did you say?  
 18 **A.** This week and a part of last week as well.  
 19 **Q.** So it took place over a week? Two weeks?  
 20 MS. MANTOAN: Objection. Asked and answered.  
 21 THE WITNESS: Roughly, yes.  
 22 BY MR. SONG:  
 23 **Q.** And then do you know how much you billed for  
 24 deposition preparation?  
 25 MS. MANTOAN: Objection. Assumes facts that

15

1 actually in the midst of preparing a report.  
 2 **Q.** And then when you started to prepare again  
 3 once the deposition was on again, was that over,  
 4 approximately, a week time span?  
 5 **A.** No.  
 6 MS. MANTOAN: Objection. Vague. Asked and  
 7 answered.  
 8 THE WITNESS: It wouldn't have been. It would  
 9 have been less than that.  
 10 BY MR. SONG:  
 11 **Q.** Maybe a few days?  
 12 MS. MANTOAN: Same objections.  
 13 THE WITNESS: I can't tell you exactly.  
 14 BY MR. SONG:  
 15 **Q.** Can you put -- that was fairly recently before  
 16 this deposition. Can you estimate?  
 17 **A.** That was --  
 18 MS. MANTOAN: Same objection.  
 19 THE WITNESS: Well, it would have been over a  
 20 month ago. And I don't recall what the dates of that  
 21 second contemplated deposition schedule were. So I  
 22 can't estimate. But more than one hour, less than ten  
 23 hours.  
 24 BY MR. SONG:  
 25 **Q.** So I'm a little bit confused. So the most

14

1 the billing was sent.  
 2 THE WITNESS: I don't think I've billed  
 3 anything in connection with my deposition preparation at  
 4 this point.  
 5 BY MR. SONG:  
 6 **Q.** Can you estimate the number of hours that  
 7 you -- now that the deposition prep has been completed,  
 8 can you estimate the number of hours you're going to  
 9 bill for deposition preparation?  
 10 MS. MANTOAN: Objection. Vague, if you're  
 11 asking about all components of prep or only his most  
 12 recent --  
 13 BY MR. SONG:  
 14 **Q.** All components of deposition preparation for  
 15 this deposition.  
 16 **A.** All components, not including -- not  
 17 restricted to this week, I don't know. Maybe 15 hours,  
 18 20 hours. I don't know.  
 19 **Q.** Do you recall how many hours you billed for  
 20 preparing for the Jewett expert deposition?  
 21 MS. MANTOAN: Objection.  
 22 THE WITNESS: No, I don't.  
 23 MS. MANTOAN: Irrelevant to this case.  
 24 THE WITNESS: No, I don't.  
 25

16

1 BY MR. SONG:  
 2 Q. Can you estimate?  
 3 A. Based on my typical practices, probably in the  
 4 same range as what I did here.  
 5 Q. Thank you.  
 6 And did you speak with anybody else to prepare for  
 7 this deposition?  
 8 A. Members of my staff.  
 9 Q. Did you speak with anybody from Oracle?  
 10 A. Yes.  
 11 Q. Okay. Who --  
 12 A. Not from Oracle. No. Sorry. From Orrick.  
 13 Q. Orrick. Yes. The names are similar.  
 14 Did you bring any of the documents that you  
 15 reviewed to refresh your recollection with you today?  
 16 A. No.  
 17 Q. So I'd like to now discuss some of your  
 18 qualifications as an expert.  
 19 So can we first talk about your education? Can you  
 20 please let me know -- can you please discuss your  
 21 college education?  
 22 A. Yes. I have an undergraduate degree from the  
 23 University of Pennsylvania where I double majored in  
 24 history and economics.  
 25 Q. And your major in economics, was that any

17

1 Q. And was there any specialty or specific type  
 2 of economics that you studied?  
 3 A. Well, my fields, my fields of specialization  
 4 were labor economics and economic history.  
 5 Q. I'm sorry. What was that?  
 6 A. Labor economics.  
 7 Q. Oh, labor economics. And economic history.  
 8 Did you take many courses in labor economics?  
 9 A. All the courses that were offered I took. And  
 10 I also attended the several -- there were several  
 11 different workshops as they're called in Chicago,  
 12 basically weekly seminars where work is presented by  
 13 outsiders visiting university, as well as students and  
 14 faculty of the university.  
 15 I attended those, I think, starting in my second  
 16 year. Normally, people wait a little longer, but I was  
 17 kind of pushed into it, and I was quite happy that I  
 18 was.  
 19 So I took the courses that were available. And  
 20 there were two specifically -- it was a two-course  
 21 sequence -- plus I attended those workshops, as I said.  
 22 Q. So the labor economics courses that you took,  
 23 there was a two-course sequence, there were some  
 24 workshops.  
 25 Any other labor economics courses?

19

1 specific type of economics?  
 2 A. Just an undergraduate major in economics.  
 3 There's no specialization at the undergrad level  
 4 typically in economics programs.  
 5 But my focus was on -- my interests were in  
 6 applied microeconomics and economic history.  
 7 Q. And did you take any statistics courses in  
 8 college?  
 9 A. Yes, I did.  
 10 Q. Do you recall which ones?  
 11 A. I took several. Unfortunately, the  
 12 econometrics course, there was one undergraduate  
 13 econometrics course offered. In both my junior and  
 14 senior years, it was not taught, which was unfortunate.  
 15 And so I went to the statistics department and I  
 16 took a sequence -- I think I took two undergrad courses  
 17 and two graduate courses in statistics and had to do a  
 18 little learning of econometrics on my own.  
 19 Q. And those statistics involved running  
 20 regression or learning about regression?  
 21 A. Among other things, yes.  
 22 Q. And I understand you also have a Ph.D.  
 23 A. Yes.  
 24 Q. And that's from the University of Chicago?  
 25 A. Yes.

18

1 A. Those were all of the labor economics courses  
 2 that are taught at Chicago.  
 3 Q. Did you take any statistics courses at  
 4 Chicago?  
 5 A. I took both statistics and econometrics.  
 6 Q. So you took one statistics class and one  
 7 econometrics class?  
 8 A. No. I didn't say that. I said I took courses  
 9 in both statistics and econometrics. I took several  
 10 econometrics courses in the economics department. And I  
 11 took courses in statistics in the statistics department.  
 12 Q. Do you remember how many statistics courses  
 13 you took?  
 14 A. There were two.  
 15 Q. And what about economics?  
 16 A. Economics?  
 17 Q. Yeah. You said you took the economics courses  
 18 in the economics department, and you went to the  
 19 statistics -- if I understood you correctly, you went to  
 20 the statistics department to take statistics courses?  
 21 MS. MANTOAN: Objection. It misstates the  
 22 testimony. Were you asking about econometrics?  
 23 BY MR. SONG:  
 24 Q. Oh, I'm sorry. Econometrics. Sorry.  
 25 A. I took several courses in econometrics, three

20

1 or four. I don't recall exactly.  
 2 **Q.** And what was your dissertation on?  
 3 **A.** It was on studying what's referred to as  
 4 intergenerational mobility from the perspective of a  
 5 labor economics framework, but looking at data from 19th  
 6 Century Philadelphia.  
 7 **Q.** And did you have -- did you have a conclusion,  
 8 a thesis for your dissertation?  
 9 **A.** Yes, I did.  
 10 **Q.** And what was that?  
 11 **A.** It was studying the relationship between  
 12 ethnicity and types of schooling choices or schooling  
 13 choices generally. That's really what was motivating  
 14 the analysis.  
 15 So I looked at -- the context was  
 16 intergenerational mobility, looking at the relationship  
 17 between -- this was looking at fathers and sons because  
 18 the data being studied was 1860, '70, and '80, the time  
 19 period when, in general, relatively few women were in  
 20 the labor market.  
 21 So to observe the relationships between labor  
 22 market activity and types of training and schooling  
 23 involved comparisons between fathers and sons, was what  
 24 I focused on.  
 25 In particular, there was an issue in the

21

1 crafts, but were unskilled.  
 2 So the unskilled Irish families sent their  
 3 children to public schooling and the skilled German  
 4 families, wherein the children grew up in an  
 5 environment of apprenticeship, ended up focusing on  
 6 apprentice, apprentice sorts of -- forms of human  
 7 capital.  
 8 **Q.** What years did your dissertation cover?  
 9 **A.** It was 1860, '70, and '80.  
 10 The result being that it was not a choice so much  
 11 as it was economic constraints differed between the  
 12 German and the Irish immigrants.  
 13 In fact, if you focused on the skilled Irish  
 14 immigrants, they looked exactly like the skilled German  
 15 immigrants. And the same was true of the unskilled  
 16 German and unskilled Irish immigrants.  
 17 **Q.** And how many years did it take you to complete  
 18 your dissertation?  
 19 **A.** Well, the bulk of the work was done in about  
 20 two and a half, three years, and then I sat on it for  
 21 quite some time, refused to send it to my adviser.  
 22 And, in fact, in those days -- I think it's still  
 23 the case -- one could assume a teaching position  
 24 without having finished the Ph.D., at least in  
 25 economics. I took advantage of that.

23

1 historical literature regarding German and Irish  
 2 immigrants. And Irish immigrants were observed  
 3 participating and sending their children with greater  
 4 frequency to public school environments, and the  
 5 Germans were observed not sending their children at  
 6 the -- with the same frequency to public schooling.  
 7 And one of the, I guess, perspectives on that  
 8 among historians was that the Germans did not value the  
 9 public schooling environment. And it was cast in sort  
 10 of a -- sort of a choice that was being made.  
 11 And given what I knew in just general terms about  
 12 Germany in this time period and Ireland in this time  
 13 period, Germany was, in Germany, quite advanced in  
 14 terms of secondary education and higher education. So  
 15 it struck me as a little odd that that would be, in  
 16 fact, the case.  
 17 So I started to study it a little more focused and  
 18 discovered that there was a very clear explanation for  
 19 this; that human capital was acquired in two ways in  
 20 that period of time. One was through public -- through  
 21 schooling. Another was through apprenticeships.  
 22 And German immigrants were very focused on skilled  
 23 crafts. They were predominant -- they were  
 24 disproportionately in the skilled crafts. The Irish  
 25 immigrants were disproportionately not in the skilled

22

1 Finally, I did send it to him, the bulk of it. It  
 2 was about a three-year project.  
 3 **Q.** And when did you -- did you send it actually  
 4 completed?  
 5 **A.** Well, yes, I did, or I wouldn't have a Ph.D.  
 6 **Q.** Oh, I'm sorry. What year was that?  
 7 **A.** 1987 is when I finally turned it over.  
 8 **Q.** That must have been a huge relief to  
 9 actually --  
 10 **A.** Well, yeah. It was obviously, yeah.  
 11 **Q.** I've heard that happen.  
 12 **A.** Yeah.  
 13 **Q.** So your dissertation was more about economic  
 14 history; correct?  
 15 **A.** Well, in a labor economics framework. The  
 16 modeling that was done was labor economics modeling.  
 17 And I used, you know, econometric methods. But it was  
 18 in this historical context.  
 19 **Q.** Did you do regression analysis?  
 20 **A.** Yes. Yes.  
 21 **Q.** And what was the regression analysis on?  
 22 **A.** I don't know if I remember the details, but I  
 23 was looking at propensities to go to schooling --  
 24 schooling versus apprenticeships as a function of those  
 25 things. I don't remember the details now.

24

1 Q. Was your -- was your dissertation published?  
 2 A. An article from it was, yes.  
 3 Q. And was that article peer-reviewed?  
 4 A. Yes.  
 5 Q. And did you actually get comments or feedback  
 6 on your dissertation?  
 7 A. I did.  
 8 Q. Do you remember any of those?  
 9 A. No, not the specifics of the comments. Of  
 10 course, I got extensive comments from my committee.  
 11 Q. Sure. Do you have -- do you have any other  
 12 training -- any other training in statistics or  
 13 econometrics, in labor economics?  
 14 MS. MANTOAN: Objection. Vague and compound.  
 15 THE WITNESS: Well, people's education does  
 16 not finish when they leave school. They continue to  
 17 learn --  
 18 BY MR. SONG:  
 19 Q. Sure.  
 20 A. -- and so forth. I keep abreast of things and  
 21 learn new things as required.  
 22 So I have not gone into any formal classroom  
 23 environment since obtaining my Ph.D.  
 24 Q. And do you have any additional licenses?  
 25 A. There are no other licenses I'm aware of in

25

1 your old exhibits yesterday because there were so many.  
 2 MS. MANTOAN: Sorry. I'm not clear.  
 3 You're marking this as Exhibit 2 to the Saad  
 4 deposition, and Exhibit 3.  
 5 MR. SONG: Yes. Yes. I'm doing my own  
 6 exhibit numbers.  
 7 MS. MANTOAN: I see. So we're going to have  
 8 the reporter formally mark that?  
 9 MR. SONG: Yes.  
 10 MS. MANTOAN: And I notice that the things  
 11 that were originally in color are not replicated here in  
 12 color.  
 13 MR. SONG: Sorry. That's the only copier I  
 14 have.  
 15 We'll mark those as Exhibits 2 and 3, please.  
 16 (Saad Exhibits 2 and 3 were marked.)  
 17 MS. MANTOAN: I would just ask that Dr. Saad  
 18 have a chance to look at them quickly --  
 19 MR. SONG: Sure. Of course. Of course.  
 20 MS. MANTOAN: -- rather than taking your  
 21 representation what's in front of him -- that those  
 22 representations are correct.  
 23 MR. SONG: And while we're at it, maybe we can  
 24 save a little bit of time. I have Dr. Madden's report  
 25 and rebuttal that I also want to mark as 4 and 5.

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1 economics. I'm a member of the American Economics  
 2 Association, but that's not a license.  
 3 Q. Do you have any certifications?  
 4 A. Again, there's no certifications, that I'm  
 5 aware of, in the -- for economics.  
 6 Q. So other than what's listed in your -- I think  
 7 it's page -- well, let me give you that. So I made you  
 8 a little handy-dandy binder so that you can find things  
 9 more quickly. But that's Exhibits 2 and 3.  
 10 MR. SONG: I'll represent that it's just his  
 11 report and his rebuttal. I thought it would be too  
 12 confusing to try to refer back to yours. But you're  
 13 welcome to look at it. It's just a copy of the --  
 14 MS. MANTOAN: Do you have a copy for us to  
 15 look at?  
 16 MR. SONG: No. I thought you would have a  
 17 copy.  
 18 MS. MANTOAN: Oh, these are Exhibits 2 and 3  
 19 from --  
 20 MR. SONG: No, no, no. I'm just --  
 21 MS. MANTOAN: You're marking them in the  
 22 context of this deposition?  
 23 MR. SONG: I'm just marking them, yeah.  
 24 Because you started over yesterday with different  
 25 numbers. I thought it would be too confusing to go from

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1 MS. MANTOAN: The same request, that Dr. Saad  
 2 be given an opportunity to --  
 3 MR. SONG: Sure. Of course.  
 4 MS. MANTOAN: -- look through them. And I'll  
 5 note again here that there are -- since it's not in  
 6 color, I think some of the materials are -- it's  
 7 difficult to understand what's happening in some of the  
 8 charts that are not -- you weren't able to produce in  
 9 color.  
 10 (Saad Exhibits 4 and 5 were marked.)  
 11 BY MR. SONG:  
 12 Q. If you just take a look at those, and then  
 13 once you're done, let us know.  
 14 MS. MANTOAN: Why are you asking him to look  
 15 at them? For what purpose are you asking him to review  
 16 them?  
 17 MR. SONG: Well, you wanted me to give him a  
 18 chance to review them to make sure that they are what I  
 19 say they are.  
 20 MS. MANTOAN: Okay.  
 21 THE WITNESS: They look to be, with the one  
 22 proviso that they're not in color.  
 23 MS. MANTOAN: Sorry. Have you had a chance to  
 24 review just 2 and 3 or also 4 and 5?  
 25 THE WITNESS: I looked at those.

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1 MS. MANTOAN: Okay.  
 2 BY MR. SONG:  
 3 Q. So if you turn to A8. I'm sorry I didn't tab.  
 4 MS. MANTOAN: In which -- in which exhibit?  
 5 BY MR. SONG:  
 6 Q. I'm sorry. Exhibit 2, your report.  
 7 A. I'm there.  
 8 Q. Does that list all of your education?  
 9 MS. MANTOAN: Objection.  
 10 THE WITNESS: A8 doesn't list --  
 11 MS. MANTOAN: Misstates the document.  
 12 THE WITNESS: A8 doesn't list any of it that I  
 13 can see.  
 14 Page A8 is what you're referring me to?  
 15 BY MR. SONG:  
 16 Q. Yeah. Attachment A.  
 17 A. Page 8?  
 18 Q. I thought it was. Yeah. I have your  
 19 education on A8, like "A" as in apple, page 7 of  
 20 Attachment A.  
 21 MS. MANTOAN: Are you asking him to look at A7  
 22 or A8?  
 23 THE WITNESS: A7 I have education.  
 24 BY MR. SONG:  
 25 Q. I don't know if I got a different draft, but I

29

1 experience.  
 2 BY MR. SONG:  
 3 Q. Is that a complete list of your employment  
 4 experience?  
 5 A. Yes, it is, post to college I should say.  
 6 Q. Post?  
 7 A. Post my education. It does not include any  
 8 employment that I had prior to graduate school.  
 9 Q. So this is all postgraduate school experience?  
 10 A. Yes.  
 11 Q. Great. And can you tell me a little bit about  
 12 what you did -- because it looks like your first job was  
 13 at CUNY.  
 14 A. Yes.  
 15 Q. Is that correct?  
 16 Can you tell me a little bit about your job, it  
 17 doesn't need to be in dramatic detail, but just a little  
 18 bit about your job there?  
 19 A. It was just a tenured track faculty position  
 20 in the department of economics and finance at one of the  
 21 what are called senior colleges of CUNY, and this one is  
 22 called Baruch College.  
 23 Q. What courses did you teach there?  
 24 A. I taught labor economics, economic history,  
 25 microeconomics, macroeconomics. And I think that's --

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1 have it as page 7. It says page 7, but it's A8.  
 2 A. Mine says page 7, A7.  
 3 Q. That's the exhibit, so we'll go with 7, A7.  
 4 But does that list all of your education?  
 5 A. Well, all of my higher education. Obviously,  
 6 not high school, not elementary school.  
 7 Q. Higher education, that's correct.  
 8 A. Formal higher education. As I a moment ago  
 9 indicated, one's education never stops.  
 10 Q. Agreed. And then -- I don't know if I have  
 11 the -- I don't know why my page numbers are different,  
 12 but anyway.  
 13 So can you turn to page 1 or A1 of Attachment A.  
 14 Is this a -- do you have the employment experience  
 15 listed there?  
 16 MS. MANTOAN: Objection. Vague.  
 17 THE WITNESS: Where? On A1? On A1, no, I  
 18 don't.  
 19 BY MR. SONG:  
 20 Q. I'm sorry. It's on -- I guess on yours it  
 21 should be page 7, A7.  
 22 A. Yes, A7.  
 23 Q. And does that list all of your experience?  
 24 MS. MANTOAN: Objection. Vague.  
 25 THE WITNESS: It lists my employment

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1 and econometrics.  
 2 Q. And you were there for approximately six years  
 3 it looks like?  
 4 A. Correct.  
 5 Q. Did you publish any articles while you were  
 6 there?  
 7 A. Well, the article from my dissertation was  
 8 published during that time. And then a monograph that I  
 9 co-authored, which is listed under "Publications," was  
 10 also published during that time.  
 11 Q. And which monograph are you talking about?  
 12 A. It's called "Financial Success and Business  
 13 Ownership Among Vietnam and Other Veterans."  
 14 Q. Can you tell us a little bit about that  
 15 article?  
 16 A. It was just an -- it was an analysis that -- I  
 17 think it was the Small Business Administration had been  
 18 the -- yes, I see that here.  
 19 It was the Small Business Administration and the  
 20 Veterans Administration both commissioned a study. And  
 21 they wanted to know -- there had been research done  
 22 previously regarding the post-military service labor  
 23 market earnings of veterans of other wars, but it had  
 24 not been done for Vietnam era veterans.  
 25 And sufficient time had passed since the end of

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1 that war to permit an analyst to look back, to look at  
 2 the data to see the relationships there.  
 3 It was a study that focused on whether or not and  
 4 in what ways service in the Vietnam era in the military  
 5 impacted subsequent private labor market earnings.  
 6 Q. And was that kind of an economic history  
 7 article then?  
 8 A. No, it was certainly not, unless you regard  
 9 the five years prior to be history.  
 10 No. This was purely a labor economics exercise.  
 11 Q. And you ran regressions for that article?  
 12 A. Many.  
 13 Q. And was this -- is this a peer-reviewed  
 14 article? It's Small Business Association. I'm not  
 15 familiar with the Small Business Association.  
 16 Is this -- is this their journal?  
 17 A. No. I think I -- Small Business Association  
 18 is a government agency.  
 19 Q. Okay.  
 20 A. Veterans Administration, another government  
 21 agency.  
 22 It was a study commissioned by them. There was an  
 23 interest, a public policy interest at the time  
 24 apparently in whether or not Vietnam era -- I think  
 25 this was in connection with whether or not there should

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1 Q. Do you know if they published it?  
 2 A. Well, I don't know whether it's regarded as  
 3 published. It was a volume. It ended up being a  
 4 volume, a bound volume. I would assume that means it's  
 5 published.  
 6 Whether or not it's formally published, I don't  
 7 know. But it was a bound volume.  
 8 Q. Do you have a copy of the bound volume?  
 9 A. I used to. I'm not sure I still do. Every  
 10 time I move offices, I have to move everything in the  
 11 office.  
 12 Q. But they didn't publish it in like a journal  
 13 or something like that?  
 14 A. Not to my knowledge.  
 15 Q. And you don't know if you have a copy of it  
 16 anymore?  
 17 A. I don't know.  
 18 Q. And that's your only publication from CUNY?  
 19 A. Well, that and the second publication there,  
 20 "Schooling and Occupational Choice in 19th Century Urban  
 21 America."  
 22 It was submitted before I left CUNY. But from the  
 23 date here, it appears that it was published after I  
 24 left.  
 25 Q. That sounds very similar to your dissertation.

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1 be some form of federal government assistance available  
 2 to veterans of the Vietnam era war, in particular, and  
 3 whether that should be different in some way from  
 4 assistance that veterans of other wars might have  
 5 gotten in the past.  
 6 So since nobody had done a systematic study,  
 7 that's why the study was commissioned.  
 8 Q. So was this -- did this end up being a  
 9 government publication?  
 10 MS. MANTOAN: Objection. Vague.  
 11 THE WITNESS: I guess you could regard it as  
 12 such, yes.  
 13 BY MR. SONG:  
 14 Q. Was this study peer-reviewed?  
 15 A. I'm not sure. I don't know whether  
 16 individuals at the SBA or VA had comments. I think  
 17 there was some back and forth. But I don't think it's  
 18 classic peer-reviewed in the sense of an academic  
 19 journal.  
 20 I'm sure there was some review, some editorial  
 21 input, but I'm not sure I would call that peer-reviewed  
 22 in the same sense as an academic journal.  
 23 Q. So this was a study that you produced for SBA,  
 24 specifically for them?  
 25 A. For SBA and the VA, yes.

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1 Is it similar to your dissertation?  
 2 A. It is the article based on that. As I  
 3 referred to a moment ago, it's the article based on my  
 4 dissertation.  
 5 Q. The Journal of Economic History, is that a  
 6 peer-reviewed journal?  
 7 A. Yes, it is.  
 8 Q. And you did receive feedback regarding that  
 9 article?  
 10 A. Yes, I did.  
 11 Q. So this came after CUNY.  
 12 Were there any other publications while you were at  
 13 CUNY?  
 14 MS. MANTOAN: Objection. Misstates testimony.  
 15 THE WITNESS: Other than the two that we just  
 16 discussed, nothing else that I wrote was published  
 17 during that period of time.  
 18 BY MR. SONG:  
 19 Q. So when you were at CUNY, you were more of a  
 20 teaching faculty?  
 21 MS. MANTOAN: Objection. Misstates testimony.  
 22 THE WITNESS: That was not the intent. The  
 23 intent was I was the research faculty. But I did not  
 24 generate -- well, I generated plenty of research. I  
 25 just didn't send it out for publication.

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1 BY MR. SONG:  
 2 Q. Were you put up for tenure?  
 3 A. I was not. Well, not that I know of. I left  
 4 before the decision to do so would have been made.  
 5 Q. Why did you leave?  
 6 A. I was not happy as an academic, as evidenced  
 7 by the fact that I wouldn't send my research material  
 8 out for publication.  
 9 Q. So you left for greener pastures.  
 10 It looks like you went to Olympia & York.  
 11 A. No. That's not true. You have to carefully  
 12 scrutinize the ordering here.  
 13 Q. It's a little bit out of order. Okay. I see.  
 14 A. Well, out of order from one perspective, but  
 15 it's in order from another perspective.  
 16 Q. Okay.  
 17 A. Olympia & York was in the midst -- in the  
 18 middle of my Pricewaterhouse employment.  
 19 Q. Were you working at one of them part time or  
 20 both part time?  
 21 A. No. No. I was at -- I went from CUNY to  
 22 Pricewaterhouse. And after 11 months at  
 23 Pricewaterhouse, a client of Pricewaterhouse hired me  
 24 away from Pricewaterhouse. And that client was  
 25 Olympia & York.

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1 time with them because I was a labor economist. So  
 2 then I was working on employment litigation with that  
 3 group.  
 4 Q. Were you working on any discrimination cases?  
 5 A. Yes. That's all I did. That's basically what  
 6 that group did.  
 7 Q. And was that on the defense side?  
 8 A. I think it may have been -- I think it was  
 9 mostly defense, I think, is what that practice was. But  
 10 I think there was some plaintiff work as well.  
 11 Q. Do you have a rough idea of the breakdown?  
 12 A. I think it was probably mostly defense, given  
 13 the practice of this particular -- of the leader of that  
 14 group.  
 15 Q. So was it maybe 80, 90 percent defense?  
 16 A. I don't -- I don't know.  
 17 Q. 60, 70 percent?  
 18 A. I can't put a number on it.  
 19 Q. What about at Olympia~&~York?  
 20 MS. MANTOAN: Objection. Vague.  
 21 THE WITNESS: I joined Olympia~&~York just as  
 22 an economist in general, not as a labor economist, and  
 23 participated in a whole variety of different types of  
 24 projects related to commercial real estate trends and  
 25 the economics of commercial real estate, which was the

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1 But Olympia & York was on the verge of collapse at  
 2 that point, unbeknownst to all of us, and so I went  
 3 back to Pricewaterhouse and then, ironically enough,  
 4 ended up consulting back to Olympia & York when they  
 5 declared bankruptcy. So it was quite interesting.  
 6 Q. We don't need to get into all the details of  
 7 all the dates.  
 8 So what did you do at Pricewaterhouse? And what  
 9 did you do at Olympia & York?  
 10 MS. MANTOAN: Objection. Compound.  
 11 THE WITNESS: I joined a group at  
 12 Pricewaterhouse that focused on litigation and  
 13 bankruptcy consulting. And I participated in the work  
 14 of that office with that group, participating in  
 15 projects involving both litigation of various types and  
 16 bankruptcy.  
 17 BY MR. SONG:  
 18 Q. Do you recall what kind of litigation?  
 19 A. A variety of different types; commercial  
 20 litigation, including things like patent infringement,  
 21 antitrust, breach of contract.  
 22 And then starting in 1990, summer of 1990 when I  
 23 went back to Pricewaterhouse, a group of people who did  
 24 labor and employment litigation joined the firm. And I  
 25 worked -- from that point on, I spent the bulk of my

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1 business of that company.  
 2 BY MR. SONG:  
 3 Q. It looks like you were simultaneously at  
 4 Altschuler Melvoin and Glasser and you were the partner  
 5 of economics and litigation services.  
 6 MS. MANTOAN: Objection. Misstates the  
 7 document.  
 8 THE WITNESS: I'm not sure what you mean by  
 9 "simultaneously."  
 10 BY MR. SONG:  
 11 Q. Well, it looks like there was -- oh, I guess  
 12 you didn't have too much overlap. You went right -- you  
 13 went straight from, I guess, Pricewaterhouse to  
 14 Altschuler?  
 15 A. I did.  
 16 Q. Is that a law firm?  
 17 A. No. It was an accounting and consulting firm.  
 18 Q. Can you describe what you did there?  
 19 A. Yes. I worked on a variety of different kinds  
 20 of matters, some including litigation, some including  
 21 consulting.  
 22 Litigation involved both labor and employment  
 23 issues and also other kinds of issues.  
 24 Q. Any discrimination cases?  
 25 A. Yes.

40

1 Q. Approximately how much of your caseload would  
 2 you say were labor cases?  
 3 A. It was most at that point, probably  
 4 three-quarters, maybe more.  
 5 Q. And how many -- of the labor cases, how many  
 6 discrimination cases did you have?  
 7 A. I don't know how many, but probably the  
 8 majority of my time was spent on the discrimination  
 9 cases.  
 10 Q. And were you -- was Altschuler -- or was your  
 11 work mostly on behalf of defendants?  
 12 A. It was both defendants and plaintiffs.  
 13 Q. Was it mostly for defendants?  
 14 A. Probably more for defendants than plaintiffs.  
 15 But there was a balance there, when I was at AM&G, of  
 16 both plaintiff and defendant work.  
 17 Q. So it was roughly 50/50 or approximately  
 18 50/50?  
 19 A. I don't know. It was probably not 50/50, but  
 20 I don't know what the exact balance would be.  
 21 Q. If they weren't 50/50, then do you think there  
 22 were more defendants' cases?  
 23 A. Oh, probably there were. That's what I think  
 24 I said earlier. It was probably more on the defendant  
 25 side of things. But there were -- there was a

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1 you described as systemic cases.  
 2 Q. And then what about at Deloitte & Touche, what  
 3 did you do there?  
 4 A. Not much of anything.  
 5 Q. You were not happy there again?  
 6 A. Well, I could have been.  
 7 Deloitte--&--Touche, as you know, is a very large  
 8 firm.  
 9 Q. Sure.  
 10 A. And after considering carefully whether we  
 11 could function as a group, the entire group of us from  
 12 AM&G at Deloitte, we decided we could.  
 13 But it turned out that, in fact, conflicts of  
 14 interest were such that we could not take on projects  
 15 that were offered to us by our clients. And so that's  
 16 why we were there for a brief two months --  
 17 Q. Okay.  
 18 A. -- and left at that point.  
 19 Q. What were your duties there?  
 20 A. Well, I was a partner there. So my duties  
 21 would have involved running a group, a practice, but  
 22 also participating in administrative duties.  
 23 And since I was only there for two months, I  
 24 really didn't have a chance to get involved with  
 25 anything to speak of.

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1 significant amount of plaintiff work as well.  
 2 Q. You don't remember -- you don't recall what  
 3 the breakdown would be?  
 4 A. No. It's 25 years --  
 5 MS. MANTOAN: Objection. Misstates testimony.  
 6 THE WITNESS: It's almost 25 years ago, so I  
 7 don't have a precise estimate. But there was work for  
 8 both defendants and plaintiffs.  
 9 BY MR. SONG:  
 10 Q. And while you were there, did your work  
 11 involve individual cases?  
 12 A. It did.  
 13 Q. Did they involve class actions?  
 14 A. It did.  
 15 Q. And do you remember what the breakdown was?  
 16 A. Well, in terms of time, I would say more time  
 17 spent on class actions just because there is more time  
 18 that one tends to spend on those sorts of cases.  
 19 Numerically, there were more individual cases.  
 20 Q. Do you have any idea of what the percentages  
 21 would have been, whether you spent 60 percent of your  
 22 time on systemic cases or class actions?  
 23 A. Again, that's not something that I would be  
 24 able to give you an estimate. What I said was more of  
 25 my -- more than half of my time would have been on what

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1 But the idea of -- the idea would have been to  
 2 participate in the business of the firm as a partner of  
 3 the firm.  
 4 Q. You were specifically in the dispute and  
 5 consulting services department?  
 6 A. I think that's what it was called, yes, at  
 7 that time.  
 8 Q. And I know you were only there for two months  
 9 and you didn't get to do very much.  
 10 But were you supposed to be working on labor cases  
 11 there?  
 12 MS. MANTOAN: Objection. Vague.  
 13 THE WITNESS: I wasn't restricted to be  
 14 whatever I wanted to work on and could work on.  
 15 Given my background in labor and employment and  
 16 given the work I had been doing for the last -- for the  
 17 years previous to that, it was contemplated I think by  
 18 them that I would add a labor and employment component  
 19 to their group and do work in that area.  
 20 BY MR. SONG:  
 21 Q. Were you also supposed to work on  
 22 discrimination cases?  
 23 MS. MANTOAN: Objection. Vague.  
 24 THE WITNESS: Well, when I --  
 25 MS. MANTOAN: -- as to --

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1 THE WITNESS: When I said "labor and  
2 employment," that would mean -- that would include  
3 discrimination cases.  
4 BY MR. SONG:  
5 Q. I just wanted to clarify if that was also  
6 included, you know, instead of like just back page -- I  
7 mean back wage, or something like that, versus  
8 discrimination cases.  
9 A. No. Damages cases -- at that point in time,  
10 damages cases had receded a little bit relative to  
11 systemic cases in my work.  
12 Q. And the dispute consulting services, did that  
13 basically mean litigation services?  
14 A. In general. But there was also a variety of  
15 other kinds of consulting that was done under that  
16 umbrella that was not litigation.  
17 Q. And do you know if Deloitte & Touche's  
18 practice focused on defendants, working with defendants?  
19 MS. MANTOAN: Objection. Vague.  
20 THE WITNESS: I think Deloitte, as a firm in  
21 that area, worked for their clients. And their clients  
22 could have been defendants or plaintiffs, as the case  
23 may be.  
24 BY MR. SONG:  
25 Q. You don't recall if they worked -- if they

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1 here I see.  
2 Q. Other than UCLA, is there any other  
3 postgraduate school employment that's not listed?  
4 A. No, there is not.  
5 Q. You were also an adjunct at UCLA?  
6 A. I served -- I would say that's more of a  
7 visiting, an invited lecturer.  
8 In fact, I don't think I was paid. Those were  
9 just invited lectures. So maybe it's not employment.  
10 Q. What courses did you teach at UCLA?  
11 MS. MANTOAN: Objection. Misstates testimony.  
12 THE WITNESS: UCLA, when I was invited to give  
13 lectures, it was in the context of econometrics, of an  
14 econometrics course.  
15 BY MR. SONG:  
16 Q. And did you teach classes at USC?  
17 A. USC, it was a full course being taught in the  
18 adjunct capacity. So that was a regular faculty  
19 position, an adjunct faculty position. And so that  
20 would have been a full -- a full course being taught  
21 each time.  
22 Q. And what course was that?  
23 A. Econometrics.  
24 Q. Was that once a semester, once a trimester?  
25 A. It may have been twice a year one time and

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1 worked primarily with defendants?  
2 A. I don't recall what others were doing. But I  
3 do know, based on my time at Pricewaterhouse, that those  
4 firms tend to have a -- I wouldn't say even balance  
5 because I don't know, but there were a number of  
6 instances where they would work on behalf of their  
7 client in a plaintiff -- as the plaintiff or as the  
8 defendant.  
9 Q. And then you tried teaching again; right?  
10 A. No.  
11 MS. MANTOAN: Objection. Misstates testimony.  
12 THE WITNESS: I did not do that.  
13 BY MR. SONG:  
14 Q. No?  
15 A. "Tried teaching again" is the wrong phrase.  
16 Q. Please --  
17 A. I was asked to be --  
18 Q. -- explain.  
19 A. I was asked to be an adjunct professor during  
20 my time at Resolution Economics.  
21 So you can see here's another ordering issue.  
22 It's contained within the time period of Resolution  
23 Economics.  
24 So there was a period of time where I served as an  
25 adjunct at USC, also at UCLA, and that's not listed

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1 once a year. I don't recall whether it was both  
2 semesters or just one semester each year.  
3 Q. And that was not a tenured position; correct?  
4 A. No.  
5 Q. I want to back up for a minute to your work at  
6 AM&G, I think you're referring to it as.  
7 Was your role -- did you have a role in preparing  
8 damages?  
9 A. There was -- well, I could answer it. That  
10 was kind of incomplete, so I'll fill it in.  
11 There were cases, litigation cases involving  
12 claims of damage. So in those cases, I might be  
13 involved and I might be asked to address the issue of  
14 damages.  
15 Q. And do you recall if they were damages on  
16 behalf of plaintiffs or -- were they damages on behalf  
17 of plaintiff?  
18 A. There were instances of that, yes.  
19 Q. And then were you also preparing damage  
20 calculations for defendants?  
21 A. There were instances of that as well.  
22 Q. Do you remember what you did more of?  
23 A. No. I think we already discussed this.  
24 I think the majority of the work that I did at  
25 AM&G was on behalf of defendants, but I don't know the

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1 exact balance. It was both.  
 2 Q. Yeah, I was just following up. I was trying  
 3 to specifically ask about damages and not just general  
 4 work, but I understand your point.  
 5 Were you also involved in testing liability?  
 6 MS. MANTOAN: Objection. Vague.  
 7 THE WITNESS: Yes. I'm not quite sure what  
 8 you're -- I want to make sure I answer the question  
 9 you're asking. So can you explain a little more?  
 10 BY MR. SONG:  
 11 Q. Sure. For example, in this case, you did a  
 12 damages calculation as well as tested for liability  
 13 whether Oracle is involved or guilty of discrimination;  
 14 correct?  
 15 MS. MANTOAN: Objection. Vague. And  
 16 misstates the document and prior testimony.  
 17 THE WITNESS: I definitely would not  
 18 characterize it that way.  
 19 BY MR. SONG:  
 20 Q. How would you characterize it?  
 21 A. I did no damage calculations in this -- in  
 22 this case.  
 23 Q. Okay.  
 24 A. In addressing liability, what I did was  
 25 respond to what the OFCCP and then later Dr. Madden

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1 of discrimination or would be consistent or  
 2 inconsistent with an allegation or claim of  
 3 discrimination.  
 4 And I did have instances where I ran such analyses  
 5 at the request of whoever my client was.  
 6 MS. MANTOAN: Are we at a natural breaking  
 7 point? We've been going about an hour. Could we take a  
 8 break?  
 9 MR. SONG: We can take a break now.  
 10 THE VIDEOGRAPHER: We are going off the record  
 11 at 10:09.  
 12 (Recess from 10:09 a.m. to 10:29 a.m.)  
 13 THE VIDEOGRAPHER: We are back on record at  
 14 10:29.  
 15 BY MR. SONG:  
 16 Q. Dr. Saad, are you still on A7 I believe it is?  
 17 A. Yes.  
 18 Q. So I next wanted to go over your publications  
 19 with you. So I think we discussed a few of them.  
 20 The third one listed under Publications,  
 21 "Employment Discrimination Litigation," can you tell me  
 22 about that article?  
 23 A. It's an article that was written as a chapter  
 24 in what's called a Litigation Services Handbook, a  
 25 volume edited by Roman Weil and others. And it's been

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1 proposed in terms of what they characterized as  
 2 liability analysis.  
 3 Q. When you were -- so when you were at AM&G, did  
 4 you test liability? Did you run regressions to  
 5 determine whether there was discrimination or liability,  
 6 other liability for a company?  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: Well, running regressions, I  
 9 mean, that's just one form of statistical analysis.  
 10 BY MR. SONG:  
 11 Q. Sure.  
 12 A. So we'll put that aside.  
 13 There are many different statistical techniques  
 14 that one uses in this sort of litigation. So, yes, I  
 15 did perform statistical analyses. And there were times  
 16 when they were in the context of testing whether or not  
 17 there was a relationship between a particular  
 18 employment practice and a particular protected  
 19 characteristic.  
 20 It's not the role of the statistician or labor  
 21 economist to try to prove or disprove discrimination  
 22 itself, which, as I understand, is a legal concept.  
 23 All I can do as a statistician or labor economist  
 24 is see whether there are relationships in the data that  
 25 could give rise to an inference or rebut an inference

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1 revised, I guess it looks like, five times at this point  
 2 since its original writing in 1995.  
 3 Q. Were you asked to write this chapter?  
 4 A. Yes.  
 5 Q. Who is Roman Weil?  
 6 A. He's a professor at the University of Chicago.  
 7 Q. Is he an attorney?  
 8 A. No.  
 9 Q. Who specifically publishes this handbook?  
 10 A. I think it's published by Wiley.  
 11 Q. And is this published for the defense bar?  
 12 MS. MANTOAN: Objection. Calls for  
 13 speculation. Vague.  
 14 THE WITNESS: That's not my understanding, no.  
 15 This is for all practitioners, whether they be  
 16 representing plaintiffs or defendants.  
 17 And it's written more for practitioners on the --  
 18 who are serving in expert roles, but also written in  
 19 such a way that attorneys could read it and appreciate  
 20 its content.  
 21 BY MR. SONG:  
 22 Q. And then who's the actual publisher of this  
 23 handbook?  
 24 A. As I said, Wiley, John Wiley.  
 25 Q. I'm sorry. And that is -- oh, I thought --

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1 A. Wiley, a major publisher, you know, one of the  
 2 big publishers in the world.  
 3 Q. Okay. I wasn't making that connection. I  
 4 thought you were talking about some guy named John  
 5 Wiley.  
 6 A. Maybe I should say John Wiley and company, if  
 7 that's -- but I'm not sure if that's the formal name or  
 8 not.  
 9 Q. And is a more recent -- an updated version  
 10 coming out as well?  
 11 A. The most recent is 2017. I haven't been asked  
 12 to update it.  
 13 As you can see from the dates there, it's every  
 14 five or six years. So there's probably a couple years  
 15 to go before I will be asked again to revise and  
 16 update.  
 17 Q. And is this a peer-reviewed journal?  
 18 A. I know it is reviewed by the editors and that  
 19 the editors do rely on a variety of people, because I  
 20 got back quite a few interesting comments, and have each  
 21 time over the years. I don't know who they are.  
 22 I do know, at least historically, Dr. Weil would  
 23 offer his suggestions, but I think there are other  
 24 individuals as well.  
 25 Q. And do you know who the editors are?

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1 approaches one can use in the context of cases involving  
 2 claims of discrimination.  
 3 Q. So does it give examples of statistical  
 4 analyses, different types?  
 5 A. There are a number of examples, some of them  
 6 hypothetical, some based on actual data.  
 7 Q. I forgot to ask. "Schooling and Occupational  
 8 Choice in Nineteenth Century Urban America," do you know  
 9 how many pages that is?  
 10 A. I think it's seven or eight pages, maybe ten.  
 11 I'm not sure.  
 12 Q. And is that -- is that more of a summary then?  
 13 MS. MANTOAN: Objection. Vague. Misstates  
 14 testimony.  
 15 THE WITNESS: It's an article based on a much  
 16 longer dissertation. The dissertation was, whatever,  
 17 120, 130 pages. So it's obviously not a full-length  
 18 version of the dissertation. It's a shortened version.  
 19 BY MR. SONG:  
 20 Q. Then your next publication that you list is  
 21 "Employment Discrimination."  
 22 Can you tell us about that article?  
 23 MS. MANTOAN: Objection.  
 24 BY MR. SONG:  
 25 Q. I'm sorry. That chapter.

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1 A. Well, he's one of the editors. There have  
 2 been different editors over time. I don't know who the  
 3 editors are now, other than --  
 4 Q. Than Wiley [sic]?  
 5 A. Weil. He's been the constant throughout the  
 6 history of this volume.  
 7 Q. And how long is this --  
 8 MS. MANTOAN: I'm sorry. Just so the record  
 9 is clear, you're talking about Weil and then Wiley.  
 10 Your question had said "Wiley," but your answer said  
 11 "Weil." Is that right?  
 12 THE WITNESS: He said Weil also. I think  
 13 we're clear.  
 14 MS. MANTOAN: Okay. It's like that  
 15 Orrick/Oracle.  
 16 THE WITNESS: Right.  
 17 MR. SONG: Wile E. Coyote.  
 18 THE WITNESS: That's a third one.  
 19 BY MR. SONG:  
 20 Q. How long is this chapter?  
 21 A. It doesn't give page numbers, does it? It's  
 22 about, I think, 35, 40 pages.  
 23 Q. And do you do any statistical analyses in  
 24 there?  
 25 A. It does present a variety of statistical

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1 MS. MANTOAN: Objection. Other than what he's  
 2 already testified to? I think that's the chapter you  
 3 were talking about at length.  
 4 Right?  
 5 THE WITNESS: No.  
 6 MR. SONG: No.  
 7 THE WITNESS: He's referring to the next one  
 8 on the list there, I think.  
 9 MS. MANTOAN: Okay.  
 10 THE WITNESS: I think.  
 11 MR. SONG: Yes. Yes. Yes. Similar titles.  
 12 THE WITNESS: Yes. That entry refers to a  
 13 chapter that was written in a volume that was a  
 14 companion to the Litigation Services Handbook.  
 15 And the goal of that companion book was to present  
 16 actual reports from various experts using data from an  
 17 actual case they had worked on, but anonymized so that  
 18 it could be published in this volume.  
 19 Q. Who is the publisher?  
 20 A. Again, it's Wiley.  
 21 Q. This is Wiley.  
 22 A. I mean, it goes along with the Litigation  
 23 Services Handbook. It's a companion volume. It was  
 24 edited by Jack Friedman, not by Roman Weil.  
 25 But the contents of that book were a series of

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1 chapters analyzing real situations and presenting  
 2 expert reports but, as I said, anonymized as to the  
 3 names of the parties so that it could be published  
 4 without implicating or discussing any of the parties  
 5 directly.  
 6 **Q.** And this chapter is specifically about  
 7 Litigation Support Report Writing?  
 8 **A.** I'm not sure.  
 9 **MS. MANTOAN:** Objection. Vague.  
 10 Is there a question?  
 11 **BY MR. SONG:**  
 12 **Q.** I guess I'm trying to --  
 13 **MR. SONG:** Yes. I asked him a question. He  
 14 just didn't understand.  
 15 **BY MR. SONG:**  
 16 **Q.** So I'm trying to understand the difference  
 17 between your -- because you said this is a companion  
 18 publication that goes with this "Employment  
 19 Discrimination Litigation" chapter in the Litigation  
 20 Services Handbook.  
 21 So I'm wondering just what the difference between  
 22 these two articles is.  
 23 **A.** Yes. The article in the Litigation Services  
 24 Handbook is a general article about approaches one can  
 25 take to claims of discrimination, how analyses could be

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1 **Q.** Do you know if it's intended for defense  
 2 attorneys or plaintiff attorneys?  
 3 **MS. MANTOAN:** Objection. Calls for  
 4 speculation. Vague. Assumes facts.  
 5 **THE WITNESS:** No. I don't think that that's  
 6 the intent at all.  
 7 My understanding is it's just --  
 8 **BY MR. SONG:**  
 9 **Q.** General?  
 10 **A.** -- individuals, in general, who are involved  
 11 in the litigation space. It's possible it's also  
 12 targeted at, in particular, academic courses, for  
 13 example, a law and economics course at a law school.  
 14 I wouldn't be surprised if this volume -- if this  
 15 volume were relied upon in that setting.  
 16 **BY MR. SONG:**  
 17 **Q.** Do you know if it is relied upon in that  
 18 setting?  
 19 **A.** I don't know.  
 20 **Q.** And do you know who does actually read this  
 21 Litigation Services Handbook?  
 22 **MS. MANTOAN:** Objection. It calls for  
 23 speculation.  
 24 **THE WITNESS:** Well, I know there are quite a  
 25 few authors involved who work in many different firms.

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1 done, and gives examples of a variety of different  
 2 contexts and different types of analyses.  
 3 The chapter in the Litigation Support Report  
 4 Writing, as its more complete name implies, is  
 5 comprised of chapters that are actual reports. And the  
 6 actual reports are published exactly as they were  
 7 written, just anonymizing the names of the parties.  
 8 **Q.** And this was published once in 2003?  
 9 **A.** Yes. That has not, to my knowledge, been  
 10 updated. At least I have not heard anything to that  
 11 effect.  
 12 **Q.** Do you know who the intended audience is for  
 13 Litigation Services Handbook?  
 14 **MS. MANTOAN:** Objection. Calls for  
 15 speculation. Vague.  
 16 **THE WITNESS:** I don't think there's -- I don't  
 17 think there's a targeted intended audience.  
 18 I think you asked me a question related to this  
 19 before. I think it's -- well, if I were to -- you don't  
 20 want me to speculate, so I probably shouldn't do that.  
 21 **BY MR. SONG:**  
 22 **Q.** No, but if you have an estimate.  
 23 **A.** I would suspect its intended audience is  
 24 practitioners in the field of litigation consulting and  
 25 attorneys involved in litigation matters.

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1 Some of them are also in academia. So I suspect there  
 2 are people at all those places who have some familiarity  
 3 with the volume.  
 4 The fact that it's been revised and updated five  
 5 times would imply to me that there must be some demand  
 6 for it. But who specifically is reading it, I don't  
 7 know.  
 8 **BY MR. SONG:**  
 9 **Q.** Do you know if this Litigation Support Report  
 10 Writing is still -- does it accompany this Litigation  
 11 Services Handbook?  
 12 **MS. MANTOAN:** Objection. Vague.  
 13 **THE WITNESS:** Well, it was intended to at the  
 14 time, and it looks like it would have been in connection  
 15 with the 2001 revision.  
 16 And by the way, I believe this book significantly  
 17 predates my participation starting in 1995. Litigation  
 18 Services Handbook had been around, I think, for at least  
 19 one, maybe two previous editions, but I'm not sure.  
 20 But the 2003 volume was in connection with the 2001  
 21 revision of Litigation Services Handbook and was  
 22 considered a companion volume at the time.  
 23 **BY MR. SONG:**  
 24 **Q.** You don't know if it's still considered a  
 25 companion?

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1 A. I don't.  
 2 Q. Then if you turn the page, it looks like you  
 3 co-authored an article with Mr. Grossman and Cane,  
 4 "Lies, Damned Lies, and Statistics."  
 5 Can you tell us a little bit about that article?  
 6 MS. MANTOAN: Objection. Vague.  
 7 THE WITNESS: Yes. The complete title is  
 8 "Lies, Damned Lies, and Statistics: How the Peter  
 9 Principle Warps Statistical Analysis of Age  
 10 Discrimination Claims."  
 11 It was an article, as you said, co-authored with  
 12 two other individuals, Paul Grossman and Paul Cane,  
 13 published in The Labor Lawyer. And the subject was,  
 14 "How should one conduct statistical analysis in the  
 15 specific context of age discrimination?"  
 16 BY MR. SONG:  
 17 Q. And this was published in The Labor Lawyer in  
 18 2007; is that correct?  
 19 A. Yes.  
 20 Q. And who are Paul Grossman and Paul Cane?  
 21 A. They are attorneys.  
 22 Q. Do you know what their practice -- what they  
 23 practice?  
 24 MS. MANTOAN: Objection. Vague.  
 25 THE WITNESS: Like law? I'm not sure what you

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1 BY MR. SONG:  
 2 Q. And was this article -- was the thesis of this  
 3 article questioning age discrimination claims?  
 4 MS. MANTOAN: Objection. Vague.  
 5 THE WITNESS: No.  
 6 BY MR. SONG:  
 7 Q. No? But the title seems to suggest that.  
 8 "How the Peter Principle Warps Statistical Analysis of  
 9 Age Discrimination Claims," it does sound a little  
 10 anti-age discrimination claim to me.  
 11 You mentioned that it was an analysis of how age  
 12 discrimination -- age discrimination claim statistics.  
 13 But was it questioning them?  
 14 MS. MANTOAN: Objection. Vague.  
 15 Argumentative. Misstates the testimony.  
 16 THE WITNESS: Yeah, I'm a little confused as  
 17 to what the question is. Maybe you can ask -- that was  
 18 several. Can you just give me one?  
 19 BY MR. SONG:  
 20 Q. Okay. Was this article challenging age  
 21 discrimination claims?  
 22 MS. MANTOAN: Same objections.  
 23 THE WITNESS: No. That wasn't the subject of  
 24 the article.  
 25 The article -- the subject of the article was how

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1 mean.  
 2 BY MR. SONG:  
 3 Q. Well, that would be helpful. I hope it's not  
 4 medicine.  
 5 A. Could you be more specific, please.  
 6 Q. What type of law?  
 7 A. I believe, in my experience with them,  
 8 employment law. Whether they practice other kinds of  
 9 law, I can't say.  
 10 Q. Do you know if it's on the defense side or the  
 11 plaintiff side?  
 12 A. In my experience with them, it was on behalf  
 13 of defendants. Beyond that, I can't tell you.  
 14 Q. And are you familiar with The Labor Lawyer?  
 15 A. I know --  
 16 MS. MANTOAN: Objection. Vague.  
 17 THE WITNESS: Yes, I am.  
 18 BY MR. SONG:  
 19 Q. And is this a defense bar journal?  
 20 MS. MANTOAN: Objection. Vague.  
 21 THE WITNESS: Not to my understanding. It's a  
 22 publication that is -- it's published by the American  
 23 Bar Association. And the ABA, I believe, makes --  
 24 serves all of its members who are both representing  
 25 plaintiffs as well as defendants.

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1 statistical analysis should be conducted in the context  
 2 of age discrimination claims.  
 3 BY MR. SONG:  
 4 Q. And is this a peer-reviewed article -- or  
 5 journal? Sorry.  
 6 A. My understanding is that it is.  
 7 Q. And by lawyers?  
 8 A. By whomever the editors of the journal see fit  
 9 to consult with as reviewers. I don't know who they  
 10 are.  
 11 Q. But if it's the ABA and it's publishing a  
 12 journal called The Labor Lawyer, presumably they're  
 13 lawyers?  
 14 MS. MANTOAN: Objection. That calls for  
 15 speculation. He's already answered the question.  
 16 THE WITNESS: No. My understanding is that  
 17 there are a lot of law journals. And many law journals,  
 18 they may have lawyers who are reviewers, but they may  
 19 have nonlawyers who are reviewers as well. My  
 20 understanding is that's quite common.  
 21 So I don't know in the case of The Labor Lawyer,  
 22 whether they have nonlawyers. But they certainly  
 23 publish a variety of nonlawyer work or work by  
 24 nonlawyers.  
 25 So I would suspect, given that they invite and

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1 apparently want to publish that material, that they  
 2 might have reviewers who are not lawyers as well.  
 3 BY MR. SONG:  
 4 Q. But this journal is most likely intended for  
 5 attorneys; correct?  
 6 MS. MANTOAN: Objection. Asked and answered  
 7 and calls for speculation.  
 8 THE WITNESS: I don't know. The ABA has  
 9 members who are lawyers, but also has members, associate  
 10 members, as they're called, who are nonlawyers.  
 11 I'm an associate member myself. And I read it, and  
 12 I have colleagues who read it who are not lawyers.  
 13 BY MR. SONG:  
 14 Q. But I'm pretty sure most members are lawyers,  
 15 of the ABA. Okay.  
 16 Your next article was by yourself. "Beyond the  
 17 Peter Principle - How Unobserved Heterogeneity in  
 18 Employee Populations Affects Statistical Analysis in Age  
 19 Discrimination Cases: Application to a Termination/RIF  
 20 Case."  
 21 What's an R-I-F case?  
 22 A. Or otherwise known as RIF or reduction in  
 23 force.  
 24 Q. And was this a follow-up article to the  
 25 previous article that you co-authored with Mr. Grossman

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1 MS. MANTOAN: Objection. Vague.  
 2 THE WITNESS: The ones that come to mind, my  
 3 work with them, I think, has been on behalf of  
 4 defendants. But I'd have to really think thoroughly  
 5 about that and probably consult them, some information,  
 6 but...  
 7 BY MR. SONG:  
 8 Q. And can you summarize this article for us,  
 9 please?  
 10 A. This took the approach outlined in the  
 11 Grossman, Cane, and Saad article, and extended it to a  
 12 situation where what was at issue was a claim of  
 13 discrimination and termination, a class claim.  
 14 And did an analysis taking into account the  
 15 approach that was outlined in the previous article,  
 16 which I refer to as the Peter Principle, but it's got a  
 17 variety of different names. That was just a popular  
 18 name that people have familiarity with, but economists  
 19 have other names that are more accurately descriptive,  
 20 you might say.  
 21 And then just -- in this case I had actually  
 22 applied this approach in an actual case. And this was  
 23 an article based on that actual case and, again,  
 24 anonymizing the company.  
 25 Q. When did the conference take place? Or was

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1 and Cane?  
 2 A. No. It was a separate article on a separate  
 3 analytical issue, but closely related issue.  
 4 Q. And it was published by the AELC Conference?  
 5 A. It was in a conference volume.  
 6 Q. Okay. And what's the AELC?  
 7 A. It's the American Economics Law Council.  
 8 Q. And what is that?  
 9 A. It's an association of lawyers.  
 10 Q. Do you know if that is predominantly labor  
 11 lawyers?  
 12 MS. MANTOAN: Objection. Vague.  
 13 THE WITNESS: I believe that's the case based  
 14 on the name. And the people that I know associated with  
 15 it, I believe, are labor lawyers or employment lawyers,  
 16 as I prefer to call them.  
 17 BY MR. SONG:  
 18 Q. Are the majority of these lawyers defense  
 19 lawyers?  
 20 MS. MANTOAN: Objection. Calls for  
 21 speculation.  
 22 THE WITNESS: I don't know.  
 23 BY MR. SONG:  
 24 Q. The lawyers that you know that are in this  
 25 conference, are they defense lawyers?

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1 there a conference that took place?  
 2 A. There was, yes.  
 3 Q. Do you remember when that was?  
 4 A. In October of 2007.  
 5 Q. And you were invited to speak at that  
 6 conference?  
 7 A. Yes.  
 8 Q. And so is this essentially a publication of  
 9 your presentation?  
 10 A. No. The presentation was in a different  
 11 format. This is an article that was written for -- the  
 12 intended purpose was to be published in the conference  
 13 volume.  
 14 Q. And was this before the conference or after?  
 15 A. It was -- it was -- I believe the volume was  
 16 produced sometime after the conference was held.  
 17 Q. How many pages was this?  
 18 A. Oh, probably 40, 50 -- 40, 45 pages, somewhere  
 19 around there.  
 20 Q. And was this peer-reviewed?  
 21 A. It was reviewed by individuals associated with  
 22 the conference.  
 23 I don't think it's peer-reviewed in the classic  
 24 sense of an academic article because it's a conference  
 25 volume article.

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1 Q. Sure.  
 2 A. But it was reviewed. I did get comments and  
 3 had to revise based on the comments I received.  
 4 Q. And were they comments from lawyers?  
 5 A. I'm not sure.  
 6 Q. Were there comments from economists?  
 7 A. I don't know because they were not -- I didn't  
 8 know who the comments were coming from.  
 9 Q. I see.  
 10 Your next article is "Filling the Data Vacuum in  
 11 Wage and Hour Litigation: The Example of  
 12 Misclassification Cases, Emphasis on Class  
 13 Certification." And this was at the SIOP Annual  
 14 Conference Proceedings.  
 15 What is the SIOP?  
 16 A. The Society of Industrial Organization  
 17 Psychologists.  
 18 Q. Was this another conference that you were  
 19 invited to speak at?  
 20 A. Yes.  
 21 Q. How many pages was this article?  
 22 A. Again, probably in the 30 to 40-page range.  
 23 Q. Can you please summarize this article?  
 24 A. Yes. This was a situation where -- in  
 25 connection with a misclassification case in a wage and

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1 So they were interested to hear how the kinds of  
 2 work that they also tend to do could be used in a legal  
 3 context. Some of them were unfamiliar with the legal  
 4 context and how their work and the nature of their work  
 5 could bear on legal questions.  
 6 So the legal question I was asked to address was  
 7 class certification and, in particular, the extent to  
 8 which the observations of different managers might vary  
 9 in quite meaningful ways from one another, their work  
 10 content that is, and the way in which that might relate  
 11 in a legal setting to questions that counsel would want  
 12 to address.  
 13 Q. And do you have any idea if these industrial  
 14 psychologists were in-house at companies?  
 15 MS. MANTOAN: Objection. Vague.  
 16 THE WITNESS: Just to make sure,  
 17 IO psychologists. They're not industrial psychologists.  
 18 IO psychologists. So just to be precise about that.  
 19 This is basically regarded as an academic  
 20 conference. But I think, based on my understanding and  
 21 my experience at a couple of these conferences now, it's  
 22 probably half academics and half people in industry.  
 23 And in industry, some of them worked directly in --  
 24 are in companies working in HR positions. Some of them  
 25 are in consulting firms that consult the companies. So

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1 hour context.  
 2 The question is: What is the content of the work  
 3 that individuals engage in when they're classified as  
 4 exempt and you think they're nonexempt, but you have no  
 5 information on the proportion of their time being spent  
 6 on managerial duties, for example, versus hourly worker  
 7 duties.  
 8 One way to find that out -- there are several ways  
 9 one could investigate that. And I was proposing  
 10 several ways to do that and fill the vacuum of data, as  
 11 the title implies.  
 12 As a consequence, the companies do not retain the  
 13 moment-by-moment activities of their employees. So the  
 14 subject covered observation studies, surveys, time  
 15 diaries, and other forms of information retrieval that  
 16 could be used in order to conduct those cases.  
 17 Q. What about the class certification aspect,  
 18 what was the emphasis on class certification?  
 19 A. Well, this -- I was asked to focus on that in  
 20 addition to more generally discussing the issues.  
 21 Because at that time, the society and many of the  
 22 society's members have an interest in workplace  
 23 activities. That's really what their profession is  
 24 about from a little different perspective than mine as a  
 25 labor economist.

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1 that's sort of the makeup of the conference, as I saw  
 2 it.  
 3 BY MR. SONG:  
 4 Q. And this was also not a peer-reviewed journal;  
 5 correct?  
 6 A. Well, this was peer-reviewed just to be  
 7 accepted. I had to submit abstracts, and then I think  
 8 had to submit some preliminary drafts. All members of  
 9 the panel that I was on had to submit some materials in  
 10 order to be approved to be in the conference.  
 11 And there were a number of comments and  
 12 suggestions posed -- put forth at that time. Whether  
 13 that constitutes peer review, I don't know. But other  
 14 IO psychologists were reviewing what I was submitting  
 15 and suggesting revisions.  
 16 But, again, it would not be peer-reviewed in the  
 17 sense of an academic article, but in the sense of  
 18 essentially an academic conference volume.  
 19 Q. And you mentioned the panel you were on.  
 20 What panel was that?  
 21 A. It was a panel that was oriented around people  
 22 working in a legal setting and using tools that IO  
 23 psychologists also use in settings other than legal  
 24 settings.  
 25 Q. Do you remember the name of the panel?

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1 **A.** I don't.  
 2 **Q.** And then the final article that you have  
 3 listed is "Wage and Hour Cases - Filling the Data  
 4 Vacuum: Misclassification Cases and Other Observational  
 5 Studies."  
 6 How is this different than your previous article?  
 7 **MS. MANTOAN:** Objection. Assumes facts. It's  
 8 vague.  
 9 **THE WITNESS:** The emphasis was a little  
 10 different here. There's a lot of similarities between  
 11 the two, because there was a continued interest in this  
 12 subject by the conference.  
 13 But I think I emphasized a little more the  
 14 observational component. And if I recall correctly, I  
 15 added a component for observation via video and how that  
 16 could be used to essentially fill in or create data  
 17 where none exists. And the companies would not be  
 18 retaining, but, nevertheless, this information would be  
 19 important in the legal context of misclassification.  
 20 **BY MR. SONG:**  
 21 **Q.** And was this panel -- what was the title of  
 22 this panel?  
 23 **A.** Again, I don't recall the name of the panel.  
 24 **Q.** But it was a similar title to the 2009  
 25 conference?

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1 to suggest this is a dissertation.  
 2 **BY MR. SONG:**  
 3 **Q.** I'll give you a chance to read it over. Let  
 4 me know when you're ready.  
 5 **A.** I've taken a look.  
 6 **Q.** Do you recognize this document?  
 7 **A.** I've not seen the document in this form, but  
 8 it looks like it is a differently formatted version of  
 9 something that was published in the Journal of Economic  
 10 History.  
 11 **Q.** Is this the article that we were discussing  
 12 earlier?  
 13 **A.** It would be, yes.  
 14 **Q.** If you look at the header on page 454 and 455,  
 15 actually all of the pages, it says, "Summary of  
 16 Dissertation."  
 17 **A.** Yes.  
 18 **Q.** So would this be a summary of your  
 19 dissertation that you did at CUNY?  
 20 **MS. MANTOAN:** Objection. Misstates testimony.  
 21 Vague.  
 22 **THE WITNESS:** No. The dissertation was done  
 23 in connection with my Ph.D. at Chicago, University of  
 24 Chicago, well, completed while I was at CUNY, if that's  
 25 what --

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1 **A.** It probably was. I don't know if it was  
 2 identical, but it was probably similar.  
 3 **Q.** Did either of these panels discuss supporting  
 4 class certification?  
 5 **MS. MANTOAN:** Objection. Vague.  
 6 **THE WITNESS:** It was not about supporting or  
 7 not supporting. It was in the context of how do they  
 8 relate to class certification.  
 9 **BY MR. SONG:**  
 10 **Q.** And is that similar for both of these articles  
 11 as well, it didn't really -- it doesn't discuss  
 12 supporting class certification?  
 13 **MS. MANTOAN:** Objection. It misstates  
 14 testimony.  
 15 **THE WITNESS:** It discusses how the information  
 16 that is gathered or can be gathered through these  
 17 approaches could be used by an individual -- by counsel  
 18 attempting to certify a class. It could also be used by  
 19 counsel seeking to have a class not be certified.  
 20 (Saad Exhibit 6 was marked.)  
 21 **BY MR. SONG:**  
 22 **Q.** I'll show you Exhibit 6. I believe it's just  
 23 your dissertation, the publication of your dissertation.  
 24 **MS. MANTOAN:** I'm going to object to the  
 25 description of the document. Misstating prior testimony

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1 **BY MR. SONG:**  
 2 **Q.** Yeah. Because on 457 it has your name.  
 3 Is that your name, and listed next to it is Baruch  
 4 College, City University of New York; correct?  
 5 **A.** Yes.  
 6 **Q.** Yes. That's why I was thinking that.  
 7 It's your -- it's a summary of your dissertation  
 8 from the University of Chicago; correct?  
 9 **A.** Yes.  
 10 **Q.** Thank you.  
 11 And then if we continue on, on that page right  
 12 after -- are there any -- I'm sorry.  
 13 Are there any publications that are not listed  
 14 here?  
 15 **A.** It depends what you regard as publications.  
 16 I've given many, many presentations, as it says in the  
 17 next bullet. Some people put those in sort of a  
 18 publication kind of listing. I don't do that, other  
 19 than the ones that go into conference volumes, which are  
 20 the ones we discussed earlier.  
 21 So there's nothing else that I would regard as a  
 22 publication in the usual sense of that word.  
 23 **Q.** Thank you.  
 24 So it sounds like you have presented many  
 25 presentations at professional conferences to law firms

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1 and to industry groups. So we won't go into all of  
2 them.  
3 But can you let me know, for example -- other than  
4 the professional conferences that we've already spoken  
5 about, are there other professional conferences that  
6 you've presented at?  
7 **A.** There are.  
8 **Q.** Can you list them?  
9 **A.** By category, I probably could do that. ABA.  
10 I presented at ABA conferences.  
11 I've presented at various conferences that I guess  
12 you would call private conference company conferences.  
13 The American Conference Institute is one, or ACI. I've  
14 presented a number of times at ACI conferences.  
15 **Q.** What types of conferences do they have?  
16 **MS. MANTOAN:** Objection. Calls for  
17 speculation.  
18 **THE WITNESS:** They have a wide variety of  
19 conferences on many, many different kinds of topics.  
20 The ones I've participated in have been either  
21 their employment discrimination conference or their wage  
22 and hour litigation conference.  
23 But I think they must sponsor something like 50  
24 different series of conferences.  
25

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1 consultants who also tend to go to these conferences.  
2 **BY MR. SONG:**  
3 **Q.** Thank you.  
4 Which law firms have you presented to?  
5 **A.** There's been quite a few over the years. I  
6 remember a few. It's been a while since I've done that.  
7 **Q.** Which few do you remember?  
8 **A.** Seyfarth Shaw; Skadden Arps; Epstein  
9 Becker-&-Green; Jackson Lewis; Littler; Paul Hastings.  
10 Those are the ones that come to mind now. There  
11 may be others. But, like I say, it's been a while.  
12 **Q.** Are they -- have they typically been defense  
13 firms?  
14 **MS. MANTOAN:** Objection. Vague, ambiguous.  
15 **THE WITNESS:** The lawyers who invited me to  
16 these -- to speak at these firms, my experience with  
17 them had been working on behalf of their clients who  
18 were defendants.  
19 **BY MR. SONG:**  
20 **Q.** And there probably --  
21 **A.** Not all. Not all. I think there --  
22 **Q.** Sure.  
23 **A.** I think there were -- I know with Skadden  
24 Arps, there were instances of doing some pro bono work  
25 with them. And those tended to be on behalf of

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1 **BY MR. SONG:**  
2 **Q.** And are those conferences for defense lawyers?  
3 **MS. MANTOAN:** Objection. It calls for  
4 speculation.  
5 **THE WITNESS:** No. That's not my  
6 understanding.  
7 In my experience, the attendees have been  
8 individuals who -- I'm using your characterization --  
9 are primarily associated with the defense bar or  
10 primarily associated with the plaintiffs' bar.  
11 **BY MR. SONG:**  
12 **Q.** Are they usually lawyers that are involved in  
13 employment litigation?  
14 **MS. MANTOAN:** Objection. Calls for  
15 speculation. Also vague as to which conference or type  
16 of conference we're talking about.  
17 **MR. SONG:** Well, he's talking about the ACI  
18 conferences.  
19 **THE WITNESS:** Yes. In the ACI, the attendees  
20 by category would be lawyers who primarily work on  
21 behalf of companies, lawyers who primarily work on  
22 behalf of plaintiffs or individuals or groups of  
23 individuals and human resource professionals and  
24 in-house counsel.  
25 Those would be the categories, putting aside the

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1 plaintiffs.  
2 So I think we did -- our firm, me in particular  
3 and I think several others, worked with them at one  
4 point when they were involved with those sorts of  
5 projects.  
6 **Q.** Yeah. They're probably the only ones who can  
7 afford your rates to give private presentations.  
8 **A.** We don't charge to give these presentations.  
9 **Q.** Oh, you do these pro bono?  
10 **A.** It's not pro bono. I'm not charging to do any  
11 of this speaking. There's no money involved in any of  
12 the speaking that we've been discussing.  
13 **Q.** Oh, even these presentations to these private  
14 law firms?  
15 **A.** Right.  
16 **Q.** Then why do you give these presentations to  
17 these law firms?  
18 **A.** Well, there's two reasons. One is that they  
19 ask me to do so. And my understanding is -- and our  
20 firm has at various points in time -- I think still at  
21 this point in time -- is a what's called CLE provider,  
22 that we are certified continuing legal education  
23 providers in topics of our expertise, namely, the  
24 analytical methods we use. And my understanding is  
25 lawyers have to get some continuing education in those

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1 areas.  
 2 So there are law firms who are quite interested in  
 3 trying to satisfy that requirement, so they're quite  
 4 interested in having us come and speak to them.  
 5 And for us, of course, it's a good thing for us to  
 6 speak to them and meet people that we might ultimately  
 7 want to work with.  
 8 Q. And when you give these presentations to these  
 9 law firms, is there a specific presentation that you  
 10 usually give?  
 11 A. There's many different topics that have been  
 12 discussed over the years.  
 13 I don't like to talk about the same thing more  
 14 than once in the same way, so we often will change  
 15 things.  
 16 Or depending on what year it is, of course, there  
 17 are different things that are of interest at different  
 18 points in time. And so we try to make the  
 19 presentations, at least when we were doing more of  
 20 them, current to what was of interest at that time.  
 21 Q. Can you give me a few examples of  
 22 presentations you've given at law firms?  
 23 A. Well, one early example was to do case  
 24 studies, for example, of several different projects we  
 25 had worked on that used methods that were -- analytical

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1 methods that the lawyers were interested in. Sometimes  
 2 we would do Statistics 101 for lawyers.  
 3 We have done a number of wage and hour  
 4 presentations summarizing different approaches to wage  
 5 and hour claims.  
 6 I think that about covers the nature of the  
 7 presentations.  
 8 Q. And when do you think that you started to give  
 9 these presentations at law firms?  
 10 A. For me, it would have been I think during my  
 11 time at Pricewaterhouse once I moved from New York to  
 12 Los Angeles.  
 13 Q. And do you remember approximately what year  
 14 that was?  
 15 A. That was in just about this time in 1993,  
 16 early 1994, that timeframe.  
 17 Q. And then at some point did you stop giving  
 18 these presentations at law firms?  
 19 A. I haven't done them for probably six or seven,  
 20 eight years, myself. I think there are colleagues of  
 21 mine who have done them more recently.  
 22 Q. And by "colleagues," do you mean colleagues at  
 23 your firm --  
 24 A. Yes.  
 25 Q. -- your company? Okay.

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1 And are these colleagues at your company, are they  
 2 still doing these presentations at law firms?  
 3 A. They might be. I'm not certain.  
 4 Q. Have you ever done a presentation for Orrick?  
 5 A. I don't think I have, no.  
 6 Q. Have any of your colleagues done a  
 7 presentation for Orrick?  
 8 MS. MANTOAN: Objection. Calls for  
 9 speculation.  
 10 THE WITNESS: I'm not sure.  
 11 BY MR. SONG:  
 12 Q. Has anybody from your company done a  
 13 presentation for Orrick?  
 14 MS. MANTOAN: Same objection.  
 15 THE WITNESS: Not that I can recall.  
 16 BY MR. SONG:  
 17 Q. You said you also do presentations for  
 18 industry or you have done presentations for industry  
 19 groups.  
 20 Which groups?  
 21 A. I think what's contemplated there, the ILG is  
 22 what it's called, Industrial Liaison Group.  
 23 Q. What is that?  
 24 A. It's a group of individuals associated with  
 25 companies who interface with various government

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1 agencies. So they're called an Industry Liaison Group.  
 2 And the liaisoning is with government agencies.  
 3 Q. Are these government contractors?  
 4 A. I think that's the case, yes.  
 5 Q. What kind of presentations have you done for  
 6 ILG?  
 7 A. Various things that they've asked me to look  
 8 at. I believe it's been several times that I have done  
 9 them, and I believe the subject matter has been  
 10 statistical analysis, not wage and hours.  
 11 Q. Statistical analysis regarding employment  
 12 cases?  
 13 A. Just employment claims and employment issues  
 14 generally.  
 15 Q. Regarding discrimination claims?  
 16 A. Not necessarily discrimination claims, but  
 17 just issues of equity, so, for example, how would one  
 18 think about pay equity.  
 19 So they're not -- it's not really a group oriented  
 20 around litigation, per se. It's more around compliance  
 21 at these companies.  
 22 And so the issue is what kinds of issues matter  
 23 from an economic, labor economics, and statistical  
 24 perspective, and what should they be aware of in terms  
 25 of how to think through those things for their company.

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1 Q. Other industry groups that you've done  
2 presentations for?  
3 A. None that I recall, as I sit here.  
4 Q. What about your company, Resolution Economics,  
5 has your company done presentations for other industry  
6 groups?  
7 MS. MANTOAN: Objection. Calls for  
8 speculation.  
9 THE WITNESS: It could have. There are many  
10 people in the company, so I don't know if there are some  
11 who have that I'm unaware of.  
12 BY MR. SONG:  
13 Q. And what's your title or position at  
14 Resolution?  
15 A. I'm managing partner.  
16 Q. And you're the founder?  
17 A. One of the founders, yes.  
18 Q. Oh, one of the founders. Okay.  
19 Who are the other founders?  
20 A. Rob Crandall is another founder, still with  
21 the firm. And there were some other founders no longer  
22 with the firm.  
23 There's another individual as part of the founding  
24 group named Joe Wilkerson. He is with the firm right  
25 now.

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1 Q. I would have left for that, too.  
2 A. Well, he didn't leave for that. It's when  
3 that involuntarily ended. When the strike happened  
4 several years ago, he came back again. So he went back  
5 to academia. He came from us to -- to us from academia,  
6 went back to academia, and then came back to us after  
7 being involved with football analytics.  
8 Q. Is he a labor economist?  
9 A. He is.  
10 Q. Would it be fair to say that some of these  
11 presentations to law firms also served as marketing?  
12 A. Well, I think I said that. I didn't use that  
13 word, but I did say it would be good to meet people with  
14 whom we might work.  
15 Q. While we're on the topic of Resolution  
16 Economics, maybe we can talk a little bit more about  
17 Resolution Economics.  
18 So can you tell me what your current -- well,  
19 you're the managing partner of Resolution Economics;  
20 correct?  
21 A. That's correct.  
22 Q. Do you have any other titles there?  
23 A. No.  
24 Q. And how long -- you've been the managing  
25 partner since October 1998?

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1 Q. He is with the firm?  
2 A. He is. He is with the firm.  
3 Q. Is it Dr. Crandall or Mr. Crandall?  
4 A. Mr. Crandall.  
5 Q. Is he an economist?  
6 A. He's got an MBA, so he would not characterize  
7 himself as an economist, but --  
8 Q. He probably knows a lot about economics.  
9 A. He does.  
10 Q. What about -- is it Dr. Wilkerson or  
11 Mr. Wilkerson?  
12 A. Mr. Wilkerson also.  
13 Q. And is he an economist?  
14 A. No, he's not.  
15 Q. Were any of the other founders economists?  
16 A. Yes.  
17 Q. Who else?  
18 A. When the firm was founded -- Jeff Dornitz was  
19 among the founding group, and he is an economist.  
20 Q. But he's no longer with the firm?  
21 A. He has come and gone a couple of times  
22 depending on other opportunities. He's had a very  
23 interesting -- he was doing Money Ball for the  
24 Philadelphia Eagles for a while, speaking of  
25 Philadelphia.

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1 A. Correct.  
2 Q. And so were you basically the kind of lead  
3 founder?  
4 A. Yes.  
5 Q. And how many other co-founders would you say  
6 there were?  
7 A. Well, the group, I believe there were nine of  
8 us when we left Deloitte. And I would regard them all  
9 as part of the founding group.  
10 Q. And were they all with you in the same  
11 department at Deloitte?  
12 A. Well, we were one group. We had worked  
13 together at AM&G and moved as a group minus one to  
14 Deloitte. And then after that very short period of  
15 time, moved again minus one from Deloitte to start  
16 Resolution Economics.  
17 Q. Why did you start Resolution Economics?  
18 A. That's an interesting question. I've been an  
19 entrepreneur since third grade.  
20 Q. Okay. Lemonade?  
21 A. No, iced tea.  
22 Q. Oh, iced tea.  
23 A. So I've always been a bit of an entrepreneur.  
24 But in this case, the group at AM&G, we  
25 contemplated starting our own firm. And, you know,

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1 there are risks with starting your own firm and it  
 2 would be me personally financing everything. So we  
 3 didn't have the guts to do it, you might say.  
 4 But we got those guts when we realized we could  
 5 not even do any work in the context of the Deloitte  
 6 conflict problems. So that's why we ended up founding  
 7 it.  
 8 It was a challenge initially, of course, but it  
 9 was a lot of fun.  
 10 **Q.** What was Resolution Economics intended to do?  
 11 **A.** Economic consulting of whatever kind we could  
 12 do, and consulting on statistical issues, analytical  
 13 issues generally. So some in the litigation context,  
 14 but some in other contexts.  
 15 And at this point in time, we now do a wide  
 16 variety of things other than work in the litigation  
 17 context.  
 18 **Q.** Can you please tell me what Resolution  
 19 Economics does now?  
 20 **MS. MANTOAN:** Objection. Asked and answered.  
 21 **THE WITNESS:** Well, one thing we do is  
 22 participate in labor and employment litigation cases.  
 23 That's something, I guess, obvious to you.  
 24 There's also -- there are also people who work in  
 25 the area of accounting and commercial litigation and

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1 mean by that.  
 2 **BY MR. SONG:**  
 3 **Q.** I thought that was your -- the term you used.  
 4 That's why I was using it.  
 5 **A.** No. I didn't --  
 6 **Q.** I'm sorry if I misspoke. I'm sorry. What did  
 7 you say?  
 8 **A.** Litigation consulting.  
 9 **Q.** Litigation consulting. Okay.  
 10 How much of Resolution's business is litigation  
 11 consulting?  
 12 **A.** It's probably still the majority. I'm going  
 13 to guess 70 to 75 percent. It's a declining majority  
 14 though over time.  
 15 **Q.** And what percentage -- what percentage of the  
 16 litigation consulting work is on behalf of defendants?  
 17 **A.** That I wouldn't know. Overall, that depends  
 18 on the practice.  
 19 In the commercial litigation space, they're  
 20 probably 50/50. I'm guessing. And when I work in the  
 21 commercial litigation work, I tend to be 50/50. In  
 22 fact, the most recent project was on behalf of a  
 23 plaintiff.  
 24 In the labor and employment space, it's mostly  
 25 defendant, although not exclusively. And that does

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1 consulting.  
 2 Then we also do a variety of direct consulting to  
 3 companies mostly on labor and employment issues, but  
 4 there's some also in the accounting space.  
 5 We also have -- are working on and have developed  
 6 what you might call software tools that would be useful  
 7 partially in the compliance role, but also partially in  
 8 a business context as well. And so that's an area that  
 9 we are increasingly interested in, in working in.  
 10 **BY MR. SONG:**  
 11 **Q.** What percentage of your business is litigation  
 12 economics?  
 13 **MS. MANTOAN:** Objection. Vague.  
 14 Asking him or Resolution?  
 15 **MR. SONG:** Well, he's the managing partner of  
 16 Resolution Economics. I'm asking him as the managing  
 17 partner for Resolution Economics. I wasn't asking him.  
 18 **THE WITNESS:** So can you ask me again just to  
 19 make sure I --  
 20 **BY MR. SONG:**  
 21 **Q.** Yeah. Can you tell me what percentage of  
 22 Resolution Economics' business is litigation economics?  
 23 **MS. MANTOAN:** Objection. Vague.  
 24 **THE WITNESS:** Litigation economics, that's the  
 25 thing that I'm confused about. I'm not sure what you

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1 vary, depending -- it has varied over the years.  
 2 **Q.** Do you know what -- in employment, do you know  
 3 what percentage is on behalf of defendants?  
 4 **A.** As I said -- I didn't give a percentage.  
 5 Probably --  
 6 **Q.** Yeah. That's why I was asking.  
 7 **A.** Probably in the 80 percent range. It could be  
 8 more some years, less other years in terms of  
 9 engagements.  
 10 **Q.** You've listed all the prior cases that you've  
 11 testified in on A10; is that correct?  
 12 **MS. MANTOAN:** Objection.  
 13 **BY MR. SONG:**  
 14 **Q.** Oh, I'm sorry. The last four years of  
 15 testimony.  
 16 **A.** It's A9 for me, is the first page of that.  
 17 **Q.** Okay. A9. Is that a complete and accurate  
 18 list of all your testimonies for the last four years?  
 19 **A.** Well, it doesn't identify the reports in this  
 20 case because this was filed with it. But that's an  
 21 update.  
 22 **Q.** Yeah.  
 23 **A.** And there may be -- I think there are a couple  
 24 of other projects in the meantime. So this is not the  
 25 most recent.

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1 MS. MANTOAN: Are you looking at your initial  
 2 report --  
 3 THE WITNESS: Yes.  
 4 MS. MANTOAN: -- or your rebuttal report?  
 5 THE WITNESS: Initial. That's what I was -- I  
 6 think I was asked to look there.  
 7 Is that correct?  
 8 BY MR. SONG:  
 9 Q. Yes. Yes.  
 10 Do you recall which cases are missing from this  
 11 list?  
 12 MS. MANTOAN: Objection. Misstates testimony.  
 13 THE WITNESS: No, I don't. I know there  
 14 was -- within the last several weeks, there was a report  
 15 filed in a wage and hour matter, but I don't recall the  
 16 name right now.  
 17 BY MR. SONG:  
 18 Q. And that wasn't -- so that wasn't you?  
 19 A. No, no. It was.  
 20 Q. Oh, it was you?  
 21 A. Yes.  
 22 Q. But you don't remember the case?  
 23 A. No.  
 24 Q. Was it a state case?  
 25 A. It was a California State wage and hour case.

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1 was a plaintiff in an arbitration matter and in a state  
 2 court matter.  
 3 I worked for a variety of plaintiffs in  
 4 single-plaintiff cases over the years in connection  
 5 with analyses of damages. So I've done some plaintiff,  
 6 some defendants in that context.  
 7 There was a case for plaintiffs in a matter  
 8 against Disney Stores that I participated in on behalf  
 9 of plaintiffs.  
 10 Q. Any others you can think of?  
 11 A. Those are the ones that I recall, as I sit  
 12 here, in terms of where an actual official event  
 13 occurred.  
 14 Q. What about in employment discrimination cases,  
 15 have you ever represented the plaintiff?  
 16 MS. MANTOAN: Objection. Vague as to  
 17 "represent."  
 18 THE WITNESS: Yeah. I wouldn't use that  
 19 phrase.  
 20 I did work in the context of employment  
 21 discrimination on behalf of plaintiffs in the Intown  
 22 Suites and the Disney Stores matters that I referred to  
 23 a moment ago.  
 24 BY MR. SONG:  
 25 Q. Are any of the cases -- there's so many cases

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1 Q. And was that on behalf of plaintiff or  
 2 defendant?  
 3 A. It's on behalf of the company, so the  
 4 defendant in that case.  
 5 Q. Did you discuss -- did your report analyze  
 6 liability?  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: Some of the work related to the  
 9 issue of liability in that case, but the report is filed  
 10 in connection with the class certification phase of that  
 11 case.  
 12 BY MR. SONG:  
 13 Q. Did your report discuss damages?  
 14 A. No.  
 15 Q. So which plaintiffs -- to the extent you  
 16 recall, which plaintiffs have you worked for?  
 17 A. There were several cases for Intown Suites a  
 18 number of years back where both the EEOC and private  
 19 counsel were involved. I was engaged by private counsel  
 20 in those cases. And they were on behalf of putative  
 21 classes in connection with the Intown Suites  
 22 organization.  
 23 Q. Do you remember any other plaintiffs that you  
 24 worked for?  
 25 A. I worked for the Creative Artists Agency. It

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1 that you list here. But are any of these cases that you  
 2 list similar to this case?  
 3 MS. MANTOAN: Objection. Vague.  
 4 THE WITNESS: By "this case," you mean the  
 5 case we're here about today?  
 6 BY MR. SONG:  
 7 Q. Yes, the Oracle matter.  
 8 MS. MANTOAN: Same objection. Vague.  
 9 THE WITNESS: I'm not sure what you mean by  
 10 "similar."  
 11 BY MR. SONG:  
 12 Q. Okay. Well, let's start with: Are there --  
 13 how many discrimination cases are listed here, do you  
 14 know?  
 15 MS. MANTOAN: Objection. Vague.  
 16 Are you talking employment discrimination?  
 17 MR. SONG: I'm sorry. Employment  
 18 discrimination cases.  
 19 THE WITNESS: Nine of these cases are  
 20 discrimination cases or involve claims of employment  
 21 discrimination.  
 22 BY MR. SONG:  
 23 Q. And do you work for plaintiffs in any of those  
 24 cases?  
 25 A. Did I?

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1 Q. Yes. I'm sorry. Did you?  
 2 A. No. In these cases the work was done on  
 3 behalf of defendants.  
 4 Q. And this might be a little bit difficult for  
 5 you to answer. But prior to the last four years, can  
 6 you recall how many employment discrimination cases you  
 7 worked on?  
 8 A. It's a lot. Probably 30 or 40. I don't know.  
 9 I've never tried to count them up.  
 10 Q. And do you know how many plaintiffs you  
 11 represented in those cases?  
 12 MS. MANTOAN: Objection. Misstates the  
 13 testimony. Vague as to "represented."  
 14 THE WITNESS: Again, with that proviso,  
 15 because I don't look at it that way.  
 16 BY MR. SONG:  
 17 Q. Worked for.  
 18 A. Worked on behalf of is the better way to put  
 19 it.  
 20 Q. Any way you want to say it.  
 21 A. Plaintiffs -- well, the two cases -- actually,  
 22 it's three, because there were two cases for Intown  
 23 Suites, at least two. There might have been more.  
 24 Intown Suites and the Disney Stores. There may  
 25 have been others. I'd have to go back and look. Those

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1 discrimination and pay claims.  
 2 Q. What about race discrimination and pay claims?  
 3 MS. MANTOAN: Objection. Vague.  
 4 You're talking about both of those things need to  
 5 be true? It's race discrimination and compensation at  
 6 issue?  
 7 MR. SONG: Yes.  
 8 MS. MANTOAN: Counteractive, not disjunctive.  
 9 Okay. Thank you.  
 10 THE WITNESS: Two of the cases are race  
 11 discrimination claims that involved compensation.  
 12 BY MR. SONG:  
 13 Q. And for the approximately 30 to 40 that you  
 14 mentioned prior to -- discrimination cases that you  
 15 worked on prior to the last four years, can you recall  
 16 how many of those involved gender-based compensation  
 17 claims?  
 18 A. Not specifically, no. I'd have to look at a  
 19 list and go through that one by one.  
 20 Q. Would you have the same answer for the  
 21 race-based questions?  
 22 A. Yes. I don't know the exact breakdown.  
 23 Q. Do you have any kind of an estimate?  
 24 A. Not as I sit here, no, not that would be in  
 25 any sense accurate.

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1 stick out just because of the nature of those  
 2 particular cases.  
 3 Q. In the nine cases that you worked on,  
 4 employment discrimination cases in the last four years,  
 5 do any of them have similar claims as the OFCCP has in  
 6 this case?  
 7 MS. MANTOAN: Objection. Vague.  
 8 Are you talking about the claims originally  
 9 brought, including settled claims, or the claims that  
 10 remain live?  
 11 MR. SONG: The live claims. Thanks for  
 12 clarifying.  
 13 MS. MANTOAN: Still objection as to form.  
 14 THE WITNESS: That's a good point.  
 15 Why don't you define what you regard as claims,  
 16 just to make sure I don't make a mistake and identify a  
 17 case that doesn't belong in the category.  
 18 BY MR. SONG:  
 19 Q. We can go claim by claim. Are there -- are  
 20 any of those nine cases involving gender discrimination  
 21 pay cases?  
 22 A. Gender discrimination and pay?  
 23 Q. Yeah. Gender compensation -- gender-based  
 24 compensation claims.  
 25 A. Five of these cases involve gender

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1 Q. For the nine -- for the nine discrimination  
 2 cases that you said that you've worked on in the last  
 3 four years, have you produced reports in each of those  
 4 cases?  
 5 MS. MANTOAN: Objection. Misstates the  
 6 testimony. I think these are cases in which he's  
 7 testified, as the rules require.  
 8 MR. SONG: I know. But I just asked if he  
 9 produced reports.  
 10 MS. MANTOAN: The question said any case he  
 11 worked on. That's not what the disclosure requirement  
 12 is. I think that misstates his prior testimony.  
 13 THE WITNESS: I think all of them, all of  
 14 them.  
 15 BY MR. SONG:  
 16 Q. In how many of those cases did you testify?  
 17 A. Well, I think given the construction of this  
 18 document, all of them would have had either deposition  
 19 or trial or both.  
 20 Q. How many had deposition testimony, if you  
 21 recall?  
 22 A. I don't have to recall. I can just read it  
 23 from my listing. It makes it a lot easier.  
 24 All of them, although I just noticed there are ten  
 25 on this list, not nine. I missed one previously.

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1 Q. And in any of these cases that you've listed  
 2 here for your last four years of testimony, have any  
 3 motions to exclude your testimony been filed?  
 4 MS. MANTOAN: Objection. Calls for  
 5 speculation.  
 6 THE WITNESS: Two that I know of. I think  
 7 I've got that right. Two that I know of.  
 8 BY MR. SONG:  
 9 Q. Were any of your reports excluded?  
 10 MS. MANTOAN: Objection. Calls for  
 11 speculation.  
 12 THE WITNESS: Not to my knowledge, no.  
 13 BY MR. SONG:  
 14 Q. Were any of them limited?  
 15 MS. MANTOAN: Objection. Calls for  
 16 speculation. It's vague.  
 17 THE WITNESS: It's my understanding one of  
 18 them was limited.  
 19 BY MR. SONG:  
 20 Q. And which one was that?  
 21 A. That was Moussouris, et al., v. Microsoft.  
 22 Q. And how was that report limited?  
 23 MS. MANTOAN: Objection. It calls for  
 24 speculation. And it calls for a legal conclusion. It's  
 25 vague.

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1 cases where you list testimony for the last four years,  
 2 has your report ever been criticized?  
 3 MS. MANTOAN: Objection. Vague.  
 4 THE WITNESS: Well, every single report, my  
 5 report is criticized by the opposing expert -- that goes  
 6 without saying -- and counsel.  
 7 BY MR. SONG:  
 8 Q. Criticized by the judge.  
 9 MS. MANTOAN: Objection. Vague. Calls for  
 10 speculation. Calls for a legal conclusion, I suppose,  
 11 depending on the vagueness.  
 12 THE WITNESS: No. I don't think -- in the  
 13 Moussouris -- in the Microsoft matter, the judge, of  
 14 course, did criticize that one aspect of the report.  
 15 But other than that, I don't believe in the  
 16 other -- there's one other case where there was a  
 17 Daubert challenge, where the judge spoke approvingly,  
 18 surprising to me, of what we had done. And that's the  
 19 only other one that I know what the judge actually said  
 20 in connection with the cases that we've been discussing  
 21 here.  
 22 BY MR. SONG:  
 23 Q. So outside of the cases that are listed here,  
 24 has your report ever been excluded?  
 25 MS. MANTOAN: Objection. Calls for

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1 THE WITNESS: My understanding, there were  
 2 several paragraphs that plaintiffs objected to and  
 3 sought to eliminate from my opinion. And the judge  
 4 agreed. Well, I can tell you that in that case, both  
 5 sides filed comprehensive total elimination motions.  
 6 The motion for plaintiffs was granted with respect  
 7 to several paragraphs having to do with one particular  
 8 analysis in that report.  
 9 BY MR. SONG:  
 10 Q. And which analysis was that?  
 11 A. It was one having to do with keyword searching  
 12 of off-cycle -- what were called off-cycle promotion  
 13 justifications.  
 14 Q. Was that similar to the word clustering graphs  
 15 or charts that you do in your report here?  
 16 A. No.  
 17 MS. MANTOAN: Objection. Vague.  
 18 THE WITNESS: It was nowhere -- nothing like  
 19 that. If it had been -- if that had been the way it had  
 20 been done, then it likely wouldn't have been limited.  
 21 It was a more casual approach, you might say.  
 22 It really was more of a parenthetical almost in the  
 23 report, in an otherwise fairly long report.  
 24 BY MR. SONG:  
 25 Q. In the cases that you testified or in the

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1 speculation.  
 2 THE WITNESS: To my knowledge, I've never had  
 3 a report -- certainly not a report in its entirety  
 4 excluded, that I'm aware of.  
 5 BY MR. SONG:  
 6 Q. Have you had any -- have you had any other  
 7 report limited?  
 8 MS. MANTOAN: Objection. It's vague. Calls  
 9 for speculation. And it calls for a legal conclusion  
 10 potentially.  
 11 THE WITNESS: So this is with respect to, I  
 12 guess, what we've been calling the 30 to 40 employment  
 13 matters that predate this listing?  
 14 BY MR. SONG:  
 15 Q. Actually, any case because -- so we've just  
 16 spoken about your cases from the last four years. And  
 17 now I'm talking about all your -- all the cases you've  
 18 ever worked on.  
 19 A. I'm not sure I understand.  
 20 Q. Okay. You've had your report limited in  
 21 Microsoft.  
 22 A. Yes.  
 23 Q. Have you ever had your report limited in any  
 24 other cases --  
 25 MS. MANTOAN: Objection.

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1 BY MR. SONG:  
 2 Q. -- that you worked on?  
 3 MS. MANTOAN: It's vague. It calls for  
 4 speculation. And depending on the vagueness, it may  
 5 call for a legal conclusion.  
 6 THE WITNESS: Well, it's not an employment  
 7 case, but there's one other matter where a judge has  
 8 limited portions of the report. And that's a matter on  
 9 page A9 called Harris versus Union Pacific. And I  
 10 believe that report, a portion of that has been limited.  
 11 BY MR. SONG:  
 12 Q. Do you recall which portion?  
 13 A. Well, it's a very odd situation which -- with  
 14 which I disagree for very obvious reasons, as does  
 15 counsel.  
 16 I was characterized by the judge as making medical  
 17 conclusions, which I -- and, in fact, it was in the  
 18 decision that I was a medical doctor and part owner of  
 19 a medical clinic somewhere, something that is  
 20 completely wrong here.  
 21 I did quantitative analysis, statistical  
 22 analysis -- not statistical analysis -- quantitative  
 23 analysis in that case, but it involved medical issues  
 24 on which I was not opining.  
 25 So I was prohibited from opining on medical

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1 So the medical outcomes, you might say, were  
 2 categorized, but it wasn't through any determination as  
 3 to their medical appropriateness by me or my staff. We  
 4 simply categorized those. And so that portion of the  
 5 report was what was limited.  
 6 BY MR. SONG:  
 7 Q. Which law firm were you working with on the  
 8 Microsoft case?  
 9 A. That was with Orrick, the Orrick firm.  
 10 Q. Are you currently working with Orrick on any  
 11 other matters?  
 12 MS. MANTOAN: I'm going to object to the  
 13 extent it seeks to invade work product. He's not a  
 14 consultant -- he's not a testifying expert that's  
 15 disclosed in any matter.  
 16 So if you're working with us on anything for which  
 17 you've not been disclosed as the testifying expert, I'm  
 18 going to instruct you not to answer that.  
 19 THE WITNESS: I'm not sure if I'm supposed to  
 20 answer or not at this point.  
 21 MS. MANTOAN: So the question is if you're  
 22 working with Orrick on any matters currently other than  
 23 ones for which you have been disclosed as a testifying  
 24 expert -- sorry -- limited to ones where you've been  
 25 disclosed as a testifying expert.

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1 issues, which I wasn't going to do. So I'm not quite  
 2 sure -- counsel is quite confused. I don't know the  
 3 current state of that. They were going to appeal that,  
 4 and I'm not so sure where it stands at this point.  
 5 This was about a year ago, I think.  
 6 Q. And which firm -- which firm were you working  
 7 for in the Union Pacific case?  
 8 A. It's a firm in the Midwest, I believe in  
 9 Kansas City. And I'm not recalling the name, but I can  
 10 provide the name.  
 11 Q. And do you remember exactly which portions of  
 12 your report were limited?  
 13 MS. MANTOAN: Objection. It's vague.  
 14 THE WITNESS: There were portions having --  
 15 there were two different aspects to that report. One  
 16 dealt with economics issues and sort of more theoretical  
 17 matters. And that portion was not limited.  
 18 And one had to do with analysis of a large complex  
 19 database of worker comp -- of workers' comp claims and  
 20 other kinds of claims leading to limitations of work for  
 21 Union Pacific Railroad.  
 22 And my work was simply to take that very ugly,  
 23 large, messy database and make it suitable for analysis,  
 24 which our staff did, and then categorize the outcomes in  
 25 that database in various ways.

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1 THE WITNESS: No, I am not, to my knowledge.  
 2 MS. MANTOAN: Was your question intended to  
 3 include or exclude the Jewett case, which I know you  
 4 know about and asked about.  
 5 MR. SONG: Yeah. I know about Jewett.  
 6 MS. MANTOAN: Okay.  
 7 THE WITNESS: So I should revise that and say  
 8 other than Jewett, which we just spoke about, no.  
 9 BY MR. SONG:  
 10 Q. So other than Jewett, this case and Microsoft,  
 11 have you ever been retained by Orrick to work on other  
 12 matters?  
 13 MS. MANTOAN: Same objection and instruction.  
 14 Limited to cases in which you were disclosed to testify.  
 15 MR. SONG: That's fine.  
 16 THE WITNESS: I have been.  
 17 BY MR. SONG:  
 18 Q. And which other cases?  
 19 A. There's one that I recall. And it's a case,  
 20 Lawrence Livermore National Labs. And I don't recall  
 21 any other cases besides that one.  
 22 Q. What year was the Livermore case?  
 23 A. Probably about four or five years ago.  
 24 Q. Do you remember how many hours you worked on  
 25 that case?

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1 MS. MANTOAN: Objection. Vague.  
 2 THE WITNESS: No.  
 3 BY MR. SONG:  
 4 Q. Do you know how much you billed for that case?  
 5 A. At this point, no, I don't.  
 6 Q. How much did you work on the Microsoft case?  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: I worked a lot on that case.  
 9 BY MR. SONG:  
 10 Q. Do you remember approximately how many hours?  
 11 A. Not specifically, but I'm sure it was hundreds  
 12 of hours.  
 13 Q. Do you recall how much you billed for the  
 14 Microsoft matter?  
 15 A. Not specifically, but I'm betting you do. I  
 16 see it in your eyes.  
 17 Q. I want to know what your recollection is or  
 18 what your understanding is.  
 19 A. It was a substantial amount. I don't recall  
 20 exactly. I'm not very good with memorizing these sorts  
 21 of things.  
 22 Q. Even as the managing partner that's working on  
 23 these cases?  
 24 A. Well, I know -- I know things like totals, not  
 25 per case, typically.

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1 A. No, no. I'm talking about the firm, not my  
 2 own billing.  
 3 Q. Do you recall how much you billed on the Union  
 4 Pacific matter?  
 5 A. No, I don't.  
 6 Q. And to date, how much have you billed Orrick  
 7 to work on this matter?  
 8 A. I believe it is in excess of a million  
 9 dollars, but I don't know for sure how -- a little bit  
 10 more.  
 11 Q. It's less than 2 million?  
 12 A. Yes.  
 13 MR. SONG: How are we on time? It's 12:00.  
 14 Is this a good time for you guys to break?  
 15 MS. MANTOAN: It's up to you. That's fine by  
 16 me.  
 17 MR. SONG: So let's go off the record for now.  
 18 THE VIDEOGRAPHER: We are going off the record  
 19 at 11:54.  
 20 (Recess from 11:54 a.m. to 12:55 p.m.)  
 21 THE VIDEOGRAPHER: We are back on record at  
 22 12:55.  
 23 BY MR. SONG:  
 24 Q. Dr. Saad, before the lunch break, we were  
 25 talking about the previous cases that you worked on. I

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1 There are times when I will go and actually  
 2 specifically look at things like that. For example, if  
 3 there's a budget involved, I will have to know. But I  
 4 don't, you know, keep a running tally in my head of  
 5 that sort of material.  
 6 Q. Can you give me an estimate of how much you  
 7 earned on Microsoft?  
 8 MS. MANTOAN: Objection. It's vague.  
 9 THE WITNESS: Earned? I'm not sure what that  
 10 means.  
 11 BY MR. SONG:  
 12 Q. How much you billed on Microsoft.  
 13 MS. MANTOAN: Same objection.  
 14 THE WITNESS: I'm sure it was over a million  
 15 dollars. I'm not sure by how much.  
 16 BY MR. SONG:  
 17 Q. How much have you billed on the -- how much  
 18 have you billed Orrick on the Jewett matter?  
 19 A. Probably similar to the Microsoft matter. In  
 20 excess of a million dollars I'm sure.  
 21 Q. Is it between 1 and 2 million?  
 22 A. Most likely.  
 23 Q. And when you say most likely 1 and 2 million,  
 24 are you talking about Resolution Economics' billing or  
 25 just your own billing?

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1 want to specifically talk a little bit more about the  
 2 Jewett matter.  
 3 First, when were you retained to work on the Jewett  
 4 matter?  
 5 MS. MANTOAN: I'm going to object to the idea  
 6 that this serves as like an additional or second  
 7 deposition in the Jewett case.  
 8 I know that the OFCCP have said that they have a  
 9 cooperation agreement with plaintiff's counsel in  
 10 Jewett. And I don't think it would be proper to attempt  
 11 to use this deposition as essentially additional  
 12 deposition or testimony in connection with the Jewett  
 13 case.  
 14 So I will allow some limited questioning about the  
 15 engagement. But to the extent you're going to get into  
 16 opinions offered in Jewett, I think that's improper.  
 17 BY MR. SONG:  
 18 Q. Do you want me to repeat the question?  
 19 A. Yes, please.  
 20 Q. When were you retained in the Jewett matter?  
 21 A. I believe it was in 2016, maybe early 2017.  
 22 Q. And since you've been retained, do you know  
 23 how many hours you've worked on the case?  
 24 MS. MANTOAN: Same objections.  
 25 And I believe the -- you have the transcript from

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1 Jewett. I believe those questions were asked and  
 2 answered in Jewett, and it wouldn't be proper to ask  
 3 questions about any billing in Jewett subsequent to the  
 4 questions in his properly noticed deposition in that  
 5 case.  
 6 So I'll permit the question if you limit the  
 7 testimony to billing through the previous deposition in  
 8 the case.  
 9 THE WITNESS: I think we discussed this  
 10 earlier. I think -- I believe -- I believe you asked me  
 11 this, but if not -- I don't recall how many hours, but  
 12 it was a lot of hours. I think I might have said  
 13 hundreds of hours that I worked on that project.  
 14 BY MR. SONG:  
 15 Q. Yeah. I wanted to see if you had a more  
 16 specific estimate.  
 17 A. No, I don't.  
 18 Q. What about since your deposition in Jewett,  
 19 how many hours have you worked on since, from then till  
 20 now?  
 21 MS. MANTOAN: I'm going to object to that  
 22 question as improper. And it would essentially  
 23 constitute a supplemental deposition in the Jewett case.  
 24 I don't think it's proper for cooperating counsel to use  
 25 this case to get additional testimony in that case.

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1 before the break. I appreciate you giving me the break.  
 2 I continue to believe the question is improper and  
 3 disagree with your representations about what Oracle has  
 4 or hasn't argued in this case.  
 5 But with respect to the specific question posed,  
 6 I'm not going to give any instruction at this time.  
 7 MR. SONG: Thank you.  
 8 THE WITNESS: Please repeat the question.  
 9 BY MR. SONG:  
 10 Q. Sure. Since your deposition in Jewett until  
 11 the present day, approximately how many hours have you  
 12 billed to the Jewett matter?  
 13 A. I don't know.  
 14 Q. Can you give me an estimate?  
 15 A. I would say it's not all that many. This is  
 16 since my deposition?  
 17 Q. Yes.  
 18 A. Well, I think I actually had to do some work  
 19 in connection with the aftermath of depositions. I  
 20 think motions or various things I was asked to review  
 21 with respect to how my work was characterized. So there  
 22 was some time there. I don't know how much. Not a lot.  
 23 But since then, I don't think there's been really  
 24 any time spent on Jewett. So it's probably -- I'm  
 25 guessing. I'd be surprised if it's more than 30 hours,

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1 BY MR. SONG:  
 2 Q. You can answer the question.  
 3 MS. MANTOAN: I don't believe that the  
 4 question is proper, and I don't believe --  
 5 MR. SONG: Well, are you instructing him to  
 6 answer or not? I mean, just make up your mind. Because  
 7 I think it's a proper question.  
 8 Oracle argued that there's always relevant  
 9 information in documents in Jewett and have argued  
 10 strenuously so.  
 11 I don't agree with the objection. If you're going  
 12 to instruct not to answer, then so be it, but..  
 13 MS. MANTOAN: I genuinely didn't anticipate  
 14 this line of questions.  
 15 Can we go off the record so that I can confer with  
 16 counsel that's not here -- my colleagues that aren't  
 17 here?  
 18 MR. SONG: Okay.  
 19 MS. MANTOAN: Thank you.  
 20 THE VIDEOGRAPHER: We're going off the record  
 21 at 12:59.  
 22 (Recess from 12:59 p.m. to 1:02 p.m.)  
 23 THE VIDEOGRAPHER: We are back on record at  
 24 1302.  
 25 MS. MANTOAN: So there was a question asked

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1 including that earlier work.  
 2 Q. Can you tell me how the Jewett matter and this  
 3 matter are different?  
 4 MS. MANTOAN: Objection. It's vague. It's  
 5 ambiguous. Calls for a legal conclusion. And it calls  
 6 for materials outside of this case and, thus, that  
 7 Dr. Saad may not be prepared to speak to.  
 8 BY MR. SONG:  
 9 Q. You can answer.  
 10 A. The geographic scope differs.  
 11 Q. What other differences are there?  
 12 MS. MANTOAN: Same objections. Vague.  
 13 Ambiguous. Calls for a legal conclusion. Calls for him  
 14 to testify on matters unrelated to this case,  
 15 contravening the requirements that the cases be  
 16 litigated separately.  
 17 THE WITNESS: The Jewett case is in state  
 18 court in California, and the OFCCP case is before an  
 19 administrative law judge.  
 20 BY MR. SONG:  
 21 Q. What about regarding the claims?  
 22 MS. MANTOAN: Same objections. Vague.  
 23 Ambiguous. Calls --  
 24 MR. SONG: Can you just make a standing  
 25 objection, please, because you're wasting my time now.

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1 MS. MANTOAN: I'm not attempting to waste your  
2 time.  
3 MR. SONG: You repeat the same objection over  
4 and over on the same line of questioning. You're  
5 wasting my time.  
6 MS. MANTOAN: The full panoply of objections  
7 that I've made stand. And I continue to believe that  
8 this abuses the co-counseling or joint defense, whatever  
9 sort of agreement you represented you have with  
10 plaintiff's counsel, asking questions about that case  
11 here.  
12 MR. SONG: If you have the same objection, can  
13 you just say, "Same objection," please then if you're  
14 not going to make a standing objection?  
15 MS. MANTOAN: I will endeavor to do so when  
16 appropriate.  
17 BY MR. SONG:  
18 Q. Can you talk about the differences in claims  
19 between this matter and the Jewett matter?  
20 MS. MANTOAN: Same objections.  
21 THE WITNESS: There were claims and there are  
22 claims in the OFCCP matter that did not exist in the  
23 Jewett matter.  
24 In particular, there were -- there were hiring  
25 claims, which I understand are no longer in the case.

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1 MS. MANTOAN: Same objections. That plainly  
2 calls for a legal conclusion.  
3 THE WITNESS: Well, I think I actually just  
4 alluded to that from an analytical perspective in an  
5 earlier answer.  
6 But, again, I can say that there's no -- in Jewett,  
7 there were no hiring allegations that I was aware of, no  
8 advancement -- specific advancement allegations. And in  
9 the OFCCP matter, there are hiring -- there were hiring  
10 claims that are now dismissed. There's a pay claim.  
11 And then it's somewhat unclear, but there also  
12 appear to be some claims associated with advancement,  
13 but it's not stated -- it's really not stated that way  
14 by the OFCCP. The OFCCP's statement of its case, to my  
15 understanding, is a compensation claim.  
16 BY MR. SONG:  
17 Q. Is your analysis of the discrimination in  
18 Jewett any different than your analysis of the  
19 discrimination in this matter?  
20 MS. MANTOAN: Objection. The same objections  
21 from before. Legal conclusion. And this also assumes  
22 facts in the framing of the question.  
23 THE WITNESS: I want to make clear, and  
24 hopefully was clear in my reports, that my analysis is  
25 actually a response to analyses performed by opposing

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1 The protected class in the -- classes in OFCCP are  
2 different in some respects from Jewett. Jewett just was  
3 a gender case alone.  
4 The Jewett case dealt with analysis related to the  
5 California Fair Pay Act, and the OFCCP case has to do  
6 with various claims, compensation among them.  
7 There -- I believe there are other -- I don't  
8 believe there were any promotion claims or advancement  
9 claims in Jewett, that I'm recalling.  
10 BY MR. SONG:  
11 Q. Any other differences you can think of?  
12 MS. MANTOAN: Same objections.  
13 THE WITNESS: Well, the data differs, of  
14 course. The time -- the time scope is a little  
15 different.  
16 BY MR. SONG:  
17 Q. How does the data differ?  
18 MS. MANTOAN: Same objection.  
19 THE WITNESS: The time period -- I think the  
20 time period covered by the data differs. And, of  
21 course, given the geographic scope being different,  
22 there's that difference as well.  
23 BY MR. SONG:  
24 Q. And what about -- do the types of  
25 discrimination differ?

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1 experts.  
2 And I think a similar posture I was in in Jewett as  
3 well as here where I am presented with a -- my  
4 assignment was to serve in a rebuttal role in the sense  
5 of evaluating, in the OFCCP matter, evaluating whether  
6 or not the analyses presented in support of OFCCP's  
7 claims, in fact, do provide that support or whether they  
8 don't provide that support. That's what my analysis is  
9 restricted to.  
10 And so it does differ in certain ways based on  
11 everything we have already talked about between Jewett  
12 and OFCCP.  
13 BY MR. SONG:  
14 Q. How does your analysis differ from Jewett to  
15 this matter?  
16 MS. MANTOAN: Same objection. Assuming facts  
17 in the framing.  
18 THE WITNESS: Well, the data was different.  
19 So, obviously, that's one difference.  
20 To the extent that Dr. Madden performed her  
21 analyses differently than the analyses presented in the  
22 Second Amended Complaint, and those two were different  
23 from the analyses presented by Dr. Neumark and Jewett,  
24 of course, my responses are going to be different in a  
25 whole variety of ways.

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1 BY MR. SONG:  
 2 Q. So for both matters, you weren't determining  
 3 whether there is discrimination, but just providing a  
 4 rebuttal report to the experts that the Jewett  
 5 plaintiffs have and the expert that we have in this  
 6 matter?  
 7 MS. MANTOAN: Objection. Assumes facts not in  
 8 evidence. And it's vague and ambiguous. Misstates  
 9 testimony.  
 10 THE WITNESS: Well, keep in mind that in  
 11 Jewett, my report is offered in the context of class  
 12 certification. So it's not a merits report, not  
 13 intended to be one, and is not in that phase of the  
 14 case. So that's obviously a very important difference  
 15 that I neglected to state earlier.  
 16 In the OFCCP matter, to answer your question there,  
 17 my work is in response to the work presented to me by  
 18 OFCCP and Dr. Madden.  
 19 Q. So you mentioned that Jewett involves just  
 20 gender claims and does not involve racial claims;  
 21 correct?  
 22 A. Yes.  
 23 MS. MANTOAN: Objection. Misstates testimony.  
 24 BY MR. SONG:  
 25 Q. So if we're just talking about the gender

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1 OFCCP matter.  
 2 So there's that issue. But -- and that -- that  
 3 work was done in the context of class certification, not  
 4 in the context of a merits framework. So it's  
 5 completely different from a posture point of view.  
 6 BY MR. SONG:  
 7 Q. But when you're trying to analyze the gender  
 8 discrimination in both matters, another way I can phrase  
 9 it is, are you comparing men and women in the same jobs  
 10 or just similar?  
 11 MS. MANTOAN: Objection. It misstates  
 12 testimony. It assumes facts. It calls for a legal  
 13 conclusion. And you're misrepresenting his testimony  
 14 and bringing back in your preferred framing of what his  
 15 testimony was. It's improper.  
 16 THE WITNESS: I'd like to just -- to first  
 17 answer with respect to the work in this case.  
 18 BY MR. SONG:  
 19 Q. Thank you. Sure.  
 20 A. In this case, my role was to evaluate whether  
 21 or not Dr. Madden or the OFCCP in their statistical  
 22 analyses has done an analysis that supports their  
 23 claims -- supports the claims of the OFCCP. That was  
 24 the goal of my analysis.  
 25 And in context -- in the context of that goal, I

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1 claims in Jewett and in the Oracle matter, is it a  
 2 similar analysis in terms of comparing similarly  
 3 situated workers?  
 4 MS. MANTOAN: Objection. Vague. Calls for a  
 5 legal conclusion. Assumes fact.  
 6 THE WITNESS: I think you may have misspoken.  
 7 So if you want to repeat it.  
 8 BY MR. SONG:  
 9 Q. So we're just talking about the gender claims,  
 10 because those are -- there's gender discrimination  
 11 claimed in both Jewett and Oracle; correct?  
 12 A. Generally speaking, yes.  
 13 Q. So when you're analyzing the gender  
 14 discrimination claims in both matters, are you looking  
 15 at -- are you -- are you comparing similarly situated  
 16 employees?  
 17 MS. MANTOAN: Objection. Assumes facts.  
 18 Calls for a legal conclusion.  
 19 And I object to you're trying to mislead the  
 20 witness by suggesting that the same legal claims are at  
 21 issue in both cases.  
 22 THE WITNESS: Yeah. It's important to keep in  
 23 mind, as I think I stated earlier, that the Jewett case  
 24 is in the context of the California Fair Pay Act, which,  
 25 as I understand it, is quite different legally than the

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1 had to consider whether or not Dr. Madden or the OFCCP  
 2 had, in fact, compared individuals who were similarly  
 3 situated with respect to the work they were doing at  
 4 OFCCP. That was one of the things I did, among --  
 5 among others.  
 6 So I was testing whether they had, in fact, done  
 7 that.  
 8 Q. Whether they had properly compared male and  
 9 female employees at Oracle?  
 10 A. Whether or not the analysis, in fact, was  
 11 appropriately constructed to address the claims in the  
 12 case.  
 13 Q. And your opinion was or is?  
 14 MS. MANTOAN: Objection. It's vague.  
 15 THE WITNESS: The opinion -- and again in the  
 16 context of OFCCP, to make sure that we're on the same  
 17 page still -- was that neither the Second Amended  
 18 Complaint nor Dr. Madden's analyses were appropriately  
 19 constructed.  
 20 BY MR. SONG:  
 21 Q. And how were they not appropriately  
 22 constructed?  
 23 A. Well, that's what my two reports cover in 250  
 24 pages or so.  
 25 Q. But I want -- can you summarize just so I can

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1 see your understanding and maybe get a clear explanation  
2 of why you believe that?  
3 **A.** Well, there are many different analyses that  
4 are done. So I'm not sure that -- I think you have to  
5 be more specific. There are quite a few different  
6 analyses that are performed.  
7 **Q.** Can you give me one reason why they were not  
8 properly constructed?  
9 **A.** One reason is that Dr. Madden, in particular,  
10 does not consider individuals who are similarly situated  
11 with respect to what they are doing at Oracle.  
12 **Q.** Can you think of any other reasons?  
13 **MS. MANTOAN:** Objection. It's vague. And  
14 it's compound.  
15 Are we talking about Madden's analysis or the OFCCP  
16 or both?  
17 **BY MR. SONG:**  
18 **Q.** Regarding Madden's analysis in the  
19 Oracle/OFCCP matter.  
20 **A.** Dr. Madden does not provide a basis for the  
21 assumptions that she uses to exclude certain factors  
22 from her pay analyses.  
23 **Q.** Can you think of any, other than those two  
24 reasons, other reasons that Dr. Madden did not properly  
25 construct her model?

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1 If you want to instruct not to answer, then, you  
2 know, we'll address it. We'll deal with it. But right  
3 now you're just wasting my time and distracting me.  
4 **MS. MANTOAN:** Yeah. I think questions about  
5 whether the model is properly constructed are totally  
6 improper here. So I'm going to instruct the witness not  
7 to answer the question.  
8 **MR. SONG:** Okay.  
9 **MS. BREMER:** I would just note that it's  
10 completely improper to instruct the witness not to  
11 answer on a basis other than privilege.  
12 **MS. MANTOAN:** So there's one lawyer here.  
13 But it's also colluding. This is an unusual  
14 circumstance in which OFCCP has attempted to take  
15 advantage of a supposed cooperation with Jewett counsel.  
16 And I think that puts it in a very different context  
17 than other cases where there --  
18 **MR. SONG:** You're assuming and making false  
19 allegations that you have no basis to make.  
20 **MS. MANTOAN:** You've repeatedly put forward  
21 that you have a cooperating agreement --  
22 **MR. SONG:** You're alleging we're colluding or  
23 working with Jewett counsel here.  
24 **MS. MANTOAN:** I think you've provided --  
25 **MR. SONG:** I barely know the names of the

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1 **MS. MANTOAN:** Objection. It's vague. It's  
2 compound.  
3 Other than the ones that are in his 250-page  
4 report?  
5 **MR. SONG:** No, no. For the two reasons he  
6 just gave me.  
7 **THE WITNESS:** So if you'd like me to go into  
8 the report and go through it, I'm happy to do that.  
9 **BY MR. SONG:**  
10 **Q.** Well, I do have questions about your report,  
11 but let's stop there then and move back to Jewett.  
12 So was the Jewett model properly constructed?  
13 **MS. MANTOAN:** I'm going to object, again, that  
14 these call for a legal conclusion. They're totally  
15 improper as a way to essentially get his additional  
16 deposition for your cooperation --  
17 **MR. SONG:** Can you just say, "Same objection,"  
18 instead of wasting my time? You're testifying more than  
19 your witness here. And that constitutes wasting my  
20 time, like I've asked you repeatedly.  
21 **MS. MANTOAN:** And so I am getting close to the  
22 point I'm going to instruct him not to answer questions  
23 about a separate case that you're trying to get --  
24 **MR. SONG:** Then be my guest. Either do it or  
25 don't. But stop wasting my time.

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1 Jewett counsel.  
2 **MS. MANTOAN:** There's discovery rules in that  
3 case and discovery rules here. And I think all parties  
4 should abide by them in both cases.  
5 **MR. SONG:** We totally agree.  
6 We'll just note that we do believe it's improper to  
7 instruct not to answer when it's not based on a  
8 privilege. But if that's your instruction, that's your  
9 instruction.  
10 **BY MR. SONG:**  
11 **Q.** Dr. Saad, did you consider patent bonus as a  
12 variable in the Jewett matter?  
13 **A.** It was not a variable I used in the Jewett  
14 matter.  
15 **Q.** And why not?  
16 **A.** Well, there's a very different set of data, as  
17 I said earlier.  
18 In Jewett, it was statewide California. I think  
19 it's more than double the population. And as it turns  
20 out, a large share of that non-headquarters population  
21 are acquisitions, many of which are in hardware  
22 contexts as opposed to software.  
23 The information on patents that I relied upon in  
24 this case, in the OFCCP matter, goes back quite ways  
25 to -- actually to I believe it's 2003 from the data

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1 itself. And that's not something I could do in the  
 2 context of acquisitions.  
 3 So that variable probably would not have been a  
 4 suitable variable to use in that setting. I considered  
 5 it, but then I was aware of this issue of having years  
 6 and years of time where I don't know whether  
 7 individuals have patents or don't have patents in  
 8 connection with their work at those companies before  
 9 they were acquired.  
 10 **Q.** And that isn't a problem in the Oracle matter?  
 11 **A.** No, it's not. Because there's only -- I think  
 12 there are seven acquired employees in the entire dataset  
 13 for the OFCCP matter.  
 14 **Q.** I want to show you the next exhibit.  
 15 (Saad Exhibit 7 was marked.)  
 16 **BY MR. SONG:**  
 17 **Q.** I'll give you a chance to look at it, and just  
 18 let me know when you're done.  
 19 **MS. MANTOAN:** Counsel, I don't see a Bates  
 20 number on this. So at this point -- is this a  
 21 cross-produced document?  
 22 **MR. SONG:** I believe it was. You know, some  
 23 of the documents didn't have Bates stamps. Let me see  
 24 if mine does. Because I know some of the other  
 25 documents, when you print them, they don't have it. I

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1 economics or econometric principles or ideas.  
 2 Can you explain regression, what a regression is  
 3 and does to a layperson? How would you explain that to  
 4 a layperson?  
 5 **MS. MANTOAN:** Objection. It's vague and  
 6 compound.  
 7 **THE WITNESS:** I'm assuming you mean multiple  
 8 regression. I will answer in that context.  
 9 **BY MR. SONG:**  
 10 **Q.** Yes.  
 11 **A.** Multiple regression --  
 12 **MS. MANTOAN:** Same objections.  
 13 **THE WITNESS:** Multiple regression is a  
 14 technique whereby -- statistical technique whereby one  
 15 seeks to understand variation in a variable, typically  
 16 called a dependent variable.  
 17 So let's say earnings, for example. One seeks to  
 18 understand variations observed between people's earnings  
 19 and the characteristics they may have, so, for example,  
 20 education, experience, job you're in, your geographic  
 21 location, a whole variety of things.  
 22 And what multiple regression does is obtain the  
 23 average impact of each of those factors on compensation,  
 24 holding constant all of the other factors. So each one  
 25 individually can be said to be the independent and

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1 don't know.  
 2 Is there any issue -- is there any problem with the  
 3 copy of it other than the Bates stamp?  
 4 **MS. MANTOAN:** I think -- I think it just  
 5 implicates like the source of the document. And we said  
 6 we'd talk at the end of the deposition about  
 7 confidentiality issues.  
 8 I think that now this is information -- it looks  
 9 like this contains information that was not sealed in  
 10 that separate case or provisionally under seal in that  
 11 separate case.  
 12 **MR. SONG:** Okay.  
 13 **BY MR. SONG:**  
 14 **Q.** Did you have a chance to look at it?  
 15 **A.** Yes. It appears to be my report in the Jewett  
 16 matter in Support of Defendant Oracle's Opposition to  
 17 Plaintiff's Motion for Class Certification.  
 18 **Q.** And in this report, you did not consider  
 19 patent bonus for the reasons you just discussed; is that  
 20 correct?  
 21 **A.** That's correct.  
 22 **Q.** So this report does not contain patent bonus  
 23 anywhere in there?  
 24 **A.** I did not use that variable. That's correct.  
 25 **Q.** I want to talk about some just general labor

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1 separate influence of that factor, taking into account  
 2 all other factors.  
 3 **BY MR. SONG:**  
 4 **Q.** What do you need to conduct a multiple  
 5 regression?  
 6 **MS. MANTOAN:** Objection. Vague. Compound.  
 7 **BY MR. SONG:**  
 8 **Q.** What are the requirements?  
 9 **MS. MANTOAN:** Objection. Vague and compound.  
 10 **THE WITNESS:** That is an extremely vague  
 11 question, but I'll do my best with it.  
 12 **BY MR. SONG:**  
 13 **Q.** Thank you. And I am a layperson, so I  
 14 don't -- I don't understand all of these terms.  
 15 **A.** Well, in simplest terms, the requirements are  
 16 that you have accurately measured data on your dependent  
 17 variable and on your independent variables. And if it's  
 18 not accurate, that you have a sense in what ways it  
 19 might not be accurate, because there are ways to handle  
 20 that sort of circumstance. At its most basic term,  
 21 basic level, that's what you would need.  
 22 But there are many, many complications in  
 23 conducting a real-world regression analysis that may  
 24 call upon other requirements to be met to properly  
 25 interpret regression findings.

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1 Q. In my layperson's explanation, would data --  
 2 so it sounds like data is important for -- to conduct a  
 3 proper multiple regression.  
 4 MS. MANTOAN: Objection. Vague.  
 5 THE WITNESS: Well, broadly defined  
 6 information.  
 7 Now, there's many ways to have quantitative  
 8 measures. In fact, many variables of economics are not  
 9 quantitative initially. They're converted to  
 10 quantitative form.  
 11 For example gender, the most obvious one in this  
 12 context, or race, those are not quantitative variables.  
 13 They're converted to quantitative form for purposes of  
 14 the regression.  
 15 But there's many other kinds of information, lots  
 16 of other kinds of information that also does not arrive  
 17 in its native form as quantitative, and it's converted  
 18 to quantitative. Prior experience, school you might  
 19 have gone to, the degree you got, none of that is  
 20 quantitative. It all needs to be converted to  
 21 quantitative.  
 22 And so that's actually a substantial step in  
 23 conducting regression analysis, is to get the  
 24 information that you need, regardless of its format,  
 25 make it into a quantitative form, and then run your

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1 But, you know, in my simple mind I'm thinking that,  
 2 you know, you get bad inputs, you get bad outputs. So  
 3 if you had problems -- okay, maybe not bad data. Maybe  
 4 you say you had problems with data. Would that cause  
 5 problems for a multiple regression?  
 6 MS. MANTOAN: Objection. It's vague. And  
 7 it's compound.  
 8 THE WITNESS: Yeah. I mean, that is such a  
 9 broad topic area, but there's one thing I can answer.  
 10 You asked if you don't have enough data. There are  
 11 circumstances where you may have a very small sample and  
 12 it may not be adequate for a particular type of  
 13 analysis. That is a possibility in some circumstances.  
 14 Bad data, that is...  
 15 BY MR. SONG:  
 16 Q. What about unreliable data? Maybe that's a  
 17 poor choice of words.  
 18 MS. MANTOAN: Objection. It's vague. It's  
 19 compound. And it's an incomplete hypothetical.  
 20 THE WITNESS: The question would be, in what  
 21 way is it unreliable? What would unreliable actually  
 22 mean?  
 23 I'm not sure what unreliable means. I'm not sure  
 24 what --  
 25

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1 analysis.  
 2 BY MR. SONG:  
 3 Q. And another way to ask -- a separate question  
 4 I have -- strike that -- is if you have bad data, would  
 5 that prevent a labor economist from running multiple  
 6 regressions?  
 7 MS. MANTOAN: Objection. Vague. Compound.  
 8 THE WITNESS: It would depend on the  
 9 circumstances.  
 10 BY MR. SONG:  
 11 Q. What would happen if you inserted, let's  
 12 say -- I don't know what the term is -- like bad data,  
 13 invalid data or faulty data?  
 14 What would you call, quote-unquote, bad data in  
 15 econometrics?  
 16 MS. MANTOAN: Objection. Vague. It's  
 17 compound.  
 18 THE WITNESS: Well, I was going to turn it  
 19 around and ask you what do you mean by bad data.  
 20 BY MR. SONG:  
 21 Q. For example, if you have -- so one example  
 22 could be if you don't have enough data, or if you've got  
 23 data that's inconsistent, like you were saying that it's  
 24 got to be measured properly, so maybe it's improperly  
 25 measured.

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1 BY MR. SONG:  
 2 Q. Okay. Let's say it's improperly measured, as  
 3 you mentioned before.  
 4 A. The question --  
 5 MS. MANTOAN: Objection.  
 6 Is there a question pending? I don't think there  
 7 was a question.  
 8 MR. SONG: Yes.  
 9 BY MR. SONG:  
 10 Q. What if -- what if the data was improperly  
 11 measured and then used for a multiple regression  
 12 analysis?  
 13 MS. MANTOAN: Objection. Vague. Incomplete  
 14 hypothetical. Compound.  
 15 THE WITNESS: If there's what's referred to as  
 16 a measurement error, what econometricians might refer to  
 17 as measurement error, measurement error can be dealt  
 18 with in various ways using the appropriate econometric  
 19 methods.  
 20 So that's not necessarily something that would  
 21 prevent you from running an analysis.  
 22 BY MR. SONG:  
 23 Q. Regarding having enough data, is there some  
 24 kind of general rule in labor economics for how much  
 25 data you need?

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1 MS. MANTOAN: Objection. Vague. Compound.  
 2 Incomplete hypothetical.  
 3 THE WITNESS: No, because it depends on the  
 4 circumstances.  
 5 BY MR. SONG:  
 6 Q. Can you give me an example of a situation  
 7 where there would be not enough data?  
 8 MS. MANTOAN: Same objections.  
 9 THE WITNESS: I can give you one example.  
 10 Let's say you have five observations. I doubt  
 11 there's very many regression analyses one could perform  
 12 on five observations. Of that, I'm pretty confident.  
 13 BY MR. SONG:  
 14 Q. Let's assume we have good data for a  
 15 regression, a multiple regression model. What can a  
 16 multiple regression model do if you have good data?  
 17 MS. MANTOAN: Objection. Vague. Compound.  
 18 Incomplete hypothetical. Potentially calls for a legal  
 19 conclusion.  
 20 THE WITNESS: So if the data is satisfactory  
 21 to the analyst -- let's put it that way.  
 22 BY MR. SONG:  
 23 Q. Thank you. That's a better term.  
 24 A. If the data is satisfactory to the analyst and  
 25 the multiple regression would allow you to identify the

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1 So if you ran a successful regression, would it  
 2 help you decide the probability of some event happening?  
 3 MS. MANTOAN: Objection. Vague. Compound.  
 4 Incomplete hypothetical.  
 5 THE WITNESS: As stated, I have no idea what  
 6 that -- what you mean. I'm sorry.  
 7 BY MR. SONG:  
 8 Q. Maybe I don't either.  
 9 Well, my understanding of statistics, as you just  
 10 said, was that it deals with probability.  
 11 So regression, multiple regression is a statistical  
 12 tool; correct?  
 13 MS. MANTOAN: Objection. It misstates the  
 14 testimony. Vague. Compound. Incomplete hypothetical.  
 15 THE WITNESS: The last part of your -- the  
 16 question was regression is a statistical tool. I can  
 17 answer yes to that.  
 18 The first part of your question, I don't know. It  
 19 was just a statement. So I'm just answering the  
 20 question part.  
 21 BY MR. SONG:  
 22 Q. Whatever you can, I appreciate it. Let me  
 23 back up then.  
 24 Is multiple regression related to probability?  
 25 MS. MANTOAN: Same objections.

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1 influence of the independent variables on the dependent  
 2 variable from a purely quantitative perspective, not  
 3 necessarily in any causal way, but simply quantitatively  
 4 what is the association of each of the independent  
 5 variables with the dependent variable holding constant  
 6 the other independent variables, you would be able to  
 7 measure that quantitative impact.  
 8 BY MR. SONG:  
 9 Q. And then would you also be able to analyze the  
 10 probability of a certain event happening if you had --  
 11 if you ran, I guess, a satisfactory regression?  
 12 MS. MANTOAN: Same objections. Vague.  
 13 Compound. Incomplete hypothetical. Calls for a legal  
 14 conclusion.  
 15 THE WITNESS: No, not as stated, not at all.  
 16 BY MR. SONG:  
 17 Q. Do multiple regressions deal with probability  
 18 at all?  
 19 MS. MANTOAN: Objection.  
 20 THE WITNESS: Well, by definition, all  
 21 statistical methods are based on a framework of  
 22 probability.  
 23 BY MR. SONG:  
 24 Q. Yes. So that was my basic understanding of  
 25 regression.

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1 THE WITNESS: As I said earlier, all  
 2 statistical methods have an underlying framework of  
 3 probability. That's the foundation of all statistical  
 4 methods, is probability theory.  
 5 BY MR. SONG:  
 6 Q. Yeah. No, I got that.  
 7 What about regression analysis?  
 8 A. Of course. Of course. Because it's a  
 9 statistical method, it is based on principles of  
 10 probability.  
 11 Q. So what kind of or what type of probability  
 12 will a properly run multiple regression provide?  
 13 MS. MANTOAN: Objection. Misstates the  
 14 testimony. Vague. Incomplete hypothetical.  
 15 BY MR. SONG:  
 16 Q. If any. Maybe it won't provide any.  
 17 Does it help you determine probability?  
 18 MS. MANTOAN: Same objections.  
 19 BY MR. SONG:  
 20 Q. I'm just trying to understand the relationship  
 21 between regression and probability.  
 22 A. Well, the relationship is that the foundations  
 23 of regression analysis are, among other things,  
 24 probability theory.  
 25 I'm not sure what you're asking the way you're

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1 asking it.  
 2 **Q.** I'm probably asking in a nonlabor economics  
 3 fashion. So maybe it's difficult to understand, but --  
 4 all right. I'll just move on from there.  
 5 Can multiple regression -- I'm sorry. Strike that.  
 6 Can multiple regressions predict things?  
 7 **MS. MANTOAN:** Objection. Vague. Incomplete  
 8 hypothetical. Compound.  
 9 **THE WITNESS:** Statisticians will use the  
 10 phrase "predict" in the context of a regression model.  
 11 And that simply means that they use it to fit the  
 12 characteristics of individuals, let's say, within that  
 13 data to the outcome of the model.  
 14 So you would get what are called fitted values.  
 15 And every regression has those. By definition, that's  
 16 the way the regression procedure works. But can you  
 17 use -- and that would be called in-sample prediction, if  
 18 you will.  
 19 Can you use regression models -- do people use  
 20 regression models to do out-of-sample predictions? They  
 21 do. And people do that all the time.  
 22 **BY MR. SONG:**  
 23 **Q.** Are they intended to predict?  
 24 **A.** Some --  
 25 **MS. MANTOAN:** Objection. Vague. Compound.

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1 **MS. MANTOAN:** Same objections.  
 2 **THE WITNESS:** The analysts using them would  
 3 intend them for that purpose. And depending on the  
 4 context, they have to do certain things to make sure  
 5 that they can use them for that purpose.  
 6 **BY MR. SONG:**  
 7 **Q.** Is regression -- multiple regression analysis  
 8 a good way to analyze discrimination?  
 9 **MS. MANTOAN:** Objection. Vague. Compound.  
 10 Incomplete hypothetical.  
 11 **THE WITNESS:** Well, discrimination is a legal  
 12 concept. So I'm not going to use that word.  
 13 **BY MR. SONG:**  
 14 **Q.** Okay.  
 15 **A.** Can you use statistical tools to examine  
 16 differences in outcomes within an employee population or  
 17 across -- statistical tools can be used under the right  
 18 circumstances to address claims of employment  
 19 discrimination.  
 20 **BY MR. SONG:**  
 21 **Q.** Do you think there are better statistical  
 22 tools to analyze discrimination?  
 23 **MS. MANTOAN:** Objection. Vague. Incomplete  
 24 hypothetical. And compound.  
 25 **THE WITNESS:** Better than what?

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1 **THE WITNESS:** Some regression modeling is  
 2 designed with the goal of making predictions.  
 3 **BY MR. SONG:**  
 4 **Q.** And some are not?  
 5 **A.** No, no. I'm just saying as a -- the way in  
 6 which econometricians or statisticians generally use  
 7 regression tools, sometimes those ways include designing  
 8 them with the intent of being able to make predictions.  
 9 **Q.** Are multiple regressions good tools to predict  
 10 outcomes?  
 11 **MS. MANTOAN:** Objection. Vague. Incomplete  
 12 hypothetical. Compound.  
 13 **THE WITNESS:** That's an extremely general  
 14 statement. It certainly depends on the circumstances.  
 15 They can be horrible tools if the regression is not  
 16 an appropriately generated regression or if the data is  
 17 not appropriate. So a variety of reasons why they may  
 18 not -- a given regression model may not be suitable.  
 19 But there may also be -- again, depending on the  
 20 circumstances -- circumstances where or situations where  
 21 a regression model can be used to generate predictions  
 22 in a particular context.  
 23 **BY MR. SONG:**  
 24 **Q.** So would those types of models be designed --  
 25 need to be designed to predict certain outcomes?

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1 **BY MR. SONG:**  
 2 **Q.** Better than regression.  
 3 **MS. MANTOAN:** Same objections.  
 4 **THE WITNESS:** There's no context for that  
 5 question. It depends on the circumstances.  
 6 There are some circumstances where you don't use  
 7 regression at all, others where you do. So I don't know  
 8 how to answer that question.  
 9 **BY MR. SONG:**  
 10 **Q.** Can you give me an example of where you would  
 11 use a regression model to analyze discrimination?  
 12 **MS. MANTOAN:** Objection. Assumes facts.  
 13 Vague. Incomplete hypothetical.  
 14 **THE WITNESS:** Again, I'm going to have to  
 15 preface this by it's not analyzing discrimination. It's  
 16 analyzing differences in pay that may be associated with  
 17 a protected characteristic.  
 18 And there are circumstances where regression is a  
 19 tool that's useful. Pay might be one of them. But  
 20 there may be other practices as well that one would want  
 21 to use a regression technique of some kind or another.  
 22 **BY MR. SONG:**  
 23 **Q.** What other tools would you use to analyze the  
 24 pay disparity?  
 25 **MS. MANTOAN:** Objection. Vague. Incomplete

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1 hypothetical. Compound.  
 2 THE WITNESS: One can use simple comparisons  
 3 of means with -- in some -- in certain circumstances.  
 4 And other sorts of non- -- other than sorts of  
 5 nonparametric tests could potentially be used, again,  
 6 depending on circumstances.  
 7 BY MR. SONG:  
 8 Q. What is statistical significance?  
 9 A. It's the confidence with which your estimated  
 10 effect -- the level of confidence of an estimated  
 11 measured effect of an independent variable on a  
 12 dependent variable.  
 13 Q. Is there a certain standard deviation  
 14 associated with statistical significance, in your view?  
 15 MS. MANTOAN: Objection. Vague. And  
 16 depending on the vagueness, may be calling for a legal  
 17 conclusion.  
 18 THE WITNESS: Well, I do have an understanding  
 19 that in a legal context, there's a certain benchmark  
 20 approach to statistical significance.  
 21 As I understand it, two to three standard  
 22 deviations is the phrase that the Supreme Court put out  
 23 at some point in the past. Those are two very different  
 24 things. Two standard deviations and three are not that  
 25 close together in some sense.

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1 Q. I think that's what I was thinking.  
 2 A. -- in large samples.  
 3 Q. Oh, so it can -- the standard deviation for  
 4 statistical significance can vary. Like 1.96, there's a  
 5 range?  
 6 A. It does vary a little bit as a function of the  
 7 sample size you are studying. But it stabilizes at 1.96  
 8 above probably 100, 125 observations.  
 9 Q. Then can you discuss the importance of  
 10 variables in multiple regressions?  
 11 MS. MANTOAN: Objection. Vague. Compound.  
 12 Incomplete hypothetical.  
 13 THE WITNESS: I'm not sure what you mean by  
 14 that.  
 15 BY MR. SONG:  
 16 Q. How about if you just explain variables to a  
 17 layperson such as myself that is not a labor economist.  
 18 MS. MANTOAN: Objection. Vague. Compound.  
 19 THE WITNESS: You mean you would like me to  
 20 define variable?  
 21 BY MR. SONG:  
 22 Q. Yeah. What is a -- if you're trying -- maybe  
 23 if you were teaching a basic class, like an intro class,  
 24 what would you say a variable is? How would you define  
 25 variable?

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1 Then as a social scientist, statistical  
 2 significance takes on a range of different levels. The  
 3 most popular, I think, is what's called the .05 level of  
 4 statistical significance, which corresponds  
 5 approximately to two standard deviations.  
 6 But there are other levels of statistical  
 7 significance you see in journal articles on a regular  
 8 basis.  
 9 BY MR. SONG:  
 10 Q. I haven't heard of the .05. What does .05  
 11 mean?  
 12 A. Five percent probability.  
 13 Q. Five percent probability of some event  
 14 occurring out of pure chance?  
 15 A. I wouldn't phrase it quite that way. But a  
 16 5 percent chance that the estimated effect is, in fact,  
 17 zero or no effect.  
 18 And I should -- one can also do significance tests  
 19 against benchmarks other than zero effect. But for  
 20 purposes of your question, I think the zero effect  
 21 benchmark is what you had in mind.  
 22 Q. And that's exactly at two standard deviations?  
 23 A. Not exactly. It depends on the size of the  
 24 sample you are analyzing. It's 1.96 standard  
 25 deviations --

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1 A. The variable is --  
 2 MS. MANTOAN: Same objections.  
 3 THE WITNESS: Variable is a phenomenon that  
 4 can take on different values.  
 5 BY MR. SONG:  
 6 Q. And what is their importance? Why are they  
 7 important in statistics?  
 8 MS. MANTOAN: Objection. Vague. Compound.  
 9 THE WITNESS: It's not that they're important  
 10 in statistics. They're what give rise to the discipline  
 11 of statistics.  
 12 BY MR. SONG:  
 13 Q. And without them, you couldn't run a  
 14 regression; correct?  
 15 A. Without what?  
 16 Q. Variables.  
 17 A. Well, I think that's kind of by definition.  
 18 Q. But I think a layperson would not -- your  
 19 average person off the street would not know what's  
 20 required in a regression.  
 21 So I'm trying to make sure that we're on the same  
 22 page in terms of, you know, what a regression is and  
 23 what data is, et cetera, et cetera.  
 24 Can you describe exogenous variable? Or what's  
 25 your definition of exogenous variable?

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1 **A.** Exogenous would be with respect to some sort  
2 of theoretical structure. So if there's some sort of  
3 structure that you have in mind or some sort of model or  
4 phenomenon of interest, there are factors which  
5 influence that phenomenon that the phenomenon itself has  
6 no control over.  
7 So they're exogenous. They're external factors  
8 having nothing to do -- they're not created by the  
9 phenomenon itself or related to it in any direct way.  
10 They are external to it.  
11 **Q.** What about an endogenous variable?  
12 **A.** An endogenous variable is one whose value may  
13 be influenced by the phenomenon you're studying.  
14 **Q.** Would you need both types of variables for a  
15 regression?  
16 **MS. MANTOAN:** Objection. Vague. Compound.  
17 Incomplete hypothetical.  
18 **THE WITNESS:** No I guess is the simple answer.  
19 **BY MR. SONG:**  
20 **Q.** Can you use exogenous variables for a  
21 regression analysis?  
22 **MS. MANTOAN:** Same objections.  
23 **THE WITNESS:** You can use any kind of  
24 variables in a regression analysis. It depends on the  
25 context.

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1 depends on the circumstances and it depends what the  
2 phenomenon is that you're studying. It depends on many  
3 things.  
4 **BY MR. SONG:**  
5 **Q.** They can be used even if they have -- they're  
6 influenced by the phenomenon?  
7 **A.** It depends on what your inquiry is. We're  
8 talking at a theoretical level.  
9 **Q.** Yes. And is there a minimum number of  
10 variables that you need for a regression?  
11 **MS. MANTOAN:** Objection. Incomplete  
12 hypothetical. Compound. Vague.  
13 **THE WITNESS:** Two would be the minimum.  
14 **BY MR. SONG:**  
15 **Q.** And is there a maximum?  
16 **MS. MANTOAN:** Same objections.  
17 **THE WITNESS:** That would depend on the  
18 circumstances.  
19 But I guess from some theoretical perspective,  
20 there's no maximum, but that from a practical  
21 perspective, there's going to be a maximum in every  
22 circumstance.  
23 **BY MR. SONG:**  
24 **Q.** And what would happen if you exceeded the  
25 maximum?

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1 **BY MR. SONG:**  
2 **Q.** So there are some exogenous variables that  
3 would not be appropriate for a regression?  
4 **MS. MANTOAN:** Same objections.  
5 **THE WITNESS:** Well, if they were completely  
6 unrelated to the phenomenon of interest, then they would  
7 likely be inappropriate in that analysis.  
8 **BY MR. SONG:**  
9 **Q.** But if they're related to the phenomenon, they  
10 could be used for regression analysis, a properly  
11 constructed one?  
12 **MS. MANTOAN:** Same objections. Vague.  
13 Compound. Incomplete hypothetical.  
14 **THE WITNESS:** "They" meaning exogenous  
15 variables, if they were exogenous variables thought to  
16 be related to the phenomenon of interest, yes, they can  
17 be used in regression, again, assuming many things.  
18 **BY MR. SONG:**  
19 **Q.** Sure.  
20 **A.** But just at the most theoretical level.  
21 **Q.** Yes. Theoretical basic level, that's what I'm  
22 getting at.  
23 What about endogenous variables?  
24 **MS. MANTOAN:** Same objections.  
25 **THE WITNESS:** They could be used as well. It

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1 **MS. MANTOAN:** Same objections.  
2 **THE WITNESS:** Well, for most computer programs  
3 that one uses to study phenomena, you will receive  
4 warnings. There are times when if you -- in fact, if  
5 you have too many variables in one type of a context,  
6 your model won't run at all.  
7 **BY MR. SONG:**  
8 **Q.** Are there other problems with having too many  
9 variables?  
10 **MS. MANTOAN:** Objection. Vague. Compound.  
11 Incomplete hypothetical.  
12 **THE WITNESS:** I have taken your phrase of "too  
13 many" in the theoretical sense. But now you have to  
14 define to me what you mean by "too many."  
15 **BY MR. SONG:**  
16 **Q.** Because you mentioned, if I understood you  
17 correctly, that if there were too many variables, the  
18 program wouldn't even run.  
19 **A.** That's correct.  
20 **Q.** So I was just wondering, are there other  
21 problems that could come up if you have too many  
22 variables?  
23 **MS. MANTOAN:** Objection. Vague. Compound.  
24 Incomplete hypothetical.  
25 **THE WITNESS:** If you have many variables which

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1 are unrelated to the phenomena of interest collectively,  
 2 it will reduce the fit of your model, to use the phrase.  
 3 That's not necessarily a problem, but you like to  
 4 avoid that if possible.  
 5 BY MR. SONG:  
 6 Q. Any other problems you could have with too  
 7 many variables?  
 8 MS. MANTOAN: Same objections.  
 9 THE WITNESS: No. I think we've covered the  
 10 issues.  
 11 BY MR. SONG:  
 12 Q. What about the reverse? If you have -- you  
 13 said the minimum is two. What would happen if you  
 14 had -- so you couldn't run a regression with zero or one  
 15 variables; correct?  
 16 A. Well, you can't run a regression with fewer  
 17 than two variables.  
 18 Q. So that would be the problem. I'm just trying  
 19 to understand the flip side.  
 20 So with one or zero, you just couldn't even run a  
 21 regression; is that correct?  
 22 A. That's correct.  
 23 Q. You mentioned R-squared in your report.  
 24 Can you give us a definition of R-squared?  
 25 A. Yes. It's the proportion of variation in the

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1 MS. MANTOAN: Objection. Vague. Compound.  
 2 Calls for a legal conclusion. Misstates prior  
 3 testimony. Mischaracterizes the claims.  
 4 THE WITNESS: I'm not sure what you mean by  
 5 "pay equity analysis." You haven't previously used that  
 6 phrase.  
 7 BY MR. SONG:  
 8 Q. How about if I simplify it and say, is  
 9 R-squared important in your analysis of this matter of  
 10 Oracle?  
 11 MS. MANTOAN: Objection. Misstates prior  
 12 testimony. Vague.  
 13 THE WITNESS: I think R-squared is something  
 14 that is worth examining when you're doing this sort of  
 15 analysis that I'm doing that is in my report.  
 16 (Saad Exhibit 8 was marked.)  
 17 BY MR. SONG:  
 18 Q. I'll give you a second to look that -- or as  
 19 long as you need to look that over. Just let me know  
 20 when you're ready.  
 21 MS. MANTOAN: Is there any particular passage  
 22 that you want him to be focusing on in this two-page  
 23 document?  
 24 MR. SONG: Well, first I want to authenticate  
 25 this document.

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1 dependent variable that is associated with the set of  
 2 independent variables in the model.  
 3 Q. And what's the importance -- well, strike  
 4 that.  
 5 Is R-squared important in statistics?  
 6 MS. MANTOAN: Objection. Vague. Compound.  
 7 THE WITNESS: It's relied on a lot in  
 8 statistical analysis where R-squared is computed. It is  
 9 heavily relied upon. So I would say, yes, it's  
 10 important.  
 11 BY MR. SONG:  
 12 Q. And why is it important?  
 13 A. Most people who are doing empirical work would  
 14 like to know the extent to which there is a relationship  
 15 collectively between the independent variables and the  
 16 dependent variable.  
 17 But it's -- it's a relative concept. It depends  
 18 on the type of work you're doing, the nature of the  
 19 subject matter you're applying your analysis to.  
 20 There's a wide range of outcomes with respect to  
 21 what is considered a suitable R-squared and what is  
 22 not. And it is definitely dependent on the  
 23 circumstances.  
 24 Q. Would R-squared be important in a pay equity  
 25 analysis such as Oracle?

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1 BY MR. SONG:  
 2 Q. Can you take a look at it, and then I'll point  
 3 you to a passage I'd like you to look at.  
 4 A. Yeah. I've looked at this.  
 5 Q. And what is this?  
 6 A. It's a couple of pages from a book called A  
 7 Guide to Econometrics by Peter Kennedy.  
 8 Q. And is this the book that you cite to in your  
 9 report?  
 10 A. It's one of them, yes.  
 11 Q. So this would be a reliable book on  
 12 econometrics?  
 13 MS. MANTOAN: Objection. Vague and compound.  
 14 THE WITNESS: It's reliable for certain  
 15 purposes, yes.  
 16 BY MR. SONG:  
 17 Q. So if you look at the bottom of page 27, the  
 18 last bullet point, it says, "In general, econometricians  
 19 are interested in obtaining good parameter estimates  
 20 where good is not defined in terms of R-squared.  
 21 Consequently, the measure of R-squared is not of much  
 22 importance in econometrics. Unfortunately, however,  
 23 many practitioners act as though it is important for  
 24 reasons that are not entirely clear, as noted by Cramer.  
 25 These measures of goodness of fit have a fatal

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1 attraction. Although it is generally conceded among  
 2 insiders that they do not mean a thing, high values are  
 3 still a source of pride and satisfaction to their  
 4 authors, however hard they may try to conceal these  
 5 feelings.  
 6 "Because of this, the meaning and role of R-squared  
 7 are discussed at some length throughout this book,  
 8 Section 5.5, and its general notes extend the discussion  
 9 of this section. Comments are offered in the general  
 10 notes of other sections when appropriate. For example,  
 11 one should be aware that R-squared from two equations  
 12 with different dependent variables should not be  
 13 compared, and that adding dummy variables (to capture  
 14 seasonal influences, for example) can inflate R-squared  
 15 and that regressing on group means overstates R-squared  
 16 because the error terms have been averaged."  
 17 Did I read that correctly?  
 18 **A.** Yes.  
 19 **Q.** Do you agree with this passage?  
 20 **A.** Not as --  
 21 MS. MANTOAN: Objection. It's vague and it's  
 22 compound.  
 23 Are you asking if he agrees with everything or  
 24 anything?  
 25 MR. SONG: No. I said passage.

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1 However, the question here in the context of this  
 2 case, because you asked me -- that's how you led into  
 3 this -- is that, for example, I think Dr. Madden  
 4 yesterday testified about studies she has done where  
 5 the R-squareds were less than 5 percent, or .05, yet  
 6 the studies were successful studies.  
 7 Now, if there is a theory, what econometricians  
 8 are typically doing and what distinguishes them from  
 9 statisticians, at least to economists, is that  
 10 typically they will have some sort of theoretical  
 11 structure that guides the statistical research they do.  
 12 So they're sometimes constructing a theoretical  
 13 economic model from which they derive implications that  
 14 they seek to test.  
 15 So if they seek to test those on data that is  
 16 very, very noisy data, yet they are able to identify a  
 17 signal associated with their theory on a particular  
 18 variable they're interested in, that can be completely  
 19 valid because the theory is what has preceded it. You  
 20 expected to find this outcome, you have a properly  
 21 constructed model, and you found that income.  
 22 That is very different from what we're doing when  
 23 we study employment data with allegations of  
 24 discrimination. Why it's different is that  
 25 discrimination is simply an inference. It is a

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1 MS. MANTOAN: The whole passage. Okay.  
 2 MR. SONG: Yeah.  
 3 THE WITNESS: Not as stated. And I think  
 4 actually I gave an answer that, in fact, addresses this  
 5 issue.  
 6 It depends on the context. There are times when  
 7 R-squared can matter more than others.  
 8 BY MR. SONG:  
 9 **Q.** But didn't you actually cite to this passage  
 10 in your report?  
 11 **A.** To this passage specifically?  
 12 **Q.** Yeah. I thought --  
 13 **A.** I'm not sure I cited to this passage  
 14 specifically, no.  
 15 **Q.** But do you agree with this -- what parts of  
 16 this do you agree with?  
 17 **A.** What I agree with is that one has to be very  
 18 careful and one should not compare R-squareds blindly  
 19 across different analyses. There are going to be some  
 20 analyses where an expected fit of the data in the model  
 21 would be not more than 5 percent, yet that could be a  
 22 very valid study. There are other cases where the  
 23 expected fit might be 80 or 90 percent, and that would  
 24 be a valid study. So one cannot cross-compare  
 25 R-squareds.

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1 residual. It is not -- there's no theory that says it  
 2 ought to be there or that it ought to have a particular  
 3 characterization.  
 4 There's a theory about things that influence pay.  
 5 Whatever that theory might be, you incorporate those  
 6 variables. You then incorporate another variable  
 7 that's not in any theory. It's not coming from theory.  
 8 It's a protected characteristic. You put that in the  
 9 model.  
 10 You observe whether or not there's any  
 11 relationship between that variable and whatever you're  
 12 studying, let's say it's pay. And in that case, if all  
 13 the variables are in your model and you have thoroughly  
 14 explained pay, in general, only then would an inference  
 15 be potentially possible regarding the relationship  
 16 between pay and, let's say, gender.  
 17 So if you have very low R-squared in the context  
 18 of a pay analysis, it leaves open the question of what  
 19 have you left out that may be correlated with the  
 20 variable for gender about which there is no theory.  
 21 And, therefore, low R-squares in an employment context  
 22 are totally different than low R-squares in the context  
 23 where you're testing some economic theory which is not  
 24 dependent on a residual.  
 25 **Q.** So you're arguing that R-squared is important

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1 in a pay discrimination case.  
 2 **A.** I would say that it is something one must  
 3 consult and take into account. And I would suspect that  
 4 if the issue of applications of regression analysis to  
 5 employment discrimination were something that Peter  
 6 Kennedy was asked to opine on, he may say something  
 7 similar to that.  
 8 But here is one of those circumstances where we  
 9 may want to look at that, only because of the danger of  
 10 an omitted variable completely biasing the coefficient  
 11 of interest about which there is no preexisting theory  
 12 and which totally depends on the accuracy of everything  
 13 else in the model.  
 14 **Q.** And you cited specifically to this page,  
 15 correct, page 27?  
 16 **A.** Well, if I did, it wasn't to that passage  
 17 necessarily.  
 18 **MS. MANTOAN:** Can you point him to where --  
 19 you're just representing that he cited it. Can you  
 20 point him to the passage?  
 21 **MR. SONG:** No. I actually don't remember  
 22 where he cited it.  
 23 **BY MR. SONG:**  
 24 **Q.** Do you remember, Dr. Saad?  
 25 **A.** No.

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1 **Q.** I apologize.  
 2 **MS. MANTOAN:** I guess on that point, Counsel,  
 3 do you know if this is the same version that he's  
 4 citing?  
 5 **MR. SONG:** I think it is, because I found it  
 6 by his cite. He cited to this page. And that's how I  
 7 found the passage, Footnote 56.  
 8 **MS. MANTOAN:** Which is in the original report,  
 9 Counsel?  
 10 **MR. SONG:** Yes.  
 11 **MS. MANTOAN:** Thank you.  
 12 **THE WITNESS:** 2008 is the year.  
 13 **BY MR. SONG:**  
 14 **Q.** Okay. Just to continue on R-squared, do you  
 15 know of a treatise that also states R-squared is  
 16 important in econometrics?  
 17 **MS. MANTOAN:** Objection. Misstates prior  
 18 testimony.  
 19 **THE WITNESS:** Every econometrics textbook  
 20 talks about -- whether elementary or advanced -- talks  
 21 about R-squared.  
 22 **BY MR. SONG:**  
 23 **Q.** That wasn't my question.  
 24 Can you -- and maybe there's quite a few. But can  
 25 you name a treatise that says R-squared is important?

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1 **Q.** I don't think we need to take the time to find  
 2 it. But you do remember citing to this book?  
 3 **A.** I often cite to this book. It's a good book.  
 4 **Q.** What about what Mr. Kennedy says about,  
 5 "Consequently, the measure R-squared is not of much  
 6 importance in econometrics"?  
 7 **A.** It depends. Most econometrics is not involved  
 8 with what we're doing here.  
 9 To the extent that it is, I believe that's the  
 10 context within which R-squared is worth considering  
 11 among the criteria you use to evaluate the validity and  
 12 the suitability of a particular regression model.  
 13 Remember, in a company setting, for example, there  
 14 may be many factors that influence pay, some of which  
 15 we know, some of which we may not know.  
 16 And if we don't know certain factors or don't have  
 17 information from certain factors and seek to draw  
 18 conclusions from a residual difference between, let's  
 19 say, gender and pay, then we may be reaching  
 20 conclusions that are invalid conclusions.  
 21 **Q.** Do you know which edition this book is? Oh,  
 22 Fourth Edition.  
 23 Do you know what year this was published? I don't  
 24 recall. I should have copied that.  
 25 **A.** I don't know.

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1 **A.** I would suspect that most of the books in  
 2 econometrics will have a similar view to this view,  
 3 which is that R-squared must be interpreted with  
 4 caution, which is the part that I highlighted here in  
 5 the footnote.  
 6 So to the extent that you open up a textbook,  
 7 especially, let's say, a graduate textbook, it probably  
 8 will discuss that it can be important in some  
 9 circumstances, but you have to be careful how you  
 10 interpret R-squared and certainly not make comparisons  
 11 across different phenomena.  
 12 For example, don't claim that a sociological --  
 13 studies in sociology journals, which tend to have lower  
 14 R-squares, must be invalid because when compared to  
 15 studies in certain other disciplines with much higher  
 16 R-squares, those have higher R-squares.  
 17 So that would be an invalid use or critique of  
 18 sociological studies as stated.  
 19 **Q.** But the book you cite to says econometrics is  
 20 not important.  
 21 Can you name a book that says it is important?  
 22 **MS. MANTOAN:** Objection. Misstates the  
 23 document.  
 24 **THE WITNESS:** It doesn't say it's not  
 25 important. It says that you have to be careful with it.

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1 And as an absolute bright line thing, it says it's  
 2 not -- it's not important, per se. That doesn't mean  
 3 it's unimportant. The document doesn't say it's  
 4 unimportant.  
 5 BY MR. SONG:  
 6 Q. It says it's not of much importance.  
 7 A. That's not unimportant. It depends on the  
 8 circumstances.  
 9 Q. So I'll ask, I think, the third or fourth  
 10 time.  
 11 Can you name a book that says it is important?  
 12 A. Not as I sit here, but I'll be happy to fill  
 13 that in in the transcript later.  
 14 As I said, I think most would probably  
 15 characterize R-squared in the way that I did and the  
 16 way that this book does as well.  
 17 Q. So then I was going to ask if you can name a  
 18 treatise or a book that says R-squared is important in  
 19 economic analysis of discrimination.  
 20 But I'm guessing you'll have the same answer, is  
 21 that you can look at -- you can find one or you'll look  
 22 into it?  
 23 A. Well, that's something I would look into to  
 24 see how R-squared is characterized in books that are  
 25 devoted to studying disparities in pay between

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1 If things outside the model ought to be in the  
 2 model, R-square would be higher, and the value of the  
 3 coefficient or measured effect on the particular  
 4 characteristic would change. So in that setting,  
 5 R-squared becomes important.  
 6 If you had a particularly low R-squared, you might  
 7 suspect there may be some variables omitted that may  
 8 have an effect on my variable of interest about which  
 9 there is no theory and about which I cannot have any  
 10 predisposition. I have to be agnostic until I see what  
 11 its effects are.  
 12 And in those circumstances, I would say the lower  
 13 R-squared is, the greater the likelihood is there's --  
 14 there are omitted variables, in which case the less the  
 15 likelihood is I can consider the analysis reliable.  
 16 Q. But you also said that Kennedy would agree  
 17 with you that there is -- this is an exception. How do  
 18 you know that?  
 19 A. I wouldn't --  
 20 MS. MANTOAN: Objection. It misstates prior  
 21 testimony.  
 22 THE WITNESS: I didn't say exception. I  
 23 didn't use that phrasing.  
 24 I would say --  
 25

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1 demographic groups.  
 2 Q. So what basis do you have for saying that  
 3 Kennedy would agree that this type of case, the Oracle  
 4 case, is an exception to the passage I read --  
 5 MS. MANTOAN: Objection. Misstates prior  
 6 testimony.  
 7 BY MR. SONG:  
 8 Q. -- on page 27?  
 9 A. I didn't say anything about the Oracle case in  
 10 that answer.  
 11 Q. Well, I think -- I'm sorry if I misspoke.  
 12 I think you said for employment discrimination,  
 13 that it was something that should be considered or  
 14 looked at in employment discrimination cases.  
 15 A. I said that the fit of a model has some  
 16 importance in the context of a statistical inquiry where  
 17 you are seeking to identify effects through a residual  
 18 approach, essentially a residual approach, where you  
 19 have a proxy variable for something we call  
 20 discrimination.  
 21 That proxy is a demographic characteristic.  
 22 There's no theory about it. Nothing to guide you as to  
 23 what value of that coefficient you ought to find. Yet  
 24 that factor could be highly correlated with things both  
 25 in the model and outside the model.

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1 BY MR. SONG:  
 2 Q. That's fine.  
 3 A. -- he does not rule out that there are times  
 4 when R-squared matters. He doesn't rule that out in  
 5 this passage at all. I don't know why you think he  
 6 does. He does not.  
 7 So I would suspect that if he were in the context  
 8 we're in right now, that he would say, well, that's a  
 9 circumstance where I think it might be worth looking at  
 10 the fit of the model.  
 11 And, for example, if I knew that -- just to give  
 12 you a hypothetical, if I knew that there were many,  
 13 many pay analyses that had been done and the R-squareds  
 14 tended to be, let's say, in the 50 percent range, and  
 15 the one I was looking at in a particular case was in  
 16 the 20 percent range, would that give me some concern,  
 17 as an analyst, that I might have omitted variables that  
 18 might bias the measured effect of gender, the  
 19 relationship between gender and pay which, again,  
 20 because there's no theory, I can't ignore a  
 21 particularly low R-squared relative to other -- other  
 22 R-squareds.  
 23 Q. Okay. But I'm still curious as to what basis  
 24 you have for saying Kennedy would agree with you on this  
 25 point.

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1 A. Because I think it's a pretty obvious point.  
 2 Q. So other than it being obvious, do you have  
 3 any other basis for believing Kennedy would agree with  
 4 you?  
 5 A. I haven't spoken to him, if that's what you're  
 6 asking.  
 7 Q. No. I was just wondering -- I don't know.  
 8 Maybe he's had other -- written other papers or books,  
 9 or something like that, that say something like that.  
 10 A. Not to my knowledge.  
 11 Q. You know far more than I do about all these  
 12 things.  
 13 A. Not to my knowledge. He hasn't written other  
 14 books about -- this is a book that I know of his.  
 15 Q. What's the role of or what do you think of  
 16 assumptions in statistical analysis?  
 17 MS. MANTOAN: Objection. Vague. Compound.  
 18 Incomplete hypothetical.  
 19 THE WITNESS: There's assumptions in all work  
 20 that people do. I have no idea what you mean by that.  
 21 BY MR. SONG:  
 22 Q. Are assumptions required to perform a  
 23 statistical analysis?  
 24 MS. MANTOAN: Same objections.  
 25 THE WITNESS: Well, they're embedded in almost

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1 So I'm just trying to understand your criticisms of  
 2 aggregation and whether it's always something that's not  
 3 permitted or whether there are some uses for  
 4 aggregation.  
 5 A. Well, it depends on -- it depends on the  
 6 circumstances, of course, like anything.  
 7 Q. When would aggregation be appropriate?  
 8 MS. MANTOAN: Objection. Vague. Compound.  
 9 Incomplete hypothetical.  
 10 THE WITNESS: Boy, that's a very wide open  
 11 sort of question.  
 12 BY MR. SONG:  
 13 Q. Can you answer?  
 14 A. There can be instances when it is appropriate  
 15 and instances when it isn't.  
 16 Q. Well, with all the different analyses that  
 17 you've conducted in your career, can you give me an  
 18 example of where it is appropriate?  
 19 MS. MANTOAN: Same objections. Vague.  
 20 Compound. Incomplete hypothetical. Vague as to  
 21 "appropriate" and "aggregation."  
 22 THE WITNESS: Well, in a, let's say -- you've  
 23 been using the example of compensation.  
 24 If you are looking at an individual job, for  
 25 example, and that job was held in several different

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1 any statistical analysis. There are certain assumptions  
 2 that are present when you use a particular technique.  
 3 Certain things are assumed to be true about  
 4 characteristics of the data, for example, and  
 5 relationship of variables to one another. There are a  
 6 variety of things that are underlying assumptions of  
 7 statistical modeling.  
 8 BY MR. SONG:  
 9 Q. And what about the role of aggregation in  
 10 statistical analysis?  
 11 MS. MANTOAN: Objection. Vague. Compound.  
 12 Incomplete hypothetical.  
 13 THE WITNESS: What kind of aggregation are you  
 14 referring to?  
 15 BY MR. SONG:  
 16 Q. So when you're aggregating data, for example,  
 17 is that useful?  
 18 MS. MANTOAN: Same objection.  
 19 THE WITNESS: I'm not sure what you mean.  
 20 You'll have to give me an example of something more  
 21 specific.  
 22 BY MR. SONG:  
 23 Q. For example, in your report -- you criticize  
 24 some of the aggregation in your reports that both OFCCP  
 25 and Dr. Madden do.

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1 locations by a company, it may be under that -- it's  
 2 possible you could aggregate those different locations  
 3 if you knew that the processes influencing pay at those  
 4 different locations was, in some sense, the same.  
 5 I don't know for sure, but that could be an example  
 6 where it might be -- could be appropriate to aggregate  
 7 rather than do each location separately.  
 8 MR. SONG: Do you need a break?  
 9 MS. MANTOAN: Whenever we could.  
 10 MR. SONG: I'm almost done with kind of this  
 11 line.  
 12 MS. MANTOAN: Great.  
 13 MR. SONG: Which you'll probably be very happy  
 14 to hear.  
 15 BY MR. SONG:  
 16 Q. Human capital theory, can you define human  
 17 capital theory?  
 18 MS. MANTOAN: Objection. Vague. Compound.  
 19 BY MR. SONG:  
 20 Q. Or tell us what it is.  
 21 A. Well, human capital is the -- itself is just  
 22 value embedded in individuals and acquired through  
 23 training, through experience. Some would regard innate  
 24 ability as part of your stock of human capital which you  
 25 enhance through training and experience.

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1 Your skills would be a component of human capital.  
 2 Health is often regarded as a component of human  
 3 capital.  
 4 Q. Thank you very much.  
 5 MR. SONG: We can break.  
 6 THE VIDEOGRAPHER: We are going off the record  
 7 at 1418.  
 8 (Recess from 2:18 p.m. to 2:43 p.m.)  
 9 THE VIDEOGRAPHER: We are back on record at  
 10 1443.  
 11 MR. SONG: Kate, you had something you want to  
 12 state for the record.  
 13 MS. MANTOAN: Yes. Thank you. I appreciate  
 14 that.  
 15 Before the break, there was testimony about  
 16 Exhibit 8, which was represented as a document  
 17 referenced in Dr. Saad's report.  
 18 We did a little investigation and note that  
 19 Exhibit 8 is the Fourth Edition published in 1998 of  
 20 this Kennedy text where Dr. Saad's report was citing to  
 21 a 2008 version of the text.  
 22 And it appears to me, at least, that the text put  
 23 in front of him -- some of the language that Dr. Saad  
 24 cited from the Sixth Edition does not appear in the  
 25 Fourth. So it's been revised.

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1 MS. MANTOAN: Objection. Vague.  
 2 This case? We know he's working on two matters for  
 3 Oracle.  
 4 MR. SONG: I think that Oracle is our matter,  
 5 proprietary rights.  
 6 BY MR. SONG:  
 7 Q. The OFCCP/Oracle matter.  
 8 A. I believe it was sometime in late 2016 or  
 9 early 2017.  
 10 Q. Since then -- I think I asked this before, but  
 11 do you have any recall of how many hours you've billed  
 12 on this case so far?  
 13 MS. MANTOAN: Objection. It is asked and  
 14 answered.  
 15 THE WITNESS: I don't know the number.  
 16 BY MR. SONG:  
 17 Q. I forgot whether you had an estimate.  
 18 MS. MANTOAN: Same objection.  
 19 THE WITNESS: I think I said probably hundreds  
 20 of hours.  
 21 BY MR. SONG:  
 22 Q. Maybe more than a hundred?  
 23 A. More than a hundred.  
 24 Q. More than 200?  
 25 A. Probably.

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1 So I just wanted the record to be clear that  
 2 Exhibit 8 is not, in fact, a document that was cited in  
 3 his report. Instead, he was looking at a subsequent  
 4 edition, a revised subsequent edition of the same text.  
 5 And my understanding, Counsel, from our  
 6 off-the-record conversation is that you agree that the  
 7 exhibit put in front of him was -- was not the version  
 8 that was cited in Dr. Saad's report. Dr. Saad's report  
 9 cites a revised version of that text.  
 10 MR. SONG: Just a slight clarification. I'll  
 11 state it appears that it's a different version. I agree  
 12 that there a few things missing that. It appears that  
 13 it's a different version. I just want to confirm which  
 14 version it is before we state something -- before I  
 15 confirm that.  
 16 I do agree it's the wrong version. It appears that  
 17 way. I'm happy to correct the record or --  
 18 MS. MANTOAN: Thank you.  
 19 MR. SONG: -- the transcript once we get down  
 20 to the bottom of this. I'm sure there can't be much  
 21 dispute once we find the book, that copy of the book.  
 22 MS. MANTOAN: Understood. Thank you.  
 23 BY MR. SONG:  
 24 Q. Dr. Saad, when were you retained for the  
 25 Oracle matter?

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1 Q. More than 300?  
 2 A. That I don't know.  
 3 Q. Do you know -- can you estimate how much  
 4 you've build for the OFCCP/Oracle matter?  
 5 MS. MANTOAN: Objection. It's asked and  
 6 answered.  
 7 THE WITNESS: As I said, I think that the  
 8 billings in connection with the work that I've been  
 9 doing here is probably in excess of a million dollars,  
 10 probably not much in excess of it.  
 11 BY MR. SONG:  
 12 Q. And your billing rate, if I recall correctly,  
 13 is 750 per hour?  
 14 A. Yes.  
 15 Q. And do you know how many staff members are  
 16 also working on this Oracle matter?  
 17 MS. MANTOAN: Objection. Vague as to time.  
 18 THE WITNESS: Over the period of time that I  
 19 have -- I and my staff have worked on this project,  
 20 there have been a number of staff members.  
 21 BY MR. SONG:  
 22 Q. Can you estimate how many?  
 23 A. Probably eight to ten at some point in time or  
 24 another have been involved with the project.  
 25 Q. And how many -- are there any other labor

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1 economists that are working on this matter from  
 2 Resolution?  
 3 **A.** Yes.  
 4 **Q.** How many?  
 5 **A.** Three of the individuals are labor economists  
 6 by training, and others -- in other words, have Ph.D.s  
 7 in labor -- in economics with fields in labor.  
 8 **Q.** Okay.  
 9 **A.** And other individuals have backgrounds in  
 10 either statistics or economics as well.  
 11 **Q.** But three of them are Ph.D.s?  
 12 **A.** Correct.  
 13 **Q.** And what are their names?  
 14 **A.** Elaine Reardon, Karyn Model and Ming Gu.  
 15 **Q.** Do you recall the names of your other staff  
 16 that are working on this matter?  
 17 **A.** I'll do the best I can. Sama Agrawal, Shui  
 18 Tong Wong, Christina Kim, Pete Breslin, and Levon  
 19 Massmanian.  
 20 **Q.** What is your understanding of your assignment  
 21 on this matter?  
 22 **MS. MANTOAN:** Objection. Vague.  
 23 **THE WITNESS:** I was asked to respond to --  
 24 initially to the claims made by the OFCCP in the Second  
 25 Amended Complaint.

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1 So I think there are privilege issues and work  
 2 product issues aside from that context.  
 3 So limited to that, you know, I don't have  
 4 objection to you answering the question limited to scope  
 5 of the rules.  
 6 **THE WITNESS:** One should be obvious. I was  
 7 asked to assume that the hiring claims were no longer  
 8 part of the case even though they are in the Second  
 9 Amended Complaint.  
 10 Aside from that, I was not asked to make any  
 11 specific assumptions that I can recall.  
 12 **BY MR. SONG:**  
 13 **Q.** Just about the hiring claims?  
 14 **A.** I was just asked to -- I was asked to assume  
 15 they no longer needed to be responded to. I don't know  
 16 if that's an assumption or a direction.  
 17 **Q.** Safe assumption.  
 18 **A.** Yes.  
 19 **Q.** And is it safe to say that that's the only  
 20 assumption you relied on in responding to the Second  
 21 Amended Complaint?  
 22 **A.** I'm trying to think of any assumptions that  
 23 counsel would have provided. And I can't think of any,  
 24 any assumptions.  
 25 I was provided with data, documents, various

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1 And I was also asked to respond to whomever the  
 2 OFCCP would put forth as their expert. Ultimately, that  
 3 was Dr. Madden. So I was asked to respond to Dr. Madden  
 4 in my second report.  
 5 **BY MR. SONG:**  
 6 **Q.** Were you asked to make any assumptions in  
 7 responding to the Second Amended Complaint?  
 8 **A.** I'm not sure what that means. What do you  
 9 mean by "assumptions"?  
 10 **Q.** Assumptions on, for example -- let's see.  
 11 What is a good example of an assumption? We spoke  
 12 earlier about assumptions in statistics. Were there --  
 13 let me phrase it another way.  
 14 Were there any assumptions that you were required  
 15 to make to respond to the OFCCP's Second Amended  
 16 Complaint?  
 17 **A.** I can tell you --  
 18 **MS. MANTOAN:** Let me interpose an objection  
 19 here.  
 20 You're within Rule 26 to the extent you're talking  
 21 about assumptions for counsel. Just I think the text of  
 22 Rule 26, it's appropriate for you to answer if you are  
 23 asked to -- you can be asked to identify assumptions  
 24 that a party's attorney provided and that the expert  
 25 relied on in forming the opinions to be expressed.

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1 information. But I don't recall being provided with  
 2 any assumptions by counsel.  
 3 **Q.** What about that Oracle did not discriminate  
 4 against its employees, is that an assumption --  
 5 **MS. MANTOAN:** Objection.  
 6 **BY MR. SONG:**  
 7 **Q.** -- you made?  
 8 **A.** I'm never asked to assume that. I mean,  
 9 that's --  
 10 **Q.** But was that an assumption that you made?  
 11 **A.** Of course not.  
 12 **Q.** But you also didn't assume that they were  
 13 discriminating.  
 14 **A.** I didn't assume one way or the other. That's  
 15 not my role.  
 16 **Q.** And would your answers be the same when you  
 17 responded to Dr. Madden's report?  
 18 **A.** Yes.  
 19 **Q.** And the documents and data -- I'm sorry. Let  
 20 me or let's turn to Attachment B of your initial report.  
 21 **MS. MANTOAN:** Is that Exhibit 2?  
 22 **MR. SONG:** Yes.  
 23 **MS. MANTOAN:** Thank you.  
 24 **BY MR. SONG:**  
 25 **Q.** Attachment B are the -- is the data and

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1 documents you considered in drafting your initial  
 2 report?  
 3 **A.** That's correct.  
 4 **Q.** Does it contain everything that you reviewed  
 5 for -- to prepare your report?  
 6 **A.** As far as I know, yes.  
 7 **Q.** Is there anything here that you considered  
 8 that is not included?  
 9 **MS. MANTOAN:** Objection. Vague.  
 10 **THE WITNESS:** Can you restate that, please.  
 11 **BY MR. SONG:**  
 12 **Q.** Well, I'll just go back to review. Is there  
 13 anything that you reviewed that is not listed on  
 14 Attachment B to prepare your response to the Second  
 15 Amended Complaint?  
 16 **A.** No, I don't think so. I think this is  
 17 essentially a listing of everything that I received.  
 18 **Q.** And as far as you know, it's a complete and  
 19 accurate list?  
 20 **A.** Yes, as far as I know.  
 21 **Q.** And you were given all of these documents to  
 22 review?  
 23 **A.** Yes.  
 24 **Q.** Did you request any documents?  
 25 **MS. MANTOAN:** I'm going to object to the

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1 couple of things.  
 2 One was the extension back in time of a certain  
 3 subset of employees. And then there was another subset  
 4 of employees that were beyond the first production.  
 5 First production ended at the end of 2017. It was  
 6 subsequently updated to -- or maybe it was the end -- I  
 7 think it was January 2016 -- 2017. And then it was  
 8 updated to January 2017. I believe that's the case.  
 9 **Q.** And when did you first receive documents from  
 10 your attorneys to consider?  
 11 **MS. MANTOAN:** I'm going to object to the  
 12 extent that you're asking for communications with him  
 13 beyond those that identify the facts that were provided.  
 14 I think you're going beyond what Rule 26 permits in  
 15 terms of communications with an expert and counsel.  
 16 **MR. SONG:** But it's just the date. I'm just  
 17 looking for the date that that happened. I can ask like  
 18 when he met with you guys. It's not attorney/client.  
 19 **MS. MANTOAN:** Limited just to that.  
 20 **MR. SONG:** Yeah, yeah. I'm just trying to get  
 21 dates. That's all.  
 22 **MS. MANTOAN:** Okay.  
 23 **THE WITNESS:** Well, the first date I received  
 24 would have probably been sometime in 2017. But I at  
 25 that point didn't have any specific assignment and there

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1 extent you're asking for communications between counsel  
 2 and the expert.  
 3 You're entitled to communications that identify  
 4 facts or data that the party's attorney provided and  
 5 that the expert considered in forming the opinions to be  
 6 expressed.  
 7 I think your question goes beyond the scope of  
 8 that. So I'm going to object on privilege grounds to  
 9 anything that goes beyond the text of the rule.  
 10 **MR. SONG:** Okay. I'll withdraw that question.  
 11 **BY MR. SONG:**  
 12 **Q.** Did you request any data from Oracle?  
 13 **MS. MANTOAN:** Objection. Vague.  
 14 **THE WITNESS:** Beyond what was produced to me?  
 15 **BY MR. SONG:**  
 16 **Q.** Yes.  
 17 **A.** It's hard to recall. But I think early on  
 18 there were incompleteness issues in the data. And I  
 19 believe, based on the correspondence I've seen, that  
 20 there were -- there were a couple of different  
 21 productions.  
 22 I don't think I requested any of those, but I was  
 23 aware of the need to get those updated productions.  
 24 **Q.** What incompleteness issues did you encounter?  
 25 **A.** Well, as the time period -- there were a

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1 was no report contemplated at that time.  
 2 So I got some material, but I'm not sure what the  
 3 context was at that point.  
 4 **BY MR. SONG:**  
 5 **Q.** If that was before your assignment, then what  
 6 was your assignment at that time?  
 7 **A.** Well, I think there was a series of mediation  
 8 meetings going on at that point in time. And I don't  
 9 know whether any of our work was relied upon in that  
 10 context, but it may have been. I don't know.  
 11 **Q.** Because you weren't involved in the  
 12 mediations; right?  
 13 **MS. MANTOAN:** I'm going to object to invading  
 14 the mediation privilege and invading the work product.  
 15 I think you're entitled to know when we first  
 16 retained him, which he testified was in 2016 or 2017.  
 17 Retention is different than having a specific  
 18 assignment that generated a specific report. So I think  
 19 anytime after he was retained by us, which he said was  
 20 in late 2016, early 2017, you're limited to inquiring  
 21 about communications that are permitted under the rules.  
 22 **BY MR. SONG:**  
 23 **Q.** When was the last date that you received  
 24 documents from the attorneys to consider for the  
 25 reports?

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1 A. That was probably in April or May of 2019. I  
 2 think there was some material that came in as recently  
 3 as that time.  
 4 Q. And would your answer be the same for data?  
 5 A. I think it was not electronically readable  
 6 data -- well, it was electronically -- it was all  
 7 electronic information.  
 8 But I think, for example, human resource and  
 9 payroll data, I think some of that was provided during  
 10 2019. I'm not sure exactly when.  
 11 Q. And then when was the earliest date that you  
 12 received data?  
 13 A. Like I said, I think sometime in 2017. When,  
 14 I don't know.  
 15 Q. Okay. I was trying to clarify between  
 16 documents and data, like electronic data.  
 17 So it was -- so when was the first time you -- so  
 18 your '17 date, was that for documents or data or both?  
 19 A. It would be both.  
 20 Q. Were there other incompleteness issues that  
 21 you had to deal with?  
 22 MS. MANTOAN: Objection. Misstates testimony.  
 23 Vague.  
 24 THE WITNESS: Not that I recall.  
 25

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1 A. No, no. In case you asked me that in  
 2 previous -- if that was part of your questions, I never  
 3 communicated directly with Oracle about anything that I  
 4 received in this case. It was always through counsel.  
 5 BY MR. SONG:  
 6 Q. Did Oracle directly give you any documents?  
 7 A. No.  
 8 Q. Did Oracle directly give you any data?  
 9 A. No.  
 10 Q. Did you interview anybody from Oracle for your  
 11 report?  
 12 A. No.  
 13 Q. Did you meet anybody from Oracle directly  
 14 regarding your report?  
 15 A. No.  
 16 Q. What is your understanding of the facts of  
 17 this matter?  
 18 MS. MANTOAN: Objection. Vague. Compound.  
 19 THE WITNESS: That is an extremely broad  
 20 statement. I'm not sure what you mean by "facts."  
 21 BY MR. SONG:  
 22 Q. What facts do you believe are relevant in this  
 23 case?  
 24 MS. MANTOAN: Same objections. Also calls for  
 25 a legal conclusion.

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1 BY MR. SONG:  
 2 Q. And so did you request additional documents  
 3 from Oracle?  
 4 MS. MANTOAN: Same objections. And I believe  
 5 this goes beyond what Rule 26 permits.  
 6 You're entitled to the facts and data that he was  
 7 provided. You're not entitled to further communications  
 8 with counsel.  
 9 MR. SONG: I'm not asking about -- I'm asking  
 10 what he received from Oracle.  
 11 MS. MANTOAN: You asked what he requested.  
 12 MR. SONG: Yes.  
 13 MS. MANTOAN: You're asking what he  
 14 communicated to Oracle?  
 15 MR. SONG: To Oracle.  
 16 MS. MANTOAN: Oh, directly to Oracle, not to  
 17 counsel?  
 18 MR. SONG: Yes.  
 19 MS. MANTOAN: Okay. The question is: Did you  
 20 directly pick up the phone and call Oracle and ask for  
 21 some things?  
 22 MR. SONG: Yes, yes.  
 23 THE WITNESS: No, I never did.  
 24 BY MR. SONG:  
 25 Q. Oh, you never requested further documents.

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1 THE WITNESS: Well, the data and information  
 2 that I reviewed and that was reviewed by Dr. Madden, I  
 3 guess would constitute facts and I would guess would be  
 4 relevant to the analyses that were performed.  
 5 I don't know if that's what you mean. I mean,  
 6 those are facts.  
 7 BY MR. SONG:  
 8 Q. What other facts do you think are important in  
 9 this case?  
 10 MS. MANTOAN: Objection. Vague. Compound.  
 11 Potentially, depending on vagueness, calls for a legal  
 12 conclusion.  
 13 THE WITNESS: Yeah. I'm not sure what you're  
 14 referring to by "facts."  
 15 There's the data, documents, all these materials,  
 16 which constitute information, which in some sense are  
 17 factual.  
 18 There are declarations. There are a variety of  
 19 legal documents. I don't know. Those are not facts, as  
 20 far as I understand them. They may relate to facts, but  
 21 I don't consider those facts in the same sense as I  
 22 would consider data to be based on some sort of factual  
 23 circumstance.  
 24 MS. MANTOAN: To clarify, you named a bunch of  
 25 things. And then you said they are not facts or those

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1 are not facts.  
 2 THE WITNESS: Those things --  
 3 MS. MANTOAN: I just want the record to be  
 4 clear so both of us are clear.  
 5 So when you said, "Those are not facts, as far as I  
 6 understand them," it's just not clear as it came out, as  
 7 I heard it anyway, what's the "those."  
 8 THE WITNESS: It's clear to me, I think.  
 9 BY MR. SONG:  
 10 Q. Which facts -- did Orrick give you facts to  
 11 rely on for your report?  
 12 MS. MANTOAN: Objection to the extent you're  
 13 calling for anything outside of what's permitted by  
 14 Rule 26.  
 15 THE WITNESS: Orrick provided me with the data  
 16 and the documents that were reviewed and are part of  
 17 Attachment B.  
 18 Not everything in Attachment B came from Orrick.  
 19 Some of those things were collected by me.  
 20 So to the extent that they provided those things,  
 21 and I've already stated that to me they constitute --  
 22 partially constitute facts, they gave me those facts.  
 23 BY MR. SONG:  
 24 Q. Which items in Attachment B were collected by  
 25 you?

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1 the response. So there were numerous different  
 2 methodologies involved because of the methodologies and  
 3 approaches presented in the work underlying the Second  
 4 Amended Complaint.  
 5 BY MR. SONG:  
 6 Q. Can you describe some of those methodologies  
 7 that you used?  
 8 MS. MANTOAN: Same objections.  
 9 THE WITNESS: There were various statistical  
 10 methods. Regression analysis was one method. There  
 11 were other kinds of statistical tests, for example,  
 12 chi-squared tests, logistic regression.  
 13 BY MR. SONG:  
 14 Q. And why --  
 15 A. Simple quantitative measures.  
 16 Q. And why did you select those methods?  
 17 A. Based on -- in response to the material put  
 18 forth in the Second Amended Complaint.  
 19 Q. But other than just being in response to the  
 20 material in the Second Amended Complaint, what were the  
 21 specific reasons? For example, let's take -- you did  
 22 conduct multiple regression analyses to respond to  
 23 OFCCP's claims in the Second Amended Complaint?  
 24 A. In a responsive mode, yes.  
 25 Q. And why did you choose regression analyses?

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1 A. B18 lists a series of secondary sources. I  
 2 believe I collected all of those sources.  
 3 The online cites that begin on B20 and go over to  
 4 B21 I collected.  
 5 Q. What facts did you rely on for your initial  
 6 report?  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: Well, I relied on the data or  
 9 used the data. Let's put it that way.  
 10 BY MR. SONG:  
 11 Q. What about your understanding of Oracle and  
 12 how it compensates its employees?  
 13 A. Well, there's certain information in the  
 14 documents that I was provided that I consulted and in  
 15 some cases relied upon in certain ways.  
 16 Whether those are facts or not -- I would call  
 17 them facts from my perspective.  
 18 Q. Okay.  
 19 A. And then some of the external sources  
 20 contained factual information, and I relied upon those.  
 21 Q. Can you please describe the methodology you  
 22 used in responding to OFCCP's claims in your initial  
 23 report?  
 24 MS. MANTOAN: Objection. Vague. Compound.  
 25 THE WITNESS: Well, the whole of the report is

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1 A. Because -- primarily to address the claims of  
 2 the Second Amended Complaint in the context in which  
 3 they were made.  
 4 So I was testing the models and approaches of the  
 5 Second Amended Complaint within the framework that they  
 6 prescribed -- that was prescribed by the Second Amended  
 7 Complaint and the analysis that underlay it.  
 8 Q. So did you believe that regression analysis  
 9 was a good way to analyze the claims in the Second  
 10 Amended Complaint?  
 11 MS. MANTOAN: Objection. Vague. Compound.  
 12 THE WITNESS: Remember, I'm responding and  
 13 testing the claim -- the methodologies used that were  
 14 summarized in the Second Amended Complaint.  
 15 And, remember, I had the backup material. I had  
 16 all of the data and all the other material that related  
 17 to the information provided in the Second Amended  
 18 Complaint and much additional information that was not  
 19 in the Second Amended Complaint but was in the backup  
 20 material.  
 21 So I'm testing the -- whether or not those  
 22 materials could support the claims that the OFCCP was  
 23 making. So I did that on -- in that context, which is  
 24 why I addressed it using regression analysis the way I  
 25 did.

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1 BY MR. SONG:  
 2 Q. What about the other methodologies that you  
 3 used to analyze the Second Amended Complaint claims?  
 4 Like, earlier you mentioned chi-squared and a few  
 5 other methods. Why did you choose those methods?  
 6 A. Because they were appropriate for the  
 7 particular response that I wished to make.  
 8 Q. In your initial report, did you criticize the  
 9 OFCCP for -- OFCCP's model for not being able to predict  
 10 accurately?  
 11 MS. MANTOAN: Objection. Vague. Compound.  
 12 THE WITNESS: I do have a whole discussion  
 13 where I produce what some people call predicted values  
 14 or fitted values or residuals. There's a variety of  
 15 ways one can describe them.  
 16 I did subject the OFCCP's models to an analysis of  
 17 those residuals. So in that sense -- and I assessed the  
 18 extent to which the OFCCP's model was able to explain  
 19 variations in pay.  
 20 So, yes, I did critique the OFCCP's model with  
 21 respect to its ability to fit the data.  
 22 BY MR. SONG:  
 23 Q. And why did you do that?  
 24 A. As part of my responding to what the OFCCP's  
 25 analysis was. And in the context there, it was looking

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1 regression model to predict a certain outcome, that it  
 2 be designed for that purpose, but --  
 3 A. I don't think I said that, no. I said it can  
 4 be and that there are contexts within which regression  
 5 models are designed for that purpose.  
 6 Q. Have you ever seen this approach used in labor  
 7 economics, this predictive model that you were using to  
 8 try to see if Dr. Madden's model was correct?  
 9 MS. MANTOAN: Objection. Vague. Compound.  
 10 Misstates testimony.  
 11 THE WITNESS: I'm not sure what you mean by  
 12 "predictive model."  
 13 BY MR. SONG:  
 14 Q. Okay. Well, you were -- you were criticizing  
 15 Dr. Madden's model because it didn't predict as well as  
 16 it should; is that right?  
 17 MS. MANTOAN: Objection. Misstates testimony.  
 18 THE WITNESS: No. I didn't -- that wasn't  
 19 what I said.  
 20 BY MR. SONG:  
 21 Q. What is your criticism of --  
 22 A. What I said was, among other things, that one  
 23 way one can assess the completeness of a regression  
 24 model, taking the aggregation as given for the moment,  
 25 is to look to see to what extent you're able to explain

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1 to see how good of a job does the OFCCP's model do at  
 2 explaining pay if looked at individual by individual and  
 3 what do -- what does the constellation of those  
 4 predictions look like, and does it suggest that there be  
 5 something incomplete about the model on its own terms,  
 6 again, taking the aggregations that were used by the  
 7 OFCCP at face value.  
 8 Q. And you had similar criticisms of Dr. Madden's  
 9 model, correct, in your rebuttal report?  
 10 A. There were some similar criticisms, yes.  
 11 Q. Was Dr. Madden's model designed to predict  
 12 outcomes?  
 13 MS. MANTOAN: Objection. Calls for  
 14 speculation. Vague.  
 15 THE WITNESS: I don't know what she designed  
 16 it to do specifically. It's not a matter of whether  
 17 it's designed -- it's not a matter of whether these  
 18 models are designed to predict outcomes. But the extent  
 19 to which they can may be relevant to an assessment as to  
 20 whether or not those models are appropriately  
 21 constructed in the first place.  
 22 BY MR. SONG:  
 23 Q. I believe you -- I believe you testified  
 24 earlier that it was important to -- but maybe I  
 25 misunderstood -- that it was important to require a

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1 individual outcomes.  
 2 Now, it's certainly not the case one expects  
 3 individual outcomes to all be the same. Of course,  
 4 that's not what's expected.  
 5 But the extent to which the -- the extent to which  
 6 you are off, both on positives and negatives, is of  
 7 interest in a case like this one where -- again, going  
 8 back to something I stated earlier -- the variable of  
 9 interest is based on a residual outcome about which  
 10 there is no theory.  
 11 And to the extent that you have a model that does  
 12 a very poor job of explaining pay generally, the  
 13 greater the likelihood is that there is something left  
 14 out. And whatever is left out of the model may, in  
 15 fact, be highly correlated with the variable of  
 16 interest, in this case, gender or race.  
 17 So that's the reason -- one of the reasons why  
 18 specifically I would look at Dr. Madden's model in this  
 19 fashion.  
 20 Q. And is your approach supported by the  
 21 literature?  
 22 MS. MANTOAN: Objection. Vague.  
 23 THE WITNESS: Well, every -- any econometrics  
 24 book will talk about analysis of residuals. You look at  
 25 residuals for a whole variety of reasons.

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1 Residuals are an automatic output of any regression  
 2 model. Because in order to compute the least squares'  
 3 regression surface one must, in fact, generate,  
 4 residuals are a byproduct of that.  
 5 So when one visualizes them or inspects them or  
 6 studies them in various ways, it's frequently in the  
 7 context of assessing the appropriateness and validity of  
 8 the model that you've run.  
 9 So it's a very common thing to do.  
 10 BY MR. SONG:  
 11 Q. So it's -- so it's common for a residual  
 12 analysis to be used to evaluate regression analysis?  
 13 That's well established in labor economics?  
 14 A. In econometrics, generally.  
 15 Q. Econometrics. Okay.  
 16 Are there treatises that you can identify that  
 17 would support this argument?  
 18 A. Well, any econometrics book. I'm sure that,  
 19 in fact, probably Kennedy has a discussion about  
 20 analysis of residuals.  
 21 Really, any textbook that you pick up, whether  
 22 elementary or advanced, will discuss the importance of  
 23 analysis of residuals.  
 24 Q. And have you yourself tested whether using  
 25 residuals is a good way to analyze these types of

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1 assumptions are not met. So that's one use of  
 2 residuals. And there are specific tests with respect to  
 3 those kinds of issues.  
 4 But there are other uses of residuals as well, for  
 5 example, identifying outliers in data. A very common  
 6 way to identify outliers is to compute residuals and  
 7 examine them in various ways. And you can define  
 8 outliers in terms of standard deviation units in a  
 9 variety of ways.  
 10 BY MR. SONG:  
 11 Q. So if I understand you correctly -- I'm sorry.  
 12 I'm not a labor economist.  
 13 But if I understand you correctly, are you saying  
 14 that residuals are a good way to analyze regressions,  
 15 multiple regressions?  
 16 MS. MANTOAN: Objection. Misstates testimony.  
 17 Vague. Compound.  
 18 THE WITNESS: They're a good way to assess --  
 19 they're one way to assess the quality and validity and  
 20 appropriateness of a particular regression model.  
 21 BY MR. SONG:  
 22 Q. But is it a good way, a good method to assess  
 23 a regression analysis?  
 24 MS. MANTOAN: Objection. Vague.  
 25 THE WITNESS: I don't know what you mean by

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1 models?  
 2 MS. MANTOAN: Objection. Vague.  
 3 THE WITNESS: I always look at residuals when  
 4 I'm doing regression analysis. It's a very -- it's a  
 5 very important diagnostic tool in conducting regression  
 6 analysis.  
 7 BY MR. SONG:  
 8 Q. But have you -- have you tested it yourself?  
 9 MS. MANTOAN: Objection. Vague.  
 10 THE WITNESS: I don't know what you mean.  
 11 BY MR. SONG:  
 12 Q. Well, you said you always use residuals to  
 13 test models or different models.  
 14 But have you -- is there a way to test whether  
 15 that's even a good way to analyze these models?  
 16 MS. MANTOAN: Objection. Vague. Incomplete  
 17 hypothetical. Compound.  
 18 THE WITNESS: Yeah, I'm not -- I'm not sure  
 19 what you're referring to. It's a standard approach,  
 20 almost a necessary approach.  
 21 There are certain aspects of residual analysis that  
 22 are effectively necessary because there are certain  
 23 assumptions underlying linear regression models that, if  
 24 they're not met, there will be patterns in the residuals  
 25 that are detectable, which will tell you that those

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1 good. I told you --  
 2 BY MR. SONG:  
 3 Q. Well, you said it's --  
 4 A. -- that I do it and that it's a common thing  
 5 that people do. I would assume that implies that it's  
 6 good.  
 7 Q. Okay.  
 8 A. So I don't know what you mean by "good way."  
 9 Q. Well, previously you said it's one way rather  
 10 than saying it's useful or helpful or -- you know.  
 11 So one way could be the worst way. Another way  
 12 could be a very good, effective and efficient way. But  
 13 I understand your answer now. Thank you.  
 14 For your rebuttal report, did you aggregate any  
 15 data for your rebuttal report?  
 16 MS. MANTOAN: Objection. Vague and compound.  
 17 THE WITNESS: I'm not sure what you mean by  
 18 "aggregate any data."  
 19 BY MR. SONG:  
 20 Q. So you -- okay. Let me -- so you criticized  
 21 Dr. Madden's report for aggregating certain data.  
 22 And so my understanding is that you did not  
 23 aggregate data for -- you did not aggregate data because  
 24 you thought that was the improper way or method to  
 25 conduct the analysis.

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1 **A.** Well, I -- keep in --  
 2 MS. MANTOAN: Objection. It's vague. And  
 3 it's compound.  
 4 THE WITNESS: Again, keep in mind that I'm  
 5 responding to -- in the context of Dr. Madden, I'm  
 6 responding to Dr. Madden in my rebuttal report.  
 7 So in the rebuttal report, I did some analyses  
 8 where I intentionally aggregated, as Dr. Madden did in  
 9 the same fashion she did, and then did various other  
 10 things differently.  
 11 There were instances, especially in my first  
 12 report, where I disaggregated in a whole variety of  
 13 different ways laid out in the report for purposes of  
 14 that report in response to the aggregated approaches of  
 15 the Second Amended Complaint.  
 16 So I did both, but, again, in response to the  
 17 analyses presented in the Second Amended Complaint and  
 18 then by Dr. Madden in her report.  
 19 BY MR. SONG:  
 20 **Q.** Can you explain what the -- what the main  
 21 problem is with Dr. Madden aggregating data?  
 22 MS. MANTOAN: Objection. Vague. Compound.  
 23 THE WITNESS: Well, one problem that I see  
 24 with it in this particular instance is that -- and I  
 25 laid out some of the reasons for this concern in my

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1 the spread in these residuals.  
 2 And, as I say in the report fairly clearly, that  
 3 examining the extent of that spread is not intended to  
 4 study the individuals, per se. It's that it gives rise  
 5 to a concern that perhaps there are systematic  
 6 group-wide variables omitted and that that's the reason  
 7 for the excessive spread seen in the data.  
 8 And because of the possibility that some of these  
 9 omitted variables are correlated to gender, it could  
 10 have a substantial effect on the gender coefficient.  
 11 And, in fact, we see in Dr. Madden's sequenced  
 12 columns the -- how that works. For example, going from  
 13 column 5 to column 6 in her A tables, you see a fairly  
 14 substantial change in the gender coefficient relative to  
 15 the four previous columns, which were all about the  
 16 same. And the new variables entered in column 6 were  
 17 omitted in column 5.  
 18 So there's an example of greatly increased  
 19 explanatory fit to the data and a substantial change in  
 20 the gender coefficient.  
 21 So there's an example in Dr. Madden's own report of  
 22 what a variable correlated with a variable that's of  
 23 interest can do if that's a variable that's relevant to  
 24 put in the model.  
 25

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1 first report -- is this is an extremely varied  
 2 workforce. The range of -- the nature of work involved  
 3 is enormously wide and the corresponding range of pay is  
 4 enormously wide.  
 5 I point out in a number of ways the wide variety of  
 6 what's going on in the workplace, among all of these  
 7 employees. And it is difficult in a regression analysis  
 8 to capture, properly model, all of that variety with  
 9 some of the variables that were -- certainly with the  
 10 variables available in the electronic databases in this  
 11 case.  
 12 So my criticism was that perhaps the aggregations  
 13 were such that it was difficult for Dr. Madden's model  
 14 to reliably identify any relationship between gender and  
 15 pay.  
 16 BY MR. SONG:  
 17 **Q.** And back to your residual analysis of  
 18 individual predictions, when this case is about  
 19 comparing groups against each other, why would it be --  
 20 why is it beneficial to focus on individuals?  
 21 MS. MANTOAN: Objection. Misstates the  
 22 testimony.  
 23 THE WITNESS: Again, I'm not focused on the  
 24 individuals for their own sake. I'm focused on the  
 25 pattern of the residuals, the extent and the width of

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1 BY MR. SONG:  
 2 **Q.** So then is the -- is the spread or variance of  
 3 residuals measuring something different than R-squared?  
 4 **A.** There will be a relationship between them.  
 5 **Q.** But they're not the same?  
 6 **A.** There is a relationship between, because  
 7 you're using the residuals in the computation of  
 8 R-squared.  
 9 **Q.** So that's the relationship, that they're --  
 10 they're not the same, but they're related because of  
 11 the --  
 12 **A.** No. They're not the same, but one uses the  
 13 residuals in computing R-squared.  
 14 **Q.** If you can turn to page 110 of your initial  
 15 report.  
 16 If you look at the first heading right above  
 17 paragraph 143, you say, "Prior pay is highly correlated  
 18 with starting pay in all firms, not just at Oracle,  
 19 because both pay sources are a function of the skills,  
 20 experience and responsibilities of the employee."  
 21 Can you expand on that, like what you mean by that?  
 22 MS. MANTOAN: Objection. Vague.  
 23 THE WITNESS: To the extent that pay is  
 24 determined -- to give you just sort of a -- I don't know  
 25 if hypothetical is the right word, but give you a

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1 scenario.  
 2 If pay is determined in a labor market where firms  
 3 are competing for labor, then if I -- if an employee has  
 4 particular skills at one firm in a particular industry  
 5 that pay a certain amount and have a certain value to  
 6 that firm and they move to another firm in the industry,  
 7 there's likely to be a high correlation to the extent  
 8 that the second firm also pays according to the value of  
 9 those skills.  
 10 Now, it's not going to be a perfect correlation,  
 11 because it's a different company, maybe slightly  
 12 different work. It could be in a different location.  
 13 There are a whole variety of things that will make the  
 14 correlation not perfect.  
 15 But one would expect, to the extent that workers  
 16 are mobile and firms are in the labor market competing  
 17 for labor, one would expect to see a high correlation  
 18 between prior pay and starting pay for any group of  
 19 employees you pick.  
 20 BY MR. SONG:  
 21 Q. So you don't see any problem with prior pay  
 22 being highly correlated with starting pay?  
 23 MS. MANTOAN: Objection. Vague. Misstates  
 24 testimony. Compound.  
 25 THE WITNESS: Well, as I said, in the example

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1 described, one would expect to find a high correlation.  
 2 Q. Sure, sure. In a theoretical sense, I  
 3 completely understand your point. But I'm talking about  
 4 in the real world where all compensation is not based --  
 5 well, let me ask you.  
 6 In the real world, not in this hypothetical  
 7 situation, do you believe compensation is based entirely  
 8 on skills?  
 9 MS. MANTOAN: Objection. Incomplete  
 10 hypothetical. Vague. Compound.  
 11 THE WITNESS: No. That was just a  
 12 hypothetical, sort of a simple market economy example.  
 13 I'm sure there are a variety of other factors that would  
 14 influence pay that are not skills.  
 15 In fact, there have been a lot of research,  
 16 information symmetries. There's all kinds of things out  
 17 there. There are also allegations of discrimination.  
 18 That's also possible. There are many possibilities --  
 19 BY MR. SONG:  
 20 Q. Do you believe there's discrimination in  
 21 compensation?  
 22 A. With respect to starting pay or prior pay?  
 23 Which one? Which one are you --  
 24 Q. Let's start with prior pay.  
 25 MS. MANTOAN: Objection. Vague. Incomplete

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1 I gave, if we assume that Firm A and Firm B -- let's  
 2 take an example.  
 3 Firm A and Firm B are in the same industry making  
 4 different products, but they're in the same industry,  
 5 they're in the same general location. And an individual  
 6 has a certain skill bucket at Firm A and decides he  
 7 wants to leave Firm A and go to Firm B. Assume that pay  
 8 is entirely determined by the measurement of skills.  
 9 Assume that, if that's the case, and nothing else.  
 10 BY MR. SONG:  
 11 Q. Yes.  
 12 A. If that's the case, then one would expect the  
 13 pay at Firm A and the pay at Firm B to be fairly closely  
 14 related.  
 15 And then if one had many such individuals and you  
 16 conducted a correlation analysis, one would find a  
 17 fairly high correlation --  
 18 Q. Sure.  
 19 A. -- between prior and starting pay.  
 20 Q. So do you believe that compensation is  
 21 entirely based on skills?  
 22 A. I gave you the example. In the example I just  
 23 gave you, it was a hypothetical designed --  
 24 Q. Sure.  
 25 A. -- so that in a market economy of the type I

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1 hypothetical. Compound.  
 2 THE WITNESS: That's a question about whether  
 3 there's discrimination in pay against a particular  
 4 demographic group --  
 5 BY MR. SONG:  
 6 Q. Let's take one --  
 7 A. -- among firms generally. And there's been a  
 8 lot of research on this.  
 9 Q. Yes.  
 10 A. And it's the conclusion -- there's still  
 11 further work being done. There are studies that, in  
 12 certain industries, have been able to show that the wage  
 13 gap, once one controls for a whole variety of things, is  
 14 fairly small, other industries where they're unable to  
 15 explain fully, some industries where women are paid  
 16 more.  
 17 BY MR. SONG:  
 18 Q. Which industries are those?  
 19 A. It wouldn't be a target for the OFCCP.  
 20 I think there are some industries where women  
 21 dominate and they are paid more. They are  
 22 disproportionately -- they have a disproportionate  
 23 share of the workforces, like the fashion industry,  
 24 something like that.  
 25 Q. So there --

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1 A. I think I read somewhere that -- whether or  
2 not that's a rigorous study, I don't know.  
3 Q. So in the fashion industry, women are paid  
4 more than men?  
5 MS. MANTOAN: Objection. Misstates testimony.  
6 Compound.  
7 THE WITNESS: It might be. I don't know. I  
8 don't know. I should probably withdraw that. I'm not  
9 sure about that.  
10 But there's a lot of research that has been done  
11 that perhaps there is economy-wide discrimination.  
12 Perhaps there isn't. There's a lot of uncertainty as to  
13 whether and to what extent there is.  
14 BY MR. SONG:  
15 Q. What's your personal belief?  
16 MS. MANTOAN: Objection. Vague. Compound.  
17 Depending on the vagueness, may call for a legal  
18 conclusion.  
19 THE WITNESS: Well, I don't know if my  
20 personal belief --  
21 MS. MANTOAN: Personal belief as to what?  
22 THE WITNESS: I don't think that is of any --  
23 MR. SONG: I do.  
24 THE WITNESS: -- moment, frankly.  
25

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1 There's no question about that.  
2 BY MR. SONG:  
3 Q. Between men and women?  
4 A. Yes, on average. If you just average across  
5 the economy, there's no question about that.  
6 Q. And is there a racial pay gap?  
7 MS. MANTOAN: Objection. Vague. Compound.  
8 THE WITNESS: My understanding is there  
9 continues to be, yes, again, averaged across all workers  
10 of different races.  
11 BY MR. SONG:  
12 Q. So if there's a raw wage gap, a gender wage  
13 gap, isn't there a problem with starting salary being  
14 highly correlated to prior salary?  
15 A. No.  
16 MS. MANTOAN: Objection. Vague. Compound.  
17 Incomplete hypothetical.  
18 THE WITNESS: No, not at all.  
19 BY MR. SONG:  
20 Q. Doesn't that just pass on the discrimination?  
21 MS. MANTOAN: Objection. Vague. Compound.  
22 Incomplete hypothetical. Misstates testimony. And  
23 calls for a legal conclusion.  
24 THE WITNESS: Not in the description that you  
25 provided at all, no. Those two things don't follow.

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1 BY MR. SONG:  
2 Q. And it's my depo. Do you believe -- all  
3 right. Let me put it another way.  
4 Do you believe there's a gender wage gap?  
5 MS. MANTOAN: Objection. Vague. Compound.  
6 Incomplete hypothetical.  
7 THE WITNESS: What is -- define that for me.  
8 BY MR. SONG:  
9 Q. What you -- you just used it, so I would  
10 think --  
11 A. No. I didn't use that phrasing.  
12 Q. You used wage gap.  
13 A. I probably said wage difference.  
14 Q. No.  
15 MR. SONG: Reporter, can you please read  
16 back --  
17 THE WITNESS: I might have said wage gap.  
18 BY MR. SONG:  
19 Q. You did.  
20 A. Did I?  
21 Q. I know you did. I wrote it down.  
22 So what do you -- so do you believe there's a wage  
23 gap?  
24 MS. MANTOAN: Objection. Vague. Compound.  
25 THE WITNESS: There's certainly a raw pay gap.

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1 BY MR. SONG:  
2 Q. But if you believe in the wage -- gender wage  
3 gap, which you just said, the raw -- for raw pay,  
4 correct?  
5 MS. MANTOAN: Objection. Misstates testimony.  
6 BY MR. SONG:  
7 Q. Then if a woman's starting salary at her next  
8 company is based on her prior pay and there is this wage  
9 gap, that wage gap is just going to continue.  
10 A. Your hypothetical --  
11 MS. MANTOAN: There's no question pending.  
12 There's no question pending. Wait for a question.  
13 BY MR. SONG:  
14 Q. So you believe it's okay to use prior pay to  
15 set starting pay?  
16 MS. MANTOAN: Objection. Vague. Incomplete  
17 hypothetical. Compound. Calls for a legal conclusion.  
18 THE WITNESS: No. I didn't say that.  
19 MS. MANTOAN: Misstates testimony.  
20 BY MR. SONG:  
21 Q. I know. I'm asking.  
22 A. I didn't say that. No. I didn't say that at  
23 all.  
24 Q. I'm asking you.  
25 A. Yes. And I don't have a position on whether

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1 it is good or not. I really don't.  
 2 One would expect that people would try to measure  
 3 the skills of people who are -- they're seeking to have  
 4 join their company.  
 5 Q. Sure.  
 6 A. They know what those skills will bring in  
 7 their company and will offer pay to that individual  
 8 based on their perception of the skills of that  
 9 applicant.  
 10 That's what my expectation would be that people  
 11 would do.  
 12 Q. That's, I think, everybody's -- I think we all  
 13 would expect that. It's just in the reality, that  
 14 doesn't happen.  
 15 MS. MANTOAN: There's no question pending.  
 16 BY MR. SONG:  
 17 Q. So if it -- if the starting salary should just  
 18 be paid based on skill, then why consider prior pay?  
 19 MS. MANTOAN: Objection. Vague. Incomplete  
 20 hypothetical. Compound. Misstates prior testimony.  
 21 BY MR. SONG:  
 22 Q. It should be irrelevant.  
 23 MS. MANTOAN: Same objections.  
 24 You're asking for his personal views about a topic?  
 25 MR. SONG: Yes, personal views, yes,

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1 personally?  
 2 MR. SONG: No. I'm asking -- he's an expert  
 3 giving opinions. I'm asking for his opinions.  
 4 MS. MANTOAN: I'm not clear who --  
 5 MR. SONG: This is him. He's giving his  
 6 expert opinions on numerous topics. He wrote two  
 7 500-page treatises about his opinions. I can't ask for  
 8 a simple opinion?  
 9 That's what you're paying him millions of dollars  
 10 to do. I'm just --  
 11 MS. MANTOAN: I object to that --  
 12 MR. SONG: Let him earn more money.  
 13 MS. MANTOAN: -- characterization. I object  
 14 to that characterization. You're paying for his time  
 15 today.  
 16 I also object that it's vague. It's an incomplete  
 17 hypothetical. It's compound. And it misstates prior  
 18 testimony.  
 19 MR. SONG: That's fine. He can still answer  
 20 my question.  
 21 THE WITNESS: Which I can't remember at this  
 22 point.  
 23 BY MR. SONG:  
 24 Q. So you said, "If one can measure the skill,  
 25 absolutely, I would use skill to set prior pay."

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1 absolutely.  
 2 He's an expert labor economist. So I would think  
 3 his views -- he's studied lots of research, read lots of  
 4 research. I highly value his personal opinion on this.  
 5 MS. MANTOAN: Same objections. Vague.  
 6 Incomplete hypothetical. Compound. Misstates prior  
 7 testimony.  
 8 THE WITNESS: Can you please ask the question  
 9 again. It's been a while.  
 10 BY MR. SONG:  
 11 Q. So if -- I'm sorry.  
 12 MR. SONG: Ms. Reporter, could you read back  
 13 my question. I think it might be easier.  
 14 Okay. I'm sorry. Here it is.  
 15 BY MR. SONG:  
 16 Q. So if the starting salary should just be based  
 17 on skill, then why consider prior pay?  
 18 MS. MANTOAN: Same objections.  
 19 THE WITNESS: So if one can measure the skill,  
 20 absolutely, I would use skill to set prior pay.  
 21 BY MR. SONG:  
 22 Q. But if you can't measure skill, then you would  
 23 consider prior pay?  
 24 MS. MANTOAN: Objection. It's vague.  
 25 Are you asking what he does in his practice

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1 But if you can't measure skill and only consider  
 2 skill to set starting salary, then you would use prior  
 3 pay?  
 4 A. No. I didn't say that.  
 5 MS. MANTOAN: Objection. It's vague. It's  
 6 compound. Incomplete hypothetical. It misstates prior  
 7 testimony.  
 8 THE WITNESS: No. I didn't say that.  
 9 BY MR. SONG:  
 10 Q. I want to show you -- I want to show you the  
 11 next exhibit.  
 12 And this is, I think, 8 -- hold on -- 9.  
 13 (Saad Exhibit 9 was marked.)  
 14 MS. MANTOAN: So I'm going to -- I'm going to  
 15 object to what's obviously a brand new report. I'm  
 16 going to object and move to strike any testimony, just  
 17 so you know, that is based on this report.  
 18 As you and your counsel know, I believe this is  
 19 totally improper, it violates the court's orders, it  
 20 violates the discovery rules, violates the applicable  
 21 rules in this procedure.  
 22 And I just want to make clear on the record that  
 23 I've never seen the document put in front of me and the  
 24 witness. I don't believe anyone at -- counsel for  
 25 Oracle has.

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1 MR. SONG: Okay. Noted.  
 2 BY MR. SONG:  
 3 Q. Dr. Saad, can you take a look at this  
 4 declaration and the attachments to this declaration and  
 5 let me know when you're done.  
 6 MS. MANTOAN: I'm also going to object to your  
 7 representation of what the document even is.  
 8 MR. SONG: Okay.  
 9 MS. MANTOAN: You're testifying about what you  
 10 believe it is. You haven't asked him what he thinks it  
 11 is or what it is.  
 12 MR. SONG: I have to give him a chance to read  
 13 it; right?  
 14 MS. MANTOAN: Do you want him to sit and read  
 15 the entirety of the document?  
 16 MR. SONG: I want him to review it so that I  
 17 can ask him questions about it.  
 18 THE WITNESS: I see there's some text, five  
 19 pages of text and a whole series of tables. That's what  
 20 I see.  
 21 BY MR. SONG:  
 22 Q. And if you would turn to the first table.  
 23 MS. MANTOAN: We'll have a running objection  
 24 to literally every question you ask that involves this  
 25 document.

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1 model.  
 2 Can you talk about each one individually and why  
 3 you chose the variable?  
 4 MS. MANTOAN: Object to the framing of the  
 5 question.  
 6 BY MR. SONG:  
 7 Q. And if you want me to ask about each  
 8 particular one, I'm happy to do that.  
 9 MS. MANTOAN: Object to the framing of the  
 10 question. Misstates prior testimony.  
 11 THE WITNESS: Which model are you referring  
 12 to?  
 13 BY MR. SONG:  
 14 Q. The model you used in the -- we can start with  
 15 the model that you ran in your rebuttal report.  
 16 MS. MANTOAN: Objection. It's compound. And  
 17 framing misstates prior testimony.  
 18 THE WITNESS: Which model though?  
 19 BY MR. SONG:  
 20 Q. Your regression model where you use cost  
 21 center, cumulative time spent on leave of absence, time  
 22 spent working in standard job title, total tenure  
 23 working at Oracle, whether an employee received a patent  
 24 bonus, whether an employee took a leave of absence in  
 25 the current year, and whether the employee arrived at

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1 MR. SONG: That's perfectly fine.  
 2 MS. MANTOAN: And we intend to move to strike  
 3 every single question and answer about this document.  
 4 MR. SONG: I'm sorry you feel that way, but --  
 5 THE WITNESS: I just want to be clear.  
 6 MR. SONG: But if you could just, so we don't  
 7 waste more time, you can make a standing objection or  
 8 just say, "Same objection," I would appreciate it.  
 9 MS. MANTOAN: I will make that objection, if  
 10 appropriate.  
 11 BY MR. SONG:  
 12 Q. Do you recognize this first table, Dr. Saad?  
 13 A. No. I've never seen this document.  
 14 Q. By looking at it, can you -- do you understand  
 15 what it is?  
 16 A. No, I don't.  
 17 MR. SONG: I think we can take a break.  
 18 THE VIDEOGRAPHER: We are going off the record  
 19 at 1542.  
 20 (Recess from 3:42 p.m. to 3:59 p.m.)  
 21 THE VIDEOGRAPHER: We're back on record at  
 22 1559.  
 23 BY MR. SONG:  
 24 Q. Dr. Saad, I next wanted to discuss the  
 25 variables that you chose to input into your regression

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1 Oracle as an experienced hire or through acquisition.  
 2 MS. MANTOAN: Objection. Vague. Compound.  
 3 And the framing of the question misstates prior  
 4 testimony.  
 5 THE WITNESS: The issue is that there are  
 6 several different models that were present in my first  
 7 report.  
 8 You're referring to my first report; correct?  
 9 BY MR. SONG:  
 10 Q. Well, yeah. I would like to discuss both of  
 11 your reports, the models you use in both reports.  
 12 So I believe the -- I believe the variables I just  
 13 listed were in paragraph 121 of your report.  
 14 A. Yes.  
 15 MS. MANTOAN: Same objections to the question.  
 16 THE WITNESS: So you referred me to  
 17 paragraph 121.  
 18 BY MR. SONG:  
 19 Q. Of your report, yes.  
 20 A. Yes. That has to do with the pay analyses.  
 21 Q. Yes.  
 22 A. Okay. That's what I wanted to know.  
 23 Q. Okay.  
 24 A. Well, I think you just listed them. And here  
 25 we do have a list --

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1 Q. Yes.  
 2 A. -- of those variables. Some of them are  
 3 categories of variables, so there's a great many  
 4 variables, a number of values that category of variables  
 5 can take.  
 6 Q. Can you please discuss each one?  
 7 MS. MANTOAN: Objection. Vague. Compound.  
 8 THE WITNESS: Is there one you'd like me to  
 9 start with? Maybe you can ask me about them  
 10 individually.  
 11 BY MR. SONG:  
 12 Q. Okay. I'd be happy to do that. Let's start  
 13 with cost center or cost center organization name.  
 14 A. It's --  
 15 MS. MANTOAN: There's no question pending.  
 16 BY MR. SONG:  
 17 Q. So can you please describe your organization  
 18 variable?  
 19 MS. MANTOAN: Objection. It's vague.  
 20 THE WITNESS: The variable is -- there's a  
 21 field in the data called organization name, and it's  
 22 that variable.  
 23 BY MR. SONG:  
 24 Q. And you mentioned that some of the variables  
 25 have a number of categories of the variable.

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1 because many organizations may not be in the analysis at  
 2 all in such -- in that case.  
 3 So there's going to be -- that's likely to be the  
 4 smallest number. And the largest number is likely to be  
 5 in runs where you're -- where the comparison is Asian  
 6 and White men.  
 7 BY MR. SONG:  
 8 Q. But you don't know -- you don't know how many  
 9 are in either one or each one?  
 10 A. Not each one by each one, no, I don't.  
 11 Q. Did you run these regressions yourself?  
 12 A. Well, my staff did the programming.  
 13 Q. Your staff did the programming, but then who  
 14 actually ran the regressions?  
 15 MS. MANTOAN: Objection. Vague.  
 16 THE WITNESS: Well, if they're doing the  
 17 programming, they're running the regressions. The  
 18 programming involves running the regressions.  
 19 BY MR. SONG:  
 20 Q. I thought that meant just setting up the model  
 21 so that it could be run or something like that. Okay.  
 22 It's my ignorance.  
 23 So did you -- did you program any of these  
 24 yourself?  
 25 A. No. I don't -- my proficiency in programming

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1 Is this one of them?  
 2 A. Yes.  
 3 Q. And how many categories are there?  
 4 A. Well, it would depend on the run that was  
 5 being performed. Because in some of the runs, the  
 6 population upon which the model is run is different, and  
 7 that will imply different numbers of organizations are  
 8 invoked in the analysis.  
 9 So it does depend on the analysis.  
 10 Q. Is there a range then?  
 11 A. From the lowest number to the highest number,  
 12 whatever that is. I don't know what the numbers of  
 13 organization names invoked are organization by -- are  
 14 run by run.  
 15 Q. Can you pick a run and then give it -- let me  
 16 know how many categories are in that run?  
 17 MS. MANTOAN: Objection. It's vague. It's  
 18 compound.  
 19 THE WITNESS: Well, I don't know what they are  
 20 run by run. I never look to see how many got invoked  
 21 run by run.  
 22 But, for example, the runs with African Americans  
 23 and Whites, if those are performed, would have the  
 24 fewest observations and, therefore, there would be the  
 25 fewest number of organizations brought into the analysis

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1 is not at the level of my staff. I do review programs,  
 2 I review them all, but I don't write them.  
 3 Q. So they program them or run them, and then  
 4 they give you the results?  
 5 A. Yes.  
 6 Q. And why did you pick cost center?  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: Well, it's organization name,  
 9 not cost center. It's organization name. That's the  
 10 name of the -- that's what the variable is called.  
 11 BY MR. SONG:  
 12 Q. Okay.  
 13 A. That variable was chosen to attempt to proxy  
 14 for the nature of the products that employees are  
 15 involved with. And as I state in the report, it's not a  
 16 perfect -- it is not a variable for product, per se.  
 17 But Mr. Miranda, in his declaration, noted that  
 18 organization is not unrelated to product and, in some  
 19 instances, is squarely on product, but not in every  
 20 single instance.  
 21 Q. When you -- isn't it also an accounting code  
 22 or a cost center?  
 23 A. Well --  
 24 MS. MANTOAN: Objection. Vague and compound.  
 25 THE WITNESS: My understanding is there is a

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1 relationship between organization name and cost center,  
 2 which would not be a surprising thing in a complex  
 3 organization.  
 4 BY MR. SONG:  
 5 Q. Because I believe that one of your  
 6 footnotes -- I'm not seeing it right now, but I believe  
 7 one of your footnotes says that it's an accounting code  
 8 and that it might be or is generally correlated to  
 9 product.  
 10 A. Yes. I think --  
 11 MS. MANTOAN: There's no question pending.  
 12 Please wait for a question. Thanks.  
 13 THE WITNESS: I'll let you find it.  
 14 BY MR. SONG:  
 15 Q. So the reason you chose -- let me just  
 16 backtrack. Strike that.  
 17 Why did you choose -- other than what you've just  
 18 testified to, were there any other reasons why you chose  
 19 organization as a variable?  
 20 A. No. That was the reason I chose it, what I've  
 21 testified to.  
 22 Q. And before you chose it, did you know how many  
 23 categories of organization there were?  
 24 MS. MANTOAN: Objection. Vague.  
 25 THE WITNESS: Yes, I did.

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1 review of the data.  
 2 Q. Did your staff do that calculation?  
 3 A. No. That calculation wouldn't have been  
 4 necessary for them to do. Not to my knowledge, let's  
 5 put it that way.  
 6 Q. Can you give me an estimate of the total  
 7 number of categories of organization?  
 8 MS. MANTOAN: Objection. Vague. Vague as to  
 9 time. Vague as to "categories."  
 10 THE WITNESS: In any particular year?  
 11 BY MR. SONG:  
 12 Q. Yeah. Either the years in question in the  
 13 Complaint, or we can just talk about -- we can talk  
 14 about 2018. We can just pick a year.  
 15 MS. MANTOAN: Objection. Vague. Compound.  
 16 THE WITNESS: I don't think I would know --  
 17 again, I did not compute the number of active  
 18 organizations in any particular year.  
 19 BY MR. SONG:  
 20 Q. Do you know the number of active organizations  
 21 through the relevant time period of this lawsuit?  
 22 A. No.  
 23 MS. MANTOAN: Objection. Vague. Calls for a  
 24 legal conclusion.  
 25 THE WITNESS: No. I did not attempt to make

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1 BY MR. SONG:  
 2 Q. And how many -- how many categories of  
 3 organization were there?  
 4 A. I knew there were quite a few.  
 5 Q. Okay.  
 6 A. But keep in mind that's across the entire span  
 7 of time. Not all organization names are present in each  
 8 year. Many come and go. There are many of them that  
 9 have no occupants in any given year.  
 10 So the total number of them with nonzero occupants  
 11 in any given year is one third of the total number of  
 12 them.  
 13 Q. And what -- so what is the total number of  
 14 them?  
 15 A. That's what I'm saying. I don't know what the  
 16 total number of them is.  
 17 I do know that when one looks at the numbers of  
 18 them that are in use within each year, it's a -- it's  
 19 not all of them. It's a share of them. And it's  
 20 probably less -- probably about half per year.  
 21 But then across the entire time, since  
 22 organization names come and go, for the universe of all  
 23 organization names, it may be a third of them.  
 24 I can't be sure. I'd have -- I didn't do that  
 25 calculation. I'm just estimating that based on my

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1 that calculation.  
 2 BY MR. SONG:  
 3 Q. Do you know if it's more than five?  
 4 A. Oh, it's certainly more than five.  
 5 Q. Is it more than 50?  
 6 A. I think it probably is.  
 7 Q. Is it more than a hundred?  
 8 A. It may be.  
 9 Q. Is it more than 200?  
 10 A. I don't know.  
 11 Q. Is it more than three?  
 12 A. If I don't know 200, I don't know 300.  
 13 Q. Well, I was just trying. Maybe you did.  
 14 How does over 800 sound?  
 15 MS. MANTOAN: Objection. Vague.  
 16 Argumentative.  
 17 THE WITNESS: For active in --  
 18 MS. MANTOAN: Asked and answered.  
 19 THE WITNESS: For active in any one year, that  
 20 sounds too high.  
 21 BY MR. SONG:  
 22 Q. What about for the total of the relevant time  
 23 period of the lawsuit?  
 24 MS. MANTOAN: Objection. Asked and answered.  
 25 Calls for a legal conclusion. It's vague.

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1 THE WITNESS: I'm not sure they all would be  
 2 active over the entire time. That I'm not sure. I'm  
 3 not sure if in the data that I had reviewed whether  
 4 there are organization names that are never active.  
 5 BY MR. SONG:  
 6 Q. Do you know the median size of an  
 7 organization?  
 8 A. No, I don't.  
 9 Q. Do you know what the average size is?  
 10 A. No.  
 11 Q. Do you have any idea how large these  
 12 organizations are?  
 13 MS. MANTOAN: Objection. Vague. It's asked  
 14 and answered also.  
 15 THE WITNESS: Some are larger. I think there  
 16 are some that are approximately 200 people. There are  
 17 some that are smaller. There are actually some that are  
 18 individual people.  
 19 BY MR. SONG:  
 20 Q. And how many individual people?  
 21 A. I don't know.  
 22 Q. Can you give me an estimate?  
 23 A. No.  
 24 Q. Five?  
 25 MS. MANTOAN: Objection. It's asked and

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1 becomes irrelevant.  
 2 BY MR. SONG:  
 3 Q. So do you know if you -- if you used  
 4 categories of organization that contained one employee  
 5 for your analysis?  
 6 MS. MANTOAN: Objection. Assumes facts.  
 7 Vague. Compound.  
 8 THE WITNESS: They would be fed in with the  
 9 data. Whether the computer relies upon them in  
 10 generating the estimates, and particularly the estimates  
 11 of the coefficient of the variables of interest, I don't  
 12 know for sure.  
 13 I would have to check to see if Sass -- I believe  
 14 all of these were run in Sass --  
 15 BY MR. SONG:  
 16 Q. Sass.  
 17 A. -- format. And Sass will give you warnings  
 18 if, in fact, you should not put certain information into  
 19 your model.  
 20 BY MR. SONG:  
 21 Q. Maybe I just -- it's just my misunderstanding  
 22 of econometrics. But I thought previously -- and please  
 23 correct me if I'm wrong. I'm sure you will. I  
 24 thought -- so two, as a minimum, that was just for  
 25 variables in general, not -- so that does not include

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1 answered.  
 2 MR. SONG: I didn't ask him that question.  
 3 THE WITNESS: I didn't look to see how many  
 4 there were of each particular category.  
 5 BY MR. SONG:  
 6 Q. Is there more than a hundred?  
 7 A. Across the entire span of the data, that's  
 8 quite possible. I mean, we're looking at 40,000, maybe  
 9 30,000 employee years here. It's quite possible.  
 10 Q. But you don't even want to give me an estimate  
 11 of how many have one?  
 12 MS. MANTOAN: Objection. Argumentative. And  
 13 it's asked and answered.  
 14 He's told you he can't give you an estimate, not  
 15 that he doesn't want to.  
 16 THE WITNESS: I told you, I haven't looked to  
 17 see what that is.  
 18 BY MR. SONG:  
 19 Q. Can you use categories of organization to have  
 20 one employee in it?  
 21 MS. MANTOAN: Objection. Vague.  
 22 THE WITNESS: There's no reason you can't.  
 23 But if an estimate for a parameter estimate on an  
 24 organization equal to one cannot be computed, then the  
 25 computer program will not compute it. So then it

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1 categories of variables?  
 2 MS. MANTOAN: Objection. Misstates prior  
 3 testimony.  
 4 THE WITNESS: I think I know what you're  
 5 asking, but why don't you ask it again with a little  
 6 more information so I'm sure.  
 7 BY MR. SONG:  
 8 Q. I believe -- I could be wrong. I'm often  
 9 wrong. But I believe you testified earlier, when I was  
 10 asking you about minimum and maximum numbers of  
 11 variables, that you said the minimum was two.  
 12 Is that correct?  
 13 A. Yes, a dependent and an independent variable.  
 14 Q. But that wouldn't -- that minimum number of  
 15 two wouldn't count here, because this is just a category  
 16 of variable; is that right?  
 17 MS. MANTOAN: Objection. Misstates prior  
 18 testimony.  
 19 THE WITNESS: Yes, yes. I think that's apples  
 20 and oranges.  
 21 BY MR. SONG:  
 22 Q. I just want to clarify that for my own limited  
 23 knowledge.  
 24 But if a category of organization had only one  
 25 employee, isn't that employee deleted for the analysis?

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1 MS. MANTOAN: Objection. Vague. Compound.  
 2 Incomplete hypothetical.  
 3 THE WITNESS: I don't know if they're deleted  
 4 or not. I'm not sure. I don't think that they are  
 5 deleted. I think that that variable wouldn't get used,  
 6 but they wouldn't be deleted.  
 7 I have to check, see how Sass handled that  
 8 situation.  
 9 BY MR. SONG:  
 10 Q. Right now you don't recall how Sass handled  
 11 it?  
 12 A. I'm not certain about that.  
 13 Q. If a category of organization did have only  
 14 one employee, would that be useful in inputting it into  
 15 a regression model?  
 16 MS. MANTOAN: Objection. Vague. Compound.  
 17 Incomplete hypothetical.  
 18 THE WITNESS: Say that again.  
 19 BY MR. SONG:  
 20 Q. I'm just wondering, if you have a category of  
 21 organization that has one employee, then I don't -- why  
 22 would you input it into the regression model?  
 23 MS. MANTOAN: Objection. Vague. Compound.  
 24 Incomplete hypothetical.  
 25 THE WITNESS: Well, if you're controlling for

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1 model?  
 2 MS. MANTOAN: Objection. Vague. Compound.  
 3 Incomplete hypothetical.  
 4 THE WITNESS: Well, that may be inappropriate  
 5 also.  
 6 BY MR. SONG:  
 7 Q. Okay. Why would that be --  
 8 A. That may not be appropriate.  
 9 Q. Why?  
 10 A. Because maybe you want to keep that -- keep  
 11 the variable complete the way it is and allow the  
 12 software to make the determination.  
 13 Q. I see. What about -- do you know if any of  
 14 these categories of organization had zero employees?  
 15 A. Well, if they did, then those wouldn't be even  
 16 applied in that particular year.  
 17 There are many organization names with zero  
 18 employees in any given year. That's what I was saying  
 19 earlier. So those automatically don't apply.  
 20 Q. When you say --  
 21 A. Nobody would be ascribed a value for one of  
 22 those organizations if nobody was in one of those  
 23 organizations.  
 24 Q. And this might be my misunderstanding as well.  
 25 But if there were zero employees in a category of

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1 organization name and some organization names apply to a  
 2 single employee --  
 3 BY MR. SONG:  
 4 Q. Yeah.  
 5 A. -- it would generate -- the procedure would  
 6 generate the variables from the inputs it gave you.  
 7 So what I'm not certain about is whether Sass  
 8 would kick those out. Because there are commands in  
 9 Sass that -- you don't create these variables  
 10 individually. That categorical variable is --  
 11 generates a series of what are called indicator or  
 12 dummy variables automatically in the software.  
 13 That being the case, if it's inappropriate to have  
 14 individuals with values of one, then it will either  
 15 kick them out or kick out that variable.  
 16 Q. What did you -- well, does your staff know how  
 17 many of these categories have one employee?  
 18 MS. MANTOAN: Objection. Calls for  
 19 speculation. Vague.  
 20 THE WITNESS: I don't know.  
 21 BY MR. SONG:  
 22 Q. Because I'm just thinking, wouldn't you  
 23 want -- if you knew a category of an organization had  
 24 only one employee, wouldn't you just want to delete it  
 25 yourself before -- and not feed it into the regression

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1 organization, are you saying that your staff would not  
 2 even input it into the regression model?  
 3 MS. MANTOAN: Objection. Misstates testimony.  
 4 Vague. Compound. Incomplete hypothetical.  
 5 THE WITNESS: No. I'm not saying that.  
 6 BY MR. SONG:  
 7 Q. Are you saying that you would just go ahead  
 8 and input into the model, and then the Sass program  
 9 would kick it out or delete it, or whatever it is?  
 10 A. It would be handled by the software, yes.  
 11 Q. That's what I was trying to figure out. It  
 12 would be handled by the software. Okay.  
 13 Going back to a category of organization with just  
 14 one employee, if you input that category of organization  
 15 into your regression model, isn't that essentially  
 16 comparing that employee against that employee --  
 17 MS. MANTOAN: Objection. Incomplete  
 18 hypothetical.  
 19 BY MR. SONG:  
 20 Q. -- if there's only one person in a category?  
 21 MS. MANTOAN: Objection. Incomplete  
 22 hypothetical. Vague and compound.  
 23 THE WITNESS: For that organization, no  
 24 coefficient would be able to be estimated in that case.  
 25

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1 BY MR. SONG:  
 2 Q. Because there's only one?  
 3 A. Because there's only one.  
 4 Q. I see. Okay. So do you know how many of  
 5 these categories of organization have fewer than five  
 6 employees in them?  
 7 MS. MANTOAN: Objection. Vague as to time.  
 8 Vague. Compound.  
 9 THE WITNESS: No, I don't.  
 10 BY MR. SONG:  
 11 Q. So if there was a -- does your staff know?  
 12 MS. MANTOAN: Same objections.  
 13 THE WITNESS: I don't know.  
 14 BY MR. SONG:  
 15 Q. So if you -- so I understand the point about  
 16 categories that have -- of organization that only have  
 17 one employee. But if you input an organization that had  
 18 only two employees, let's say, for example, you would be  
 19 comparing one employee against another employee; right?  
 20 A. With respect to that one variable, yes.  
 21 Q. But for one -- if you had one employee, you  
 22 wouldn't get a coefficient. But if you had two  
 23 employees, you would effectively be comparing one  
 24 employee against another employee.  
 25 Is that how it works?

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1 BY MR. SONG:  
 2 Q. I see. What about -- is it a problem that  
 3 some of these organizations have -- I think you said  
 4 could have up to 200 if they're being compared to  
 5 smaller organizations of one or two people?  
 6 MS. MANTOAN: Objection. Misstates testimony.  
 7 And it's vague as to "problem."  
 8 THE WITNESS: No. It wouldn't make any  
 9 difference.  
 10 The point is to control for organization and  
 11 differences in compensation, holding other things  
 12 constant associated with different -- with organizations  
 13 generally.  
 14 So intraorganization comparisons are not the object  
 15 of the analysis. The goal is to control for  
 16 organizational differences, all else constant, which  
 17 then would allow one to more correctly analyze other  
 18 variables of interest that might be biased by the  
 19 exclusion of the organization variables generally.  
 20 BY MR. SONG:  
 21 Q. These organization names are also used for  
 22 budget purposes; is that correct?  
 23 MS. MANTOAN: Objection. Vague.  
 24 THE WITNESS: I think I have read that there  
 25 may be some relationship between budget and

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1 A. With respect to that one variable, among many.  
 2 Q. Would that -- would a small sample size like  
 3 that affect the -- affect the analysis in any way?  
 4 MS. MANTOAN: Objection. It misstates  
 5 testimony. It's vague. It's compound. And it assumes  
 6 facts.  
 7 THE WITNESS: No. Because what you're doing  
 8 there is if you have two employees, you're comparing  
 9 them to other employees in other organizations.  
 10 There's some organization that will constitute the  
 11 base organization against which the other organizations  
 12 are compared with respect to the impact on pay.  
 13 So those two would be compared to whatever the base  
 14 is.  
 15 And if it's a relevant differentiator between  
 16 individuals, then there's a good reason to put it in  
 17 even if it is at the individual variable level sparse.  
 18 Another way to put this is, one would not rely upon  
 19 the values of the coefficients on the organizations  
 20 themselves. One would rely on the fact that the  
 21 organization concept has been controlled for and brought  
 22 in, in connection with explaining pay generally among  
 23 all employees.  
 24 But one would never seek to make that a variable of  
 25 interest in the analysis, a variable of interest itself.

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1 organization.  
 2 BY MR. SONG:  
 3 Q. And I'm sorry if this is a stupid question,  
 4 but I'm just curious.  
 5 Would these -- if you had small sample sizes in  
 6 the -- in some of these organizations -- I remember you  
 7 mentioning earlier that, I think, if you had too many --  
 8 was it too many variables would reduce explanatory  
 9 power?  
 10 Is that what you said?  
 11 MS. MANTOAN: I object to the misstatement of  
 12 prior testimony and the assumption of facts in this  
 13 predicate of the question.  
 14 THE WITNESS: No. I didn't say that.  
 15 BY MR. SONG:  
 16 Q. I'm sorry. Do you remember what -- do you  
 17 recall what you said about the -- having too many -- I  
 18 thought that was one of the problems with having too  
 19 many variables in a regression.  
 20 MS. MANTOAN: Objection. Misstates prior  
 21 testimony.  
 22 THE WITNESS: Well, if you have too many  
 23 variables, you will run out of what are called degrees  
 24 of freedom and your model won't run at all. That's one  
 25 problem. There are more variables than there are

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1 observations.  
 2 There's a concept called adjusted R-squared. And  
 3 adjusted R-squared takes into account that you can  
 4 continue to add variables forever and continue to  
 5 increase your R-squared. So there's a calculation that  
 6 takes into account additional variables being added that  
 7 may not add much to reducing the unexplained variation  
 8 in the dependent variable.  
 9 So it's possible if you put in many, many  
 10 completely unrelated variables into a regression -- I  
 11 think that's what we were speaking about earlier -- that  
 12 you'll reduce the adjusted R-squared. You actually  
 13 would increase the unadjusted R-squared, but you would  
 14 be doing so in a way that was what econometricians call  
 15 spurious.  
 16 BY MR. SONG:  
 17 Q. If you use unrelated variables?  
 18 A. If they were completely unrelated -- well, if  
 19 they were completely unrelated, they probably wouldn't  
 20 change R-squared at all.  
 21 But if they were only slightly related, they still  
 22 will increase the R-squared, but they will not  
 23 increase. They will instead reduce adjusted R-squared.  
 24 Q. And are organizations -- is that -- are those  
 25 also used to track expenses like travel and

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1 variations in budgets that may also be associated with  
 2 these organization names and which would be good to  
 3 control for in order to more properly interpret the  
 4 other coefficients of interest in the model.  
 5 BY MR. SONG:  
 6 Q. And why do you think organization correlates  
 7 to product?  
 8 MS. MANTOAN: Objection. It's asked and  
 9 answered.  
 10 THE WITNESS: Yes. I think --  
 11 MS. MANTOAN: It's in the report.  
 12 THE WITNESS: I think I said that the Miranda  
 13 declaration discusses this, and that was the basis for  
 14 my use of that variable.  
 15 BY MR. SONG:  
 16 Q. Is there any other reason other than the  
 17 Miranda declaration?  
 18 A. At the time that I wrote the report, that was  
 19 the reason. But the more I think about it in response  
 20 to what you've said, to the extent that budgets may  
 21 correlate also to organization name, that may be a  
 22 second reason.  
 23 However, it's possible, although I don't know,  
 24 that the correlation between organization names, the  
 25 products, and the consequent budget impact may all

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1 entertainment?  
 2 A. I have not heard that. But since they are  
 3 used in -- to some extent, as I understand it, in  
 4 budgeting, that's possible.  
 5 And, in fact, now that you bring up this concept  
 6 of budgeting, that would be one good reason why you  
 7 would want to control for organization. Because if you  
 8 look at the compensation materials provided, they speak  
 9 a lot about the relationships between budget and pay  
 10 changes and pay levels and bonus awards and stock  
 11 awards, and so on.  
 12 So to the extent that there is variation in these  
 13 organizations, all else constant, arising from  
 14 budgetary issues, one would want to control for that.  
 15 Q. Well, wasn't the reason that you included  
 16 organization as a variable was that it was somewhat of a  
 17 proxy for product?  
 18 MS. MANTOAN: Objection. Misstates prior  
 19 testimony.  
 20 THE WITNESS: That was the primary reason why  
 21 I sought to use it, is that there's some, as I  
 22 understand it, a correlation to product.  
 23 But you bring up another related reason which may,  
 24 in fact, be a consequence of the fact that organization  
 25 names are associated with products, that there are

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1 correlate to one another.  
 2 Q. But if organization -- doesn't the fact that  
 3 organization -- I don't see the link between -- the  
 4 correlation, I should say, between product and budget.  
 5 Those seem like very different, you know, things that  
 6 fall within a same category.  
 7 MS. MANTOAN: Do you have a question?  
 8 THE WITNESS: I want to make sure I'm  
 9 answering a question for you.  
 10 BY MR. SONG:  
 11 Q. So how does -- how does the fact that  
 12 organization is also a budget -- budgeting category or  
 13 concept help it -- help it relate to product?  
 14 A. Well, let's make sure we don't get off onto a  
 15 tangent here.  
 16 The reason I used organization name was because of  
 17 my understanding, based on the Miranda deposition, that  
 18 there was a relationship to the products individuals  
 19 worked on.  
 20 And to the extent I want to control for that in  
 21 connection with my analysis of pay of employees who  
 22 work on various types of things doing various different  
 23 things, that's why I did it.  
 24 You brought up this notion of perhaps organization  
 25 names also relate to budgets. So I don't know if they

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1 do or don't. I don't recall.  
 2 But if they do, then it would stand to reason that  
 3 that would be another reason to control, given what I  
 4 have read regarding how compensation relates to -- can  
 5 relate to budgets as well, in terms of increases,  
 6 bonuses, stock awards, and so on.  
 7 BY MR. SONG:  
 8 Q. How strongly do you believe organization is  
 9 correlated to product?  
 10 MS. MANTOAN: Objection. Vague.  
 11 THE WITNESS: I don't know.  
 12 BY MR. SONG:  
 13 Q. Do you remember -- first you said Miranda  
 14 declaration. Then you said deposition.  
 15 Do you mean Miranda declaration?  
 16 A. I meant the declaration. If I misspoke, I  
 17 meant declaration.  
 18 Q. I just wanted to clarify. Okay.  
 19 Does he say how strongly correlated organization is  
 20 with product?  
 21 MS. MANTOAN: Objection. Vague. And the  
 22 document speaks for itself.  
 23 THE WITNESS: There is a quote, I believe, in  
 24 one of my footnotes.  
 25

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1 product worked on in the data that I utilized, which is  
 2 why I used this particular variable.  
 3 BY MR. SONG:  
 4 Q. Have you seen any records of which products  
 5 Oracle employees work on?  
 6 A. I have.  
 7 MS. MANTOAN: Objection. Vague.  
 8 THE WITNESS: I have seen.  
 9 BY MR. SONG:  
 10 Q. You have?  
 11 A. Yes.  
 12 Q. Can you tell me which documents?  
 13 A. Well, for example, in the requisitions,  
 14 there's some very clear references to what product the  
 15 individuals will work on. So you can see what their  
 16 intended product to work on would be.  
 17 Q. But the requisitions don't contain the names  
 18 of the employees that work on a certain product; right?  
 19 A. Well, no, no. It does contain the name of --  
 20 we know the name of the successful person to that  
 21 requisition. So we know that individual will go into  
 22 the company and presumably initially work on the  
 23 products identified in the requisitions. So we do know  
 24 that.  
 25 Q. What about subsequent to that?

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1 BY MR. SONG:  
 2 Q. Yes.  
 3 A. If you can tell me where it is, that might  
 4 help us, but --  
 5 Q. It might be 93.  
 6 A. Footnote 93 or page 93?  
 7 Q. Footnote 93. I believe it's page 81. That's  
 8 what I have in my chicken scratch. Oh, yeah.  
 9 A. Yes. There it is.  
 10 Q. It's Note 93, yeah. "Organizations indicate  
 11 cost centers." That's why I was calling it constant,  
 12 was because of your footnote.  
 13 A. And I see actually in the footnote that, in  
 14 fact, it does refer to tracking budget and other  
 15 financial outcomes. But it says, "A cost center or  
 16 organization can encompass a single product or service  
 17 team, but not every product or service team has its own  
 18 cost center."  
 19 Q. And does Oracle keep records of which  
 20 employees work on which products?  
 21 MS. MANTOAN: Objection. Calls for  
 22 speculation. Vague. Vague as to time. Vague as to  
 23 "records."  
 24 THE WITNESS: I don't know if they do. I  
 25 don't know. Not in the -- there wasn't a field for

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1 MS. MANTOAN: Objection. Vague.  
 2 THE WITNESS: You mean for the employee?  
 3 BY MR. SONG:  
 4 Q. Yes. Because I'm presuming that at least some  
 5 employees don't stay on the same product forever.  
 6 A. I would suspect that's probably true.  
 7 Q. You haven't seen any data fields that include  
 8 which products employees work on; correct?  
 9 MS. MANTOAN: Objection. Vague as to "data  
 10 fields." And misstates testimony.  
 11 THE WITNESS: I have not seen any fields in  
 12 the HR data or personnel data that I've analyzed that  
 13 relate to products worked on specifically.  
 14 BY MR. SONG:  
 15 Q. And just to clarify, so you haven't seen any  
 16 data fields with which products an employee works on at  
 17 Oracle; right?  
 18 MS. MANTOAN: Objection. Vague. Misstates  
 19 prior testimony.  
 20 THE WITNESS: As I said, in the HR data,  
 21 there's no column labeled product worked on. That  
 22 doesn't mean there isn't information that is available  
 23 where one could not determine --  
 24 BY MR. SONG:  
 25 Q. Sure.

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1 A. -- to some extent the product worked on,  
 2 namely, requisitions, perhaps also promotion  
 3 justifications, transfer requests, performance  
 4 evaluation materials. There's a whole host of  
 5 materials that would include this information.  
 6 Q. Sure. I understand that. But I'm just  
 7 specifically asking about data fields like in the  
 8 electronic data.  
 9 MS. MANTOAN: Objection. Vague.  
 10 THE WITNESS: Well, all the other information  
 11 I just referred to, that's all electronic.  
 12 BY MR. SONG:  
 13 Q. What about data fields?  
 14 MS. MANTOAN: Objection. Vague.  
 15 THE WITNESS: You mean like a column in a  
 16 dataset?  
 17 BY MR. SONG:  
 18 Q. Yes, exactly. That's what I'm trying --  
 19 A. Yeah. I think I said that I have not -- I  
 20 have not seen a column in a dataset that's labeled  
 21 product employee worked on.  
 22 Q. What about a data field that records the  
 23 skills of an employee?  
 24 MS. MANTOAN: Objection. Vague. Vague as to  
 25 time. Vague as to "data field." Vague as to "skills."

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1 job functions for which there are no products they're  
 2 working on.  
 3 If you're asking me for product development, I  
 4 can -- the answer to that is probably these  
 5 organizations are all associated with some kind of a  
 6 product I would suspect, but I don't know that for sure.  
 7 I should say product or service, because Oracle  
 8 also sells services.  
 9 BY MR. SONG:  
 10 Q. Are you familiar with MAP hires?  
 11 A. I've heard the term, and I'm not remembering  
 12 it right now. It's M-A-P. It's an acronym.  
 13 Q. Yes, yes.  
 14 A. If you remind me what that means.  
 15 Q. I can't -- I don't even know if it means  
 16 anything. I can't recall. But I just remembered it as  
 17 MAP hires.  
 18 A. Yeah. I'm not --  
 19 MS. MANTOAN: There's no question pending.  
 20 BY MR. SONG:  
 21 Q. So you're not -- you are -- you are familiar  
 22 with MAP hires?  
 23 A. I have seen the designation, but I'm not  
 24 recalling at the moment as I sit here what M-A-P  
 25 represents.

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1 THE WITNESS: I guess I could answer I haven't  
 2 seen a column in the data labeled skills employee has.  
 3 BY MR. SONG:  
 4 Q. Do you know if every organization is -- I'm  
 5 sorry. Strike that.  
 6 Do you know if every product has an organization  
 7 associated with that?  
 8 MS. MANTOAN: Objection. Vague.  
 9 THE WITNESS: So if I can rephrase that, are  
 10 you asking if there are products that are created  
 11 outside of an organization?  
 12 BY MR. SONG:  
 13 Q. Yeah. Well, let me rephrase that.  
 14 Is every organization associated with a product?  
 15 MS. MANTOAN: Objection. Vague.  
 16 THE WITNESS: As a general matter, probably  
 17 not. Most certainly not --  
 18 BY MR. SONG:  
 19 Q. Okay.  
 20 A. -- as a general matter.  
 21 Q. Do you know how many are not associated with a  
 22 product?  
 23 MS. MANTOAN: Same objection.  
 24 THE WITNESS: Well, I'm sure in the -- you did  
 25 not restrict your question here. So there are probably

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1 Q. Do MAP hires have their own -- have its own  
 2 organization?  
 3 A. I don't know.  
 4 Q. Do you know if -- you don't know if it has an  
 5 organization?  
 6 MS. MANTOAN: Objection. Asked and answered.  
 7 It's vague.  
 8 BY MR. SONG:  
 9 Q. Have you heard of the organization, 0Q87  
 10 Global Product Security?  
 11 MS. MANTOAN: Objection. Assumes facts.  
 12 BY MR. SONG:  
 13 Q. I'm sorry. Dash or hyphen Oracle USA.  
 14 MS. MANTOAN: Same objection. Assumes facts.  
 15 THE WITNESS: I have looked at the list of  
 16 organization names a number of times, but I must confess  
 17 I did not memorize it.  
 18 BY MR. SONG:  
 19 Q. Do you remember seeing this one?  
 20 A. I don't recall specifically. But if you're  
 21 representing to me that it's in there, then I'm sure it  
 22 is.  
 23 Q. I am representing that it is in there, and I  
 24 just want to know if you recall seeing it.  
 25 Do you know -- do you know which product or

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1 products are associated with this organization?  
 2 **A.** No.  
 3 **MS. MANTOAN:** Objection. Assumes facts.  
 4 Vague.  
 5 **THE WITNESS:** No. I wouldn't know what  
 6 product or service was associated with any particular  
 7 organization. That wasn't the point.  
 8 The point was, based on what Mr. Miranda stated,  
 9 that there's some relationship between products and  
 10 organization names, I felt that that was important to  
 11 control for. I don't need to know what those products  
 12 are in order to utilize that variable.  
 13 **BY MR. SONG:**  
 14 **Q.** Do some organizations have more than one  
 15 product associated with it?  
 16 **MS. MANTOAN:** Objection. It's asked and  
 17 answered. It's vague. It's vague as to time. It's  
 18 vague as to "associated."  
 19 **THE WITNESS:** I wouldn't be surprised if they  
 20 do. But I don't know.  
 21 **BY MR. SONG:**  
 22 **Q.** And does organization have any relationship  
 23 with how Oracle values its employees?  
 24 **A.** The question --  
 25 **MS. MANTOAN:** Objection. It's vague. It's

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1 sought by other firms working in these sorts of, quote,  
 2 cutting-edge areas that often receive outside offers.  
 3 And there's a concept at Oracle called dive and save,  
 4 where there are times where Oracle has to counteroffer  
 5 an external offer to save a particularly valuable  
 6 employee.  
 7 To the extent that these cutting-edge products are  
 8 in some way incorporated in the organization name  
 9 variable, then I would suspect that there would be some  
 10 relationship of the sort you've asked about.  
 11 But I don't know. I mean, I didn't need to know  
 12 that in order to determine whether it was a valuable  
 13 variable to put in. But I would suspect the answer to  
 14 your question is probably there is such a relationship.  
 15 **BY MR. SONG:**  
 16 **Q.** And this dive and save that you just  
 17 mentioned, is that a policy or a program at Oracle?  
 18 **A.** No.  
 19 **MS. MANTOAN:** Objection. Vague.  
 20 **THE WITNESS:** It's a phenomenon that they  
 21 call. It's counteroffers. How do you -- what do you do  
 22 to try to save an employee who has received an outside  
 23 offer? You make a counteroffer. And they label that  
 24 that phenomenon.  
 25

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1 compound.  
 2 **THE WITNESS:** If the question what do you mean  
 3 by "values," I'm not sure what that means.  
 4 **BY MR. SONG:**  
 5 **Q.** How important an employee is to Oracle.  
 6 **MS. MANTOAN:** Same objections. Object to  
 7 "important" also as vague.  
 8 **THE WITNESS:** So the question then is, do  
 9 organizations correlate to --  
 10 **BY MR. SONG:**  
 11 **Q.** The value Oracle places on an employee.  
 12 **MS. MANTOAN:** Same objections. Several  
 13 varieties of vagueness. Compound.  
 14 **THE WITNESS:** Well, I'm not asking the  
 15 question of whether they value them one way or the other  
 16 differently; I'm just -- or more or less.  
 17 All I'm doing is taking into account the -- that  
 18 the work that they may be doing may differ as a function  
 19 of the product they work on and may lead to differences  
 20 in pay that I wanted to control for.  
 21 I have read many -- in a number of places in the  
 22 materials provided to me that cutting-edge work is  
 23 associated with employees who are particularly highly  
 24 valued.  
 25 There are instances of individuals who are highly

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1 **BY MR. SONG:**  
 2 **Q.** Dive and save?  
 3 **A.** Dive and save.  
 4 **Q.** And the trigger for that phenomenon is an  
 5 offer, an outside offer?  
 6 **MS. MANTOAN:** Objection. Vague. It's  
 7 compound.  
 8 **THE WITNESS:** That's my understanding.  
 9 Or an employee could say, I'm going to leave, and  
 10 maybe not have an offer on the table, but Oracle wished  
 11 to save that employee or retain that employee. They may  
 12 also refer to that as dive and save.  
 13 **BY MR. SONG:**  
 14 **Q.** When I was saying how Oracle values employees,  
 15 I wasn't trying to get at whether it's more or less,  
 16 just whether it has some correlation with how they value  
 17 employees.  
 18 **MS. MANTOAN:** Objection. Very vague and  
 19 compound, to the extent there's a question pending.  
 20 **BY MR. SONG:**  
 21 **Q.** So I can repeat my question.  
 22 Are organizations correlated with how Oracle values  
 23 employees?  
 24 **MS. MANTOAN:** Objection. Vague. Compound.  
 25 **THE WITNESS:** Well, I think I gave a long

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1 answer to exactly that question.  
 2 BY MR. SONG:  
 3 Q. Yeah. I was looking for the short answer.  
 4 MS. MANTOAN: Well, I'll add an asked and  
 5 answered objection as you seem to be conceding that you  
 6 asked it before.  
 7 MR. SONG: No. I'm not conceding that.  
 8 THE WITNESS: My answer was, again, to the  
 9 extent that there's any correlation between work on  
 10 cutting-edge products for which the employees on  
 11 which -- who work on those cutting-edge products are  
 12 highly valued by Oracle, and the organization names  
 13 track to some extent or segregate cutting-edge groups  
 14 from other groups, then there would be some sort of  
 15 relationship between these employees working on  
 16 cutting-edge products that Oracle wants to retain and,  
 17 therefore, makes efforts to do so, there should be some  
 18 correlation to the organization name variable.  
 19 But I don't know. It's just I'm answering your  
 20 question that it would stand to reason.  
 21 BY MR. SONG:  
 22 Q. Have you seen -- how do you know -- how do you  
 23 know this or why do you believe this?  
 24 MS. MANTOAN: Objection. It's vague. It's  
 25 asked and answered.

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1 THE WITNESS: There is -- there are Oracle  
 2 documents that refer to cutting edge, employees doing  
 3 cutting-edge work and how their compensation could be  
 4 viewed.  
 5 And to the extent that organizations do track  
 6 products, and according to Mr. Miranda there is some  
 7 relationship there, then Mr. Miranda's declaration would  
 8 be a document that connects the dots between the other  
 9 Oracle documents and this sort of relationship that  
 10 you've described.  
 11 BY MR. SONG:  
 12 Q. Which documents are these that you've seen  
 13 that say cutting edge, employees working on cutting-edge  
 14 documents -- or cutting-edge products are highly valued?  
 15 MS. MANTOAN: Objection. Misstates testimony.  
 16 Vague.  
 17 THE WITNESS: I think, as I stated earlier,  
 18 the compensation materials, they're descriptive of the  
 19 compensation structure, you might say.  
 20 There are a number of PowerPoints that I reviewed  
 21 that I think we discussed earlier.  
 22 BY MR. SONG:  
 23 Q. Can you point to any specific ones?  
 24 A. Well, they are -- they are primarily  
 25 attachments to the Waggoner Volumes I and II

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1 THE WITNESS: I think I just gave the reason  
 2 why in my previous answer. A lot of materials that I've  
 3 read in this case.  
 4 BY MR. SONG:  
 5 Q. Which materials would indicate that there is a  
 6 relationship between organizations and how Oracle values  
 7 employees?  
 8 MS. MANTOAN: Objection. Misstates prior  
 9 testimony. Vague and ambiguous.  
 10 THE WITNESS: I didn't say -- I didn't say  
 11 materials in the context of what you've just asked  
 12 about.  
 13 I said there were materials that refer to the work  
 14 of cutting edge, on cutting-edge products, and that  
 15 those materials discuss that there are instances where  
 16 those employees are also going to be highly sought after  
 17 by other employers. And they will, therefore, tend to  
 18 be more highly paid. The market value of what they are  
 19 doing is higher.  
 20 BY MR. SONG:  
 21 Q. Okay. But have you seen any Oracle documents  
 22 that show or say that Oracle values employees -- there's  
 23 a relationship between how Oracle values employees and  
 24 organization?  
 25 MS. MANTOAN: Objection. Vague. Compound.

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1 depositions, although I think there are a couple more  
 2 that are also in Volume III. There's one in particular  
 3 in Volume III that's in color.  
 4 I can't remember the title of it. Compensation  
 5 something, but I can't remember if it's -- what that  
 6 second word is.  
 7 But that one does discuss -- there is a reference  
 8 to the nature of the work people will be doing as one  
 9 of the factors that comes into play when determining  
 10 compensation for managers who are associated with  
 11 setting and adjusting compensation for the employees  
 12 that they manage.  
 13 Q. I have the same question with regard to  
 14 compensation.  
 15 Is there a connection between organization and  
 16 compensation?  
 17 MS. MANTOAN: Objection. Vague. Compound.  
 18 THE WITNESS: I did not do a statistical  
 19 analysis directly of that. However, I think at least  
 20 some of the coefficients generated would be  
 21 interpretable, although you have to be careful just  
 22 because of the nature of that particular set of  
 23 variables.  
 24 But, you know, I didn't focus on that, per se. But  
 25 probably there is some indication of organizations with

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1 positive coefficients and others with negative  
 2 coefficients, all else constant, for the employees being  
 3 considered.  
 4 But I didn't look at -- I didn't look at  
 5 organizations one by one and try to study them  
 6 separately from other organizations. So I'm not -- I'm  
 7 not sure what I'd have to do to answer your question.  
 8 BY MR. SONG:  
 9 Q. And what is -- what is that -- what is your  
 10 belief that organization is connected to compensation  
 11 based on? Documents?  
 12 MS. MANTOAN: Objection. It misstates  
 13 testimony. It's vague. It's compound.  
 14 THE WITNESS: Yeah. I didn't say that I have  
 15 the belief. I said that probably one could look at the  
 16 results and draw some inferences.  
 17 But that was not something that was the subject --  
 18 I was not interested in that, per se.  
 19 BY MR. SONG:  
 20 Q. Okay.  
 21 A. If one wanted to study it, this data, one  
 22 probably could do that --  
 23 Q. Okay.  
 24 A. -- using organization name. You would be  
 25 restricted to that variable.

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1 testimony. It's vague. It's compound.  
 2 THE WITNESS: Well, I suspect it is connected.  
 3 I just don't know in what way. I suspect that it is for  
 4 all the reasons we've been discussing.  
 5 We just got finished discussing cutting-edge  
 6 products. And to the extent that workers on those  
 7 products are considered highly valuable employees, they  
 8 would tend to be paid more relative to those in other  
 9 organizations.  
 10 So I suspect that, in fact, yes, that there is some  
 11 correlation between what people are -- what products  
 12 people work on, to the extent organization tracks that,  
 13 and their pay.  
 14 I did not study them separately and independently  
 15 to see whether they did.  
 16 BY MR. SONG:  
 17 Q. So you have not studied that question  
 18 empirically whether there is a connection between  
 19 organization and compensation?  
 20 A. Well, I --  
 21 MS. MANTOAN: Objection. It misstates the  
 22 prior testimony.  
 23 THE WITNESS: Well, I do know that  
 24 organization adds meaningfully to the explanatory power.  
 25 It does explain some of the variance in compensation

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1 BY MR. SONG:  
 2 Q. Well, do you believe organization is connected  
 3 to compensation?  
 4 MS. MANTOAN: Objection. Vague and ambiguous.  
 5 Compound.  
 6 THE WITNESS: It's not a matter of belief.  
 7 It's a matter of whether it's true or not. And I don't  
 8 know if it is for sure from an empirical perspective.  
 9 BY MR. SONG:  
 10 Q. So your answer is you're not sure?  
 11 MS. MANTOAN: Objection. Misstates testimony.  
 12 MR. SONG: I think that's what he just said.  
 13 THE WITNESS: It was not the subject of my  
 14 inquiry, so I can't give you an answer on that. It's a  
 15 control variable that I put into --  
 16 BY MR. SONG:  
 17 Q. Okay. I'm just asking you --  
 18 A. -- an analysis.  
 19 Q. -- if you know or not.  
 20 A. I don't know.  
 21 Q. Okay. That's all I'm looking for.  
 22 If it's not connected to compensation or if you  
 23 don't know if it's connected to compensation, why  
 24 include it in the regression analysis?  
 25 MS. MANTOAN: Objection. It misstates prior

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1 generally. So I do know that.  
 2 BY MR. SONG:  
 3 Q. So a few minutes ago you said you didn't know  
 4 if there was a connection or you weren't sure if there  
 5 was a connection to compensation and organization. But  
 6 now you're saying you suspect there is.  
 7 MS. MANTOAN: Objection. It misstates all of  
 8 the various iterations of testimony that he said he  
 9 previously gave. It's vague. And it's compound.  
 10 THE WITNESS: You were asking me questions  
 11 where I was answering with respect to variations by  
 12 organization. And I don't know the extent to which  
 13 there's variations by organization, but I suspect that  
 14 there is some -- the fact that there is a relation  
 15 between the organizations.  
 16 Is there a relationship to compensation generally?  
 17 Well, according to the analysis, there is. Because when  
 18 you put those variables into the model, they do account  
 19 for some of the variation and compensation of the  
 20 employees.  
 21 BY MR. SONG:  
 22 Q. Have you seen organization mentioned in any of  
 23 Oracle's compensation documents?  
 24 MS. MANTOAN: Objection. Vague.  
 25 THE WITNESS: I don't recall if I saw it in

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1 there or not. It might be there. There's a great many  
 2 of those documents, so it could well be there. But I  
 3 don't recall.  
 4 BY MR. SONG:  
 5 Q. Thank you.  
 6 And have you interviewed any employees about  
 7 organization?  
 8 MS. MANTOAN: Objection. It's asked and  
 9 answered.  
 10 THE WITNESS: I haven't interviewed anybody at  
 11 Oracle.  
 12 BY MR. SONG:  
 13 Q. Has your staff?  
 14 MS. MANTOAN: Objection.  
 15 THE WITNESS: Not to my knowledge.  
 16 MR. SONG: Can we take a break?  
 17 MS. MANTOAN: Yes.  
 18 THE VIDEOGRAPHER: We are going off the record  
 19 at 1657.  
 20 (Recess from 4:57 p.m. to 5:12 p.m.)  
 21 THE VIDEOGRAPHER: 1712.  
 22 BY MR. SONG:  
 23 Q. Dr. Saad, I'd like to talk to you about  
 24 compensation and how you came up with your total  
 25 compensation calculations.

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1 the data is that the majority of employees at this point  
 2 are electing RSUs.  
 3 But be that as it may, to value the stock and  
 4 convert to dollars, I took the RSUs as they were, and  
 5 they got valued as of the date of the grant.  
 6 Options, the way it worked in Oracle, four options  
 7 was equivalent -- considered equivalent in value to one  
 8 RSU. So I simply converted them to RSUs and valued them  
 9 using the stock price that I used to determine the  
 10 dollar value of the RSUs granted.  
 11 To the extent that they vest over time, that is not  
 12 an issue that I had to take into account because I  
 13 valued them at the point in time when they were awarded.  
 14 BY MR. SONG:  
 15 Q. Why didn't you use the Medicare wages as  
 16 compensation?  
 17 A. As I explained in my report, primarily because  
 18 of the stock issue and how the stock -- the Medicare  
 19 wages is the wages received from the employer in a  
 20 particular year, not the wages earned necessarily.  
 21 In some cases, the two things are the same. For  
 22 example, for base compensation, it would tend to be the  
 23 same. For bonuses, it would tend to be the same unless  
 24 there's some sort of special restriction.  
 25 For stock, it's unlikely to be the same because

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1 So can you please tell me -- tell us how you  
 2 calculated the total compensation in your reports?  
 3 MS. MANTOAN: Objection. Vague. Compound.  
 4 THE WITNESS: Yes. Total compensation is the  
 5 sum of base pay, bonuses and the value of any stock  
 6 awarded in a particular year.  
 7 So for base pay, there were -- I think it was the  
 8 all earnings file that was used. There were two sources  
 9 for base pay. They differed slightly in some instances  
 10 from one another, but for the most part, they were the  
 11 same. So I obtained the base pay from that source.  
 12 There's a bonus file where there were various codes  
 13 for different bonuses. And I took the ones that seemed  
 14 applicable. That's also where the patent bonus was,  
 15 which I included in total comp in the years where it was  
 16 earned.  
 17 And then for stock, I used the Fidelity data that  
 18 was provided to us. And that data allowed one to see  
 19 who was granted either RSUs, restricted stock units, or  
 20 options in any given year.  
 21 And my understanding is the employee has the  
 22 ability to elect the share of options or RSUs. I don't  
 23 think they have an infinite range of possibilities. I  
 24 think they have a certain range -- certain combinations  
 25 that they are allowed to choose. What I did notice in

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1 stock has to vest in order to be received, and people  
 2 can cash out at different paces with the same vesting  
 3 schedule.  
 4 Some individuals might hold their options as long  
 5 as possible. Others may cash them out as soon as they  
 6 can. The same with RSUs.  
 7 So that's why I did not use Medicare wages. I  
 8 wanted to get a measure of the pay in a given year for  
 9 the work done in that year.  
 10 Q. Did you run any analyses based on Medicare  
 11 wages?  
 12 A. I don't think so.  
 13 Q. And did you --  
 14 A. Other than to replicate. I think to replicate  
 15 what Dr. Madden and the OFCCP did, I did use their data  
 16 as is.  
 17 Q. So you did run some analyses based on Medicare  
 18 wages?  
 19 A. Just to replicate their work, not to do  
 20 anything other -- further.  
 21 Q. What about base pay, did you run any analyses  
 22 based on base pay?  
 23 A. No, I did not. Well, other than -- there are  
 24 some analyses. I guess the -- looking at starting pay  
 25 is looking at base pay, because that's all you have on

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1 day one. But for incumbent pay or annual pay analyses  
 2 that were performed in response to Dr. Madden or the  
 3 OFCCP, those analyses depended on total compensation as  
 4 just described.  
 5 **Q.** What are Oracle's compensation policies?  
 6 **MS. MANTOAN:** Objection. Assumes facts.  
 7 Vague.  
 8 **THE WITNESS:** Now, my understanding is they  
 9 don't have any -- anything they call policies. They  
 10 have guidelines, they have structures, they have  
 11 guidance, things of that sort.  
 12 I don't think I've ever seen anything with the  
 13 label "Policy" on it with respect to pay, except for one  
 14 thing, which is the policy that was implemented in -- I  
 15 think it was October 2017, to no longer collect --  
 16 request and/or collect prior pay for applicants from the  
 17 experienced labor market.  
 18 **BY MR. SONG:**  
 19 **Q.** So that policy was enacted in October of '17?  
 20 **A.** I think so. That's my memory of it, at some  
 21 point in 2017.  
 22 **Q.** Do you know why that policy was enacted?  
 23 **MS. MANTOAN:** Objection. Calls for  
 24 speculation.  
 25 **THE WITNESS:** Well, my understanding -- and,

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1 want?" And I'm talking higher executive jobs.  
 2 So to the extent that knowing what people were  
 3 getting would help in the negotiations for those  
 4 high-level jobs, and I'm talking, you know, EVP-type  
 5 jobs --  
 6 **BY MR. SONG:**  
 7 **Q.** Sure.  
 8 **A.** -- there may be a bit of a challenge there.  
 9 But they're probably -- I'm sure they'll figure out a  
 10 way to handle that.  
 11 But for employees in other types of jobs, I mean,  
 12 I can see the -- I can see the rationale of the law.  
 13 Whether or not it works for any given company -- I  
 14 mean, there might be some companies where you really  
 15 want them to stop doing that, others where it may not  
 16 have been a problem at all. So I think it's company  
 17 specific.  
 18 **BY MR. SONG:**  
 19 **Q.** Prior to that policy, do you know if Oracle  
 20 was considering prior pay in its compensation decisions?  
 21 **MS. MANTOAN:** Objection. It's vague. And  
 22 it's compound. And it asks about Oracle, everyone at  
 23 Oracle.  
 24 **THE WITNESS:** Well, I've -- what I know is  
 25 I've read testimony about it and I've reviewed these

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1 again, I'm not a lawyer -- but my understanding is that  
 2 there are states, including California, that I believe  
 3 have prohibited the solicitation of prior pay from  
 4 applicants, and Oracle decided that they would like to  
 5 comply with that. That's my understanding.  
 6 **BY MR. SONG:**  
 7 **Q.** And do you know why California outlawed the  
 8 solicitation of prior pay?  
 9 **MS. MANTOAN:** Objection. That calls for  
 10 speculation. It calls for a legal conclusion.  
 11 **THE WITNESS:** Specifically -- I don't know  
 12 what their specific reasoning is. I think I did read --  
 13 I think when it came out, I might have read the text of  
 14 the law, which had a bit of a preamble. So they had --  
 15 they had a stated reason for that law.  
 16 **BY MR. SONG:**  
 17 **Q.** What do you think of that law?  
 18 **MS. MANTOAN:** Objection. Vague.  
 19 **THE WITNESS:** I think there are circumstances  
 20 where it's a good idea not to collect prior pay. There  
 21 are probably going to be some real challenges for  
 22 certain kinds of jobs, like higher executive jobs, that  
 23 sort of thing.  
 24 And I know that in those situations, people often  
 25 don't ask for prior pay, they ask for, "What do you

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1 compensation materials.  
 2 The compensation materials actually don't -- I  
 3 looked through them, trying to find some reference that  
 4 they should rely in any way on prior pay.  
 5 What I found instead was numerous references in 15  
 6 different places to evaluate the nature of the job to  
 7 which the person has applied, the nature of their  
 8 skills, competencies, and so on, the distribution of pay  
 9 of people currently performing those jobs in  
 10 determining -- which they called equity in these  
 11 materials -- in determining what pay should be offered.  
 12 I didn't see anywhere where it said you should rely  
 13 on prior pay. So I -- at least in those materials.  
 14 And when I read some of the depositions, I think  
 15 Waggoner in particular did not testify that people  
 16 relied on prior pay in setting of starting pay. Now,  
 17 that doesn't mean somebody didn't. I'm just telling you  
 18 what I know.  
 19 **BY MR. SONG:**  
 20 **Q.** Sure. In any of the materials that you  
 21 reviewed, did -- did any of the materials that you  
 22 reviewed suggest that prior pay should be considered?  
 23 **A.** Not that I saw. As I said, I searched for  
 24 that actually, and I saw nothing to that effect in the  
 25 materials that I was reviewing.

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1 Q. And prior to this change in policy, do you  
 2 know if Oracle requested prior pay information from  
 3 applicants?  
 4 MS. MANTOAN: Objection. It misstates  
 5 testimony as to some change in policy. And it's vague  
 6 and it's compound, referring to Oracle at large.  
 7 THE WITNESS: Well, I did -- I am aware that  
 8 there was a data source within the company of market  
 9 intelligence pay that Oracle, like many companies in  
 10 highly competitive labor markets, would love to know  
 11 what their competitors are paying for similar kinds of  
 12 employees.  
 13 And my understanding is that they were populating a  
 14 database with this information and studying it and  
 15 trying to understand more about the labor market they  
 16 were in.  
 17 They had survey data, but survey data is not as  
 18 interesting and detailed as the kind of data that I  
 19 think they were probably able to get if they got that  
 20 sort of data.  
 21 So they may have used some of that data in  
 22 benchmarking exercises of their own. I found that  
 23 actually kind of interesting when I stumbled on that.  
 24 That is kind of an interesting thing.  
 25 I, myself, for example, would love to know things

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1 Q. You have not?  
 2 A. I have.  
 3 Q. Oh, you have.  
 4 And do you recall which documents you saw that?  
 5 A. These would be documents associated with the  
 6 recruiting of experienced candidates.  
 7 I'm not sure whether they would be Taleo documents  
 8 or iRecruitment documents. Those would be the two  
 9 potential sources, I think.  
 10 Q. Were these electronic documents?  
 11 MS. MANTOAN: Objection. Vague.  
 12 THE WITNESS: Some information I had on --  
 13 electronically. Much of it I did have electronically.  
 14 But I've also seen forms attached to the Waggoner  
 15 deposition which were handwritten forms.  
 16 BY MR. SONG:  
 17 Q. What is your understanding of how Oracle  
 18 headquarters compensates its employees?  
 19 MS. MANTOAN: Objection. Vague. It's  
 20 compound in its reference to Oracle headquarters.  
 21 THE WITNESS: So do you mean what is my  
 22 understanding regarding compensation of employees at  
 23 Oracle's headquarters?  
 24 BY MR. SONG:  
 25 Q. Yes. How do they calculate compensation? How

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1 like what do firms in my industry pay. I don't know.  
 2 What are billing rates? I don't know.  
 3 BY MR. SONG:  
 4 Q. From what you've reviewed, did Oracle have  
 5 data on prior pay?  
 6 MS. MANTOAN: Objection. Vague and compound.  
 7 THE WITNESS: There was a reference that there  
 8 was some sort of information source where they were  
 9 compiling pay from a whole variety of sources, some of  
 10 which they gathered through this process of people who  
 11 had joined the company.  
 12 But my understanding is whatever they were doing,  
 13 they had -- would have had to stop that practice. At  
 14 least if they had that data, they wouldn't have been  
 15 able to get it by requesting it. They could no longer  
 16 request that data.  
 17 BY MR. SONG:  
 18 Q. And have you seen in the material -- in the  
 19 data that you've reviewed, have you seen any data fields  
 20 or columns for prior pay?  
 21 A. No, I haven't.  
 22 Q. In any documents that you've reviewed, have  
 23 you seen any, I guess I would say, spaces for prior pay,  
 24 like blanks or spaces on forms to include prior pay?  
 25 A. I have.

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1 do they set compensation at Oracle?  
 2 MS. MANTOAN: Objection.  
 3 BY MR. SONG:  
 4 Q. I know there's not policies, as you were  
 5 saying. But you mentioned that there were practices,  
 6 guidelines, trainings, PowerPoints, et cetera.  
 7 MS. MANTOAN: Objection. It's vague. It's  
 8 compound. Vague as to "they."  
 9 THE WITNESS: What I have seen in these  
 10 various PowerPoints were discussions regarding  
 11 benchmarking to the industry through Mercer and another  
 12 source that is on the tip of my tongue, but I cannot  
 13 recall it. There's two primary sources. Mercer is one  
 14 of them.  
 15 So they do rely on that information, which is at a  
 16 very relatively high level. They use this primarily to  
 17 try to identify pay ranges, is my understanding, as a  
 18 function of various classification metrics that the  
 19 company uses.  
 20 But then when it comes to individual pay setting,  
 21 there are quite a few documents that go into discussion  
 22 about the kinds of things that pay -- pay setting  
 23 managers should -- could consider, I guess is a better  
 24 way to put it. Not should, but could.  
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1 BY MR. SONG:  
 2 Q. You mentioned classification metrics. What  
 3 does that mean?  
 4 A. In the parlance of Oracle Global Career Level,  
 5 GCL, there's a hierarchical sort of concept that, as I  
 6 understand it, aligns with -- and there are six levels.  
 7 These market data that are provided by these  
 8 surveys tend to have between five and seven levels.  
 9 So apparently they selected six levels partly to  
 10 be able to interpret the data they were receiving and  
 11 use it in a meaningful way.  
 12 If they'd had 15 levels, for example, it might  
 13 have been difficult to reconcile and use them  
 14 effectively with that market data.  
 15 So that's what I was referring to. But then there  
 16 are other classification elements. There's the job  
 17 function. There is the job specialty. There's the job  
 18 title. And then there's an individual numerical job  
 19 code that's purely numerical.  
 20 So all of those elements go together with the GCL  
 21 at the end of the chain to create a beginning point for  
 22 what you would do for an individual.  
 23 Q. Do you know how Oracle sets base salary?  
 24 MS. MANTOAN: Object to the form of the  
 25 question. It's vague and it's compound in its reference

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1 compound. It's vague as to whose base pay you're  
 2 talking about.  
 3 THE WITNESS: Well, if I can frame it in -- an  
 4 employee, somebody being considered for hire and they're  
 5 trying to determine what their starting pay should be.  
 6 And I think I probably gave some -- a similar  
 7 answer earlier in a different context, but it would  
 8 apply here.  
 9 BY MR. SONG:  
 10 Q. What about for an existing Oracle employee?  
 11 MS. MANTOAN: Objection. It's vague. And  
 12 it's compound to the extent you're asking about every  
 13 employee at Oracle.  
 14 THE WITNESS: So wait a minute. You don't  
 15 want me to continue my other answer --  
 16 BY MR. SONG:  
 17 Q. Oh, I'm sorry.  
 18 A. -- where I started? I was starting.  
 19 Q. I thought you were done.  
 20 A. No. I hadn't even started.  
 21 Q. Please finish.  
 22 A. The factors that are suggested to  
 23 individuals -- the managers who are hiring people are  
 24 the -- their prior experience, what they've done in  
 25 their backgrounds, which they evaluate because they've

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1 to Oracle.  
 2 THE WITNESS: Well, all of what I've said so  
 3 far does relate to base salary. I might have clarified  
 4 that, if I thought of it. It all relates to base  
 5 salary.  
 6 One thing I do see emphasized in the -- all of  
 7 these Oracle documents, partly the documents related to  
 8 the on-boarding or hiring from the external market  
 9 either through individual hires or in the context of  
 10 acquired employees, the emphasis of -- in all these  
 11 materials is telling people emphasize total  
 12 compensation. Talk about total compensation. Emphasize  
 13 that there are a number of elements to compensation.  
 14 BY MR. SONG:  
 15 Q. Yeah. And I'm going to get to total  
 16 compensation in a minute, but I do want to talk a little  
 17 bit more about base salary.  
 18 Is there a formula for base salary?  
 19 MS. MANTOAN: Objection. Vague and compound.  
 20 THE WITNESS: No. There is -- not that I saw.  
 21 I saw no formulas.  
 22 BY MR. SONG:  
 23 Q. And do you know the specific factors that base  
 24 pay is based on?  
 25 MS. MANTOAN: Objection. It's vague. It's

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1 got resumes or they've interviewed people. They have a  
 2 variety of measures of those things, so they know those  
 3 things.  
 4 They also are advised to consider skills and what  
 5 are labeled competencies, which to me sounds similar to  
 6 skills, but skills and competencies.  
 7 And then they're asked to think about what are  
 8 they being asked to do at Oracle, what role will they  
 9 have, and then what is the pay of individuals who have  
 10 that role currently.  
 11 So to the extent -- so they have to try to balance  
 12 all of these things, if they're so inclined, and set  
 13 pay.  
 14 So once that is set, then the next question is, to  
 15 answer your question regarding incumbent employees, the  
 16 question is whether or not and how to increase base  
 17 salary.  
 18 And based on the materials I've reviewed, they do  
 19 a similar sort of thing. They continue to evaluate  
 20 skills, competencies, but now they have performance to  
 21 bring into the mix, because the employee has now been  
 22 working at Oracle.  
 23 They also have to continue to balance equity  
 24 factors within the subset of people that is most  
 25 similar to that employee within that manager's purview.

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1 By equity, they mean -- they don't mean  
 2 necessarily demographic equity. They're referring to  
 3 if you bring in somebody at a really high pay just to  
 4 get them on board and they're being paid considerably  
 5 above other people doing the same work, that can create  
 6 a fairness issue within that subset of employees.  
 7 So all of these factors are available to be  
 8 considered, at least according to the documents that I  
 9 reviewed.  
 10 **Q.** And regarding total compensation, you  
 11 discussed stock grants a little bit earlier. So I want  
 12 to talk a little bit more about your method of valuing  
 13 the stocks.  
 14 One question I had for you is, have you heard of  
 15 the Black-Scholes method?  
 16 **A.** Yes.  
 17 **Q.** And why don't you use the Black-Scholes method  
 18 for valuing stock?  
 19 **A.** Well, it only applies to options. It doesn't  
 20 apply to RSUs. RSUs are grants of stock just restricted  
 21 in when you can avail yourself of them.  
 22 So there, the Black-Scholes model does not -- does  
 23 not apply.  
 24 One could take options and value the options with  
 25 Black-Scholes at the time of grant, add that value to

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1 **A.** It would best apply in that setting. So it  
 2 is -- there's nothing wrong with using a Black-Scholes  
 3 approach to value options.  
 4 **Q.** Why didn't you use it if it's designed for a  
 5 company like Oracle?  
 6 **A.** Because there's no reason to use it if the  
 7 company is already stating that, we're giving you, the  
 8 employee, the option -- no pun intended -- between  
 9 accepting RSUs and accepting options. You will receive  
 10 four options for every one RSU that you decide not to  
 11 take.  
 12 So that would seem to me to establish a value  
 13 between options and RSUs from the company's  
 14 perspective.  
 15 And the company is certainly not going to stack  
 16 the deck one way or the other, although it's quite  
 17 apparent that the employees have gravitated to RSUs. I  
 18 think in the latest years of the data, there's  
 19 virtually no options being chosen by employees.  
 20 I don't think that they are eliminated from  
 21 consideration, but it kind of looks like it. Everybody  
 22 seems to be going for the RSUs in the later periods of  
 23 the data.  
 24 **Q.** And what are the later periods of the data  
 25 that you're talking about?

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1 the value of the RSUs determined at that point in time.  
 2 You could do it that way if you chose to.  
 3 Many people believe that the RSU -- that the  
 4 Black-Scholes is a -- I wouldn't say controversy about  
 5 it. It's pretty widely accepted, especially in a very  
 6 heavily traded option like that at Oracle. So it's  
 7 probably one of the better times to use Black-Scholes.  
 8 But I would be indifferent between computing it  
 9 that way and converting to RSUs at the  
 10 Oracle-determined ratio. And given that Oracle is  
 11 willing to provide a four-to-one ratio, I would assume  
 12 that it makes sense to convert all to RSUs.  
 13 But one could do it either way.  
 14 **Q.** Would you agree that Black-Scholes is the most  
 15 common method of valuing stock options now?  
 16 **A.** For options, it is. But there are other  
 17 methods. I mean, that was a very popular approach. But  
 18 there have been -- I believe there have been refinements  
 19 to it over the years, and certainly adaptations to other  
 20 kinds of settings.  
 21 It's designed really more for the kind of setting  
 22 that Oracle is in, a heavily traded stock with a  
 23 heavily traded option market.  
 24 **Q.** So you're saying Black-Scholes is designed for  
 25 a company like Oracle?

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1 **A.** The last several years.  
 2 **Q.** What about in the earlier years of the data?  
 3 **A.** There was more of a balance. And I'm not sure  
 4 that the RS -- I think the -- I don't recall the dating.  
 5 It may be before the 2013 first year of analysis. But  
 6 options might have been the only thing that was  
 7 available earlier in the period.  
 8 **Q.** Doesn't vesting with the stock options present  
 9 a problem with the way you valued the stock options?  
 10 **MS. MANTOAN:** Objection. Vague.  
 11 **THE WITNESS:** No, not at all. It's their  
 12 value on the date of the grant. So if somebody gives me  
 13 a hundred options today, they will have a value today.  
 14 And I valued them at the moment of -- on the date of  
 15 receipt.  
 16 **BY MR. SONG:**  
 17 **Q.** But are they -- if they haven't vested,  
 18 they're not guaranteed those stock options.  
 19 **A.** Well, that's all taken into account. That  
 20 would be taken into account whether you used the  
 21 Black-Scholes approach or the RSU approach.  
 22 The Black-Scholes approach also acknowledges that  
 23 they're not guaranteed.  
 24 **Q.** Yes. And so it accounts for the fact that  
 25 they may never get any of those options; correct?

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1     **A.** Which is why the ratio four to one.  
2     **Q.** But under your model, let's say, for example,  
3 an employee leaves within a year of being granted or  
4 accepting some stock options. They get nothing;  
5 correct?  
6     **MS. MANTOAN:** Objection. Incomplete  
7 hypothetical. It's vague. It's compound.  
8     **THE WITNESS:** If they haven't vested, I think  
9 that's true with RSUs as well.  
10 **BY MR. SONG:**  
11     **Q.** Yes. So that total compensation figure would  
12 be inflated, wouldn't it?  
13     **A.** No. What you were paid for the work you did  
14 in the year in which you did it is the value of that  
15 stock. If you choose not to stay around to receive it  
16 all, that's a different matter, but the value received  
17 in the year in which you did the work was the value at  
18 the time in which -- that you were granted those shares  
19 or options.  
20     **Q.** It wasn't received. It's essentially an IOU,n  
21 isn't it?  
22     **A.** Of course, it is.  
23     **MS. MANTOAN:** Objection.  
24 **BY MR. SONG:**  
25     **Q.** Would you buy stock options from somebody that

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1 same with respect to this calculation. So it's  
2 somewhat immaterial whether they are valued at discount  
3 or not.  
4     **MS. MANTOAN:** Counsel, do you have a program  
5 to show him? If you wanted to ask questions about the  
6 program and how it operates, do you have a copy of it?  
7     **MR. SONG:** I do, but I don't think I'm going  
8 to have time to show him or get into that level of  
9 detail.  
10 **BY MR. SONG:**  
11     **Q.** Does your method of valuing take into  
12 consideration the volatility of stock prices?  
13     **MS. MANTOAN:** Objection. Vague.  
14     **THE WITNESS:** Well, certainly if you were  
15 using the Black-Scholes, it would take into account.  
16 That's part of the formula.  
17     But for RSUs, no, it wouldn't. Again, they're all  
18 being valued on the same playing field for all employees  
19 getting them in the same year. So it would be  
20 immaterial whether it was taken into account or not.  
21     Because whatever volatility would apply -- this is  
22 a perfect example of what Dr. Madden articulated in her  
23 report -- there's zero chance there would be differences  
24 between demographic groups because all of them would  
25 experience the same volatility for the same grant given

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1 have not vested?  
2     **MS. MANTOAN:** Objection. Vague. Incomplete  
3 hypothetical.  
4     **THE WITNESS:** They're bought -- that happens  
5 every day. Are you kidding? That's what the options  
6 market is. People are trading in options that have not  
7 yet -- that are not yet in the money you might say.  
8     Now, they may have vested, but there are other ways  
9 in which they remain contingent claims. People trade  
10 them all the time.  
11 **BY MR. SONG:**  
12     **Q.** Does your method valuing the stock options --  
13 does that consider the time value of money?  
14     **A.** I think it does. I think the way we did the  
15 RSUs did include a discounting calculation. I'm not  
16 certain, but I think it did.  
17     **Q.** How so?  
18     **A.** That it would be -- if you valued them -- I  
19 don't know. I don't know. It's been a while since I've  
20 looked at that. So I don't know if I included a  
21 discount factor in the RSUs. It's built into the  
22 options. It's part of the Black-Scholes valuation  
23 method. But I'm not sure if I did it with the RSUs or  
24 not.  
25     But keep in mind every employee is treated the

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1 at the same point in time.  
2 **BY MR. SONG:**  
3     **Q.** Doesn't your valuation method assume that the  
4 employee is going to get the entire stock option?  
5     **A.** What do you mean "option"?  
6     **Q.** My understanding is that -- or the stock  
7 grant. Doesn't your method assume that all of the stock  
8 option or grant will be vested and that that employee  
9 will receive that -- the value of that stock option?  
10     **MS. MANTOAN:** Objection. It's vague. And  
11 it's a compound question.  
12     **THE WITNESS:** Sure, it does. It's valued at  
13 the point in time as if all of those were vested, but  
14 it's done the same way for every employee.  
15 **BY MR. SONG:**  
16     **Q.** But not every employee gets stock options;  
17 correct?  
18     **MS. MANTOAN:** Objection. Vague.  
19     **THE WITNESS:** Those who get it, for all those  
20 who get it. And a pretty sizable share will get -- they  
21 get differing amounts obviously. So some may get a  
22 fairly small number of RSUs; some may get a much larger  
23 share of RSUs.  
24 **BY MR. SONG:**  
25     **Q.** Do you know, in any given year at Oracle, are

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1 stock grants limited to a percentage of employees at  
2 Oracle?  
3 **A.** There are limitations on who can receive a  
4 stock grant. That's my understanding.  
5 **Q.** And do you know what percentage?  
6 **A.** Well, within this population of IC --  
7 effectively, IC2 and up and M2 and up, I think all of  
8 those individuals are technically eligible for some sort  
9 of equity award. I believe that's the case.  
10 It's a discretionary decision to award it to any  
11 individual employee, but I believe from an eligibility  
12 perspective, that those global career levels are all  
13 eligible for equity grants, equity awards.  
14 **Q.** Your method of valuing the stock options, is  
15 that something that you came up with on your own, or is  
16 that based on -- is that based on literature?  
17 **MS. MANTOAN:** Objection. Compound. Misstates  
18 testimony.  
19 **THE WITNESS:** Converting the units to RSUs is  
20 based on how Oracle views the relationship between  
21 options and RSUs. So that's not based on a decision of  
22 mine. And evaluating their value as of the time of  
23 grant, whether or not they're discounted, is a  
24 straightforward way to compute the value that is  
25 equivalent --

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1 and who were, let's say, terminated.  
2 **BY MR. SONG:**  
3 **Q.** Who else has used this method?  
4 **A.** I've seen it used by people that I have been  
5 opposed to in that setting. I've seen it many times.  
6 It's a straightforward way in which to evaluate the  
7 value of restricted stock units.  
8 Now, in a setting of an individual, you will have  
9 to convert to present value because there it's damages.  
10 You're not doing statistical analysis of a  
11 cross-section there. So it's a little different  
12 setting.  
13 And then options, if, in fact, there was no option  
14 to convert between the two and individuals only had  
15 options, of course, there you would have to use an  
16 option valuation technique such as Black-Scholes.  
17 **Q.** Is your method supported by the literature?  
18 **MS. MANTOAN:** Objection. Vague.  
19 **THE WITNESS:** There's no literature that would  
20 relate to this. This is a sort of straightforward  
21 calculation.  
22 **BY MR. SONG:**  
23 **Q.** So this is not something -- is there a book  
24 that abdicates for this method over Black-Scholes?  
25 **MS. MANTOAN:** Objection as to "this method."

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1 **Q.** Do other labor --  
2 **A.** This is not a labor economics question. This  
3 is a question about how would one use this sort of  
4 information in an analysis in a way that does not change  
5 the analysis with respect to the coefficients of  
6 interest here which are gender and race coefficients.  
7 So if I'm treating all individuals the same, then  
8 there should be no difference between the genders or  
9 the races in the outcome.  
10 **BY MR. SONG:**  
11 **Q.** That's assuming that women and minorities are  
12 getting stock grants at the same rate as everyone else  
13 at Oracle?  
14 **A.** No, it doesn't.  
15 **Q.** Well, I'm going to move on from there because  
16 I think I'm running out of time.  
17 But what I'm curious about is, does anybody else  
18 use this method to value symptom options the way you  
19 did?  
20 **MS. MANTOAN:** Objection. Vague. It misstates  
21 testimony.  
22 **THE WITNESS:** I've seen this approach many  
23 times in damages situations where this sort of thing  
24 comes up in evaluating damages, for example, of  
25 executives who were eligible for equity from a company

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1 **THE WITNESS:** It's not over Black-Scholes.  
2 It's an alternative to it. It's not -- I doubt there's  
3 any book out there that discuss this issue in comparison  
4 of these two approaches. I don't think that that's a  
5 subject of discussion.  
6 **BY MR. SONG:**  
7 **Q.** Is there a book that discusses your method of  
8 valuing stock options?  
9 **MS. MANTOAN:** Objection. Assumes facts.  
10 Vague.  
11 **THE WITNESS:** I didn't value them as options.  
12 And there are many books that do discuss how you value  
13 options. If I'd left them as options, I would have  
14 valued them that way.  
15 I converted them, as Oracle converts them, and then  
16 valued them that way. And, as I said, in the last two  
17 or three years of the data, it was virtually all RSUs  
18 that were elected by the employees anyway.  
19 **BY MR. SONG:**  
20 **Q.** And which books discuss how you valued these  
21 options?  
22 **MS. MANTOAN:** Objection. Vague. Misstates  
23 testimony.  
24 **THE WITNESS:** Any finance book discusses the  
25 Black-Scholes model.

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1 BY MR. SONG:  
2 Q. Not the Black-Scholes. Black-Scholes is well  
3 documented and supported by the literature.  
4 What about your method of valuing stock options?  
5 MS. MANTOAN: Objection. Misstates testimony.  
6 THE WITNESS: I don't know how many times I  
7 have to say the same thing. I converted them. I'll say  
8 it one more time. I converted the units of options to  
9 RSUs.  
10 BY MR. SONG:  
11 Q. I know what you did. I'm asking if it's  
12 supported by the literature. That wasn't my question.  
13 Did you just pull this out of thin air, or is there  
14 a book or something that says, oh, this is how you value  
15 stocks?  
16 MS. MANTOAN: Objection. It's argumentative.  
17 MR. SONG: He's not answering my question.  
18 THE WITNESS: This is how Oracle values them.  
19 I followed what Oracle does.  
20 BY MR. SONG:  
21 Q. I didn't ask that question.  
22 Is there literature that supports how Oracle values  
23 stock options?  
24 MS. MANTOAN: Objection. Misstates testimony.  
25

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1 MS. MANTOAN: He didn't stay that. It  
2 misstates testimony.  
3 MR. SONG: He just did.  
4 MS. MANTOAN: I don't want to argue. It's  
5 argumentative. It calls for speculation.  
6 MR. SONG: Aldolf, how much time do I have?  
7 THE VIDEOGRAPHER: I believe about 40 minutes,  
8 but let me double-check. You have 37, 35 minutes.  
9 MR. SONG: Thank you.  
10 (Saad Exhibit 10 was marked.)  
11 BY MR. SONG:  
12 Q. I'll give you a minute to look over that  
13 document.  
14 MS. MANTOAN: Is there anything specific you  
15 want him to be focusing, or do you want him to read the  
16 whole document?  
17 MR. SONG: No. I just want him to look it  
18 over and specifically the Black-Scholes description.  
19 MS. MANTOAN: You should take the time you  
20 need obviously to read that.  
21 BY MR. SONG:  
22 Q. It's on the second page, top of the second  
23 page. If you can just let me know after you're done  
24 reviewing the Black-Scholes section.  
25 A. I've taken a look at just that section.

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1 BY MR. SONG:  
2 Q. It's a very simple question.  
3 A. As far as I know, there's no book out there  
4 that discusses what Oracle does. I doubt you'll find  
5 such a book.  
6 Q. Is there any literature out there that  
7 discusses how Oracle values stock options?  
8 MS. MANTOAN: It's asked and answered. It's  
9 argumentative. And it misstates the testimony.  
10 THE WITNESS: I suppose you could say that the  
11 Fidelity materials which contain these conversions might  
12 be a source that discusses in a formal way this  
13 conversion between the two forms of receiving an equity  
14 award.  
15 So to the extent that Fidelity is a large,  
16 sophisticated financial institution handling the equity  
17 and option programs for Oracle, I would suspect that  
18 they are doing things that make economic sense to the  
19 company.  
20 BY MR. SONG:  
21 Q. But maybe not the employees?  
22 MS. MANTOAN: Objection. That's  
23 argumentative. It calls for speculation.  
24 MR. SONG: He's speculating that it's good for  
25 Oracle.

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1 Q. Does that appear to be an accurate description  
2 of the Black-Scholes method?  
3 A. It actually doesn't describe the method at  
4 all. It just talks about the method.  
5 Q. Does what's presented there appear accurate  
6 about the Black-Scholes method?  
7 A. Well, there's some information that they state  
8 in here that I don't know whether it's accurate or not  
9 accurate. They talk about at the bottom of the section  
10 something about the relationship of Black-Scholes value  
11 relative to face value of stock. I have no idea if  
12 that's accurate or where that comes from.  
13 Q. And do you know --  
14 A. Otherwise, they have some opinions stated  
15 here, too. I don't know whether there's any support for  
16 that or not.  
17 Q. And do you know if Oracle works with Radford?  
18 MS. MANTOAN: Objection. Vague.  
19 THE WITNESS: Yes, I do, because this reminded  
20 me of the other survey that they participate in, which  
21 is the Radford Survey.  
22 I don't know whether they work with them with  
23 respect to their equity program. I don't believe they  
24 do. I think they work with Fidelity for that and  
25 Radford just as a -- they're a participating member in

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1 the survey that Radford conducts.  
 2 BY MR. SONG:  
 3 Q. I would next like to talk about your controls  
 4 for cumulative leaves of absence and whether the  
 5 employee took a leave of absence in the current year.  
 6 So can you please tell us why you controlled for  
 7 both?  
 8 MS. MANTOAN: Objection. Vague. Compound.  
 9 THE WITNESS: Well, I could tell you why I  
 10 controlled for leaves in the current year since I'm  
 11 analyzing in my responses to both the SAC and Dr. Madden  
 12 total compensation. To the extent that having been on  
 13 leave might influence components of your compensation,  
 14 either base pay or bonus pay, I took that into account.  
 15 As for cumulative leaves, I took that into account  
 16 in order to proxy for the -- not proxy -- but to take  
 17 into account the impact of leave, having taken leave by  
 18 the employees of Oracle.  
 19 BY MR. SONG:  
 20 Q. And would this have a negative impact on  
 21 women?  
 22 MS. MANTOAN: Objection. Vague. Vague as to  
 23 "negative."  
 24 THE WITNESS: I don't know what you mean by  
 25 negative impact, if you define what that means.

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1 Q. And if you have two controls for leave, that  
 2 wouldn't hurt women who take more leave?  
 3 MS. MANTOAN: Objection. Vague. Compound.  
 4 THE WITNESS: It's not two controls. It's  
 5 different controls.  
 6 One of them is simply an indicator as to yes or no,  
 7 did you take leave in the current year. The other is a  
 8 computation of cumulative leave taken over the time of  
 9 the data for which we have the information.  
 10 And as I note in my report, there are a number of  
 11 instances where I cannot fully measure that variable.  
 12 For example, employees who recently hired, I don't have  
 13 that information from their prior employer. So it would  
 14 only relate to their time at Oracle.  
 15 BY MR. SONG:  
 16 Q. What do you think of Dr. Madden's method of  
 17 simply subtracting the time each employee spends on  
 18 leave from their total job tenure?  
 19 MS. MANTOAN: Objection. Vague. Assumes  
 20 facts.  
 21 THE WITNESS: That's the way she handles. I  
 22 don't believe that that's the appropriate way to handle  
 23 it.  
 24 BY MR. SONG:  
 25 Q. And why is that?

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1 BY MR. SONG:  
 2 Q. Negative impact on women's pay.  
 3 MS. MANTOAN: Objection.  
 4 BY MR. SONG:  
 5 Q. Compensation.  
 6 MS. MANTOAN: Objection. Vague. Negative  
 7 compared to what?  
 8 THE WITNESS: In what context?  
 9 BY MR. SONG:  
 10 Q. Aren't you effectively taking some mothers or  
 11 mothers out of the comparison when you control for both  
 12 types of leave?  
 13 MS. MANTOAN: Objection. Vague.  
 14 THE WITNESS: No, not at all. I'm not sure  
 15 what you're referring to. It doesn't take them out of  
 16 any comparison.  
 17 BY MR. SONG:  
 18 Q. Well, do you believe men and women take leave  
 19 that equally?  
 20 A. No, they don't. It's clearly the case that  
 21 they don't. I have a chart in my first report related  
 22 to that issue.  
 23 Q. So women -- who takes more leave, men or  
 24 women?  
 25 A. Women.

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1 A. Because it acts as if the time that she  
 2 removes from an employee has simply just evaporated, as  
 3 if that time had not existed. That's different than  
 4 asking the question: How does leave impact compensation  
 5 and in what way is it related to the extent of the leave  
 6 you take, so you're able to address the question more  
 7 fully.  
 8 And in Dr. Madden's case, it's indistinguishable  
 9 from somebody who just happened to join the company  
 10 three months later than another employee.  
 11 Q. Are leaves related to skills?  
 12 MS. MANTOAN: Objection. Vague. Compound.  
 13 THE WITNESS: Are leaves related to skills?  
 14 I'm not sure.  
 15 BY MR. SONG:  
 16 Q. Yeah, employee skills. Does it have anything  
 17 to do with employee skills?  
 18 MS. MANTOAN: Same objections.  
 19 THE WITNESS: I don't understand that  
 20 question. You'll have to rephrase that one.  
 21 BY MR. SONG:  
 22 Q. Do the frequency of leaves an employees -- the  
 23 frequency that an employee takes leave have any impact  
 24 on skills, their skills, that employee's skills?  
 25 MS. MANTOAN: Same objections. Vague.

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1 Compound.  
 2 THE WITNESS: Oh, it might have an impact on  
 3 the accumulation of skills, an accumulation of human  
 4 capital via on-the-job training.  
 5 BY MR. SONG:  
 6 Q. What about the same question for productivity?  
 7 MS. MANTOAN: Same objections.  
 8 THE WITNESS: Well, to the extent productivity  
 9 is related to skill, of course, it would have a  
 10 relationship to that. I mean, that's the point of  
 11 skill.  
 12 BY MR. SONG:  
 13 Q. Are leaves of absences appropriate to consider  
 14 for compensation?  
 15 MS. MANTOAN: Objection. Vague. Incomplete  
 16 hypothetical.  
 17 THE WITNESS: What do you mean by  
 18 "appropriate"?  
 19 BY MR. SONG:  
 20 Q. Is it a variable that should be considered in  
 21 compensation, in setting or calculating compensation for  
 22 an employee?  
 23 MS. MANTOAN: Same objections.  
 24 THE WITNESS: I'm not sure what you mean by  
 25 calculating employee compensation. I can tell you that

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1 would you consider leaves of absences?  
 2 MS. MANTOAN: Object. Same objection.  
 3 BY MR. SONG:  
 4 Q. Well, you actually are an employer; right?  
 5 A. So if you're asking me to what extent would an  
 6 employer -- how would that affect an employee's  
 7 compensation at a particular employer, all I did was an  
 8 empirical analysis that in this case indicates that it  
 9 did for both men and women. It just happens that more  
 10 women take leave. But for the men who take leave, their  
 11 earnings are also impacted.  
 12 Q. In your opinion, should employers consider  
 13 leaves of absences in setting compensation?  
 14 MS. MANTOAN: Objection. Vague. Compound.  
 15 Incomplete hypothetical.  
 16 THE WITNESS: Well, one example I gave you was  
 17 that, for example, bonuses and stock awards, to the  
 18 extent that working a full year would influence the  
 19 extent to which you receive those amounts or would  
 20 influence the prorating, for example, then, of course,  
 21 employers I think can and should and, in fact, do take  
 22 it into account in those elements of compensation.  
 23 BY MR. SONG:  
 24 Q. Does Oracle consider leaves of absences in  
 25 setting compensation?

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1 in many analyses, and there's many academic publications  
 2 on the impact of leave, and there's a lot of research on  
 3 this. So, of course, it is something that is taken into  
 4 account in analyses of compensation.  
 5 But I'm not sure if that's what you're asking.  
 6 BY MR. SONG:  
 7 Q. Yeah. I guess I'm more asking whether it  
 8 should be considered in calculating compensation.  
 9 MS. MANTOAN: Same objections.  
 10 THE WITNESS: Should from what perspective?  
 11 I'm not sure what you mean by "should."  
 12 BY MR. SONG:  
 13 Q. From your perspective, is it appropriate to  
 14 consider or is it like saying your hair is blue, so  
 15 considering blue hair in terms of compensation. That  
 16 obviously is not appropriate to consider for  
 17 compensation to most people I would hope.  
 18 But what about leaves of absences, are they  
 19 appropriate to consider for leaves of absences?  
 20 MS. MANTOAN: Objection. The question is  
 21 vague and compound.  
 22 THE WITNESS: That one I got really confused  
 23 at the end. You may have to say that again.  
 24 BY MR. SONG:  
 25 Q. If you were considering setting compensation,

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1 MS. MANTOAN: Objection. It's vague. It's  
 2 compound.  
 3 THE WITNESS: I'm not certain, but I think I  
 4 saw a reference to prorating in materials, prorating for  
 5 partial years worked. Now, this would apply not just to  
 6 people who experienced a leave during a year, but also  
 7 to people who joined partially into the year but are  
 8 there at the time at which bonuses and other nonbase pay  
 9 awards are given.  
 10 So I believe that that information regarding  
 11 prorating applied to both kinds of settings.  
 12 BY MR. SONG:  
 13 Q. Other than prorating, do you know if Oracle  
 14 considers leaves of absences in setting compensation?  
 15 MS. MANTOAN: Objection. Vague. Compound.  
 16 THE WITNESS: Not that I have seen in any -- I  
 17 mean, it's certainly not something I see in the  
 18 compensation materials I reviewed other than this issue  
 19 of prorating.  
 20 The question is empirically what relationship does  
 21 it have in the data that I'm analyzing here in response  
 22 to Dr. Madden and the SAC.  
 23 BY MR. SONG:  
 24 Q. Do you know if Oracle considers the number of  
 25 leaves of absences in setting compensation?

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1 MS. MANTOAN: Objection. It's vague. It's  
 2 compound. It's been asked and answered.  
 3 THE WITNESS: I can't know what all the  
 4 individual managers dealing with individuals, both male  
 5 and female, who have been on leave would do or how they  
 6 do their work. And that's not what I'm trying to do.  
 7 I'm trying to see what impact is there in the data  
 8 of phenomenon of leave. And that's why I modeled it in  
 9 the way that I did so that I could actually observe what  
 10 effect it does have.  
 11 BY MR. SONG:  
 12 Q. I'm not asking about individual managers. But  
 13 I'm asking Oracle, as an organization, if it considers  
 14 the number of leaves of absences in setting  
 15 compensation.  
 16 MS. MANTOAN: Objection. It's vague. It's  
 17 compound.  
 18 BY MR. SONG:  
 19 Q. If you know.  
 20 MS. MANTOAN: It's been asked and answered.  
 21 And it assumes facts.  
 22 THE WITNESS: Well, as I said, the  
 23 organization, as far as I know, doesn't do anything from  
 24 a monolithic perspective. There are managers who have  
 25 guidelines provided to them on a variety of things, some

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1 doesn't do anything and that these low-level managers  
 2 can have -- there's guidelines, there's suggestions, but  
 3 it sounded like -- well, anyway.  
 4 A. I didn't say it that way.  
 5 MS. MANTOAN: There's no question pending.  
 6 BY MR. SONG:  
 7 Q. Have you read any documents that say -- of the  
 8 documents you've reviewed from Oracle, have you seen  
 9 anywhere that says the number of leaves of absences  
 10 should be considered in setting compensation?  
 11 MS. MANTOAN: Objection. Vague. Compound.  
 12 THE WITNESS: I've not seen that in the  
 13 documents that I've reviewed.  
 14 MR. SONG: I did want to ask -- let's see --  
 15 the declaration that has the charts, is that Exhibit 7?  
 16 BY MR. SONG:  
 17 Q. Dr. Saad, have you had a chance to look at  
 18 Exhibit 9?  
 19 MS. MANTOAN: And I reiterate an objection to  
 20 the impropriety of Exhibit 9, the lack of authentication  
 21 of Exhibit 9. And we will be moving to strike each and  
 22 every question related to Exhibit 9.  
 23 THE WITNESS: The answer is no.  
 24 BY MR. SONG:  
 25 Q. So after I --

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1 of which are pay guidelines.  
 2 And they use those guidelines in whatever way they  
 3 want. I mean, from what I can tell, there are no --  
 4 they're suggestions for the kinds of things that you  
 5 could do. And so there's no sense in which Oracle as an  
 6 entity is ever referred to in these sorts of materials.  
 7 So the answer would be that there aren't any that  
 8 I've seen with respect to leaves.  
 9 BY MR. SONG:  
 10 Q. So if there are no compensation policies at  
 11 Oracle, these individual managers can do whatever they  
 12 want in terms of compensating their staff?  
 13 MS. MANTOAN: Objection. Calls for  
 14 speculation. And it misstates testimony. It's vague.  
 15 And it's compound.  
 16 THE WITNESS: No. There are guidelines that  
 17 are provided to them. And they certainly have  
 18 incentives to do things in such a way that there isn't a  
 19 Wild Wild West quality to what's going on, which is the  
 20 implication that you -- that you placed on that. That's  
 21 not my interpretation of that.  
 22 BY MR. SONG:  
 23 Q. Your twist.  
 24 A. No. It's not my interpretation at all.  
 25 Q. Well, you said Oracle as a monolithic entity

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1 A. I mean, other than --  
 2 Q. When I showed it to you?  
 3 A. When you showed me and I saw one page that you  
 4 directed me to, and that's it.  
 5 Q. But you reviewed the other charts when I asked  
 6 you to review the exhibit; correct?  
 7 MS. MANTOAN: Objection. That misstates  
 8 testimony. Move to strike.  
 9 THE WITNESS: I flipped through and noted that  
 10 there were a bunch of charts, but I didn't look at what  
 11 they were.  
 12 MS. MANTOAN: Counsel, do you want me to  
 13 reiterate a motion to strike with every question you ask  
 14 about this document? Or will you consider it a standing  
 15 motion to strike, objection to impropriety.  
 16 MR. SONG: Yes. Standing objection would be  
 17 great. I only have one more question.  
 18 MS. MANTOAN: Fair enough.  
 19 MR. SONG: It will be quick.  
 20 BY MR. SONG:  
 21 Q. So after you reviewed it when I showed it to  
 22 you, you did not review it after that time period?  
 23 A. That's correct.  
 24 MS. MANTOAN: Objection. Misstates testimony.  
 25

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1 BY MR. SONG:  
2 Q. Dr. Saad, you mention in your report that  
3 there are unmeasured skill and ability differences.  
4 Do you recall that?  
5 A. Refer me to where in the report you are seeing  
6 that.  
7 Q. I don't recall which page it was.  
8 Do you recall making a statement like that in your  
9 report?  
10 MS. MANTOAN: Objection. The document speaks  
11 for itself.  
12 THE WITNESS: I'm not sure I recall it stated  
13 in that fragmentary way that you just stated it. That's  
14 why I'd like to know where in the document it is  
15 contained so I can see the context.  
16 BY MR. SONG:  
17 Q. Do you believe there are unmeasured skills and  
18 ability differences between workers?  
19 MS. MANTOAN: Objection. Vague.  
20 THE WITNESS: I want to know the context  
21 within which --  
22 BY MR. SONG:  
23 Q. I'm asking you a separate question.  
24 A. You're asking me separate and apart?  
25 Q. Yeah, from your report, yes.

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1 MS. MANTOAN: It was 36 you asked him to  
2 review?  
3 MR. SONG: Yes. Paragraph 36 of the rebuttal,  
4 Exhibit 3, page 33.  
5 MS. MANTOAN: Thank you.  
6 THE WITNESS: Maybe it's just late in the day,  
7 but I don't see anything where it says unmeasured or  
8 unobservable.  
9 BY MR. SONG:  
10 Q. Okay. Let me --  
11 A. Please tell me where I'm missing it.  
12 Q. So it's paragraph 36. And then I hope it's  
13 under the quote that you have. And it's the second --  
14 it's the second sentence after the block quote that you  
15 have.  
16 A. I see that sentence. It doesn't contain the  
17 words you were asking about.  
18 Q. I think -- I think I was thinking about a  
19 different passage.  
20 But you mentioned that there are idiosyncratic  
21 factors associated with each employee. For example,  
22 some employees may work harder, some less hard.  
23 Can you tell me what you mean by that?  
24 A. Well, just what it says, that there could be  
25 idiosyncratic factors associated with employees, what

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1 MS. MANTOAN: Same objections.  
2 THE WITNESS: There are circumstances in which  
3 skills and abilities are not found in data that one has  
4 to analyze for employees that is -- that's correct.  
5 BY MR. SONG:  
6 Q. Can you give me examples?  
7 MS. MANTOAN: Objection. Vague.  
8 THE WITNESS: Well, if there were data in a  
9 company where there were very few fields that were  
10 descriptive of what individuals did and what  
11 capabilities individuals had, then they're unmeasured  
12 from the perspective of the analyst.  
13 They may not be unknown from the perspective of the  
14 company. The company may know very well what the skills  
15 and capabilities are of its different employees. But  
16 they may or may not put that information in a database  
17 that an analyst gets.  
18 So unmeasured might be from the perspective of the  
19 analyst.  
20 BY MR. SONG:  
21 Q. If you can turn to paragraph 36 of your  
22 rebuttal. I misspoke. I thought it was in your report.  
23 MS. MANTOAN: Exhibit 3 we're looking at for  
24 the record; is that right?  
25 MR. SONG: Yes.

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1 are sometimes referred to as fixed effects, that are  
2 unchanging over time, but are embodied in these  
3 individual employees that will not be in data.  
4 Q. Do these differ systematically?  
5 MS. MANTOAN: Objection. Compound.  
6 THE WITNESS: No, these would not. In other  
7 words, these are idiosyncratic effects associated with  
8 the individual that are not associated in any direct or  
9 obvious way with their measured characteristics.  
10 BY MR. SONG:  
11 Q. So these idiosyncratic factors that you're  
12 mentioning, they wouldn't differ by gender?  
13 MS. MANTOAN: Objection. Misstates testimony.  
14 Compound.  
15 THE WITNESS: It would be very unlikely. I  
16 would be surprised if they did.  
17 BY MR. SONG:  
18 Q. Would they vary by race?  
19 MS. MANTOAN: Same objection.  
20 THE WITNESS: And the same answer. I doubt  
21 it.  
22 BY MR. SONG:  
23 Q. Why do these idiosyncratic factors matter?  
24 MS. MANTOAN: Objection. Assumes facts.  
25 Vague. Compound.

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1 THE WITNESS: They don't. The point I'm  
 2 making here is I think what Dr. Madden has done is to  
 3 mischaracterize the nature of what -- of the discussion  
 4 that focuses on the role of omitted systematic factors.  
 5 It confuses that with omitting individual factors.  
 6 And there's no debate between us that omitting  
 7 individual factors of the type described here, which are  
 8 personality traits you might say, is unlikely to bias a  
 9 study that's focused on group differences between  
 10 demographic groups. So I have no concern about that.  
 11 My concern, as I express later on this page and  
 12 elsewhere in the report, is that to the extent that  
 13 group-related factors are omitted, you can get biased  
 14 outcomes with respect to the variables in the model,  
 15 such as gender. And that's one reason I focus on the  
 16 spread in the outcomes and the residuals that we  
 17 discussed earlier.  
 18 BY MR. SONG:  
 19 Q. Would these idiosyncratic factors affect  
 20 compensation?  
 21 MS. MANTOAN: Same objections.  
 22 THE WITNESS: At the individual level, they  
 23 sure would.  
 24 BY MR. SONG:  
 25 Q. But not at a group level; correct?

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1 there are. It's an empirical question if they're  
 2 unmeasured.  
 3 BY MR. SONG:  
 4 Q. Do you believe there are unmeasured ability  
 5 differences between groups?  
 6 A. No. What I said was I don't think that those  
 7 idiosyncratic personal characteristics -- I don't think  
 8 the distributions of those differ across demographic  
 9 groups.  
 10 (Saad Exhibit 11 was marked.)  
 11 BY MR. SONG:  
 12 Q. Do you recognize this document, Dr. Saad?  
 13 A. It looks like a printout of information from  
 14 the cluster analysis that was performed. I can't tell  
 15 if it's complete or not.  
 16 MS. MANTOAN: Do you have the name of the file  
 17 that you printed this from? I don't see the name of the  
 18 file here.  
 19 MR. SONG: I don't remember what the name of  
 20 the file is. It's tf.map.  
 21 MS. MANTOAN: Tf.map, how is that spelled?  
 22 MR. SONG: TF-map or -- I can't remember if  
 23 it's tf -- it's tf.map.  
 24 MS. MANTOAN: If that helps you to know the  
 25 title of the document.

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1 A. Unlikely at a group level. Individuals,  
 2 regardless of race or gender, who work harder are likely  
 3 to earn more. People who work less hard are likely to  
 4 earn less.  
 5 It's unlikely that those sorts of factors have any  
 6 connection to gender or race. And, therefore, omitting  
 7 them or omitting any measure of them is not problematic  
 8 for the exercise that is being contemplated in this  
 9 setting.  
 10 Q. Are there unmeasured skill differences between  
 11 groups?  
 12 MS. MANTOAN: Objection. Vague. Compound.  
 13 Incomplete hypothetical. Vague as to time, company,  
 14 group.  
 15 THE WITNESS: If there are particular types of  
 16 skills that are not measured and they are the types of  
 17 skills that would apply to numbers of people, not in an  
 18 idiosyncratic way, then, yes, that would be a problem,  
 19 to the extent that it correlates to the variables of  
 20 interest, such as race or gender.  
 21 BY MR. SONG:  
 22 Q. But do you believe there are unmeasured skill  
 23 differences between groups?  
 24 MS. MANTOAN: Object. Same objections.  
 25 THE WITNESS: I don't know. I have no idea if

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1 BY MR. SONG:  
 2 Q. And this is provided in your backup data.  
 3 A. Yeah.  
 4 Q. And so -- I'm sorry. Can you tell us what  
 5 this document appears to be?  
 6 A. Yes. This is looking at the terms in the  
 7 requisitions, in the corpus of requisitions that was  
 8 analyzed.  
 9 And this is -- looks like a summary of the  
 10 computation of the term frequency and inverse document  
 11 frequency metrics for each of the terms in that corpus  
 12 of 447 requisitions.  
 13 Q. So these are the -- these are the words that  
 14 you used in your text mining or word clustering  
 15 analysis?  
 16 A. Not the words I used, the words that were in  
 17 the requisitions. They were not chosen. They are just  
 18 the words that appear in that set of requisitions.  
 19 Q. Okay. If you --  
 20 A. Taking out the stop words, as they're called.  
 21 Q. So all the stop words are taken out.  
 22 But if you look at the second word, "cssin," do you  
 23 know what that is?  
 24 A. These terms were taken as given in these  
 25 requisitions. If this refers to some sort of software

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1 or some particular kind of technical thing, then I did  
 2 not believe that I should be removing terms of that  
 3 sort.  
 4 **Q.** But are those -- and then what is it, the  
 5 fifth or sixth word, do you see "esp"?  
 6 **A.** Yes.  
 7 **Q.** And do you know what that is?  
 8 **A.** No. Again, I was not passing judgment on what  
 9 these words were. That's the whole point of using the  
 10 clustering techniques, is to not insert your own  
 11 judgment into the terms that are being studied.  
 12 **Q.** And did you check for typos before running  
 13 this analysis on the words?  
 14 **MS. MANTOAN:** Objection. Assumes facts.  
 15 **THE WITNESS:** If there are typos, then the  
 16 words that have a typo would actually be eliminated from  
 17 input because they would be utterly unimportant words.  
 18 They would not enter into the importance scale at all.  
 19 So, technically, you really don't even need to  
 20 clean them. You can leave them out. But I think there  
 21 was an effort made to clean the text.  
 22 There was quite a bit of preprocessing of the text.  
 23 And there are a number of programs that were provided  
 24 that have all of that precleaning effort documented.  
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1 particular in detailed empirical research of things  
 2 like labor market phenomenon.  
 3 It is starting to really catch on among academic  
 4 economists and now some of the economists who are  
 5 working in the private sector.  
 6 **Q.** Has this methodology been peer tested?  
 7 **A.** Yes, it has been. In fact, I cited one of the  
 8 articles that did exactly what this technique did in  
 9 exactly the same context, meaning -- the research  
 10 question was, when looking at the technology job market  
 11 and looking at requisitions and seeing generic  
 12 descriptions for jobs across all of these requisitions  
 13 of all these different companies, is there any way to  
 14 distinguish between those requisitions in a more  
 15 meaningful way? Because they all say the same thing in  
 16 terms of what the job title is.  
 17 And the application was -- there was slight  
 18 variation on this one. It was a clustering methodology  
 19 very similar to the one used here, and word clouds were  
 20 generated. It's almost identical to what was done  
 21 here.  
 22 But there are many other studies that are very  
 23 similar to this one.  
 24 **MS. MANTOAN:** It's my understanding we're at  
 25 seven.

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1 **BY MR. SONG:**  
 2 **Q.** So for some of these words that either look  
 3 incomplete or don't make any sense to the layperson, you  
 4 left them in because you weren't sure if they were  
 5 technical terms?  
 6 **A.** There are many terms in these requisitions, if  
 7 you look at them, that are technical terms. There are  
 8 many acronyms, many of these sorts of phrases, you know,  
 9 because many of the requisitions related to various  
 10 kinds of software. And so requests -- requirements for  
 11 skill in particular kinds of software are all throughout  
 12 these requisitions.  
 13 **Q.** And is your text mining methodology, is that  
 14 supported by the literature?  
 15 **A.** Very much so.  
 16 **Q.** And which literature?  
 17 **A.** There's enormous literature at this point in  
 18 the use of these techniques. And I cited some of the  
 19 sources, but they come out every day.  
 20 In fact, the current issue of the Journal of  
 21 Economic Literature, the lead article is called, "Text  
 22 as Data."  
 23 It was manuscript form when I cited it. It is now  
 24 out in the Journal of Economic Literature.  
 25 It's a booming area in economic research, and in

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1 **MR. SONG:** Are we out of time?  
 2 **MS. MANTOAN:** I understand we're at seven.  
 3 As we discussed earlier, before we close, I just  
 4 wanted to say that given the upcoming motion practice  
 5 and the fact that we're within the window under the  
 6 protective order to designate things confidential, I'm  
 7 going to provisionally designate the transcript and all  
 8 of the exhibits, except 1, 6, 8, and 10, which are  
 9 publicly available documents, as confidential in their  
 10 entirety.  
 11 I understand, based on yesterday, the OFCCP may  
 12 disagree with that approach, but we're -- we can confer  
 13 about that from our perspective next week and the best  
 14 way to address it in light of the upcoming motion.  
 15 **MR. SONG:** Just we do object to the  
 16 confidentiality designations, and we disagree. And  
 17 we'll meet and confer next week.  
 18 **MS. MANTOAN:** Thank you.  
 19 **THE VIDEOGRAPHER:** We are going off the record  
 20 at 1830.  
 21 (Whereupon, at 6:30 p.m., the taking of the  
 22 instant deposition ceased.)  
 23  
 24  
 25

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