

1 SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 FOR THE COUNTY OF LOS ANGELES
3 DEPARTMENT 308 HON. CHARLES MC COY, JUDGE
4 RICHARD BOEKEN,)
5 PLAINTIFF,)
6)
) CASE NO. BC226593
7 VS.)
8 PHILIP MRRIS,) VOLUME 31
 INCORPORATED, A)
9 CORPORATION; INTERNATIONAL)
 HOUSE OF PANCAKES)
10 INCORPORATED, A)
 CORPORATION.)
11)
 DEFENDANTS.)
12 _____)

13 REPORTER'S DAILY TRANSCRIPT OF PROCEEDINGS
14 WEDNESDAY, MAY 9TH, 2001
15 APPEARANCES:
16 (FOR PLAINTIFF) LAW OFFICES OF
 MICHAEL J. PIUZE
17 11755 WILSHIRE BLVD.
 SUITE 1170
18 LOS ANGELES, CA 90025
19 (FOR DEFENDANTS) ARNOLD & PORTER
 BY: MAURICE A. LEITER
20 JOHN CARLTON
 777 S. FIGUEROA ST.
21 44TH FLOOR
 LOS ANGELES, CA 90017
22
23 LISA C. RIDLEY
24 OFFICIAL REPORTER
 600 S. COMMONWEALTH AVE.
25 ROOM 308
 LOS ANGELES, CA 90005
26 VOLUME 31 OF
27 PAGES 5018 THROUGH 5137
28

1 LOS ANGELES, CALIFORNIA; WEDNESDAY, MAY 9TH, 2001

2 9:10 A.M

3 DEPARTMENT 308 HON. CHARLES MC COY, JUDGE

4

5 (THE FOLLOWING PROCEEDINGS

6 WERE HELD IN OPEN COURT IN

7 THE PRESENCE OF THE JURY.)

8

9 THE COURT: ALL RIGHT, OUR JURY PANEL IS
10 WITH US. GOOD MORNING, LADIES AND GENTLEMEN.

11 COUNSEL ARE PRESENT AS WELL.

12 GOOD MORNING, COUNSEL. GOOD TO SEE
13 YOU.

14 LADIES AND GENTLEMEN, YOU WILL
15 NOTICE THAT OUR WITNESS FROM YESTERDAY IS NOT HERE
16 TODAY. SHE WILL BE BACK WITH US ON FRIDAY MORNING.

17 THE DEFENSE MAY CALL ITS NEXT
18 WITNESS.

19 MR. LEITER: THANK YOU, YOUR HONOR.

20 PHILIP MORRIS CALLS PROFESSOR VISCUSI.

21 THE COURT: SIR, IF YOU COULD STEP UP
22 JUST INTO THIS AREA OVER HERE, FACE MY CLERK, RAISE
23 YOUR RIGHT HAND TO BE SWORN AS A WITNESS IN THIS
24 MATTER.

25

26

27 W. KIP VISCUSI

28 CALLED AS A WITNESS BY THE DEFENSE, WAS SWORN

1 AND TESTIFIED AS FOLLOWS:

2 THE CLERK: YOU DO SOLEMNLY SWEAR THE
3 TESTIMONY YOU MAY GIVE IN THE CAUSE NOW PENDING
4 BEFORE THIS COURT, SHALL BE THE TRUTH, THE WHOLE
5 TRUTH AND NOTHING BUT THE TRUTH, SO HELP YOU GOD.

6 THE WITNESS: I DO.

7 THE CLERK: THANK YOU. YOU MAY BE
8 SEATED.

9 PLEASE STATE YOUR FULL NAME AND
10 SPELL IT FOR THE RECORD.

11 THE WITNESS: W, W STANDS FOR WILLIAM
12 KIP, VISCUSI, V-I-S-C-U-S-I.

13 THE CLERK: KIP IS K-I-P?

14 THE WITNESS: K-I-P.

15 MR. CARLTON: GOOD MORNING.

16 THE WITNESS: GOOD MORNING.

17

18 DIRECT EXAMINATION

19

20 BY MR. CARLTON:

21 Q. GOOD MORNING EVERYONE.

22 PROFESSOR VISCUSI, CAN YOU TELL US
23 WHAT YOUR OCCUPATION IS.

24 A. I AM AN ECONOMIST.

25 Q. WHERE?

26 A. AT HARVARD LAW SCHOOL.

27 Q. IS THERE SOME SPECIAL AREA OF
28 SPECIALIZATION THAT YOU HAVE?

1 A. MY MAIN FOCUS IS ON HEALTH AND
2 SAFETY RISKS, HOW PEOPLE PERCEIVE RISKS, HOW THEY
3 MAKE DECISIONS INVOLVING RISKS, HOW THE GOVERNMENT
4 REGULATES RISKS. AND I ALSO SPECIALIZE IN
5 EMPIRICAL WORK WHICH IS ANALYSIS OF STATISTICAL
6 DATA REGARDING LEGAL ISSUES, MANY OF WHICH ARE RISK
7 ISSUES.

8 Q. WHAT ARE YOU HERE TO TELL US ABOUT
9 TODAY?

10 A. I AM HERE TO DISCUSS THE
11 INFORMATION PEOPLE HAVE RECEIVED WITH RESPECT TO
12 SMOKING RISKS, THEIR PERCEPTIONS OF SMOKING RISKS
13 AND HOW THESE PERCEPTIONS COMPARE WITH SCIENTIFIC
14 ESTIMATES OF THE RISK.

15 Q. NOW, YOU ARE A PROFESSOR OF
16 ECONOMICS; IS THAT CORRECT?

17 A. WELL, PROFESSOR OF LAW AND
18 ECONOMICS.

19 Q. LAW AND ECONOMICS?
20 YOU TEACH AT THE LAW SCHOOL?

21 A. THAT IS CORRECT.

22 Q. WHAT IS AN ECONOMICS PROFESSOR
23 DOING OR A LAW AND ECONOMICS PROFESSOR, TEACHING AT
24 THE LAW SCHOOL?

25 A. WELL, ONE ROLE IS TEACHING LAWYERS
26 HOW TO DO STATISTICAL ANALYSIS.

27 SO I TEACH STATISTICAL ANALYSIS AS
28 IT IS USED IN THE COURTROOM AS WELL AS STATISTICAL

1 ANALYSIS OF LEGAL ISSUES. I ALSO TEACH COURSES ON
2 REGULATION AND HOW TO TREAT SCIENTIFIC EVIDENCE IN
3 THE COURTROOM THAT'S THE COURSE I JUST COMPLETED
4 YESTERDAY.

5 Q. HOW LONG HAVE YOU BEEN AT THE
6 HARVARD LAW SCHOOL?

7 A. FIVE YEARS FULL TIME AND I WAS A
8 VISITING PROFESSOR FOR ONE SEMESTER BEFORE THEN.

9 Q. WHAT I'D LIKE YOU TO DO NOW IS JUST
10 TO TELL THE JURY A LITTLE BIT ABOUT YOUR
11 EDUCATIONAL BACKGROUND IF YOU WOULD, STARTING WITH
12 YOUR UNDERGRADUATE EDUCATION.

13 A. I WENT TO HARVARD AS AN
14 UNDERGRADUATE. I MAJORED IN ECONOMICS.
15 AFTER THAT I GOT A MASTERS IN
16 PUBLIC POLICY, ALSO FROM HARVARD, MASTERS IN
17 ECONOMICS FROM HARVARD, PH. D. IN ECONOMICS FROM
18 HARVARD.

19 Q. WHEN DID YOU GET YOUR PH. D. ?

20 A. 1976.

21 Q. AND WHAT WAS YOUR DISSERTATION ON?

22 A. IT WAS ON JOB SAFETY. SO IT WAS
23 FOCUSING ON EMPLOYMENT HAZARDS, HOW WORKERS
24 PERCEIVED RISKS OF THE JOB AND WHAT EFFECT THOSE
25 RISK PERCEPTIONS HAD ON WILL THEY QUIT THEIR JOBS,
26 THE WAGES THEY GOT FOR THEIR JOBS AND SO ON.

27 Q. ALL RIGHT. AFTER YOU GOT YOUR
28 PH. D. , WHAT DID YOU DO NEXT, IN TERMS OF YOUR

1 CAREER?

2 A. WELL, I STARTED OUT AS ASSISTANT
3 PROFESSOR AT NORTHWESTERN UNIVERSITY, ASSISTANT
4 PROFESSOR OF ECONOMICS. I WAS THERE TWO OR THREE
5 YEARS. I GOT TENURED THERE. AND THEN I WENT OFF
6 TO THE GOVERNMENT.

7 Q. SO FROM 1976 FOR THE NEXT SEVERAL
8 YEARS, YOU WORKED AT NORTHWESTERN; RIGHT?

9 A. '76 UNTIL PART OF '79.

10 Q. WHEN YOU SAY YOU WENT OFF TO THE
11 GOVERNMENT, WHAT POSITION DID YOU TAKE IN THE
12 GOVERNMENT?

13 A. I WAS THE DEPUTY DIRECTOR OF THE
14 PRESIDENT'S COUNCIL ON WAGE AND PRICE STABILITY.

15 BACK THEN INFLATION WAS A BIG
16 CONCERN, NOT JUST FOR GAS PRICES BUT MORE
17 GENERALLY.

18 SO PRESIDENT CARTER HAD A 300 PLUS
19 PERSON GROUP AS PART OF THE WHITE HOUSE THAT RAN
20 THEIR ANTI-INFLATION PROGRAM AND I WAS THE NUMBER 2
21 PERSON IN THAT AGENCY.

22 Q. WHAT KINDS OF THINGS DID YOU DO
23 THERE?

24 A. WE WERE RESPONSIBLE FOR MONITORING
25 WAGE INCREASES THEY CAME OUT OF COLLECTIVE
26 BARGAINING AGREEMENTS. WE WERE RESPONSIBLE FOR
27 MONITORING PRICE INCREASES, FOR EXAMPLE, EVEN BACK
28 THEN WE CARED ABOUT ENERGY PRICES AND ONE MAJOR

1 CONCERN WAS WHETHER OIL COMPANIES WERE CHARGING TOO
2 MUCH FOR GAS, GIVEN THE PRICE THEY HAD TO PAY FOR
3 THE OIL. SO OUR JOB WAS TO MONITOR THAT.

4 Q. AND THIS WOULD HAVE NO RELEVANCE
5 TODAY, I ASSUME?

6 A. ONLY IN CALIFORNIA AND ILLINOIS, I
7 THINK, IT IS THREE DOLLARS A GALLON.

8 Q. HOW LONG DID YOU REMAIN IN THAT
9 POSITION?

10 A. I WAS THERE UNTIL THE REGAN
11 ADMINISTRATION CAME IN AND, WHEN THEY CAME IN, I
12 LEFT.

13 Q. WHERE DID YOU GO?

14 A. TO THE NATIONAL COMMISSION ON
15 EMPLOYMENT POLICY WHICH IS ALSO IN WASHINGTON.

16 Q. AND WHAT DID YOU DO THERE?

17 A. THAT'S THE GROUP SET UP BY CONGRESS
18 TO ADVISE THEM ON EMPLOYMENT MATTERS AND THERE I
19 DID, WROTE PAPERS, AND I TESTIFIED BEFORE CONGRESS
20 ON EMPLOYMENT ISSUES.

21 Q. HOW LONG DID YOU STAY THERE?

22 A. I STAYED THERE UNTIL THE FOLLOWING
23 SEPTEMBER WHEN I WENT TO DUKE UNIVERSITY AS A FULL
24 PROFESSOR.

25 Q. AS A FULL PROFESSOR IN WHAT AREA?

26 A. AS AN ECONOMIST THERE, I WAS ALSO
27 AN ECONOMIST IN THE BUSINESS SCHOOLS AND THAT'S
28 WHERE I WAS HOUSED WHEN I WENT TO DUKE.

1 Q. OKAY. HOW LONG DID YOU STAY AT
2 DUKE?

3 A. I WAS THERE A FEW YEARS, AND THEN I
4 WAS BROUGHT BACK TO NORTHWESTERN UNIVERSITY,
5 UNIVERSITY OF CHICAGO WHERE I WAS A VISITING
6 PROFESSOR AND A FULL PROFESSOR OF ECONOMICS AT
7 NORTHWESTERN AND THEN EVENTUALLY I WAS BROUGHT BACK
8 TO DUKE UNIVERSITY WITH A UNIVERSITY ENDOWED SHARE
9 WHICH IS THE HIGHEST HONOR THEY HAVE GOT.

10 Q. WHEN DID YOU GO BACK TO DUKE?

11 A. I THINK IT WAS AROUND 1985,
12 SOMEWHERE IN THERE. '85, '88. IT'S A BLUR.

13 Q. AND HOW LONG DID YOU STAY THERE?

14 A. I WAS THERE UNTIL FIVE YEARS AGO
15 WHEN I WENT TO HARVARD LAW SCHOOL.

16 Q. I SEE.

17 WHAT'S YOUR PRESENT POSITION, DO
18 YOU HAVE A SPECIFIC POSITION AS HARVARD LAW SCHOOL?

19 A. IT'S CALLED THE JOHN F. COGAN
20 JUNIOR PROFESSOR OF LAW AND ECONOMICS. AND I AM
21 ALSO A DIRECTOR OF THEIR PROGRAM ON EMPIRICAL LEGAL
22 STUDIES.

23 Q. NOW, YOU SAY YOU ARE THE JOHN F.
24 COGAN PROFESSOR OF LAW AND ECONOMICS, WHAT DOES
25 THAT MEAN?

26 A. JOHN F. COGAN WAS THE HEAD OF THEIR
27 FUND RAISING CAMPAIGN AND HE DONATED OVER 3 MILLION
28 DOLLARS TO FUND MY PROFESSORSHIP. SO IT'S A WAY TO

1 FUND SECRETARIAL EXPENSES AND OTHER ASPECTS OF MY
2 JOB.

3 Q. NOW, YOU ALSO MENTIONED THAT YOU
4 ARE INVOLVED IN ANOTHER, YOU HAVE OTHER
5 RESPONSIBILITIES. CAN YOU TELL US ABOUT THOSE.

6 A. WELL, THIS INVOLVES THE USE OF
7 STATISTICS SO IT IS EMPIRICAL WORK.

8 TRADITIONALLY LAW PROFESSORS ONLY
9 DEALT WITH CONCEPT AND INTERPRETING THE LAW BUT
10 INCREASINGLY LEGAL RESEARCH IS USING DATA AND
11 COURTRROOMS USE DATA AS WELL.

12 SO I HEAD HARVARD LAW SCHOOLS
13 PROGRAM ON THE USE OF DATA TO ANALYZE LEGAL ISSUES.

14 Q. OKAY. DATA MEANING THINGS LIKE
15 SURVEY DATA, DATA COLLECTED FROM DIFFERENT SOURCES?

16 A. EXACTLY.

17 Q. AND HOW YOU CAN WORK THAT INTO A
18 LEGAL PRESENTATION?

19 A. THAT IS RIGHT.

20 Q. LET'S RETURN TO YOUR TEACHING
21 RESPONSIBILITIES OR YOUR RESPONSIBILITY AT HARVARD
22 LAW

23 LET'S TALK ABOUT YOUR TEACHING.
24 WHAT KINDS OF CLASSES DO YOU TEACH?

25 A. WELL, I TEACH COURSES IN
26 REGULATION, GOVERNMENT REGULATION. I AM NOW
27 TEACHING A COURSE ON STATISTICS, USE OF STATISTICS
28 TO ANALYZE LEGAL ISSUES. AND I HAVE TWO SEMINARS

1 THAT I RUN, ONE IS ON HOW PEOPLE BEHAVE OR JURIES
2 AND JUDGES BEHAVE IN THEIR TREATMENT OF RISK, SO
3 ANALYZING JURY BEHAVIOR AND A SEMINAR I JUST
4 COMPLETED IS ON HOW COURTS TREAT SCIENTIFIC
5 EVIDENCE.

6 Q. NOW, WHAT IS IT YOU TEACH AT THE
7 LAW SCHOOL ABOUT STATISTICS, HOW DOES THAT WORK IN?

8 A. WELL, I TEACH THEM EVERYTHING FROM
9 START TO FINISH, HOW YOU WOULD DESIGN A SURVEY, HOW
10 YOU WOULD DRAFT A SURVEY, WHAT KIND OF SURVEY WOULD
11 YOU RUN, WOULD IT BE A TELEPHONE SURVEY, WOULD IT
12 BE AN IN PERSON SURVEY. ONCE YOU GET THE SURVEY
13 DATA, HOW DO YOU ANALYZE IT TO MAKE SURE IT'S A
14 GOOD SURVEY, HOW DO YOU MONITOR THE SURVEY WHILE IT
15 IS TAKING PLACE TO MAKE SURE IT IS SOUND AND THEN
16 ONES YOU GET THE DATA AND START ANALYZING IT, WHAT
17 YOU DO WITH IT TO TRY TO MAKE SENSE OF THE DATA AND
18 TRY AND DRAW SOME CONCLUSIONS FROM IT.

19 Q. ALL RIGHT. NOW, IN ANY OF THESE
20 CLASSES THAT YOU TEACH, DO YOU DEAL WITH THE RISKS
21 OF SMOKING AND CIGARETTE REGULATION?

22 A. IT COMES UP IN EVERY ONE OF MY
23 CLASSES.

24 Q. ALL OF YOUR CLASSES?

25 A. EVERY ONE OF THEM

26 Q. OTHER THAN THESE CLASSES THAT YOU
27 TEACH TO YOUR STUDENTS AT HARVARD, DO YOU TEACH ANY
28 OTHER CLASSES?

1 A. I TEACH IN A LOT OF OTHER PROGRAMS.
2 I TEACH IN PROGRAMS FOR STATE AND FEDERAL JUDGES.
3 I JUST TAUGHT A GROUP OF FEDERAL JUDGES LAST WEEK.

4 I ALSO TEACH GOVERNMENT OFFICIALS
5 ABOUT RISK. I TEACH IN PROGRAMS IN WHICH INDUSTRY
6 OFFICIALS ATTEND AS WELL.

7 Q. DO YOU GIVE LECTURES OUTSIDE OF THE
8 CLASSROOM ON ECONOMICS?

9 A. I DO.

10 Q. AND CAN YOU TELL US ABOUT A FEW OF
11 THOSE?

12 A. SOME OF THESE WOULD BE AS PART OF
13 THESE VARIOUS TEACHING PROGRAMS FOR JUDGES AND FOR
14 GOVERNMENT OFFICIALS. OTHERS WOULD BE IN
15 UNIVERSITIES, WHERE I GIVE TALKS. I HAVE TALKED,
16 GIVEN TALKS AT UCLA, STANFORD, VARIOUS CALIFORNIA
17 SCHOOLS. AND ALSO, I MAKE PRESENTATIONS AT
18 CONFERENCES REGULARLY.

19 Q. I SEE.

20 DO YOU, ASIDE FROM TEACHING, AND
21 ASIDE FROM YOUR ADMINISTRATIVE RESPONSIBILITIES
22 THAT YOU HAVE TOLD US ABOUT, DO YOU ENGAGE IN YOUR
23 OWN RESEARCH?

24 A. YES. THAT'S SUPPOSED TO BE A LARGE
25 PART OF OUR JOB IS DOING RESEARCH.

26 Q. CAN YOU TELL US ABOUT THE RESEARCH
27 THAT YOU DO?

28 A. WELL, FOR THE PAST 25 YEARS, I HAVE

1 BEEN FOCUSING MOSTLY ON HEALTH AND SAFETY RISKS,
2 WORRYING ABOUT HOW PEOPLE PERCEIVE RISK.

3 I STARTED OFF WORRYING ABOUT
4 WORKERS IN JOBS. THEN I STARTED WORRYING ABOUT
5 PRODUCTS, THEN I STARTED WORRYING ABOUT
6 ENVIRONMENTAL RISKS.

7 SO I HAVE PRETTY MUCH TRIED TO
8 COVER THE WHOLE WATER FRONT IN TERMS OF THE KINDS
9 OF RISKS I HAVE WORRIED ABOUT.

10 Q. CAN YOU EXPLAIN TO US, IN LAYMEN'S
11 TERMS, WHAT ALL OF THIS WORK ON RISK HAS TO DO WITH
12 YOUR SPECIALTY OF ECONOMICS?

13 A. WELL, ECONOMICS HAS BEEN CONCERNED
14 WITH RISK FOR CENTURIES.

15 IT USED TO BE YOU WOULD THINK OF
16 RISK AND ECONOMICS ONLY IN TERMS OF FINANCIAL
17 RISKS; WILL I MAKE MONEY IN THE STOCK MARKET THIS
18 WEEK OR WILL I LOSE MONEY. THAT'S A RISK AND YOU
19 HAVE TO HAVE SOME SORT OF RISK BELIEF AND MAKE A
20 JUDGMENT.

21 BUT THE RISKS I HAVE BEEN WORRYING
22 ABOUT ARE JUST AS REAL BUT THEY HAVE A DIFFERENT
23 OUTCOME.

24 MY FOCUS HAS BEEN ON RISKS THAT
25 HAVE HEALTH AND SAFETY CONSEQUENCES FOR PEOPLE AND
26 THOSE ARE JUST AS IMPORTANT AS FINANCIAL RISKS AND
27 THOSE INVOLVE REAL DECISIONS, THEY INVOLVE NOT ONLY
28 WHAT PRODUCT YOU BUY BUT ALSO WHAT JOBS YOU CHOOSE

1 TO TAKE AND SO ON, AND HOW THE GOVERNMENT REGULATES
2 RISK.

3 SO I STUDIED THESE THINGS AS WELL.

4 Q. I SEE.

5 HAVE YOU WON ANY AWARDS FOR YOUR
6 ECONOMICS RESEARCH?

7 A. YES, I HAVE.

8 Q. CAN YOU TELL US ABOUT THOSE.

9 A. WELL, AT HARVARD, I WON THE PRIZE
10 FOR THE BEST UNDERGRADUATE THESIS IN ECONOMICS
11 WHICH DEALT WITH WATER RESOURCE PROJECTS.

12 I WON THE PRIZE FOR THE BEST PH. D.
13 DISSERTATION IN ECONOMICS WHICH WAS, AS I MENTIONED
14 BEFORE, ON JOB SAFETY.

15 THE AMERICAN RISK AND INSURANCE
16 ASSOCIATION HAS GIVEN ME FOUR BOOK OF THE YEAR
17 AWARDS FOR THE BEST BOOK OF THE YEAR.

18 THE WESTERN ECONOMICS ASSOCIATION,
19 WHICH IS THE MAIN ECONOMIC ASSOCIATION FOR THE
20 WESTERN UNITED STATES GAVE ME THEIR ARTICLE OF THE
21 YEAR AWARD.

22 THE ROYAL ECONOMIC SOCIETY BASED IN
23 ENGLAND GAVE ME THEIR ARTICLE OF THE YEAR AWARD.
24 SO A LOT OF AWARDS LIKE THAT.

25 Q. I SEE, OKAY.

26 NOW, YOU HAVE JUST TOLD US THAT YOU
27 WON AN AWARD FOR SOME BOOK YOU PUBLISHED. AND I AM
28 GOING TO ASK IF YOU PUBLISHED ANY BOOKS. NOW, I AM

1 GOING TO ASK HOW MANY HAVE YOU PUBLISHED?

2 A. I THINK THE TALLY IS 17 RIGHT NOW
3 SO ONE OF THEM HAS GONE TO THREE EDITIONS, BUT IT'S
4 ABOUT 17 BOOKS.

5 Q. ON WHAT SUBJECTS?

6 A. ALL BUT MAYBE ONE OR TWO OF THEM
7 ARE ALL ON HEALTH AND SAFETY RISKS, SO PRODUCT
8 SAFETY, CONSUMER PRODUCT SAFETY, JOB SAFETY,
9 ENVIRONMENTAL RISKS AND HAZARD WARNINGS.

10 Q. ASIDE FROM THESE BOOKS, HAVE YOU
11 PUBLISHED ANY ARTICLES?

12 A. YES, OVER 200 ARTICLES.

13 Q. AND WERE THESE IN PEER REVIEWED
14 PUBLICATIONS?

15 A. MOST OF THEM WERE IN PEER REVIEWED
16 PUBLICATIONS, YES.

17 Q. AND WE HAVE HEARD ABOUT PEER
18 REVIEWED PUBLICATIONS. BUT CAN YOU TELL US THE
19 NAMES OF SOME OF THESE PUBLICATIONS, NOT ALL 200,
20 BUT SOME OF THEM?

21 A. WELL, THREE OF THEM, AMERICAN
22 ECONOMICS REVIEW, JOURNAL OF POLITICAL ECONOMY,
23 REVIEW OF THE ECONOMICS AND STATISTICS, THOSE ARE
24 THREE.

25 Q. OKAY. NOW, ARE BOOKS SUBJECT TO
26 THE PEER REVIEW PROCESS ALSO?

27 A. NOT ALL BOOKS BUT MOST OF MY BOOKS
28 HAVE BEEN, ALMOST ALL MY BOOKS HAVE BEEN BECAUSE

1 THEY WERE PUBLISHED BY UNIVERSITY PRESSES, OXFORD
2 UNIVERSITY PRESS, HARVARD UNIVERSITY PRESS, M I. T.
3 PRESS.

4 AND THEY ENGAGES IN A PEER REVIEWED
5 PROCESS, WHERE THEY SEND IT OUT TO PROFESSORS TO
6 REVIEW IT AND PLUS THE UNIVERSITY PRESS ALSO HAS
7 ITS OWN PEER REVIEW PROCESS. SO IT GETS DOUBLE
8 REVIEW

9 Q. NOW, HAVE YOU WRITTEN ANY BOOKS OR
10 ARTICLES THAT DEAL SPECIAL, WITH THE AWARENESS OF
11 RISK AND THE PERCEPTION OF RISK WITH REGARD TO
12 SMOKING?

13 A. YES. I HAVE WRITTEN ONE BOOK
14 DEVOTED EXCLUSIVELY TO SMOKING, ANOTHER BOOK WITH A
15 MAJOR SECTION AND CHAPTER ON SMOKING RISKS AND
16 NUMEROUS ARTICLES DEALING WITH SMOKING RISK
17 BELIEFS.

18 Q. HAVE YOU HELD ANY EDITORIAL
19 POSITIONS ON ECONOMICS JOURNALS?

20 A. YES.

21 Q. CAN YOU TELL US ABOUT THOSE.

22 A. ONCE AGAIN, IT'S ABOUT A DOZEN OF
23 THOSE EDITORIAL POSITIONS, MORE THAN 12. I AM THE
24 FOUNDING EDITOR OF A JOURNAL CALLED THE "JOURNAL OF
25 RISK AND UNCERTAINTY." THAT'S THE JOURNAL I
26 STARTED.

27 AND I HAVE BEEN ON THE BOARD OF
28 AMERICAN ECONOMIC REVIEW, THE REVIEW OF ECONOMICS

1 AND STATISTICS AND NUMEROUS OTHER JOURNALS.

2 Q. HAVE YOU ALSO BEEN A PEER REVIEWER
3 FOR SOME OF THOSE JOURNALS?

4 A. FOR ALL OF THEM PLUS LOTS OF OTHER
5 JOURNALS AS WELL.

6 Q. SO LET'S TURN TO ANOTHER SUBJECT,
7 YOU HAVE TOLD US ABOUT YOUR TEACHING AND YOUR
8 RESEARCH. LET ME ASK YOU, HAVE YOU DONE ANY
9 CONSULTING WORK IN THE AREA OF RISK PERCEPTION?

10 A. YES, I HAVE.

11 Q. TELL US ABOUT THAT, IF YOU WOULD.

12 A. WELL, IT'S BEEN FOR DIFFERENT
13 GROUPS. I HAVE CONSULTED TO PRIVATE COMPANIES WITH
14 RESPECT TO THE DESIGN OF WARNING LABELS. AN
15 EXAMPLE WOULD BE DEXATRIM DIET PILLS WHICH I
16 DESIGNED THE LABEL THAT WAS ON THE MARKET.

17 I HAVE ALSO CONSULTED AND DONE WORK
18 FOR THE UNITED STATES GOVERNMENT ON HAZARD
19 WARNINGS, AS WELL AS BEING INVOLVED IN THIS
20 LITIGATION.

21 Q. HAVE YOU DONE ANY WORK FOR THE
22 NATIONAL SCIENCE FOUNDATION?

23 A. YES. I DID A STUDY FOR THEM ON
24 CONSUMER PRODUCT SAFETY REGULATION.

25 Q. AND WHEN, WHAT IS THAT, WHAT IS
26 CONSUMER PRODUCT SAFETY REGULATION AND WHAT DID YOU
27 DO?

28 A. WELL, I EVALUATED THE EFFORTS OF

1 THE CONSUMER PRODUCT SAFETY COMMISSION IN
2 WASHINGTON.

3 AND THEY HAVE REGULATIONS, THEY ARE
4 THE ONES WHO REGULATE LAWNMOWER SAFETY, CHILDREN' S
5 TOYS. THEY' RE RESPONSIBLE FOR SAFETY CAPS ON
6 BOTTLES AND SO ON. SO I DID A STUDY EVALUATING
7 THEIR REGULATIONS.

8 Q. EVER DO ANY WORK FOR THE UNITED
9 STATES DEPARTMENT OF JUSTICE?

10 A. YES. THE FIRST THING I DID FOR THE
11 U. S. DEPARTMENT OF JUSTICE IS I WORKED ON THE
12 DISCRIMINATION CASES INVOLVING THE CITY OF CISSERO,
13 WHICH, AT THAT TIME, HAD NEVER HAD A BLACK EMPLOYEE
14 IN THE HISTORY OF THE CITY, WHICH WAS SURPRISING
15 BECAUSE IT' S RIGHT ADJACENT TO THE CITY OF CHICAGO.
16 AND ALL THE NEIGHBORHOODS SURROUNDING IT ARE BLACK.

17 AND I DID AN ANALYSIS SHOWING THAT
18 IF THEY HAD A NON-DISCRIMINATORY HIRING PATTERN,
19 THEY WOULD HAVE HAD A 24 PERCENT BLACK WORK FORCE.

20 AS A RESULT OF MY ANALYSIS, WELL,
21 AFTER MY ANALYSIS WAS DONE, THERE WAS AN OUT OF
22 COURT SETTLEMENT WITH THE -- CISSERO AGREED TO
23 DE-SEGREGATE THEIR WORK FORCE.

24 Q. HAVE YOU DONE ANY WORK FOR THE
25 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY?

26 A. YES. I HAVE BEEN WORKING FOR THEM
27 ON A CONTINUOUS BASIS SINCE 1983. SO THEY HAVE
28 BEEN FUNDING MY RESEARCH FOR ALMOST 20 YEARS.

1 Q. WHAT IS IT YOU DO FOR THE E. P. A. ?

2 A. WELL, A NUMBER OF THINGS. ONE
3 THING I HAVE BEEN ON THEIR SCIENCE ADVISORY BOARD
4 ADVISING THEM ON SCIENTIFIC ISSUES. I DID THAT FOR
5 SEVEN YEARS ON ONE BOARD.

6 Q. WE HAVE HEARD ABOUT SCIENTIFIC
7 ADVISORY BOARDS. BUT CAN YOU TELL US JUST A LITTLE
8 BIT ABOUT HOW THE SCIENTIFIC ADVISORY BOARD AT
9 E. P. A. WORKS?

10 A. WELL, IT'S AN OUTSIDE PANEL OF
11 PROFESSORS AND IN THIS CASE, ONE INDUSTRY
12 SCIENTIST.

13 WE ADVISED E. P. A. ON THE USE OF
14 SCIENCE FOR ENVIRONMENTAL POLICY.

15 SO ONE SCIENCE ADVISORY PANEL I WAS
16 ON WAS ON THE CLEAN AIR ACT, ARE WE BEING
17 SUCCESSFUL IN MEETING THE GOALS OF THE CLEAN AIR
18 ACT, MAKING THE AIR CLEANER, AS CLEAN AS CONGRESS
19 SAYS WE SHOULD OR BEYOND PACE FOR THAT.

20 ANOTHER PANEL I WAS ON FOR SEVEN
21 YEARS WAS THE USE OF ECONOMICS TO EVALUATE
22 ENVIRONMENTAL POLICIES.

23 Q. HAVE YOU DONE ANY CONSULTING WORK
24 FOR PRIVATE COMPANIES?

25 A. YES, I HAVE.

26 Q. WHAT HAVE YOU DONE?

27 A. WELL, A NUMBER OF THINGS. IN THE
28 HAZARD WARNING AREA I HAVE CONSULTED TO ANHEUSER

1 BUSH, THE GROCERY MANUFACTURERS' ASSOCIATION,
2 DEXATRIM, DUPONT, A NUMBER OF OTHER COMPANIES ON
3 THE DESIGN OF HAZARD WARNING LABELS.

4 Q. HAS ANY OF YOUR CONSULTING WORK
5 INVOLVED YOUR PREPARING TO TESTIFY AS AN EXPERT
6 WITNESS OR TESTIFYING AS AN EXPERT WITNESS IN
7 LITIGATION?

8 A. YES, IT HAS.

9 Q. AND ABOUT HOW MANY CASES HAVE YOU
10 BEEN INVOLVED IN?

11 A. I THINK ROUGHLY 90 CASES. THAT MAY
12 BE A LITTLE HIGH. BUT IT'S AT LEAST IN THE 80'S.

13 Q. AND OF THOSE, HOW MANY TIMES HAVE
14 YOU TESTIFIED AT TRIAL?

15 A. I DON'T KNOW. I WOULD SAY 20, 25,
16 SOMEWHERE IN THAT BALLPARK.

17 Q. HOW MANY OF THOSE CASES WERE
18 RELATED TO TOBACCO IN SOME WAY?

19 A. THIS IS THE FOURTH TIME I HAVE
20 TESTIFIED IN TRIAL, ALTHOUGH I HAVE BEEN DEPOSED IN
21 SOME OTHER TOBACCO CASES.

22 Q. ABOUT HOW MANY TOBACCO CASES HAVE
23 YOU BEEN INVOLVED IN?

24 A. ABOUT 20 WHERE THEY HAVE CONTACTED
25 ME. BUT A LOT OF THEM, THEY CONTACT YOU AND
26 NOTHING EVER HAPPENS, SO THE CASE DISAPPEARS. BUT
27 I'D SAY 20.

28 Q. AND HAS YOUR WORK IN THOSE CASES

1 RELATED TO THIS AREA OF RISK PERCEPTION AND RISK
2 AWARENESS?

3 A. THAT'S BEEN MY FOCUS, YES.

4 Q. SO LET'S TURN TO THAT, IF WE COULD.
5 AND I'D LIKE TO ASK YOU, WHAT IS
6 RISK PERCEPTION IN THE WAY THAT YOU DEAL WITH IT?

7 A. RISK PERCEPTION IS HOW PEOPLE
8 THEMSELVES THINK ABOUT THE RISK.

9 SO I DISTINGUISH IT FROM WHAT
10 SCIENTISTS SAY THE RISK IS. IT'S NOT THAT, IT'S
11 WHAT'S IN PEOPLE'S HEADS.

12 Q. ISN'T THAT SOMETHING YOU EXPECT A
13 PSYCHOLOGIST RATHER THAN AN ECONOMIST TO BE DEALING
14 WITH?

15 A. SOME PSYCHOLOGISTS DO THIS BUT
16 ECONOMISTS HAVE BEEN DOING THIS FOR YEARS AND WE
17 HAVE BEEN PUBLISHING WORK ON THIS. I HAVE BEEN
18 PUBLISHING WORK IN THIS AREA FOR 25 YEARS.

19 Q. AND WITHIN ECONOMICS SCHOOLS, ARE
20 THERE COURSES THAT ACTUALLY FOCUS ON THIS, ON THE
21 PERCEPTION OF RISK?

22 A. YES. IT'S A KEY COMPONENT OF MANY
23 COURSES BECAUSE IN ANY SITUATION WHERE PEOPLE HAVE
24 TO MAKE MARKET DECISIONS, WHETHER IT'S BUYING A
25 PRODUCT, PICKING WHERE TO LIVE, WHICH JOB TO TAKE,
26 YOU HAVE TO MAKE YOUR OWN PERSONAL JUDGMENT
27 REGARDING THE RISK AND THAT'S AN IMPORTANT ASPECT
28 OF YOUR ECONOMIC DECISIONS.

1 Q. ARE THERE ECONOMICS JOURNALS THAT
2 FOCUS ON RISK PERCEPTION?

3 A. WELL, WE HAVE MY JOURNAL FOR
4 STARTERS, THE JOURNAL OF RISK AND UNCERTAINTY,
5 WHICH HAS BEEN AROUND SINCE THE 1980'S AND MANY
6 OTHER JOURNALS HAVE A LARGE NUMBER OF ARTICLES THAT
7 DEAL WITH RISK PERCEPTION AND HOW PEOPLE MAKE
8 DECISIONS INVOLVING RISK.

9 Q. NOW, IN EVALUATING OR IN DEALING
10 WITH RISK PERCEPTION, DO YOU WORK WITH STATISTICAL
11 INFORMATION?

12 A. YES, I DO.

13 Q. AND IN WHAT WAY, HOW DO YOU USE IT?

14 A. WELL, I GET DATA ON PEOPLE'S RISK
15 BELIEFS AND I ANALYZE THAT DATA.

16 SO IT COULD BE ANALYZING HOW THOSE
17 RISK BELIEFS EFFECT BEHAVIOR, IT COULD BE ON HOW TO
18 DESIGN HAZARD WARNINGS TO INFLUENCE RISK BELIEFS.
19 SO I LOOK AT IT A LOT OF DIFFERENT WAYS. BUT ONE
20 WAY, ONE IMPORTANT THING I DO IS ALSO PREPARE
21 PEOPLE'S RISK BELIEFS WITH WHAT THE TRUE RISKS ARE,
22 TO FIGURE OUT IF THEIR RISK BELIEFS ARE ON TARGET.

23 Q. CAN YOU TELL THE JURY ABOUT SOME OF
24 YOUR STUDIES IN THE AREA OF RISK PERCEPTION, WHAT
25 IS IT THAT YOU ACTUALLY LOOK AT?

26 A. WELL, LET ME JUST DO SOME OF THE
27 ONES I HAVE DONE FOR E. P. A.

28 E. P. A. WANTED TO KNOW HOW TO DESIGN

1 THE HAZARD WARNING LABELS FOR HAS HAZARDOUS
2 CHEMICALS AND PESTICIDES SO THAT THEY WOULD BE
3 EFFECTIVE. SO WHEN PEOPLE BUY THESE PRODUCTS, THEY
4 SHOULD KNOW HOW DANGEROUS THEY ARE. AND WHEN THEY
5 USE THE PRODUCTS, THEY SHOULD KNOW WHAT PRECAUTIONS
6 THEY SHOULD TAKE WHEN USING THEM

7 SO I HAVE RUN A SERIES OF STUDIES
8 FOR E. P. A. ON DIFFERENT LABEL FORMAT, BOXES AROUND
9 THE LABEL, CHANGES IN PRINT SIZE, DIFFERENT THINGS
10 YOU MIGHT PUT IN THE LABEL.

11 AND IT'S BEEN FOR A WIDE RANGE OF
12 PRODUCT, EVERYTHING FROM HOUSEHOLD BLEACH, DRAIN
13 OPENER, INSECTICIDES, YOU KNOW, A SERIES OF
14 PRODUCTS FOR WHICH WE HAVE DEVELOPED GUIDELINES FOR
15 EFFECTIVE. WARNINGS.

16 Q. DID YOUR WORK IN THIS AREA RESULT
17 IN ANY PUBLICATION?

18 A. YES. IT'S LED TO MANY ARTICLES AS
19 WELL AS TWO PEER REVIEWED BOOKS, ONE HARVARD
20 UNIVERSITY PRESS, ONE M. I. T. PRESS BOOK.

21 Q. AND DO YOU CONTINUE TO THIS DAY TO
22 DO RISK PERCEPTION CONSULTING FOR E. P. A. ?

23 A. I DO. RIGHT NOW WE ARE WORRIED
24 ABOUT THE RISKS TO WATER QUALITY AND WE ARE RUNNING
25 A NATIONAL SURVEY FOR E. P. A. ON HOW PEOPLE THINK
26 ABOUT RISK TO WATER QUALITY AND HOW THEY VALUE
27 CLEAN WATER, CLEAN LAKES, RIVERS AND STREAMS.

28 Q. NOW, IN ADDITION TO WORKING WITH

1 STATISTICS IN YOUR RISK PERCEPTION WORK, DO YOU
2 ALSO WORK WITH SURVEY DATA?

3 A. YES, I DO.

4 Q. AND IS THIS PRETTY ROUTINE IN THIS
5 AREA?

6 A. YES. IN FACT, GIVE OR TAKE MAYBE
7 ONE YEAR, I THINK I HAVE BEEN IN THE FIELD,
8 NON-STOP, RUNNING SURVEYS FOR E. P. A. SINCE 1983.
9 WE ARE DOING ONE NOW

10 Q. WHEN DID YOU FIRST BEGIN WORKING
11 WITH SURVEY DATA?

12 A. WELL, MY FIRST WORK WITH SURVEY
13 DATA WAS IN 1981 AND AT THAT TIME THE GOVERNMENT
14 WAS THINKING ABOUT REQUIRING LABELING OF HAZARDOUS
15 CHEMICALS IN THE WORKPLACE BUT NOBODY REALLY KNEW
16 MUCH ABOUT WHETHER THEY WOULD WORK OR NOT.

17 SO I DEVELOPED A SURVEY THAT WE
18 ADMINISTERED ON 400 WORKERS AT FOUR DIFFERENT
19 CHEMICAL PLANTS TO SEE IF HAZARD WARNING LABELS FOR
20 CHEMICALS WOULD, IN FACT, BE SUCCESSFUL IN ALERTING
21 WORKERS TO DANGERS ON THE JOB.

22 Q. WOULD IT BE FAIR TO SAY THEN THAT
23 FOR THE LAST 25 YEARS OR SO, MUCH OF YOUR WORK AND
24 YOUR RESEARCH HAS INVOLVED THE PREPARATION AND
25 ANALYSIS OF SURVEY DATA?

26 A. THAT IS CORRECT.

27 Q. AND ARE THERE CERTAIN STANDARDS
28 THAT YOU APPLY IN EVALUATING WHETHER A SURVEY IS

1 GOING TO BE APPROPRIATE AND ACCURATE AND ACCOMPLISH
2 WHAT IT IS SUPPOSED TO ACCOMPLISH?

3 A. YES, THERE ARE.

4 Q. IS THIS A DEMONSTRATIVE THAT YOU
5 PREPARED?

6 A. IT IS.

7 Q. MR. CLERK, WHAT'S THE NEXT EXHIBIT
8 IN ORDER, DO YOU KNOW?

9 THE CLERK: 11, 065.

10 MR. CARLTON: ALL RIGHT, THIS IS EXHIBIT
11 11, 065.

12

13 * (EXHIBIT 11, 065,
14 DEMONSTRATIVE, MARKED FOR I. D.)

15

16 Q BY MR. CARLTON: PROFESSOR, CAN
17 YOU TELL US WHAT DOES THIS DEMONSTRATIVE SHOW, WHAT
18 ARE YOU TRYING TO TELL US HERE.

19 A. THIS IS A LIST OF DESIRED
20 CHARACTERISTICS FOR A SURVEY, IN TERMS OF THINGS
21 YOU WOULD WANT TO WATCH OUT FOR WHEN DESIGNING A
22 SURVEY.

23 Q. SO THE FIRST ONE THAT YOU HAVE GOT
24 LISTED HERE IS, PERHAPS, OBVIOUS, BUT MAYBE YOU CAN
25 TELL US MORE ABOUT IT. "QUESTIONS MUST BE WORDED
26 PROPERLY," WHAT DO YOU MEAN?

27 A. WELL, IF PEOPLE CAN'T UNDERSTAND
28 THE QUESTION, THEN YOU DON'T HAVE A GOOD SURVEY,

1 THAT'S ONE FOR STARTERS.

2 SO PEOPLE SHOULD BE ABLE TO MAKE
3 SENSE OF THE QUESTION WHEN YOU ASK IT. IF IT'S TOO
4 COMPLICATED, THEN THAT WOULD NOT BE A GOOD SURVEY
5 QUESTION.

6 AND I PUT PARENTHESIS THERE, THERE
7 MUST BE A RIGHT ANSWER.

8 USUALLY YOU LIKE SURVEY QUESTIONS,
9 ONCE PEOPLE HAVE ANSWERED IT, YOU KNOW, WITH
10 RESPECT TO SOME TRUE REFERENCE POINT, YOU KNOW, IF
11 THEY HAVE GIVEN THE RIGHT ANSWER. SO IF YOU ASK
12 THEIR AGE, YOU KNOW, IN YEARS, THEY'D SAY I AM 35.

13 BUT IF THEIR ANSWER WAS I FEEL
14 PRETTY YOUNG, YOU KNOW, WE DON'T KNOW WHAT TO DO
15 WITH THAT.

16 SO WE LIKE TO KNOW AT LEAST, BE
17 ABLE TO RUN WITH THE ANSWER ONES WE GET IT.

18 Q. SO YOU LIKE TO FRAME A QUESTION
19 THAT WILL GIVE YOU AN ANSWER THAT CAN BE
20 OBJECTIVELY COMPARED TO SOMETHING?

21 A. THAT IS CORRECT.

22 Q. AND WHAT ELSE DO YOU HAVE HERE?

23 A. "THE ORDER OF THE QUESTION SHOULD
24 NOT BIAS THE RESULTS."

25 SO IF YOU GIVE PEOPLE INFORMATION
26 IN THE FIRST QUESTION THAT'S GOING TO CHANGE THEIR
27 ANSWERS TO THE SECOND QUESTION, GENERALLY THAT'S
28 NOT A GOOD THING BECAUSE YOU ARE DISTORTING THE

1 RESULTS TO THE SECOND QUESTION.

2 Q. HOW MIGHT THIS OCCUR, CAN YOU THINK
3 OF ANY EXAMPLES?

4 A. WELL, I CAN THINK OF EVEN OF SOME
5 SURVEYS THAT HAVE BEEN DONE ON SMOKING WHERE THEY
6 WELL, YOU KNOW, RESTATEMENTS, YOU KNOW, REGARDING
7 CIGARETTES, AND IF THESE ARE NOT TRUE STATEMENTS OR
8 IF THEY ARE DISTORTED STATEMENTS, THEN THEY COULD
9 TELL PEOPLE THINGS THEY DIDN' T KNOW GOING INTO THE
10 SURVEY.

11 SO YOU ESSENTIALLY WANT PEOPLE NOT
12 TO LEARN AS PART OF THE SURVEY PROCESS.

13 Q. ALL RIGHT. THEN THE NEXT THING YOU
14 HAVE GOT HERE, STILL UNDER THE MAIN HEADING OF
15 "QUESTIONS MUST BE WORDED PROPERLY." IS "WORDING
16 OF THE QUESTION SHOULD NOT BIAS THE RESULTS. "

17 HOW COULD THAT HAPPEN?

18 A. SOMETIMES SOME OF THESE QUESTIONS
19 LIKE, YOU KNOW, DO YOU REGRET SUCH AND SUCH, TEND
20 TO TILT RESPONSES IN A PARTICULAR DIRECTION.

21 SO WE WANT NEUTRAL QUESTIONS ABOUT
22 THINGS THAT DON' T PUSH PEOPLE ONE WAY OR THE OTHER
23 IN TERMS OF THEIR ANSWERS.

24 Q. SO A QUESTION THAT WOULD FORCE A
25 RESPONDENT TO MAKE A JUDGMENT ABOUT THEMSELVES IN
26 SOME FASHION MIGHT TEND TO BIAS THE RESULTS?

27 A. WELL, THAT IS CERTAINLY THE CASE.
28 I HAVE ENCOUNTERED NUMEROUS SITUATIONS, YOU ASK

1 PEOPLE, ARE YOU BETTER THAN AVERAGE, WORSE THAN
2 AVERAGE, OR AVERAGE, MOST PEOPLE DON'T WANT TO SAY,
3 WELL, WORSE THAN AVERAGE.

4 SO IF YOU ASK PEOPLE, ARE YOU AN
5 ABOVE AVERAGE DRIVER OR BELOW AVERAGE DRIVER, 80
6 PERCENT OF THE PEOPLE SAY THAT THEY ARE ABOVE
7 AVERAGE BECAUSE PEOPLE DON'T WANT TO FIND FAULT
8 WITH THEMSELVES.

9 SO YOU DON'T WANT TO ASK A QUESTION
10 THAT'S GOING TO MAKE PEOPLE FEEL BAD. YOU WANT TO
11 ASK PEOPLE QUESTIONS THAT GET THEM TO ASSESS THE
12 RISKS WITHOUT HAVING TO FIND FAULT WITH THEMSELVES.

13 Q. AND THIS IS THE KIND OF THING YOU
14 HAVE TO PAY ATTENTION TO WHEN YOU DRAFT THIS
15 SURVEY, YOU CAN'T CORRECT FOR IT AFTERWARDS?

16 A. THAT IS CORRECT. ONCE YOU HAVE
17 WRITTEN THE SURVEY, THE QUESTIONS ARE THE
18 QUESTIONS, AND YOU CAN'T FIX IT AFTER THE FACT.

19 Q. ALL RIGHT. THEN THE LAST ISSUE YOU
20 HAVE GOT LISTED HERE UNDER NUMBER 1 IS "QUESTIONS
21 MUST PERMIT RESPONSES THAT ARE MEANINGFUL FOR
22 STATISTICAL ANALYSIS."

23 IS THAT PRETTY SIMILAR TO THE FIRST
24 ISSUE HERE, THERE MUST BE A RIGHT ANSWER?

25 A. I THINK WE COVERED SOME OF THAT UP
26 ABOVE. IN FACT, I DID A LITTLE EXPERIMENT ON MY
27 CLASS. I ASKED THEM, ARE YOU VERY HAPPY OR
28 SOMEWHAT HAPPY? AND FOR THE PEOPLE WHO WERE

1 SOMEWHAT HAPPY, HOW MUCH MONEY WOULD YOU NEED TO
2 MAKE YOU VERY HAPPY.

3 WELL, THERE'S A BIG RANGE ACROSS
4 THE CLASS IN TERMS OF HOW MUCH MONEY PEOPLE NEEDED
5 TO MAKE THEM GO FROM SOMEWHAT HAPPY TO VERY HAPPY.

6 SO YOU DON'T KNOW WHAT IT MEANS
7 WHEN PEOPLE SAY "I AM SOMEWHAT HAPPY."

8 SO WE WANT QUESTIONS WHERE WE CAN
9 REALLY PIN DOWN THE ANSWER.

10 Q. OKAY. NOW, THE SECOND CRITERION
11 YOU HAVE GOT LISTED HERE FOR A PROPER SURVEY IS
12 "THE RESULTS MUST BE STATISTICALLY SIGNIFICANT."
13 WHAT DOES THAT MEAN?

14 A. WHAT I MEAN IS THAT IF THERE IS
15 REALLY AN EFFECT OUT THERE, SO IF THERE IS
16 SOMETHING THAT WE ARE TRYING TO FIND AND IT REALLY
17 DOES EXIST, WE SHOULD HAVE A LARGE ENOUGH SAMPLE TO
18 PIN DOWN THIS EFFECT, RELIABLY, FROM THE STANDPOINT
19 OF STATISTICAL SIGNIFICANCE. SO THAT WE CAN BE
20 CONFIDENT OF SAYING, YES, THERE'S SOMETHING THERE,
21 IF THERE IS, IN FACT, SOMETHING THERE.

22 Q. CAN YOU GIVE US AN EXAMPLE OF A
23 RESULT, SAY, THAT WOULD NOT BE STATISTICALLY
24 SIGNIFICANT?

25 A. WELL, IF THERE'S, YOU KNOW, ONE
26 CHANCE IN, YOU KNOW, 100,000 THAT PEOPLE CAN
27 DEVELOP A RARE DISEASE AND YOU ONLY ANSWERED --
28 INTERVIEWED TEN PEOPLE, YOU WOULDN'T HAVE TALKED TO

1 ENOUGH PEOPLE TO PIN DOWN A RISK OF ONE IN A
2 HUNDRED THOUSAND. YOU NEED TO INTERVIEW A LOT OF
3 PEOPLE. BECAUSE THE RISK IS SO TINY, IF YOU JUST
4 TALKED TO TEN PEOPLE, THE RISK MIGHT BE OUT THERE
5 BUT YOU WOULDN'T KNOW IT BECAUSE YOU DIDN'T
6 INTERVIEW ENOUGH PEOPLE.

7 Q. THE THIRD CRITERION "MUST BE ABLE
8 TO REPLICATE THE RESULTS."

9 CAN YOU TELL US ABOUT THAT ONE?

10 A. WELL, I MEAN THAT TWO WAYS. FIRST,
11 IF YOU TOOK -- IF I GAVE YOU MY SURVEY AND YOU WENT
12 OUT AND RAN IT, YOU SHOULD BE ABLE TO GET THE SAME
13 RESULTS.

14 SO WITHOUT HAVING MY REVIEWERS DO
15 IT, IF YOU RAN THE SURVEY, YOU SHOULD BE ABLE TO
16 FIND THE SAME NUMBERS.

17 AND THE SECOND AREA OF REPLICATION
18 HAS TO DO WITH THE ANALYSIS. IF I TURN OVER MY
19 DATA TO YOU, YOU SHOULD BE ABLE TO CRUNCH THE
20 NUMBERS THE SAME WAY I DID AND GET SIMILAR ANSWERS
21 USING THE DATA, SO YOU SHOULD BE ABLE TO REPLICATE
22 MY CALCULATIONS AS WELL.

23 Q. AND THEN LASTLY, "THE RESULTS
24 SHOULD BE SUBJECTED TO PEER REVIEW"

25 WHY IS THAT?

26 A. WELL, IDEALLY WE WANTED OTHER
27 PROFESSORS OR RESEARCHERS IN THE FIELD TO EVALUATE
28 THE WORK. AND USUALLY THE PEER REVIEW PROCESS IS

1 PART OF PUBLICATION. BUT SOMETIMES YOU SET UP YOUR
2 OWN PEER REVIEW PROCESS LIKE OUR E. P. A. GRANT, WE
3 HAVE OUR OWN PEER REVIEW PROCESS WHERE WE HAVE A
4 SERIES OF PROFESSORS AROUND COUNTRY REVIEW OUR WORK
5 AT EACH STEP OF THE WAY, JUST BECAUSE GOVERNMENT
6 WANTS TO MAKE SURE THAT THEY'RE SPENDING THIS MONEY
7 THAT THEY ARE GETTING THEIR MONEY'S WORTH.

8 Q. SO IT'S A WAY OF CHECKING ON THE
9 QUALITY OF THE WORK?

10 A. QUALITY CONTROL AS WELL AS A CHECK
11 ON WHETHER IT'S ORIGINAL, USUALLY.

12 Q. SO WHAT YOU DO WITH THIS, THESE
13 SURVEYS THAT YOU PUT TOGETHER IN ACCORDANCE WITH
14 THESE PRINCIPLES IS YOU GO OUT, YOU INTERVIEW
15 PEOPLE AND YOU GET DATA; RIGHT?

16 A. THAT IS CORRECT.

17 Q. HOW IS IT THAT, AND IN YOUR CASE,
18 IT RELATES TO RISK?

19 A. THAT IS RIGHT.

20 Q. SO YOU HAVE GOT ALL THIS DATA ON
21 PEOPLE'S PERCEPTIONS OF RISK.

22 HOW DO YOU ANALYZE IT?

23 A. WELL, THE FIRST STEP, IF I WERE TO
24 GET A SURVEY THAT I DIDN'T RUN IS I LOOK AT THE
25 SURVEY ITSELF, WAS THIS A GOOD SURVEY.

26 SECOND, USUALLY THE DATA IS
27 COMPUTERIZED, SO YOU LOOK AT THE ACTUAL ANSWERS TO
28 THE QUESTION AND SEE IF THEY MAKE SENSE.

1 SO WERE THEY CODED PROPERLY, WERE
2 THERE OBVIOUS MISTAKES ON CODING.

3 THEN YOU ANALYZE IT STATISTICALLY
4 USING COMPUTER PACKAGES, SO A COMPUTER PROGRAM IS
5 USED TO ANALYZE THE DATA.

6 Q. AND DO YOU -- WELL, DO YOU COMPARE
7 PEOPLE'S PERCEPTIONS OF RISK WITH ACTUAL RISK?

8 A. WELL, THAT'S WHAT I HAVE BEEN
9 DOING.

10 SO IN THE CASE OF SMOKING RISKS,
11 THE KEY ISSUE FOR POLICY HAS BEEN, ARE PEOPLE'S
12 RISK BELIEF HIGH ENOUGH COMPARED TO WHAT THE TRUE
13 RISKS OF SMOKING ARE. AND THAT'S HOW I GOT INTO
14 THIS FROM A POLICY STANDPOINT.

15 AND TRYING TO SEE IF PEOPLE
16 UNDERSTOOD THE RISK OF SMOKING.

17 Q. WHAT HAVE YOU DONE TO DETERMINE THE
18 TRUE RISK OF SMOKING?

19 A. WELL, I DIDN'T USE MY OWN NUMBERS.
20 WHAT I DID IS I GOT DATA FROM THE SURGEON GENERAL,
21 I GOT DATA FROM THE NATIONAL CANCER INSTITUTE, AND
22 I USED THAT DATA TO DEVELOP ESTIMATES OF WHAT THE
23 TRUE RISKS OF SMOKING ARE.

24 SO I DIDN'T ADJUST THESE ESTIMATES
25 IN ANY WAY. I DIDN'T TINKER WITH THEM I
26 ESSENTIALLY TOOK WHAT THE GOVERNMENT AND THE
27 SURGEON GENERAL SAID AT FACE VALUE AND SAID THOSE
28 ARE THE TRUE RISKS OF SMOKING, DO PEOPLE BELIEVE

1 THE RISKS ARE THAT HIGH.

2 Q. ALL RIGHT. LET'S TURN TO THIS
3 CASE, IF WE COULD.

4 WHAT HAVE YOU BEEN ASKED TO DO IN
5 THIS CASE?

6 A. I HAVE BEEN ASKED TO EVALUATE
7 WHETHER PEOPLE ARE AWARE OF SMOKING RISK
8 INFORMATION, WHETHER PEOPLE PERCEIVE RISKS OF
9 SMOKING, AND WHETHER THESE RISK PERCEPTIONS ARE
10 SUFFICIENTLY HIGH, GIVEN THE TRUE RISKS OF SMOKING.

11 Q. DO YOU HAVE OPINIONS ON THOSE
12 SUBJECTS?

13 A. I DO.

14 Q. WHAT ARE THEY?

15 A. I BELIEVE THAT THERE IS, IN FACT,
16 SUBSTANTIAL RISK AWARENESS, IN TERMS OF RECEIVING
17 INFORMATION. IN FACT, RIGHT NOW, AS WELL AS FOR A
18 LONG PERIOD OF TIME, PEOPLE HAVE ACTUALLY OVER-
19 ESTIMATED THE RISKS OF SMOKING, RATHER THAN UNDER-
20 ESTIMATED THEM

21 Q. SMOKERS AS WELL?

22 A. SMOKERS AS WELL.

23 Q. CAN YOU TELL US WHAT MATERIALS HAVE
24 YOU RELIED UPON IN FORMULATING THESE OPINIONS?

25 A. WELL, I HAVE RELIED UPON SEVERAL
26 TYPES OF INFORMATION. FIRST, I USE, FOR THE
27 EARLIER ERA, PUBLIC OPINION POLLS, BECAUSE THAT'S
28 ALL WE HAVE IN TERMS OF SURVEY DATA.

1 ALSO, FOR THE EARLY YEARS, I
2 PRESENTED INFORMATION BASED ON STATEMENTS FROM
3 PUBLIC HEALTH OFFICIALS ON WHAT INFORMATION WAS OUT
4 THERE.

5 I HAVE REVIEWED ALL THE REPORTS OF
6 THE SURGEON GENERAL'S, FOR EXAMPLE.

7 AND THEN FINALLY I USED SURVEYS
8 THAT I HAVE ANALYZED MYSELF OR WHICH I HAVE RUN
9 MYSELF ON SMOKING RISK BELIEFS FROM 1985 FORWARD.

10 Q. OKAY. LET'S FOCUS, FIRST OF ALL,
11 ON THE POLLS, THE SURVEYS THAT YOU REVIEWED.

12 ARE THERE DIFFERENT KINDS OF POLLS
13 THAT YOU HAVE LOOKED AT, DO THEY FALL INTO
14 CATEGORIES?

15 A. YES.

16 Q. WHAT ARE THOSE?

17 A. WELL, A LOT OF BINS I CAN PUT THEM
18 IN BUT ONE CATEGORY WOULD BE SURVEYS OF RISK
19 AWARENESS, WHAT HAVE YOU HEARD ABOUT THE RISK AND
20 SURVEYS OF RISK BELIEF, WHAT DO YOU BELIEVE THE
21 RISK TO BE.

22 Q. OKAY. RISK AWARENESS SURVEYS.

23 WHAT DO YOU MEAN BY THAT, WHAT IS A
24 RISK AWARENESS SURVEY?

25 A. THESE WOULD BE SURVEYS CONCERNING
26 WHAT PEOPLE HAVE HEARD, WHAT INFORMATION THEY HAVE
27 GOTTEN WITH RESPECT TO SMOKING RISKS.

28 SO "HAVE YOU HEARD ABOUT A

1 GOVERNMENT STUDY SAYING SMOKING CAUSES LUNG
2 CANCER?" THAT WOULD BE A RISK AWARENESS TYPE OF
3 SURVEY.

4 Q. AND WHAT KINDS OF RISK AWARENESS
5 POLLS HAVE YOU LOOKED AT?

6 A. I HAVE LOOKED AT GALLUP POLLS,
7 PRINCIPALLY.

8 Q. CAN YOU TELL US A LITTLE BIT ABOUT
9 THOSE.

10 A. THESE ARE NATIONAL PUBLIC OPINION
11 POLLS DATING BACK, MOST OF THEM STARTED IN THE
12 1950'S, 1954, 1957, ASKING IF PEOPLE HAD HEARD
13 ABOUT VARIOUS STUDIES THAT HAD COME OUT LINKING
14 SMOKING TO CANCER.

15 Q. GALLUP IS A RELIABLE ORGANIZATION,
16 ISN'T IT?

17 A. IT'S POSSIBLY THE NUMBER 1 SURVEY
18 OUTFIT IN THE COUNTRY.

19 Q. ALL RIGHT. HAVE YOU PREPARED A
20 DEMONSTRATIVE TO TELL US A LITTLE BIT ABOUT WHAT
21 YOU HAVE LEARNED FROM THE GALLUP POLLS?

22 A. I HAVE.

23 Q. AND THIS IS DEFENSE EXHIBIT 11066.

24

25 * (EXHIBIT 11, 066,
26 DEMONSTRATIVE, MARKED FOR I. D.)

27

28 Q BY MR. CARLTON: IS THIS THE

1 DEMONSTRATIVE YOU JUST REFERRED TO?

2 A. THAT IS.

3 Q. WHAT DOES THIS TELL US?

4 A. THE QUESTION THEY ASKED WAS, "HAVE
5 YOU HEARD OR READ ANYTHING RECENTLY TO THE EFFECT
6 THAT CIGARETTE SMOKING MAY BE A CAUSE OF CANCER OF
7 THE LUNG?"

8 AND THESE SURVEYS STARTED IN 1954
9 WHICH IS WHEN THERE WAS A LOT OF MEDIA COVERAGE OF
10 THESE THINGS.

11 AND 83 PERCENT OF THE PEOPLE IN
12 JANUARY '54, SAID, YES, THEY HAD HEARD ABOUT
13 CIGARETTES, THE STUDIES SAYING CIGARETTE SMOKING
14 MAY BE A CAUSE OF CANCER OF THE LUNG.

15 BY JUNE, WE HAD 90 PERCENT. SO IN
16 1954, 83 TO 90 PERCENT HAD HEARD ABOUT THE
17 CIGARETTE SMOKING LUNG CANCER LINKAGE.

18 Q. NOW, THE NEXT COLUMN TO THE RIGHT
19 SAYS 1957, AND THEN THERE'S A LITTLE ASTERISKS. IT
20 SAYS "RECENT REPORT OF THE AMERICAN CANCER
21 SOCIETY. "

22 WHAT'S THAT MEAN?

23 A. INSTEAD OF HEARING ABOUT JUST
24 CIGARETTE SMOKING AND LUNG CANCERS, HAVE YOU HEARD
25 ABOUT THE RECENT REPORT OF THE AMERICAN CANCER
26 SOCIETY LINKING SMOKING TO LUNG CANCER. AND 82
27 PERCENT.

28 WHAT IS REALLY STRIKING ABOUT THIS,

1 THIS IS JUST ONE REPORT. IF 82 PERCENT OF THE
2 AMERICAN PUBLIC HAD HEARD ABOUT THIS SINGLE REPORT
3 OF THE AMERICAN CANCER SOCIETY, WHICH IS VERY, VERY
4 SUBSTANTIAL RISK AWARENESS.

5 Q. ALL RIGHT. AND THEN THERE'S A JUMP
6 FROM '57 TO '99.

7 A. THEY DON'T ASK THESE QUESTIONS ALL
8 THE TIME, SO THE NEXT TIME THEY ASKED IT WAS 1999.
9 AND THERE YOU GET 85 PERCENT.

10 SO IN TERMS OF PEOPLE HEARING THAT
11 THERE'S A CIGARETTE SMOKING LUNG CANCER LINKAGE,
12 THE NUMBERS WE HAVE GOT, '54, '57, '99, THEY ARE
13 ALL REALLY SIMILAR.

14 Q. ALL RIGHT. AND HOW IS ALL OF THIS
15 RELEVANT TO YOUR OPINIONS?

16 A. IT TELLS ME AT LEAST IN TERMS OF
17 INFORMATION BEING OUT THERE, POSSIBLY LINKING
18 CIGARETTE SMOKING TO LUNG CANCER. AT LEAST THAT
19 POSSIBILITY OF A LINKAGE HAS BEEN KNOWN TO THE
20 PUBLIC SINCE 1954. THERE'S BEEN AWARENESS OF THE
21 POSSIBILITY OF A LINKAGE.

22 Q. ALL RIGHT. NOW, THAT'S -- THESE
23 ARE AWARENESS SURVEYS; RIGHT?

24 A. THAT IS CORRECT.

25 Q. YOU HAVE TOLD US ALSO THERE ARE
26 BELIEF SURVEYS?

27 A. THAT IS RIGHT.

28 Q. WHAT'S A BELIEF SURVEY?

1 A. WELL, "AWARE" IS WHAT YOU HAVE
2 HEARD ABOUT. "BELIEF" IS WHAT ARE YOUR OWN RISK
3 BELIEFS REGARDING THIS SMOKING LUNG CANCER LINK.
4 FOR EXAMPLE, DO YOU PERSONALLY BELIEVE SMOKING IS
5 RISKY.

6 Q. AND DID YOU RUN ACROSS ANY SURVEYS
7 THAT MEASURED THAT?

8 A. YES. THE GALLUP POLL RAN LOTS OF
9 SURVEYS ON THIS.

10 Q. ALL RIGHT, AND YOU HAVE PREPARED A
11 DEMONSTRATIVE ILLUSTRATING THOSE RESULTS?

12 A. I HAVE.

13 Q. IS THIS IT?

14 A. THAT'S IT.

15 Q. AND THIS IS EXHIBIT 11067.

16

17 * (EXHIBIT 11, 067,
18 DEMONSTRATIVE, MARKED FOR I. D.)

19

20 Q BY MR. CARLTON: AND AGAIN, THIS
21 IS A SURVEY BASED UPON -- THIS IS A CHART BASED
22 UPON GALLUP SURVEYS?

23 A. THAT IS CORRECT.

24 Q. THIS GALLUP SURVEY -- WELL. LET ME
25 JUST TAKE THAT BACK.

26 TELL US WHAT THIS SHOWS.

27 A. WELL, THIS CHART, SMOKING RISK
28 BELIEFS IN TERMS OF WHETHER YOU THINK CIGARETTE

1 SMOKING IS HARMFUL STARTS BACK IN 1949 WHEN 60
2 PERCENT OF THE AMERICAN PUBLIC THOUGHT SMOKING WAS
3 HARMFUL.

4 BY 1980, WE ARE AROUND 90 PERCENT.
5 AND SINCE THAT WE HAVE BEEN AROUND 90 PERCENT.

6 SO AT LEAST IN TERMS OF THIS CHART
7 IT INDICATES THAT THERE'S BEEN RISING AWARENESS
8 THAT SMOKING IS HARMFUL BUT EVEN AS FAR BACK AS
9 1949, 60 PERCENT OF THE PUBLIC THOUGHT SMOKING WAS
10 HARMFUL.

11 Q. AND IN YOUR EXPERIENCE, CONDUCTING
12 RISK AWARENESS SURVEYS, ARE THESE NUMBERS AT THE
13 HIGH END, LOW END, IN THE MIDDLE, IN TERMS OF
14 AWARENESS? HOW DO THESE COMPARE TO OTHER RISK
15 AWARENESS SURVEYS YOU HAVE SEEN?

16 A. THIS IS HIGH RISK AWARENESS, I
17 WOULD CALL THIS STRONG.

18 Q. AND THIS DEALS, THESE SURVEYS DEAL
19 WITH WHETHER SMOKING IS HARMFUL.

20 HAVE YOU LOOKED AT SURVEYS
21 CONCERNING LUNG CANCER IN PARTICULAR?

22 A. YES, I HAVE.

23 Q. AND IS THIS A DEMONSTRATIVE YOU
24 HAVE PREPARED REFLECTING THE RESULTS OF THOSE
25 SURVEYS?

26 A. IT IS.

27 Q. THIS IS EXHIBIT 11068.

28 /// /// ///

1 * (EXHIBIT 11, 068,
2 DEMONSTRATIVE, MARKED FOR I. D.)

3

4 Q BY MR. LEITER: AND AGAIN, THIS IS
5 DERIVED FROM GALLUP SURVEYS?

6 A. IT IS.

7 Q. CAN YOU TELL US WHAT THIS SHOWS.

8 A. WELL, THIS GOES BACK TO 1949 AS
9 WELL, AND ON THE VERTICAL AXIS, WHAT WE ARE
10 PLOTTING HERE IS THE PERCENT OF THE RESPONDENTS WHO
11 SAY, YES, I THINK CIGARETTE SMOKING IS ONE OF THE
12 CAUSES OF LUNG CANCER.

13 AND AS YOU CAN SEE BY 1999, 1990,
14 WE ARE WELL PAST 90 PERCENT BELIEVING CIGARETTES IS
15 ONE OF THE CAUSES OF LUNG CANCER.

16 Q. OKAY.

17 NOW, YOU HAVE PREPARED A SECOND
18 DEMONSTRATIVE REGARDING THESE PARTICULAR SURVEYS, I
19 BELIEVE, WHICH HAS AN ADDITIONAL LINE?

20 A. THIS LINE ADS THE UNDECIDED.

21 SO IT IS INTERESTING, WHEN GALLUP
22 RAN THESE SURVEYS, YOU COULD ANSWER YES, NO, AND A
23 LOT OF PEOPLE SAID "I AM UNDECIDED. "

24 I HAVE HEARD ABOUT THESE VARIOUS
25 STUDIES LINKING SMOKING TO LUNG CANCER, BUT I
26 HAVEN'T MADE UP MY OWN MIND AS TO WHETHER SMOKING
27 IS ONE OF THE CAUSES OF LUNG CANCER, SO I AM
28 UNDECIDED.

1 Q. HOW IS THAT RELEVANT TO YOUR
2 OPINIONS?

3 A. WELL, IF YOU COMBINE THE PEOPLE WHO
4 SAY, EITHER YES, IT'S A CAUSE OF LUNG CANCER OR,
5 YOU KNOW, I AM ON THE FENCE, I AM UNDECIDED, IT'S
6 CRUISING ALONG AT, 80 PERCENT, SOMEWHERE CLOSE TO
7 80 PERCENT, EVEN BEFORE 1960.

8 SO THERE'S BEEN ENORMOUS, EITHER
9 BELIEF THAT SMOKING CAUSES LUNG CANCER OR ELSE, YOU
10 KNOW, YOU ARE UNDECIDED AND HAVEN'T MADE UP YOUR
11 MIND ABOUT THIS DEBATE FOR THE PAST 40 YEARS.

12 Q. I SEE. BY THE WAY, THIS IS DEFENSE
13 EXHIBIT 11069.

14

15 * (EXHIBIT 11, 069,
16 DEMONSTRATIVE, MARKED FOR I. D.)

17

18 Q BY MR. CARLTON: HAVE YOU LOOKED
19 AT SURVEYS QUESTIONING PEOPLE ABOUT THEIR BELIEFS
20 AS TO THE RISK OF OTHER DISEASES BESIDES LUNG
21 CANCER?

22 A. I HAVE LOOKED AT SURVEYS WITH
23 RESPECT TO THROAT CANCER, HEART DISEASE, MANY OTHER
24 AILMENTS WITH RESPECT TO SMOKING AND YOU GET
25 SIMILAR KINDS OF PATTERNS.

26 Q. ALL RIGHT. LET'S JUST LOOK AT ONE
27 OF THOSE. AND THIS IS 11070.

28

/// /// ///

1 * (EXHIBIT 11, 070,
2 DEMONSTRATIVE, MARKED FOR I. D.)

3

4 Q BY MR. CARLTON: WHAT DOES THIS
5 DEMONSTRATIVE SHOW US?

6 A. THIS IS WHETHER YOU THINK CIGARETTE
7 SMOKING IS ONE OF THE CAUSES OF HEART DISEASE.

8 AND BACK IN THE EARLY ERA OF THE
9 1950'S YOU HAD UNDER 40 PERCENT OF THE PUBLIC THAT
10 THOUGHT THAT WAS TRUE.

11 AFTER THE '64 SURGEON GENERAL'S
12 REPORT, IT'S ROUGHLY 50 PERCENT OF THE POPULATION.
13 AND NOW IT'S ABOUT 80 PERCENT OF THE POPULATION WHO
14 THINKS CIGARETTE SMOKING IS ONE OF THE CAUSES OF
15 HEART DISEASE.

16 Q. NOW, WE HAVE HEARD FROM A MR.
17 FERREE IN THIS CASE THAT THERE WASN'T A CONSENSUS
18 IN THIS COUNTRY THAT CIGARETTE SMOKING CAUSED LUNG
19 CANCER UNTIL THERE WAS A 90 PERCENT RESPONSE RATE
20 IN THESE BELIEF POLLS.

21 DO YOU HAVE AN OPINION ABOUT THAT?

22 A. YES, I DO.

23 Q. WHAT'S YOUR OPINION?

24 A. WELL, UNTIL I READ HIS TESTIMONY, I
25 HAD NEVER HEARD OF PEOPLE TALKING ABOUT 90 PERCENT
26 AS BEING A CONSENSUS LEVEL. WHEN YOU RUN THESE
27 OPINION POLLS, IT'S REALLY, REALLY, HARD TO GET A
28 HUNDRED PERCENT OR EVEN 90 PERCENT ON ANYTHING.

1 Q. WHY IS THAT?

2 A. SOME PEOPLE, WHEN YOU CALL PEOPLE
3 UP ON THE PHONE, MAY NOT UNDERSTAND THE QUESTION.
4 THEY WILL SAY "I DON'T KNOW." OR THEY WILL
5 MISINTERPRET THE QUESTION.

6 SOME THINGS MAY BE WRITTEN DOWN
7 INCORRECTLY.

8 SO THAT EVEN THINGS YOU MIGHT THINK
9 ARE COMMON KNOWLEDGE, THAT EVERYBODY SHOULD KNOW,
10 YOU HARDLY EVER GET A HUNDRED PERCENT.

11 Q. 90 PERCENT, WHY IS THAT SO
12 UNREASONABLE?

13 A. YOU DON'T EVEN GET 90 PERCENT THAT
14 EASILY.

15 IN THIS CASE, I THINK THERE'S
16 ANOTHER REASON IT IS UNREASONABLE, WHOLLY APART
17 FROM POLLS. THE ASPECT OF POLLS, IT'S CALLED THE
18 CEILING EFFECT, IT'S HARD TO GET A HUNDRED PERCENT.

19 THERE'S THE OTHER THING IS THAT
20 QUESTION IS, IS SMOKING ONE OF THE CAUSES OF LUNG
21 CANCER.

22 AND I NEVER LIKED THAT QUESTION
23 BECAUSE IT MAY MEAN, IF YOU SMOKE, DOES THAT MEAN
24 YOU DEFINITELY A HUNDRED PERCENT SURE GET LUNG
25 CANCER. THAT'S ONE WAY YOU COULD DEFINITELY GET
26 IT. ANOTHER WAY YOU MIGHT DEFINITELY GET IT IS
27 WORKING IN A HAZARDOUS FACTORY WHERE YOU ARE
28 EXPOSED TO HAZARDOUS EMISSIONS, BUT THIS WHOLE

1 CAUSE LANGUAGE MAY BE MISINTERPRETED BY PEOPLE IN
2 TERMS OF THINKING THAT, YES, IF I SMOKE, I
3 DEFINITELY HAVE TO GET LUNG CANCER. YOU KNOW, I
4 THINK THERE'S A PROBABILITY I WILL GET LUNG CANCER
5 BUT I DON'T THINK IT'S FOR SURE. OR I THINK
6 THERE'S A PROBABILITY BUT I DON'T THINK IT'S OVER
7 50 PERCENT. AND IF YOU THINK IT'S NOT OVER 50
8 PERCENT, OR IF YOU THINK IT'S NOT A HUNDRED
9 PERCENT, YOU MAY JUST SAY NO.

10 Q. SO BASED ON THE QUESTION, DO YOU
11 THINK SMOKING CAUSES LUNG CANCER, YOU DON'T REALLY
12 KNOW WHAT STANDARDS THE PEOPLE WERE APPLYING WHEN
13 THEY ANSWERED THE QUESTION?

14 A. RIGHT. WE DON'T KNOW WHAT'S GOING
15 THROUGH PEOPLE'S HEADS WHEN THEY INTERPRETED THE
16 QUESTION.

17 Q. ARE THERE OTHER POLLS THAT YOU HAVE
18 LOOKED AT THAT SORT OF PUT THIS 90 PERCENT
19 CONSENSUS FIGURE THAT MR. FERREE GAVE US INTO SOME
20 PERSPECTIVE?

21 A. YES, THERE ARE. THESE ARE GALLUP
22 POLLS RUN BY THE TOP POLLING ORGANIZATIONS. SO
23 THESE ARE RELIABLE POLLS.

24 Q. ALL RIGHT. IS THIS ANOTHER
25 DEMONSTRATIVE YOU HAVE PREPARED?

26 A. IT IS.

27 Q. THIS IS 11071.

28 /// /// ///

1 * (EXHIBIT 11, 071,
2 DEMONSTRATIVE, MARKED FOR I. D.)

3
4 Q BY MR. CARLTON: CAN YOU TELL US
5 WHAT THIS DEMONSTRATIVE SHOWS US?

6 A. WELL, THE FIRST TWO THINGS IN
7 ORANGE ARE FOR SMOKING. SO THE FIRST THING IN
8 ORANGE IS THE BAR, 90 PERCENT OF THE PEOPLE HAD
9 HEARD OR READ ANYTHING RECENTLY TO THE EFFECT THAT
10 CIGARETTE SMOKING MAY BE HARMFUL TO HEALTH, THAT
11 WAS THE GALLUP, '54 POLL THAT WE TALKED ABOUT.

12 THE NEXT ONE, THE NEXT ORANGE ONE,
13 GALLUP, '77, THESE PEOPLE SAID, YES TO THE
14 QUESTION, DO YOU THINK SMOKING IS HARMFUL OR NOT.

15 Q. THIS IS A 1977 POLL?

16 A. THAT IS RIGHT.

17 NOW, THE REST OF THESE THINGS
18 PERTAIN TO POLLS REGARDING WHAT I THINK ARE
19 WELL-KNOWN FACTS.

20 WELL, THEY ARE TRUE FACTS, ANYWAY.

21 THE FIRST THING, DOES THE -- CAN
22 YOU IDENTIFY CORRECTLY THAT THE EARTH REVOLVES
23 AROUND THE SUN AS OPPOSED TO VICE-VERSA.

24 79 PERCENT OF THE PUBLIC GOT THAT
25 RIGHT. THAT THE EARTH GOES AROUND THE SUN.

26 Q. SO ON THE AWARENESS OF THE EARTH
27 REVOLVING AROUND THE SUN, 21 PERCENT OF PEOPLE
28 DIDN'T GET THAT ONE?

1 A. RIGHT. THIS IS '99, I THINK, IS
2 THAT MY READING OF IT.

3 Q. YES.

4 A. 1999.

5 Q. WHAT'S THE NEXT ONE TO THE RIGHT
6 THERE?

7 A. THE NEXT ONE, I BELIEVE, AS I
8 RECALL, FROM 1996, CAN YOU IDENTIFY AL GORE AS
9 BEING THE VICE-PRESIDENT OF THE UNITED STATES.

10 70 PERCENT OF THE AMERICAN PUBLIC
11 COULD IDENTIFY THAT AL GORE WAS THE VICE-PRESIDENT
12 OF THE UNITED STATES.

13 THIS IS FOUR YEARS AGO WHEN HE
14 REALLY WAS THE VICE-PRESIDENT OF THE UNITED STATES.

15 SO 30 PERCENT WHO CAN'T -- THAT'S
16 PROBABLY WHY HE LOST. SORRY.

17 Q. MOVING TO THE RIGHT.

18 A. THAT WAS NOT AN OPINION.

19 THE NEXT ONE IS THE MOST POPULAR
20 T. V. SHOW OR ONE OF THE MOST POPULAR T. V. SHOWS NOW
21 IS HOSTED BY REGIS PHILBIN AND CAN YOU IDENTIFY
22 REGIS PHILBIN AS THE HOST OF "WHO WANTS TO BE A
23 MILLIONAIRE." AND ONLY 66 PERCENT OF THE AMERICAN
24 PUBLIC COULD DO THAT.

25 Q. WHAT'S THE NEXT ONE?

26 A. THE NEXT ONE, IN MICHAEL JORDAN'S
27 LAST YEAR, I BELIEVE HIS LAST YEAR, HE WAS THE
28 N. B. A. M. V. P. AND STAR OF THE CHICAGO BULLS

1 BASKETBALL TEAM AND REMAINS THE WORLD'S MOST FAMOUS
2 ATHLETE. ONLY 62 PERCENT OF THE AMERICAN PUBLIC
3 COULD IDENTIFY MICHAEL JORDAN AS BEING, YOU KNOW,
4 THE N. B. A. AND M. V. P., CHICAGO BULLS STAR.

5 Q. WHAT'S THE LAST ONE ON THE RIGHT
6 THERE?

7 A. THE LAST ONE, THIS WAS RUN BACK IN,
8 I BELIEVE, IT SAYS '96 OR SO, WHEN THE "SEINFELD"
9 SHOW WAS THE TOP SHOW ON T. V. ONLY 55 PERCENT OF
10 THE AMERICAN PUBLIC COULD IDENTIFY JERRY SEINFELD
11 AS BEING THE STAR OF THE "SEINFELD" SHOW.

12 Q. SO WHAT DOES ALL OF THIS TELL YOU
13 ABOUT THE AWARENESS OF SMOKING?

14 A. IT TELLS US THE AWARENESS IS
15 REALLY, REALLY HIGH. SO IF YOU GET THESE KINDS OF
16 AWARENESS NUMBERS THAT WE HAVE BEEN SEEING, EVEN
17 NUMBERS LESS THAN 90 PERCENT, THESE COMPARE
18 FAVORABLY WITH PEOPLE'S AWARENESS OF BASIC,
19 EVERYDAY FACTS OF OUR LIFE THAT YOU WOULD THINK
20 EVERYBODY KNEW, BUT DOESN'T ALWAYS SHOW UP IN
21 SURVEYS, NOT BECAUSE PEOPLE DON'T KNOW ALL THESE
22 THINGS, BUT BECAUSE THEY MAY NOT UNDERSTAND THE
23 QUESTION, IT MAY NOT BE CODED PROPERLY AND SO ON.

24 Q. ALL RIGHT. WE HAVE TALKED ABOUT A
25 LOT OF SURVEYS. BUT ARE SURVEYS LIKE THIS THE BEST
26 WAY TO UNDERSTAND WHETHER PEOPLE ADEQUATELY
27 UNDERSTOOD THE RISKS OF SMOKING?

28 A. I PREFER -- THIS IS THE BEST SURVEY

1 EVIDENCE WE HAVE BEFORE '85, BUT BEGINNING WITH
2 1985, WE HAD BETTER SURVEY EVIDENCE.

3 Q. WELL, WHY IS THIS THE BEST EVIDENCE
4 WE HAVE BEFORE 1985?

5 A. WELL, WE CAN'T GO BACK IN TIME AND
6 RUN OUR OWN SURVEY. SO WE MIGHT WANT TO SAY, WHAT
7 WERE PEOPLE'S RISK BELIEFS IN 1956, USING A RISK
8 BELIEF QUESTION THAT WE LIKE, YOU KNOW, A BETTER
9 RISK QUESTION. SO WE DESIGN OUR OWN QUESTION TO
10 REALLY PIN THIS DOWN. BUT WE CAN'T GO BACK IN TIME
11 TO ADMINISTER THE SURVEY. WE HAVE TO RELY ON
12 WHATEVER SURVEYS ARE AVAILABLE FOR BACK THEN.

13 Q. ALL RIGHT. WELL, IS THERE OTHER
14 INFORMATION YOU CAN RELY UPON TO HELP YOU FIRM UP
15 YOUR UNDERSTANDING OF WHAT PEOPLE KNEW BACK THEN
16 AND WHAT THEY THOUGHT?

17 A. WHAT I DID, I LOOKED AT WHAT PUBLIC
18 HEALTH OFFICIALS SAID BACK THEN REGARDING WHAT
19 INFORMATION WAS OUT THERE, IN THE PUBLIC DOMAIN AND
20 THE EXTENT OF PEOPLE'S KNOWLEDGE.

21 Q. AND IS THIS SOMETHING THAT IS
22 TYPICALLY DONE IN THE AREA OF MEASURING RISK
23 PERCEPTION, RISK AWARENESS?

24 A. YES, BECAUSE IT PROVIDES
25 INFORMATION REGARDING WHAT INFORMATION WAS
26 ACCESSIBLE TO THE PUBLIC, AND IT PROVIDES AN
27 EXPERT'S ASSESSMENT OF WHAT INFORMATION THEY
28 RECEIVED.

1 Q. AND HAVE YOU SELECTED A FEW OF
2 THESE PUBLIC STATEMENTS?

3 A. YES, I HAVE.

4 Q. ALL RIGHT. WHAT'S THIS FIRST ONE
5 HERE?

6 A. THIS IS THE SURGEON GENERAL OF THE
7 UNITED STATES, LEROY BURNEY, IN 1957, TESTIFYING
8 BEFORE THE U. S. HOUSE OF REPRESENTATIVES, U. S.
9 CONGRESS.

10 "OUR POSITION IS THAT WE
11 HAVE INFORMED THE PUBLIC THROUGH THE
12 EXCELLENT COVERAGE OF THE PRESS, RADIO
13 AND T. V. , WE HAVE INFORMED THE
14 OFFICIAL HEALTH AGENCIES IN THE STATES
15 WHO ARE RESPONSIBLE FOR THIS AREA, AND
16 WE HAVE INFORMED THE AMERICAN MEDICAL
17 ASSOCIATION, RECOGNIZING THAT MANY
18 PEOPLE WILL GO TO THEIR OWN PHYSICIANS
19 FOR ADVICE. "

20 Q. HE WAS TALKING ABOUT WHAT?

21 A. SMOKING RISKS.

22 Q. THIS, BY WAY, IS EXHIBIT 11072.

23

24 * (EXHIBIT 11, 072,
25 DEMONSTRATIVE, MARKED FOR I. D.)

26

27 Q BY MR. CARLTON: THAT WAS IN 1957?

28 A. THAT IS CORRECT.

1 Q. AND LET'S LOOK AT THE NEXT ONE, OH,
2 THERE IT IS.

3 YOU HAVE GOT THIS STATEMENT OF DR.
4 JOHN HELLER, THE NATIONAL CANCER INSTITUTE. WHAT
5 DID HE HAVE TO SAY?

6 A. I BELIEVE IT IS ACTUALLY DIRECTOR
7 OF THE NATIONAL CANCER INSTITUTE.

8 Q. THIS, AGAIN, IS 1957?

9 A. THAT IS CORRECT.

10 Q. AND THIS IS EXHIBIT 11, 073.

11

12 * (EXHIBIT 11, 073,
13 DEMONSTRATIVE, MARKED FOR I. D.)

14

15 THE WITNESS: AND WHAT HE SAYS AT THE
16 SAME U. S. CONGRESS HEARINGS:

17 "NEWSPAPERS, RADIO, T. V. AND
18 OTHER MEDIA HAVE DONE AN EXCELLENT JOB
19 COVERING THIS PROBLEM AND A VERY
20 OBJECTIVE JOB, THIS IS AN EXCEEDINGLY
21 VIABLE WAY OF INFORMING THE PUBLIC. "

22 Q BY MR. CARLTON: AND THERE'S YET
23 ANOTHER ONE, THIS IS EXHIBIT 11, 074. CAN YOU TELL
24 US WHAT THIS STATEMENT IS?

25 A. I THINK THIS IS AN INTERESTING
26 STATEMENT. THIS IS FROM THE EXECUTIVE
27 VICE-PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION,
28 DR. BLASINGAME.

1 Q BY MR. CARLTON: WE HAVE MOVED UP
2 TO 1964 FROM '57?

3 A. '64 IS THE YEAR OF THE RECORD ON
4 SMOKING AND HEALTH. AND THIS IS A LETTER THAT
5 DR. BLASINGAME WROTE ON BEHALF OF THE A. M. A. TO THE
6 FEDERAL TRADE COMMISSION. WHAT THE LETTER SAID
7 WAS:

8 "WITH RESPECT TO CIGARETTES,
9 CAUTIONARY LABELING CANNOT BE
10 ANTICIPATED TO SERVE THE PUBLIC
11 INTEREST WITH ANY PARTICULAR DEGREE OF
12 SUCCESS. THE HEALTH HAZARDS OF
13 EXCESSIVE SMOKING HAVE BEEN WELL
14 PUBLICIZED FOR MORE THAN TEN YEARS AND
15 ARE COMMON KNOWLEDGE. LABELING WILL
16 NOT ALERT EVEN THE YOUNG CIGARETTE
17 SMOKER TO ANY RISK OF WHICH HE IS NOT
18 ALREADY AWARE. "

19

20 * (EXHIBIT 11, 074,
21 DEMONSTRATIVE, MARKED FOR I. D.)

22

23 Q BY MR. CARLTON: ALL RIGHT, AND DO
24 YOU HAVE ANOTHER DEMONSTRATIVE?

25 A. I DO.

26 Q. ALL RIGHT. IS THIS IT?

27 A. I HAVE THIS ONE AND MORE.

28 Q. AND THIS IS 11, 075?

1 A. YES.

2 THIS IS SURGEON GENERAL WILLIAM
3 STEWART, AND THIS IS AT THE WORLD CONFERENCE ON
4 SMOKING AND HEALTH WHERE HE SAID:

5 "TODAY, AT LEAST HERE IN THE
6 UNITED STATES, A SUBSTANTIAL MAJORITY
7 OF THE PEOPLE HAVE BEEN EXPOSED TO THE
8 SCIENTIFIC EVIDENCE AND HAVE ACCEPTED
9 IT. "

10

11 * (EXHIBIT 11, 075,
12 DEMONSTRATIVE, MARKED FOR I. D.)

13

14 Q BY MR. CARLTON: AND THEN LASTLY,
15 YOU HAVE GIVEN US A STATEMENT OF DR. DANIEL HORN.
16 WHO IS DR. DANIEL HORN?

17 A. DR. DANIEL HORN IS ONE-HALF OF THE
18 HAMMOND AND HORN RESEARCH TEAM THESE WERE THE
19 RESEARCHERS WHO PUT THE SMOKING, LUNG CANCER RISK
20 ON THE MAP IN TERMS OF SCIENTIFIC STUDIES AND HE IS
21 THE DIRECTOR OF THE NATIONAL CLEARINGHOUSE FOR
22 SMOKING AND HEALTH.

23 Q. WHAT IS THAT?

24 A. THAT WAS THE GOVERNMENT AGENCY
25 RESPONSIBLE FOR PROVIDING INFORMATION TO THE PUBLIC
26 ON SMOKING AND HEALTH.

27 Q. AND IN -- WHAT YEAR IS THIS,
28 DO YOU KNOW?

1 A. 1968.

2 Q. WHAT DID DR. HORN HAVE TO SAY?

3 A. HE SAID "YOU COULD STAND ON A ROOF
4 TOP AND SHOUT 'SMOKING IS DANGEROUS' AT THE TOP OF
5 YOUR LUNGS AND YOU WOULD NOT BE TELLING ANYONE
6 ANYTHING THEY DID NOT ALREADY KNOW "

7 Q. NOW, HOW ARE ALL OF THESE
8 STATEMENTS RELEVANT TO YOUR OPINION?

9 A. WHAT THESE STATEMENTS DO IS THAT
10 THEY REINFORCE THE RESULTS OF THE GALLUP POLLS.
11 THEY TELL US THAT SMOKING RISK INFORMATION WAS IN
12 THE PUBLIC DOMAIN, 1950'S, 1960'S.

13 Q. BESIDES THESE SORT OF HISTORICAL
14 SURVEYS THAT WE HAVE LOOKED AT AND THESE
15 STATEMENTS, ARE THERE OTHER SURVEYS THAT YOU HAVE
16 LOOKED AT THAT CAN TELL US WHETHER THE PUBLIC NOT
17 ONLY KNOWS OF THE RISKS OF SMOKING BUT ADEQUATELY
18 UNDERSTANDS THOSE RISKS?

19 A. YES, THERE ARE.

20 Q. OKAY. AND WHAT ARE THOSE SURVEYS,
21 WHAT CAN YOU TELL US ABOUT THEM?

22 A. IT'S A SERIES OF SURVEYS UNDERTAKEN
23 BEGINNING IN 1985. I RAN MY OWN SURVEY IN '91.
24 THERE WAS ANOTHER SURVEY IN '97 AND '98 THAT WE
25 WILL BE TALKING ABOUT AND THESE ARE SURVEYS THAT
26 ASK PEOPLE A RISK BELIEF QUESTION WHERE WE WILL
27 ACTUALLY BE ABLE TO COMPARE THE ANSWER TO THE RISK
28 BELIEF QUESTION TO THE SURGEON GENERAL'S ESTIMATES

1 TO FIGURE OUT IF RISK BELIEFS ARE TOO HIGH OR TOO
2 LOW

3 Q. SO WERE THE QUESTIONS DIFFERENT
4 THAN IN THE GALLUP SURVEYS?

5 A. THAT'S RIGHT. THE QUESTIONS ARE
6 DIFFERENT, THEY ACTUALLY GET A NUMBER, IN TERMS OF
7 HOW RISKY SMOKING IS, SO IT'S IN TERMS OF LET'S
8 SAY, RISK TO SMOKERS OF GETTING LUNG CANCER, OUT OF
9 A HUNDRED SMOKERS, HOW MANY OF THEM DO YOU THINK
10 WILL GET LUNG CANCER BECAUSE THEY SMOKE?

11 Q. ALL RIGHT. WELL, WE WILL TURN TO
12 THE SURVEYS IN A MINUTE. BUT LET ME ASK YOU THIS:
13 DID YOU STUDY ALL OF THESE SURVEYS IN PREPARATION
14 FOR LITIGATION?

15 A. NO.

16 Q. WHY DID YOU LOOK AT THEM?

17 A. WELL, THE ORIGINAL SURVEY, 1985
18 SURVEY, I DID OBTAIN FROM A LAW FIRM THAT HAD RUN
19 IT AS PART OF LITIGATION. THEY GAVE IT TO ME FOR
20 USE IN MY RESEARCH. SO I HAVE BEEN USING THESE
21 SURVEYS AS PART OF MY RESEARCH, WRITING ARTICLES
22 AND BOOKS ON SMOKING RISK BELIEFS.

23 Q. I SEE. AND IN FACT, HAVE YOU
24 PUBLISHED ARTICLES IN BOOKS IN WHICH YOU RELY ON
25 YOUR ANALYSIS OF THESE SURVEYS?

26 A. YES, I HAVE PUBLISHED PEER REVIEWED
27 ARTICLES IN BOOKS, USING THESE SURVEYS, ONE BOOK,
28 BUILT ALMOST ENTIRELY AROUND ONE OF THESE SURVEYS.

1 Q. WHAT WAS THE NAME OF THAT BOOK?

2 A. "SMOKING, MAKING THE RISKY
3 DECISION."

4 Q. AND YOU HAVE PUBLISHED OTHER
5 ARTICLES ALSO BUILT AROUND THESE SURVEYS; CORRECT?

6 A. THAT IS CORRECT.

7 Q. THESE WERE PEER REVIEWED?

8 A. YES, THEY WERE.

9 Q. SO LET'S GO BACK TO THESE SURVEYS
10 AND TALK ABOUT THEM A BIT. HOW DID YOU ANALYZE
11 THEM?

12 A. WELL, I OBTAINED THE SURVEY DATA
13 AND THE SURVEY ITSELF. SO I EVALUATED THE SURVEY
14 QUESTIONS, I EXAMINED THE RAW STATISTICS, I DID A
15 COMPUTER ANALYSIS OF THE DATA AND ALSO I RAN MY OWN
16 SURVEY TO VERIFY THE VALIDITY OF THESE SURVEY
17 RESULTS.

18 Q. ALL RIGHT. HOW MANY OF THESE
19 SURVEYS ARE WE TALKING ABOUT?

20 A. FOUR. ONE WAS A LOCAL SURVEY IN
21 NORTH CAROLINA WHERE I WAS BACK AT DUKE AND THREE
22 LARGER SCALE STUDIES.

23 Q. LET'S START WITH THE FIRST ONE. I
24 THINK YOU MENTIONED THAT WAS FROM 1985?

25 A. THAT IS CORRECT.

26 Q. WHAT SURVEY WAS THAT, CAN YOU TELL
27 THE JURY ABOUT IT?

28 A. THAT WAS A SURVEY THAT WAS

1 COMMISSIONED BY LAW FIRMS REPRESENTING THE
2 CIGARETTE INDUSTRY AND IT WAS RUN BY A NATIONAL
3 SURVEY RESEARCH FIRM CALLED AUDITS AND SURVEYS, AND
4 IT WAS A NATIONAL TELEPHONE SURVEY POLLING PEOPLE
5 ABOUT RISKS OF SMOKING.

6 Q. WHAT WAS THE SAMPLE SIZE THERE?

7 A. IT WAS 3,000 PEOPLE, OVER 3,000.

8 Q. AND DID IT COMPARE SMOKERS AND
9 NON-SMOKERS?

10 A. IT DID.

11 Q. WELL, LET'S LOOK AT WHAT THIS
12 SURVEY FOUND. IS THIS A DEMONSTRATIVE THAT YOU
13 HAVE PREPARED WITH REGARD TO THIS 1985 SURVEY?

14 A. IT IS.

15 Q. WHAT DOES IT SHOW?

16 A. WELL, THE QUESTION IN THE SURVEY
17 WAS THE FOLLOWING: "OF EVERY 100 SMOKERS, HOW MANY
18 OF THEM DO YOU THINK WILL GET/LUNG CANCER BECAUSE
19 THEY SMOKE?"

20 AND THE AVERAGE ANSWER WAS 43,
21 PEOPLE THOUGHT 43 OUT OF 100 SMOKERS WOULD GET LUNG
22 CANCER BECAUSE THEY SMOKE.

23 Q. NOW, WHY IS THIS QUESTION
24 DIFFERENT, HOW WOULD YOU USE IT DIFFERENTLY THAN
25 THE QUESTIONS FROM THE EARLIER GALLUP POLLS?

26 A. WELL, IN AN EARLIER GALLUP POLL, IF
27 THEY ASKED, DO CIGARETTES CAUSE LUNG CANCER, WE
28 DON'T KNOW CAUSE WITH WHAT PROBABILITY. NO MATTER

1 FROM THE LAW FIRM ABOUT THIS SURVEY?

2 A. I OBTAINED A COPY OF THE SURVEY
3 TEXT, A REPORT THAT AUDITS AND SURVEYS DID OF THE
4 ANALYSIS, AND I GOT FROM AUDITS AND SURVEYS, THE
5 SURVEY FIRM ALL OF THE DATA AS WELL AS I TALKED TO
6 THEM ABOUT THE ADMINISTRATION OF THE SURVEY TO
7 INSURE THAT IT WAS, IN FACT, ADMINISTERED SOUNDLY.

8 SO, FOR EXAMPLE, THE NATURE OF THE
9 SURVEYS, WHEN THEY CALL PEOPLE UP, THIS IS JUST A
10 SURVEY FROM AUDITS AND SURVEYS, THIS IS NOT -- THEY
11 DID NOT IDENTIFY WHO WAS SPONSORING THIS SURVEY IN
12 ANY WAY.

13 Q. SO WHEN THE LAW FIRM GAVE YOU SOME
14 OF THIS MATERIAL, DID THEY ASK YOU TO ANALYZE IT?

15 A. I FIRST DID AN ANALYSIS TO VERIFY
16 THE AUDITS AND SURVEYS REPORT OF THE DATA. AFTER
17 THAT POINT, THEY JUST TURNED ME LOOSE WITH THE DATA
18 AND SAID DO WHATEVER YOU WANT WITH IT AND I DID IT.

19 Q. DID THEY PUT ANY CONDITIONS ON WHAT
20 YOU COULD DO WITH IT?

21 A. NO.

22 Q. SO MAYBE YOU HAVE ALREADY TOLD US
23 THIS, BUT WHAT WAS IT, EXACTLY, THAT YOU DID,
24 IN ORDER TO ASSURE YOURSELF THAT THIS WAS A
25 PROPERLY CONDUCTED SURVEY?

26 A. WELL, I DESCRIBED EARLIER WHAT I
27 DID WHEN I GOT THE DATA ITSELF, LOOKING AT THE
28 SURVEY, LOOKING AT THE DATA, TALKING TO PEOPLE WHO

1 RAN THE SURVEY. BUT I DID SOMETHING ELSE AS WELL.
2 I RAN MY OWN SURVEY. SO I WANTED
3 TO SEE WOULD I GET THE SAME KINDS OF ANSWERS IF I
4 RAN THE SURVEY INSTEAD OF THEM AND I ALSO TRIED
5 DIFFERENT WORDINGS OF THE QUESTION TO SEE IF THIS
6 IS A NATURAL WAY FOR PEOPLE TO THINK ABOUT THE
7 QUESTION.

8 SO I RAN IT IN NORTH CAROLINA. SO
9 ONE QUESTION WOULD BE, INSTEAD OF SEVERAL HUNDRED
10 SMOKERS, I WOULD SAY OUT OF EVERY TWO MILLION
11 SMOKERS IN NORTH CAROLINA, HOW MANY OF THEM DO YOU
12 THINK WILL GET LUNG CANCER AND SO ON.

13 AND WHEN THIS SURVEY WAS RUN, I HAD
14 STUDENTS, GRADUATE STUDENTS RUN THE SURVEY. PEOPLE
15 INVARIABLY ANSWERED IN PERCENTAGE TERMS, YOU KNOW,
16 40 PERCENT WILL GET LUNG CANCER.

17 AND THAT TOLD ME THAT THIS IS A
18 GOOD WAY, A NATURAL WAY TO ASK THE QUESTION.

19 AND THIS WAY OF ASKING RISK
20 QUESTIONS IS WELL ESTABLISHED IN THE LITERATURE,
21 NOT JUST ON SMOKING, BUT ON OTHER RISK AS WELL.

22 Q. NOW, AT THE BEGINNING OF YOUR
23 TESTIMONY, YOU GAVE US SOME CRITERIA FOR EVALUATING
24 WHETHER A SURVEY IS PROPERLY CONDUCTED. WE TALKED
25 ABOUT THOSE.

26 YOUR OPINION, DID THIS, THIS
27 SURVEY, THIS 1985 SURVEY, MEET THOSE CRITERIA?

28 A. YES, IT DID.

1 Q. HAVE YOU RELIED ON THIS SURVEY IN
2 YOUR OWN PUBLICATIONS?

3 A. YES, I HAVE.

4 Q. YOU SAID THERE WERE FOUR SURVEYS
5 AFTER 1985. THIS IS THE FIRST ONE, WHEN WAS THE
6 NEXT ONE?

7 A. WELL, THE NEXT ONE, I AM NOT SURE
8 IF IT MADE A BAR CHART, BUT THAT WAS MY 1991 SURVEY
9 IN NORTH CAROLINA.

10 SEVERAL HUNDRED PEOPLE, WHERE
11 INSTEAD OF ASKING OUT OF A HUNDRED SMOKERS, HOW
12 MANY OF THEM YOU THINK WILL GET LUNG CANCER, I
13 ASKED, HOW MANY WILL DIE FROM LUNG CANCER BECAUSE
14 THEY SMOKE. AND THEN YOU GET VERY SIMILAR ANSWERS.

15 AND I ASKED OTHER QUESTIONS AS WELL
16 RELATING TO MORTALITY RISK, OVERALL AND LIFE
17 EXPECTANCY LOSS.

18 Q. AND YOUR SAMPLE SIZE THERE WAS
19 WHAT?

20 A. I THINK IT WAS A FEW HUNDRED
21 PEOPLE, 300.

22 Q. AND DO YOU RECALL WHAT THE RESULTS
23 OF THAT SURVEY WERE?

24 I THINK WE HAVE A COPY OF IT HERE.
25 IS THIS A COPY OF A BOOK YOU HAVE
26 WRITTEN?

27 A. YES, IT IS.

28 Q. AND ARE THE RESULTS OF YOUR 1991

1 SURVEY IN HERE?

2 A. YES, THEY ARE.

3 Q. THIS, BY THE WAY, IS EXHIBIT 6365.

4

5 * (EXHIBIT 6365, BOOK EXCERPT,
6 MARKED FOR I. D.)

7

8 Q BY MR. CARLTON: DOES THIS PART OF
9 YOUR BOOK SUMMARIZE THE RESULTS OF YOUR SURVEY?

10 A. THAT'S THE QUESTION, YES, "AMONG
11 100 CIGARETTE SMOKERS HOW MANY OF THEM DO YOU THINK
12 WILL DIE FROM LUNG CANCER BECAUSE THEY SMOKE?"

13 THE AVERAGE RISK ANSWER IS .38.

14 Q. WHAT DOES THAT MEAN?

15 A. 38 PERCENT OF THE SMOKERS ARE
16 EXPECTED TO DIE FROM LUNG CANCER BECAUSE THEY
17 SMOKE.

18 Q. SO, WHEREAS THE 1985 STUDY YOU
19 TALKED ABOUT SAYS 43 PERCENT OF SMOKERS WERE
20 EXPECTED TO GET LUNG CANCER, THE 1991 STUDY THAT
21 YOU CONDUCTED YOURSELF FOUND THAT, AMONG THOSE
22 RESPONDENTS, 38 PERCENT WERE EXPECTED TO ACTUALLY
23 DIE FROM LUNG CANCER; IS THAT RIGHT?

24 A. THAT IS RIGHT.

25 Q. NOW, DID YOU ACTUALLY SEPARATE OUT
26 IN YOUR STUDY THE PERCEIVED RISKS OF SMOKERS AND
27 NON-SMOKERS?

28 A. YES, I DID.

1 Q. AND ACTUALLY, I PROBABLY SHOULD
2 HAVE LEFT THIS UP THERE.

3 WHAT DID YOU FIND AS TO THE RISK
4 PERCEPTIONS OF SMOKERS AND NON-SMOKERS?

5 A. IT IS TRUE THAT SMOKERS HAVE LOWER
6 RISK BELIEF THAN NON-SMOKERS. HOWEVER, THEY ARE
7 NOT THAT MUCH LOWER. AS IT TURNS OUT, THEY ARE
8 VERY CLOSE TO THOSE OF NON-SMOKERS AND WAY HIGHER
9 THAN THE ACTUAL RISK.

10 Q. I THINK THE NUMBERS ARE HERE.
11 LET'S LOOK AT THESE.

12 A. SO FOR LUNG CANCER FATALITY RISK --

13 Q. I AM ACTUALLY GOING TO TRY
14 SOMETHING I HAVE WANTED TO DO. THERE WE ARE. I AM
15 GOING TO TRY SOMETHING I HAVE WANTED TO DO SINCE I
16 FOUND OUT WE COULD DO THIS. MAGIC.

17 THERE YOU ARE.

18 CAN YOU TELL US THEN WHAT YOUR
19 STUDY SHOWS?

20 A. WELL, LET ME SAY, FOR THIS SURVEY,
21 I THINK IT'S 206 PEOPLE WERE ANSWERING THESE
22 PARTICULAR QUESTIONS. I JUST WANTED TO CLARIFY
23 THAT. I MAY HAVE SAID 300 EARLIER.

24 BUT WHAT WE FIND IS THAT FOR
25 EVERYBODY, OVERALL, THEY THINK 38 OUT OF A HUNDRED
26 SMOKERS WILL GET LUNG CANCER AND DIE FROM IT
27 BECAUSE THEY SMOKE. WHEREAS SMOKERS THINK THAT 31
28 OUT OF A HUNDRED SMOKERS WILL DIE FROM LUNG CANCER.

1 Q. SO A DIFFERENCE OF 7 PERCENT?

2 A. THAT IS RIGHT.

3 Q. NOW, ASIDE FROM LUNG CANCER, I
4 NOTICE THAT THERE'S A COLUMN LABELED "TOTAL SMOKING
5 MORTALITY RISK." WHAT DOES THAT MEAN?

6 A. WELL, THIS IS THE RISKS OF DYING
7 FROM ALL CAUSES, LUNG CANCER, THROAT CANCER, HEART
8 DISEASE, OUT OF A HUNDRED SMOKERS, HOW MANY OF THEM
9 DO YOU THINK WILL DIE FROM ALL THESE DIFFERENT
10 SMOKING RELATED CAUSES OF DEATH.

11 Q. AND WHAT DID YOU FIND?

12 A. WELL, PEOPLE IN THE POPULATION
13 OVERALL, THINK IT'S 54 PERCENT OF ALL SMOKERS WILL
14 DIE BECAUSE THEY SMOKE. CURRENT SMOKERS THINK THAT
15 47 OUT OF EVERY HUNDRED SMOKERS WILL DIE
16 PREMATURELY BECAUSE THEY SMOKED.

17 Q. OKAY. NOW, WAS THAT QUESTION,
18 TOTAL SMOKING MORTALITY RISK, ASKED IN THE 1985
19 SURVEY THAT YOU HAVE TOLD US ABOUT?

20 A. NO, IT WASN'T.

21 Q. AND WHAT WAS THE QUESTION THAT YOU
22 RECALL THAT YOU ACTUALLY ASKED ON TOTAL MORTALITY
23 RISK IN YOUR 1991 SURVEY?

24 A. IT WAS VIRTUALLY IDENTICAL TO THE
25 LUNG CANCER QUESTION. IT WAS OUT OF 100 SMOKERS,
26 HOW MANY OF THEM DO YOU THINK WILL DIE FROM LUNG
27 CANCER, HEART DISEASE, THROAT CANCER AND ANY OTHER
28 ILLNESSES BECAUSE THEY SMOKED.

1 Q. NOW, DID YOU CHECK THIS QUESTION
2 OUT BEFORE YOU ACTUALLY ADMINISTERED IT TO SEE IF
3 PEOPLE UNDERSTOOD IT IN THE WAY THAT YOU WANTED IT
4 TO BE UNDERSTOOD?

5 A. YES, I DID. WE DID PRE-TEST TO
6 MAKE SURE THE PEOPLE UNDERSTOOD THE WORDING OF THE
7 QUESTION.

8 Q. AND IS PRE-TESTING SOMETHING THAT
9 SHOULD BE DONE IN ORDER TO HAVE A PROPER AND
10 APPROPRIATE SURVEY?

11 A. YES. IT'S A COMMON THING THAT'S
12 DONE. WE PRE-TEST ALL OF OUR SURVEYS THAT WE RUN
13 FOR E. P. A. , FOR EXAMPLE, JUST TO MAKE SURE, IF YOU
14 ARE ASKING ABOUT SOMETHING COMPLICATED, THAT YOU
15 HAVE A GOOD QUESTION.

16 Q. NOW, DID YOU ALSO STUDY LIFE
17 EXPECTANCY LOSS IN 1991?

18 A. I DID.

19 Q. WHAT IS THAT, HOW DO YOU STUDY LIFE
20 EXPECTANCY LOSS?

21 A. WELL, WHAT I WANTED TO FIGURE OUT
22 IS, SURE, PEOPLE MAY THINK YOU DIE FROM SMOKING,
23 BUT DO THEY REALLY UNDERSTAND HOW MUCH LIFE YOU
24 WILL LOSE BECAUSE YOU SMOKE? SO I WANTED TO FOCUS
25 ON HOW MUCH YOUR LIFE WOULD BE SHORTENED BECAUSE
26 YOU SMOKE. SO THAT WAS THE LIFE EXPECTANCY LOSS
27 TYPE OF QUESTION.

28 Q. OKAY. WHAT DID YOU FIND?

1 A. WELL, WHAT WE FOUND THERE IS THAT
2 PEOPLE, ONCE AGAIN, OVER ESTIMATED THE LIFE
3 EXPECTANCY LOSS COMPARED TO WHAT THE SCIENTIFIC
4 ESTIMATES ARE.

5 Q. AND, AGAIN, WAS THAT QUESTION, LIFE
6 EXPECTANCY LOSS, PRE-TESTED?

7 A. YES. AND I HAVE EVEN RUN SEVERAL
8 SIMILAR VARIANTS OF THE LIFE EXPECTANCY LOSS
9 QUESTION IN EACH OF THESE SURVEYS, '91, '97, '98,
10 AND EVERYONE OF THEM SHOWS THAT PEOPLE OVER ASSESS
11 THE LIFE EXPECTANCY LOSS.

12 Q. SO WE HAVE NOW TALKED ABOUT TWO
13 SURVEYS, '85 AND '91, AND WHEN WAS THE THIRD
14 SURVEY?

15 A. 1997.

16 MR. CARLTON: YOUR HONOR, LET ME ASK
17 THIS, BEFORE I MOVE INTO ANOTHER SURVEY, WOULD THIS
18 BE AN APPROPRIATE TIME FOR A BREAK.

19 THE COURT: IT WOULD BE JUST FINE, IF YOU
20 WOULD LIKE TO SUGGEST IT.

21 YES, MA' AM

22 JUROR: I JUST NEED TO KNOW, ONE OF THE
23 DEMONSTRATIVES YOU PUT UP FOR THE 1985 STUDY, WHAT
24 WAS THE NUMBER?

25 MR. CARLTON: THIS ONE.

26 JUROR: FOR THE '85.

27 MR. CARLTON: 11, 077.

28 THE COURT: ALL RIGHT, LET'S TAKE OUR

1 BREAK AND WE WILL BE BACK AT QUARTER TILL 11:00.

2 THANK YOU, LADIES AND GENTLEMEN.

3

4 (AT THIS TIME, A RECESS
5 WAS TAKEN.)

6

7 (THE FOLLOWING PROCEEDINGS
8 WERE HELD IN OPEN COURT IN
9 THE PRESENCE OF THE JURY.)

10

11

12 XXXXXX XXXXXXXX,
13 CALLED AS A WITNESS BY THE XXXXXXXXXXXX, HAVING BEEN
14 PREVIOUSLY DULY SWORN, RESUMED THE WITNESS STAND
15 AND TESTIFIED FURTHER AS FOLLOWS:

16 THE COURT: ALL RIGHT. OUR JURY PANEL IS
17 WITH US, COUNSEL ARE PRESENT.

18 THE WITNESS IS ON THE STAND, SIR,
19 YOU MAY BE SEATED.

20 YOU UNDERSTAND YOU ARE STILL UNDER
21 OATH.

22 THE WITNESS: YES.

23 /// /// ///

24 /// /// ///

25 /// /// ///

26 W. KIP VISCUSI,
27 CALLED AS A WITNESS BY THE DEFENSE, HAVING BEEN
28 PREVIOUSLY DULY SWORN, RESUMED THE WITNESS STAND

1 AND TESTIFIED FURTHER AS FOLLOWS:

2

3 DIRECT EXAMINATION (RESUMED)

4

5 BY MR. CARLTON:

6 Q. WHEN WE LEFT OFF, YOU WERE ABOUT TO
7 START TELLING US ABOUT THE THIRD OF THESE FOUR
8 SURVEYS, WEREN' T YOU?

9 A. YES, I WAS.

10 Q. AND THAT WAS FROM WHAT YEAR?

11 A. 1997.

12 Q. CAN YOU TELL US A LITTLE BIT ABOUT
13 THAT?

14 A. THIS WAS A SURVEY, A NATIONAL
15 SURVEY UNDERTAKEN IN CONNECTION WITH THE STATES'
16 CIGARETTE LITIGATION BUT EVENTUALLY IT WAS AN
17 ATTEMPT TO REPLICATE MY 1991 SURVEY FOR A NATIONAL
18 SAMPLE TO SEE IF THE RESULTS HELD UP.

19 Q. WHO CONDUCTED THIS 1997 SURVEY?

20 A. ONCE AGAIN, THIS WAS AUDITS AND
21 SURVEYS IN NEW YORK.

22 Q. AND HOW DID YOU OBTAIN IT?

23 A. IT WAS GIVEN TO ME BY A LAWYER
24 REPRESENTING THE CIGARETTE INDUSTRY. AND I WAS
25 ALSO IN CONTACT WITH THE SURVEY FIRM REGARDING WHAT
26 THEY DID.

27 Q. NOW, DID YOU PARTICIPATE IN THIS
28 SURVEY, DID YOU HAVE SOME INVOLVEMENT IN IT?

1 A. NO, I DIDN' T.

2 Q. YOU OBTAINED IT WHEN IT WAS
3 FINISHED?

4 A. THAT IS CORRECT.

5 Q. AND YOU SAY IT WAS AN EFFORT TO
6 REPLICATE THE 1991 SURVEY THAT YOU HAD DONE?

7 A. YES, BECAUSE MY '91 SURVEY WAS ONLY
8 IN NORTH CAROLINA, IN FACT, DURHAM, NORTH CAROLINA,
9 WHICH MAY NOT BE REPRESENTATIVE OF THE ENTIRE
10 COUNTRY, SINCE NORTH CAROLINA IS THE LEADING
11 TOBACCO PRODUCING STATE IN THE COUNTRY. SO THE
12 IDEA WAS TO RUN IT ON A NATIONAL RANDOM SAMPLE TO
13 SEE IF THE RESULTS WOULD BE SIMILAR.

14 Q. NOW, YOU SAY YOU GOT A COPY OF THIS
15 SURVEY FROM A LAW FIRM REPRESENTING THE TOBACCO
16 INDUSTRY?

17 A. YES.

18 Q. IS IT THE SAME LAW FIRM YOU HAVE
19 GOTTEN THE 1985 SURVEY FROM?

20 A. DIFFERENT ONE.

21 Q. LET ME BACK UP TO THE '85 SURVEY
22 AND JUST ASK, DID YOU GET PAID BY THAT LAW FIRM OR
23 THE TOBACCO INDUSTRY FOR ANY OF YOUR WORK WITH
24 REGARD TO THE '85 SURVEY?

25 A. THE PORTION I WAS PAID FOR WAS THE
26 SHORT ANALYSIS I PREPARED EVALUATING THE REPORT
27 AUDITS AND SURVEYS ITSELF DID WITH THE SURVEY, THE
28 REPORT THEY PREPARED FOR THE LAW FIRM

1 IS YOUR OPINION?

2 A. IT IS A RELIABLE SURVEY.

3 Q. WHAT IS THE -- WHAT WAS THE SAMPLE
4 SIZE OF THE 1997 SURVEY?

5 A. IT WAS APPROXIMATELY 1,000, JUST
6 OVER A THOUSAND, I THINK.

7 Q. YOU DID YOUR OWN INDEPENDENT
8 ANALYSIS OF THE DATA THAT WAS GENERATED BY THE
9 SURVEY?

10 A. THAT IS RIGHT.

11 Q. YOU TALKED WITH AUDITS AND SURVEYS,
12 WHAT WAS IT, WORLDWIDE, AUDITS AND SURVEYS
13 WORLDWIDE ABOUT THE SURVEY?

14 A. BY THEN, THEY ADDED WORLDWIDE TO
15 THEIR TITLE, YES. I DID TALK TO THE PEOPLE WHO RAN
16 THE SURVEY.

17 Q. OKAY. AND DO YOU BELIEVE THIS IS
18 THE TYPE OF SURVEY THAT WOULD BE REASONABLY RELIED
19 UPON BY PEOPLE IN YOUR FIELD?

20 A. YES, IT IS.

21 Q. OKAY. AND DID THE 1997 SURVEY MEET
22 THE CRITERIA THAT YOU LAID OUT FOR US AT THE
23 BEGINNING OF YOUR TESTIMONY?

24 A. YES, IT DID. IT WAS A SOUND SURVEY
25 IN ALL RESPECTS.

26 Q. WHAT RISKS DID THE 1997 SURVEY DEAL
27 WITH?

28 A. IT DID THE THREE RISKS SIMILAR TO

1 THE '91 SURVEY, FIRST, WOULD YOU GET LUNG CANCER,
2 SO THAT WAS SOMEWHERE IN '85. AND SECOND, WHAT IS
3 YOUR TOTAL MORTALITY RISK BECAUSE YOU SMOKE. AND
4 THIRD, WHAT IS YOUR LIFE EXPECTANCY LOSS BECAUSE
5 YOU SMOKED.

6 Q. DID THIS SURVEY CONFIRM OR
7 CONTRADICT THE TWO EARLIER SURVEYS?

8 A. IT CONFIRMED THEM

9 Q. AND IS THIS A DEMONSTRATIVE THAT
10 YOU PREPARED WITH REGARD TO THE 1997 SURVEY?

11 A. YES, IT IS.

12 Q. AND THIS IS 11,078.

13

14 * (EXHIBIT 11,041,
15 DEMONSTRATIVE, MARKED FOR I. D.)

16

17 Q BY MR. CARLTON: CAN YOU TELL US
18 WHAT THIS DEMONSTRATIVE SHOWS?

19 A. WHAT THIS SHOWS IS BOTH THE RESULTS
20 FOR 1985 AND 1997, IN TERMS OF RISK OF LUNG CANCER
21 OUT OF 100 SMOKERS. AND IN 1985, AS YOU WILL
22 RECALL, WE FOUND PEOPLE THOUGHT THAT 43 OF A
23 HUNDRED SMOKERS WOULD GET LUNG CANCER BECAUSE THEY
24 SMOKE. IN 1997, THE NUMBER IS 47 PERCENT.

25 Q. SO IT HAD GONE UP A BIT?

26 A. A SMALL AMOUNT, YES.

27 Q. DID THE 1997 SURVEY ALSO HAVE A
28 QUESTION ABOUT ALL RISK MORTALITY?

1 A. YES, IT DID.

2 Q. AND IS THIS A DEMONSTRATIVE YOU
3 PREPARED WITH REGARD TO THAT ISSUE?

4 A. YES.

5 Q. THIS IS 11, 079.

6

7 * (EXHIBIT 11, 079,
8 DEMONSTRATIVE, MARKED FOR I. D.)

9

10 Q BY MR. CARLTON: CAN YOU TELL US
11 WHAT THE SURVEY FOUND ABOUT THAT ISSUE?

12 WHAT WAS THE QUESTION, FIRST OF
13 ALL?

14 A. WELL, THIS QUESTION IS MY 1991
15 WORDING THAT THEY PUT ON THE 1997 SURVEY. AND IT
16 ASKED PEOPLE OUT OF EVERY 100 SMOKERS, HOW MANY OF
17 THEM DO YOU THINK WILL DIE FROM LUNG CANCERS, HEART
18 DISEASE, THROAT CANCER OR ANY OTHER ILLNESS BECAUSE
19 THEY SMOKE.

20 AND ON AVERAGE PEOPLE THINK IT'S A
21 50-50 PROPOSITION. SO 50 PERCENT OF THE PEOPLE
22 WILL DIE.

23 Q. NOW, OKAY, AND DID THE 1997 SURVEY
24 ALSO DEAL WITH PERCEIVED LOSS OF LIFE EXPECTANCY?

25 A. IT DID.

26 Q. IS THIS A DEMONSTRATIVE THAT YOU
27 PREPARED TO ILLUSTRATE THE FINDINGS IN THAT AREA?

28 A. YES.

1 Q. THIS IS 11, 080.

2

3 * (EXHIBIT 11, 080,
4 DEMONSTRATIVE, MARKED FOR I. D.)

5

6 Q BY MR. CARLTON: SO WHAT DID THE
7 1997 SURVEY FIND WITH REGARD TO THIS ISSUE?

8 A. WELL, IN A QUESTION WHERE WE ASKED
9 DIFFERENT QUESTIONS FROM MEN AND WOMEN TO TELL THEM
10 BACKGROUND INFORMATION ON LIFE EXPECTANCY, AFTER
11 THEY HAVE READ THE QUESTION, ON AVERAGE, MEN
12 THOUGHT THAT SMOKERS WOULD LOSE 10.1 YEARS OF LIFE
13 EXPECTANCY, AND FOR FEMALE SMOKERS, WOMEN THOUGHT
14 THEY WOULD LOSE 14.8 YEARS OF LIFE EXPECTANCY.

15 Q. WHY DID YOU BREAK IT UP BETWEEN MEN
16 AND WOMEN?

17 A. THE REASON IS THAT WOMEN LIVE A LOT
18 LONGER THAN MEN AND HAVE MORE TO LOSE IN SOME
19 SENSE, SO WE HAVE THE AVERAGE MAN, AGE 21, WILL
20 LIVE TO AGE 73, AND THE AVERAGE WOMAN, AT AGE 21,
21 WILL LIVE TO AGE 80.

22 SO THIS GIVES THEM INFORMATION ON
23 THE NORMAL LIFE EXPECTANCY WHICH IS DIFFERENT FOR
24 MEN AND WOMEN.

25 Q. SO THAT'S THE, AT THE TOP OF THIS
26 DEMONSTRATIVE, IS THAT THE WAY THE QUESTION WAS
27 ASKED?

28 A. THAT IS RIGHT. AND YOU ARE ONLY

1 ASKED THE QUESTION PERTINENT TO WHAT YOU WERE. SO
2 SINCE YOU ARE A MAN, I WOULD ASK YOU THE QUESTION,
3 AN AVERAGE 21-YEAR-OLD MALE WOULD BE EXPECTED TO
4 LIVE TO THE AGE OF 73, "WHAT DO YOU THINK THE LIFE
5 EXPECTANCY IS FOR THE AVERAGE MALE SMOKER?"

6 Q. OKAY. NOW, THE RESULTS HERE, THESE
7 TWO BARS THAT YOU SEE, DO THESE ADDRESS RESPONSES
8 BY ALL RESPONDENTS, SMOKERS AND NON-SMOKERS?

9 A. YES, THEY DO.

10 Q. DID YOU BREAK OUT THE INFORMATION
11 FOR SMOKERS?

12 A. I DID.

13 Q. WAS IT SOMEWHAT DIFFERENT?

14 A. A LITTLE BIT LOWER BUT STILL VERY
15 HIGH.

16 Q. AND DO YOU RECALL WHAT THE NUMBERS
17 WERE?

18 A. NOT OFF THE TOP OF MY HEAD.

19 Q. OKAY, WAS IT IN THE RANGE?

20 A. YES, IT WAS VERY SIMILAR TO THESE
21 NUMBERS.

22 Q. AND YOU DID, OR AT LEAST YOU
23 EVALUATED ONE MORE SURVEY, ISN'T THAT RIGHT?

24 A. THAT IS CORRECT.

25 Q. WHEN WAS THE NEXT SURVEY?

26 A. THIS SURVEY WAS IN 1998, IN THE
27 STATE OF MASSACHUSETTS.

28 Q. OKAY.

1 CAN YOU TELL US ABOUT THIS SURVEY?

2 A. WELL, THIS IS A SURVEY THAT WAS
3 ALSO IN CONNECTION WITH THESE STATE CASES. THIS IS
4 A SURVEY THAT I WAS IN CHARGE OF FROM START TO
5 FINISH. SO I WAS THE ONE WHO WORKED WITH THE
6 SURVEY RESEARCH FIRM TO DEVELOP THE SURVEY
7 QUESTIONS. I WAS INVOLVED AND IN CONTACT WITH THEM
8 DURING THE ADMINISTRATION OF THE SURVEY. I DID THE
9 ANALYSIS OF THE SURVEY RESULTS, THE ONLY ROLE THE
10 LAW FIRM WAS TO PAY THEM WHEN IT WAS DONE.

11 Q. OKAY. LET'S JUST BACK UP A BIT.
12 WHY WERE YOU DOING THIS SURVEY IN THE FIRST PLACE?

13 A. WELL, THE STATE OF MASSACHUSETTS
14 WAS SUING THE CIGARETTE INDUSTRY FOR MEDICAID
15 COSTS.

16 Q. WELL, WHO ASKED YOU TO DO THE
17 SURVEY?

18 A. A LAW FIRM REPRESENTING THE
19 CIGARETTE INDUSTRY.

20 Q. OKAY.

21 AND AS YOU TOLD US, THE LAW FIRM S
22 INVOLVEMENT WAS BASICALLY JUST TO PAY FOR IT AT THE
23 END?

24 A. THAT IS CORRECT, IN FACT, THEY
25 WEREN'T EVEN PRESENT DURING ANY OF THESE
26 DISCUSSIONS REGARDING THE CONTENT OF THE SURVEY.

27 Q. AND WHAT WAS THE SAMPLE SIZE IN THE
28 1998 SURVEY?

1 A. IT WAS ROUGHLY A THOUSAND AS WELL.
2 MAYBE A THOUSAND, THOUSAND AND 10. SOMETHING LIKE
3 THAT.

4 Q. HOW DID YOU LOCATE THESE PEOPLE?

5 A. THIS WAS A RANDOM TELEPHONE CALL
6 SURVEY THAT REACHES THE DIFFERENT AREAS OF
7 MASSACHUSETTS. AND WE ACTUALLY OVER SAMPLED
8 MEDICAID RECIPIENTS.

9 Q. WHAT DO YOU MEAN, YOU OVER SAMPLED?

10 A. THERE ARE MORE PEOPLE ON MEDICAID
11 SO WE HAVE MORE PEOPLE WHO ARE POOR IN OUR SAMPLE,
12 ON AVERAGE, THAN THE AVERAGE FOR THE MASSACHUSETTS
13 POPULATION.

14 Q. AND WHAT RISK DID YOU MEASURE IN
15 1998?

16 A. THE SAME THREE AS IN 1997, EXCEPT I
17 BELIEVE THE LUNG CANCER QUESTION WAS CHANGED TO
18 "DIE FROM LUNG CANCER, " BACK TO "DIE, " WHICH
19 RAISED, IN 1991, INSTEAD OF "GET LUNG CANCER" OR
20 "DEVELOP LUNG CANCER. "

21 Q. AND WHAT DID YOU FIND WITH REGARD
22 TO THE PERCEIVED RISK OF LUNG CANCER IN 1998?

23 A. PRETTY MUCH THE SAME THING WE HAVE
24 BEEN FINDING IS THAT IT'S VERY HIGH AND IT IS
25 SUBSTANTIALLY ABOVE THE TRUE RISK OF LUNG CANCER.

26 Q. IS THIS A DEMONSTRATIVE THAT YOU
27 PREPARED THAT REFLECTS THE RESULTS IN 1998?

28 A. YES, IT IS.

1 Q. AND THIS IS EXHIBIT 11081.

2

3 * (EXHIBIT 11, 081,
4 DEMONSTRATIVE, MARKED FOR I. D.)

5

6 Q BY MR. CARLTON: SO THIS, THIS
7 DEMONSTRATIVE REFLECTS THE RESULTS OF RESPONSES TO
8 THE QUESTION AT THE TOP HERE?

9 A. THAT IS CORRECT.

10 Q. "OUT OF EVERY 100 SMOKERS, HOW MANY
11 OF THEM DO YOU THINK WILL, " AS YOU SAID, "DIE, " IN
12 THIS ONE?

13 A. "DIE, " IN '98, "GET, " IN '85.

14 Q. "FROM LUNG CANCER, BECAUSE THEY
15 SMOKE?"

16 AND JUST TO REITERATE, THE LEFT BAR
17 IS THE 1985 RESULT, THE MIDDLE BAR IS THE 1997, THE
18 RIGHT BAR IS '98?

19 A. THAT IS CORRECT.

20 Q. AND THE RESULTS WERE WHAT IN '98?

21 A. 48 PERCENT. SO PEOPLE THOUGHT 48
22 OUT OF A HUNDRED SMOKERS WOULD DIE FROM LUNG CANCER
23 BECAUSE THEY SMOKED.

24 Q. THIS WAS COMPARABLE TO THE EARLIER
25 STUDIES?

26 A. YES, IT IS. VERY CLOSE.

27 Q. ALL RIGHT. AND ON THE 1998 SURVEY,
28 WAS THERE ALSO A QUESTION FOR ALL RISK MORTALITY?

1 A. YES, THAT WAS THE SECOND RISK THAT
2 I FOCUSED ON.

3 Q. IS THIS A DEMONSTRATIVE YOU
4 PREPARED ILLUSTRATING THAT FINDING?

5 A. YES, IT IS.

6 Q. THIS IS EXHIBIT 11, 082.
7 WHAT DID YOU FIND OUT IN 1998?

8 A. IN 1998, WE FOUND THAT PEOPLE
9 THOUGHT THAT 54 OUT OF A HUNDRED SMOKERS WOULD DIE
10 BECAUSE THEY SMOKED AND THAT WOULD BE FROM LUNG
11 CANCER, HEART DISEASE, THROAT CANCER OR OTHER
12 ILLNESSES.

13 Q. COMPARABLE, AGAIN, TO THE PRIOR
14 STUDY?

15 A. YES. VERY CLOSE.

16 Q. AND THEN, LASTLY, IN 1998, DID YOU
17 ALSO ASK ABOUT PERCEIVED RISKS, RISK OF LOSS OF
18 LIFE EXPECTANCY?

19 A. I DID.

20 Q. ALL RIGHT. AND IS THIS A
21 DEMONSTRATIVE YOU PREPARED?

22 A. IT IS.

23 Q. THIS IS 11, 083.

24

25 * (EXHIBIT 11, 083,
26 DEMONSTRATIVE, MARKED FOR I. D.)

27

28 Q. BY MR. CARLTON: WHAT DID YOU FIND

1 OUT IN 1998 ABOUT PERCEIVED LOSS OF LIFE
2 EXPECTANCY?

3 A. WELL, THE PERCEIVED LIFE EXPECTANCY
4 LOSS, ONCE AGAIN, IS VERY HIGH. FOR MEN, IT IS THE
5 SAME AS IT WAS IN '97. IN THAT SURVEY, 10.1 YEARS
6 OF LIFE WOULD BE LOST BECAUSE OF SMOKING. AND FOR
7 WOMEN, IT'S NOW 15.9 YEARS OF LIFE EXPECTANCY WOULD
8 BE LOST DUE TO SMOKING.

9 Q. ALL RIGHT. AGAIN, THIS IS ALL
10 RESPONDENTS?

11 A. ALL RESPONDENTS.

12 Q. AND AGAIN, WAS THE PERCEIVED LOSS A
13 BIT LOWER FOR SMOKERS?

14 A. LOWER BUT STILL VERY CLOSE TO THIS
15 AND VERY HIGH.

16 Q. ARE YOU AWARE OF ANY, ANY SURVEYS
17 BY PEOPLE, NOT WORKING FOR OR ASSOCIATED WITH THE
18 TOBACCO INDUSTRY, HAVING TO DO WITH THESE KINDS OF
19 RISK PERCEPTIONS?

20 A. YES, THERE HAVE BEEN OTHER SURVEYS
21 AS WELL.

22 Q. ARE YOU FAMILIAR WITH THE SURVEY BY
23 AN INDIVIDUAL NAMED PAUL SLOVIC?

24 A. YES, I AM

25 Q. WHO'S HE?

26 A. HE'S A PSYCHOLOGIST WHO DOES
27 RESEARCH IN OREGON, STATE OF OREGON.

28 Q. AND DID HE RUN A SURVEY SIMILAR TO

1 YOURS THAT YOU ARE FAMILIAR WITH?

2 A. YES, HE DID. HE TRIED TO REPLICATE
3 MY LUNG CANCER RESULTS.

4 Q. WHAT DID HE FIND?

5 A. HE FOUND EVEN STRONGER RESULTS THAN
6 I DID, AS I RECALL.

7 Q. IS THIS A COPY OF A PAPER THAT MR.
8 SLOVIC WROTE?

9 A. YES, IT IS.

10 Q. HAVE YOU READ THIS PAPER, THIS
11 ARTICLE?

12 A. I HAVE.

13 Q. THIS IS EXHIBIT 7289.

14

15 * (EXHIBIT 7289, ARTICLE, MARKED
16 FOR I. D.)

17

18 Q BY MR. CARLTON: ARE THE RESULTS
19 OF HIS SURVEY INCLUDED IN THIS?

20 A. YES, THEY ARE.

21 Q. ARE THESE THE RESULTS OF HIS
22 SURVEY?

23 A. QUESTION 1 IS THE ONE THAT
24 PARALLELS MY SURVEY.

25 Q. IN WHICH RESPECT, WHICH QUESTION
26 WAS IT?

27 A. IT'S THE LUNG CANCER QUESTION. SO
28 ADULTS THINK 48 OUT OF A HUNDRED ADULTS WOULD DIE

1 FROM LUNG CANCER. BUT YOUTHS, WE SAMPLED 2,000
2 YOUTHS, THEY THINK 2,000 -- THEY THINK 60 OUT OF A
3 HUNDRED WOULD DIE FROM LUNG CANCER.

4 Q. SO MR. SLOVIC FOUND IN HIS RESPONSE
5 TO A SURVEY IDENTICAL TO YOURS THAT AMONG ADULTS
6 THEY THOUGHT THAT 48.5 PERCENT OF SMOKERS WHO DIE
7 FROM LUNG CANCER, WAS THAT IT?

8 A. THAT IS CORRECT.

9 Q. AND THIS COMPARES WITH THE NUMBERS
10 THAT YOU FOUND?

11 A. YES, IT DOES.

12 Q. SO WE HAVE LOOKED AT A NUMBER OF
13 SURVEYS THAT MEASURE THE PUBLIC'S AWARENESS OF
14 HEALTH RISKS OF SMOKING; RIGHT?

15 A. THAT IS CORRECT.

16 Q. AND WE HAVE LOOKED AT SOME SURVEYS
17 REGARDING THEIR BELIEFS AS TO THE HEALTH RISK OF
18 SMOKING.

19 IS THERE OTHER INFORMATION THAT YOU
20 ARE AWARE OF THAT TELLS US WHETHER THE PUBLIC KNOWS
21 ENOUGH ABOUT THE HEALTH RISKS OF SMOKING?

22 A. WELL, YOU WOULD WANT TO COMPARE
23 THESE RISK BELIEFS TO ESTIMATES OF THE TRUE RISKS
24 IN ORDER TO FIGURE OUT IF THE PUBLIC KNOWS ENOUGH.

25 Q. OKAY, I THINK YOU TOLD US EARLIER
26 THAT YOU, IN FACT, HAVE DONE THAT; RIGHT?

27 A. THAT IS CORRECT.

28 Q. AND YOU TOLD US HOW YOU MEASURE THE

1 TRUE RISKS, AS YOU PUT IT, BUT WHY DON'T YOU TELL
2 US AGAIN.

3 A. WELL, IN THE CASE OF THE TRUE
4 RISKS, I TOOK THE NUMBERS FROM THE SURGEON GENERAL.
5 SO THE SURGEON GENERAL'S REPORTS CALCULATE THE
6 TOTAL NUMBER OF PEOPLE WHO DIE FROM LUNG CANCER,
7 THE TOTAL NUMBER OF PEOPLE WHO DIE FROM CIGARETTE
8 SMOKING, GENERALLY.

9 SO I USE THOSE NUMBERS AND NUMBERS
10 FROM THE NATIONAL CANCER INSTITUTE TO CALCULATE THE
11 TRUE RISKS OF SMOKING. AND I DIDN'T ADJUST THEM IN
12 ANY WAY OR LOWER THEM OR DO ANYTHING. SO I TOOK
13 THE SURGEON GENERAL'S ESTIMATES AT FACE VALUE AND I
14 CAN COMMENT A LITTLE BIT MORE ON IT WHEN WE SEE
15 DIFFERENT ESTIMATES.

16 Q. OKAY.

17 AND WHAT DID YOU FIND TO BE THE
18 TRUE ACTUAL RISK OF SMOKING, BASED ON THE
19 INFORMATION AND THE CALCULATIONS THAT YOU DID?

20 A. WELL, DEPENDS ON WHAT RISK WE ARE
21 TALKING ABOUT, BUT FOR LUNG CANCER, THE TRUE RISK
22 WOULD BE FROM 6 PERCENT TO 13 PERCENT WOULD BE YOUR
23 CHANCE OF GETTING LUNG CANCER, NOT, YOU KNOW, 40
24 PERCENT OR 48 PERCENT, THE KINDS OF NUMBERS WE HAVE
25 GOTTEN IN THE SURVEY.

26 SO PEOPLE'S PERCEPTIONS ARE MUCH,
27 MUCH HIGHER THAN WHAT THE TRUE RISKS OF LUNG CANCER
28 ARE.

1 Q. IS THIS A DEMONSTRATIVE YOU
2 PREPARED TO ILLUSTRATE THAT?

3 A. IT IS.

4 Q. THIS IS 11,084.

5 WHAT DOES THIS SHOW?

6 A. IT SHOWS ON THE FAR RIGHT, IN
7 ORANGE, IS THE ACTUAL RISK CALCULATED USING
8 ESTIMATES OF -- FROM THE SURGEON GENERAL, THE
9 NATIONAL CANCER INSTITUTE, AND USING THEIR
10 ESTIMATES, THE TRUE RISK IS 6 TO 13 PERCENT,
11 WHEREAS THE PUBLIC'S RISK BELIEFS RANGE FROM 43
12 PERCENT TO 48 PERCENT FOR THESE SURVEYS.

13 SO YOU HAVE GOT THE PUBLIC OVER
14 ESTIMATING THE RISK BY, YOU KNOW, A LOT. MANY,
15 MANY TIMES GREATER THAN IT ACTUALLY IS FOR LUNG
16 CANCER.

17

18 * (EXHIBIT 11,084,
19 DEMONSTRATIVE, MARKED FOR I. D.)

20

21 Q BY MR. CARLTON: THIS IS THE RISK
22 OF DYING FROM LUNG CANCER?

23 A. THAT IS CORRECT.

24 Q. WHY IS THERE A RANGE, 6 TO 13
25 PERCENT?

26 A. I DID DIFFERENT SENSITIVITY
27 ANALYSES, DEPENDING ON LENGTH OF LIFE THAT YOU
28 SMOKED. SO THE 13 PERCENT, I THINK, IS A VERY

1 CONSERVATIVE ESTIMATE OF LUNG CANCER DEATHS,
2 ASSUMING THAT PEOPLE SMOKE 60 YEARS. SO THAT -- IT
3 ENDS UP COUNTING 60 YEARS OF LUNG CANCER DEATHS,
4 SAYING THAT THAT'S WHAT YOU MIGHT FACE.

5 SO IT'S A LOT OF DEATHS. MOST
6 SMOKERS DON'T SMOKE FOR 60 YEARS, SO IT IS ACTUALLY
7 A VERY CONSERVATIVE ESTIMATE OF THE RISK. THE TRUE
8 RISK MOST PEOPLE TALK ABOUT IS A ROUND TEN PERCENT,
9 SOMEWHERE IN THE MIDDLE.

10 Q. NOW, DID YOU DO A SIMILAR
11 CALCULATION FOR ALL RISK MORTALITY?

12 A. I DID.

13 Q. IS THIS A DEMONSTRATIVE THAT YOU
14 HAVE PREPARED WITH REGARD TO THAT?

15 A. I DID, YES.

16 Q. WHAT DOES THIS TELL US?

17 A. WELL, ONCE AGAIN, THE ORANGE BAR
18 REPRESENTS THE TRUE RISK. AND I DIDN'T MAKE THESE
19 NUMBERS UP. THESE ARE, ONCE AGAIN, ARE NUMBERS
20 FROM THE SURGEON GENERAL THAT I USED IN TERMS OF
21 THE CALCULATIONS OF THE NUMBER OF PEOPLE WHO DIE
22 EVERY YEAR BECAUSE OF CIGARETTE SMOKE.

23 I TOOK THE SURGEON GENERAL'S
24 ESTIMATES OF RISK TO CALCULATE THE TRUE RISK OF
25 DEATH FROM SMOKING, WHICH COMES OUT TO 18 TO 36
26 PERCENT.

27 WE ALSO HAVE AN ADDITIONAL PIECE OF
28 INFORMATION, THE SURGEON GENERAL ALSO SAID FOR

1 HEAVY SMOKERS, THE RISK IS 33 PERCENT.

2 AND THAT'S RIGHT IN MY RANGE.

3 SO EVEN THOUGH 18 TO 36 PERCENT IS
4 FOR ALL SMOKERS, HEAVY SMOKERS, ACCORDING TO THE
5 SURGEON GENERAL, ARE ALSO IN MY RANGE AND THEY ARE
6 AT 33 PERCENT.

7 Q. WHEN YOU SAY "THE SURGEON GENERAL,"
8 ARE YOU REFERRING TO THE 1989 SURGEON GENERAL'S
9 REPORT?

10 A. YES, I AM

11 Q. THIS IS EXHIBIT 5654.

12 AND IS THIS THE REFERENCE THAT YOU
13 WERE TELLING US ABOUT?

14 A. THAT IS CORRECT.

15 AS MANY AS ONE-THIRD, SO MAYBE EVEN
16 LESS THAN ONE-THIRD, AS MANY AS ONE-THIRD OF HEAVY
17 SMOKERS, AGE 35 YEARS, WILL DIE BEFORE AGE -- AGE
18 85 OF DISEASES CAUSED BY THEIR SMOKING.

19 Q. THAT'S ALL DISEASES?

20 A. ALL DISEASES.

21 Q. SO ON YOUR CHART, THE 33 PERCENT
22 FIGURE SHOWS UP ON THE RIGHT SIDE OF THE BAR?

23 A. THAT IS CORRECT.

24 Q. AND THAT'S RIGHT WITHIN THE RANGE
25 THAT YOU, YOURSELF, CALCULATED?

26 A. THAT IS RIGHT.

27 Q. WHAT DOES THIS TELL YOU ABOUT THE
28 ACCURACY OF PEOPLE'S PERCEPTIONS OF THE RISK OF

1 DYING FROM ANY CAUSE, FROM SMOKING?

2 A. IT TELLS US ONCE AGAIN THAT PEOPLE
3 NOT ONLY ARE AWARE OF THE RISKS OF SMOKING, WHICH
4 ARE SUBSTANTIAL, BUT THEY ALSO OVER ESTIMATED THE
5 RISKS COMPARED TO WHAT THE SURGEON GENERAL
6 ESTIMATES THE RISK TO BE.

7 Q. NOW, ARE YOU AWARE OF TESTIMONY
8 FROM DR. BENOVMITZ IN THIS CASE?

9 A. YES, I AM

10 Q. AND DID HE TESTIFY ON THIS ISSUE?

11 A. HE DID.

12 Q. AND HE TOLD US THAT THE RISK WAS 50
13 PERCENT.

14 A. I SAW THAT.

15 Q. HOW DOES THAT EFFECT YOUR OPINIONS?

16 A. WELL, I DON'T KNOW WHERE HE GOT IT
17 BECAUSE HE DIDN'T GIVE A SOURCE. BUT I AM WILLING
18 TO RELY UPON THE SURGEON GENERAL AND THESE ARE THE
19 ESTIMATES FROM THE SURGEON GENERAL. AND I AM NOT,
20 I WOULDN'T ALTER THESE OPINIONS BASED ON HIS
21 TESTIMONY BECAUSE I DIDN'T SEE ANY EVIDENCE FOR HIS
22 OPINION.

23 Q. BUT IN ANY EVENT, EVEN IF YOU TAKE
24 DR. BENOVMITZ' ESTIMATES, IT APPEARS THAT SMOKERS
25 DON'T UNDER ESTIMATE THE RISKS, OR THAT PEOPLE
26 DON'T UNDER ESTIMATE THE RISK?

27 A. RIGHT. BECAUSE PERCEPTIONS ARE 50
28 TO 54 PERCENT, EVEN TAKING HIS HIGH ESTIMATE OF THE

1 MORTALITY RISK, PEOPLE ARE AWARE OF THE OVERALL
2 RISK FROM SMOKING.

3 Q. BY THE WAY, THIS DEMONSTRATIVE IS
4 11085.

5

6 * (EXHIBIT 11, 085,
7 DEMONSTRATIVE, MARKED FOR I. D.)

8

9 Q BY MR. CARLTON: DID YOU ALSO
10 COMPARE ACTUAL LOSS OF LIFE EXPECTANCY TO PERCEIVED
11 LOSS OF LIFE EXPECTANCY?

12 A. I DID.

13 Q. ALL RIGHT. AND HOW DID YOU DO
14 THAT?

15 A. ONCE AGAIN, I USED ESTIMATES FROM
16 THE SURGEON GENERAL ON LIFE EXPECTANCY. SO IN THIS
17 CASE, I DID ESTIMATES OF THE RANGE OF LIFE
18 EXPECTANCY OF ABOUT SIX TO EIGHT YEARS, BASED ON
19 WHAT THE SURGEON GENERAL SAID. THERE'S ALSO A
20 STATEMENT IN THE '89 SURGEON GENERAL'S REPORT THAT
21 YOU JUST PUT UP AND THE NEXT LINE THEY ALSO SAY SIX
22 TO EIGHT YEARS.

23 AND --

24 Q. LET'S LOOK AT THAT FOR JUST HALF A
25 SECOND.

26 THIS IS THE SAME PART OF THE
27 SURGEON GENERAL'S REPORT THAT WE JUST LOOKED AT IN
28 EXHIBIT 5654. AND IS THIS WHAT YOU ARE REFERRING

1 TO HERE?

2 A. YES. "33-YEAR-OLD SMOKERS WILL
3 SHORTEN THEIR LIVES AN AVERAGE OF SIX TO EIGHT
4 YEARS IF THEY SMOKE A PACK A DAY. "

5 THE FINAL THING, THERE'S A NEW
6 REPORT FROM THE INSTITUTE OF MEDICINE ON SMOKING
7 WHICH ALSO PEGS THE LIFE EXPECTANCY LOSS OF SIX TO
8 SEVEN YEARS.

9 Q. SIX TO SEVEN YEARS BY THE
10 INSTITUTES IN MEDICINE?

11 A. THAT IS CORRECT.

12 Q. REMIND US, WE HAVE HEARD A BIT
13 ABOUT THIS, WHAT IS THE INSTITUTE OF MEDICINE?

14 A. THAT'S PART OF THE NATIONAL
15 INSTITUTE OF HEALTH. THEY ARE BASED IN WASHINGTON.
16 AND THEY DO VARIOUS STUDIES ON HEALTH RISKS. I WAS
17 ON ONE OF THEIR PANELS, DEALING WITH THE VALUATION
18 OF LIFE.

19 Q. OKAY. SO TELL US ABOUT THIS
20 DEMONSTRATIVE.

21 A. WHAT THIS DEMONSTRATIVE SHOWS,
22 WELL, WE HAVE STILL GOT THE MORTALITY RISK ONE UP
23 THERE, I THINK YOU SHOULD HAVE THE LIFE EXPECTANCY
24 ONE.

25 Q. I AM SORRY, I SHOULD HAVE MY
26 GLASSES ON.

27 IS THIS THE ONE?

28 A. THAT'S IT.

1 Q. AN THIS IS 11086.

2

3 * (EXHIBIT 11, 086,
4 DEMONSTRATIVE, MARKED FOR I. D.)

5

6 THE WITNESS: ON THE RIGHT IS THE ACTUAL
7 RISK, IN TERMS OF LIFE EXPECTANCY LOSS, AND
8 EVERYBODY'S NUMBERS SEEM TO BE ABOUT THE SAME PLACE
9 WHETHER IT'S THE OLD SURGEON GENERAL'S NUMBER, MY
10 NUMBERS I CALCULATED BASED ON ESTIMATES FROM THE
11 SURGEON GENERAL, OR THE INSTITUTES OF MEDICINE. WE
12 ARE LOOKING AT SIX TO EIGHT YEARS LIFE EXPECTANCY
13 LOSS BECAUSE OF SMOKING.

14 NOW, IF YOU COMPARE THAT, THAT
15 ORANGE BAR TO THE THINGS ON THE LEFT, ON AVERAGE,
16 ACROSS MEN AND WOMEN, YOU ARE LOOKING AT, YOU KNOW,
17 12 OR 13 YEARS OF LIFE EXPECTANCY LOSS. AND EVEN
18 IF YOU TAKE THE LOWEST BAR FOR MEN, THAT'S 10.1
19 YEARS OF LIFE EXPECTANCY LOSS. THAT'S BIGGER THAN
20 THE TRUE RISK ON THE RIGHT BAR. SO THAT NO MATTER
21 HOW YOU CUT THE DATA, PEOPLE OVER ESTIMATED THE
22 LIFE EXPECTANCY LOSS DUE TO SMOKING.

23 Q. WELL, DO YOU HAVE AN OPINION AS TO
24 WHY THAT MIGHT BE?

25 A. THERE'S A SUBSTANTIAL LITERATURE
26 INDICATING THAT PEOPLE OVER ESTIMATE HIGHLY
27 PUBLICIZED RISK. AND BASED ON LITERATURE REVIEW I
28 HAVE DONE, SMOKING SEES TO BE ABOUT THE MOST HIGHLY

1 PUBLICIZED RISK IN SOCIETY.

2 THERE ARE OTHER HIGHLY PUBLICIZED
3 RISKS TOO.

4 WE OVER ESTIMATE THE RISK OF
5 EARTHQUAKES BECAUSE THEY MAKE THE NEWSPAPER.

6 WE OVER ESTIMATE THE RISK OF ALL
7 SORTS OF CATACLYSMIC EVENTS THAT ARE HIGHLY
8 PUBLICIZED.

9 BUT SMOKING IS ONE OF THOSE HIGHLY
10 PUBLICIZED RISKS AS WELL.

11 Q. AND WHY IS IT THAT PEOPLE OVER
12 ESTIMATE THEIR RISK OF HIGHLY PUBLICIZED RISKS?

13 A. WELL, WHAT THE PUBLICITY SAYS IS
14 THAT THIS IS DANGEROUS. THEY DON'T SAY WITH
15 SMOKING, SMOKING WILL COST YOU SIX TO EIGHT YEARS
16 OF LIFE EXPECTANCY, THAT SORT OF PUBLICITY WOULD
17 GET PEOPLE TO THINK ABOUT THE RISK ACCURATELY.

18 BUT BY CONTINUING TELLING PEOPLE
19 SIMPLY SOMETHING IS DANGEROUS, THEN THAT EFFECT HAS
20 BEEN TO SIMPLY RAISE RISK BELIEFS AND TO LEAD TO AN
21 OVER PERCEPTION OF RISK.

22 Q. NOW, I'D LIKE TO CHANGE SUBJECTS A
23 BIT.

24 WE HAVE HEARD HERE ABOUT
25 RATIONALIZATION OF RISKS, MINIMIZATION OF RISKS.

26 IS THAT ALSO CALLED OPTIMISM BIAS?

27 A. WELL, YES. OPTIMISM BIAS WOULD BE
28 A LABEL FOR IT. AND THIS IS WHAT I WOULD CALL A

1 HYPOTHESIS. I DON'T THINK OPTIMISM BIAS REALLY
2 EXISTS. BUT I THINK THIS IS A CONJECTURE SOME
3 PEOPLE OFTEN HAVE ABOUT HOW PEOPLE WILL THINK ABOUT
4 RISK.

5 Q. CAN YOU TELL US WHAT OPTIMISM BIAS
6 IS, AT LEAST IN HYPOTHESIS?

7 A. WELL, LET'S GO BACK TO THAT
8 QUESTION WE TALKED ABOUT EARLIER ABOUT HOW GOOD A
9 DRIVER ARE YOU.

10 IF YOU ASK PEOPLE, ARE YOU AN ABOVE
11 AVERAGE DRIVER, AN AVERAGE DRIVER OR BELOW AVERAGE
12 DRIVER, PEOPLE ARE MORE WILLING TO SAY, MORE LIKELY
13 TO SAY, ABOVE AVERAGE DRIVER.

14 AND THAT'S OFTEN INTERPRETED AS
15 OPTIMISM BIAS.

16 OR AS I INTERPRETED IT, AS BEING A
17 CONSEQUENCE OF THE WAY YOU ASK THE QUESTION, WHERE
18 YOU ARE ASKING PEOPLE TO FIND FAULT WITH THEMSELVES
19 AND PEOPLE DON'T LIKE TO DO THAT.

20 Q. HAVE YOU STUDIED THE LITERATURE ON
21 THIS?

22 A. NOT ONLY HAVE I STUDIED THE
23 LITERATURE ON THIS, I HAVE DONE A STUDY FOR E. P. A.
24 ON OPTIMISM BIAS.

25 Q. DO YOU HAVE AN OPINION AS TO
26 WHETHER OPTIMISM BIAS RELATES TO THE PERCEIVED RISK
27 OF SMOKING?

28 A. YES, I DO.

1 Q. AND WHAT IS THAT OPINION?

2 A. MY OPINION IS THAT IT DOES NOT.

3 Q. WHY?

4 A. FOR SEVERAL REASONS. FIRST,
5 SMOKING IS A LARGE RISK, AND OPTIMISM BIAS HAS BEEN
6 SHOWN NOT TO PERTAIN TO LARGE RISKS.

7 Q. WHAT DO YOU MEAN, WHAT'S A LARGE
8 RISK?

9 A. WELL, LOTS OF RISKS THAT WE FACE
10 ARE REALLY SMALL. SO WHEN WE PUT THIS RISK UP ONE
11 CHANCE IN SIX OR ONE CHANCE IN THREE OF DEATH FROM
12 SMOKING, IN THE WHOLE SCHEME OF THINGS, THAT'S A
13 BIG RISK.

14 A TYPICAL HAZARDOUS WASTE SITE THAT
15 E. P. A. WOULD CLEAN UP, THAT WOULD HAVE A RISK OF
16 ONE CHANCE IN 10,000 OF CANCER OVER 30 YEARS.
17 THAT'S A SMALL RISK.

18 AND THOSE ARE RISKS BIG ENOUGH TO
19 WARRANT GOVERNMENT CLEAN UP BUT THEY ARE
20 SUBSTANTIALLY SMALLER THAN THE RISK OF SMOKING.

21 Q. AND IS THERE LITERATURE THAT
22 SUPPORTS YOUR OPINION THAT OPTIMISM BIASES DOES NOT
23 APPLY TO SMOKING?

24 A. YES, THERE IS.

25 Q. HAVE YOU PREPARED A DEMONSTRATIVE,
26 AN EXAMPLE OF THIS?

27 A. I HAVE.

28 Q. WHAT IS THIS?

1 A. THIS IS AN ARTICLE BY A PROFESSOR
2 JENKS, I BELIEVE, ON OPTIMISM BIAS, WITH RESPECT TO
3 SMOKING, WHICH IS SOMEBODY WHO SET OUT TRYING TO
4 FIND OPTIMISM BIAS.

5 Q. AND THIS, BY THE WAY, IS EXHIBIT
6 11087.

7

8 * (EXHIBIT 11, 087,
9 DEMONSTRATIVE, MARKED FOR I. D.)

10

11 MR. PIUZE: YOUR HONOR, USING THIS STUFF
12 ON DIRECT IS SOMETHING I HAVE TO OBJECT TO.

13 THE COURT: I THINK IT'S BEEN RAISED BY
14 OTHER TESTIMONY. I AM GOING TO ALLOW IT.
15 OVERRULED.

16 Q BY MR. CARLTON: AND WHAT DID
17 PROFESSOR JENKS HAVE TO SAY?

18 A. (READING)

19 "CONTRARY TO EXPECTATION,
20 THE SMOKERS WERE MORE, NOT LESS LIKELY
21 TO FEEL THAT SMOKING IS ADDICTIVE,
22 BOTH PHYSICALLY AND PSYCHOLOGICALLY,
23 AND THAT IT COULD LEAD TO MAJOR HEALTH
24 PROBLEMS. THESE SMOKERS SEEM TO
25 RELIEVE ANY DISSONANCE CONCERNING
26 THEIR SMOKING BY SAYING THAT SMOKING
27 IS ADDICTIVE, BOTH PHYSICALLY AND
28 PSYCHOLOGICALLY, RATHER THAN DENYING

1 THE HEALTH HAZARDS. QUITE POSSIBLY,
2 THE INFORMATION BOMBARDMENT BY THE
3 MEDIA HAS BECOME SO STRONG THAT IT IS
4 NOW IMPOSSIBLE TO AVOID THE
5 INFORMATION OR DENY THE HEALTH COST OF
6 SMOKING. "

7 Q. THIS WAS A 1991 STUDY?

8 A. THAT IS CORRECT.

9 Q. AND SO IF I UNDERSTAND THIS
10 CORRECTLY, WHAT PROFESSOR JENKS WAS SUGGESTING HERE
11 IS THAT PEOPLE DON'T DENY THE HEALTH RISK OF
12 SMOKING; CORRECT?

13 A. THAT IS CORRECT.

14 Q. BUT SMOKERS WILL BLAME THEIR
15 ADDICTION TO RATIONALIZE CONTINUED SMOKING?

16 A. THAT IS RIGHT.

17 Q. ARE THERE SURVEYS HAVING TO DO WITH
18 OPTIMISM BIAS IN SMOKING?

19 A. YES. THERE'S SURVEYS THAT FOCUS
20 RIGHT IN ON WHETHER PEOPLE, IN FACT, BELIEVE --
21 WHETHER SMOKING WILL HARM THEMSELVES AS OPPOSED TO
22 SIMPLY HARMING OTHER PEOPLE.

23 Q. WHO CONDUCTED THESE SURVEYS?

24 A. THE GALLUP POLL RAN A NUMBER OF
25 THEM

26 Q. IS THIS A DEMONSTRATIVE YOU HAVE
27 PREPARED REGARDING THESE SURVEYS?

28 A. YES.

1 Q. TELL US ABOUT THESE SURVEYS, HOW
2 ARE THEY DIFFERENT FROM THE ONES WE HAVE ALREADY
3 HEARD ABOUT?

4 A. WELL, THE DIFFERENCE IS THAT
5 INSTEAD OF SAYING, IS SMOKING HARMFUL TO HEALTH, OR
6 IS SMOKING HARMFUL, THIS SURVEY ASKS SMOKERS ONLY,
7 IS SMOKING HARMFUL TO YOUR HEALTH. SO IT ASKS THEM
8 TO PERSONALIZE IT, ASKS THEM DOES IT HURT YOU.

9 Q. THERE ARE THREE SETS OF BARS HERE,
10 WHAT DO THOSE PERTAIN TO?

11 A. THESE WERE THE THREE YEARS THAT THE
12 SURVEY RAN, 1987, 1990, 1993, AND THE BLUE BAR, THE
13 BIG ONES, INDICATE THE ANSWER, YES, WHERE A PERSON
14 SAYS, YES, SMOKING IS HARMFUL TO MY HEALTH.

15 AND WE HAVE 94 PERCENT OF THE
16 PEOPLE SAYING YES IN '87, 96 PERCENT IN 1990, AND
17 90 PERCENT IN 1993.

18 Q. OKAY. ARE THERE OTHER SURVEYS THAT
19 YOU HAVE LOOKED AT THAT ARE RELEVANT TO THIS ISSUE?

20 A. YES, THERE ARE.

21 Q. BEFORE WE MOVE ON, THIS ONE IS
22 EXHIBIT 11, 088.

23

24 * (EXHIBIT 11, 088,
25 DEMONSTRATIVE, MARKED FOR I. D.)

26

27 Q BY MR. CARLTON: WHAT DID YOU FIND
28 OUT?

1 A. THE RESULTS ARE CONSISTENT, NOT
2 ONLY TO DO PEOPLE THINK SMOKING IS HARMFUL TO THEIR
3 HEALTH, THEY ACTUALLY BELIEVE IT HAS ACTUALLY
4 HARMED THEIR HEALTH IN MANY OF THESE SURVEYS.

5 Q. THEY NOT ONLY BELIEVE IT COULD,
6 THEY BELIEVE IT HAS?

7 A. YES.

8 Q. DOES THIS DEMONSTRATIVE REFLECT THE
9 RESULTS OF ONE OF THOSE SURVEYS?

10 A. YES, IT DOES. AND THIS IS, ONCE
11 AGAIN, A GALLUP POLL. THE QUESTION IS, "DO YOU
12 BELIEVE SMOKING HAS ALREADY EFFECTED YOUR HEALTH?"
13 AND 65 PERCENT OF THE PEOPLE SAY YES.

14 Q. AGAIN, THESE ARE SMOKERS
15 RESPONDING?

16 A. THAT IS CORRECT.

17 Q. THIS IS EXHIBIT 11089 (THAT WAS
18 QUESTION BEFORE).

19

20 * (EXHIBIT 11, 089,
21 DEMONSTRATIVE, MARKED FOR I. D.)

22

23 Q BY MR. CARLTON: AND DID THAT SAME
24 SURVEY ASK ANOTHER QUESTION OF SMOKERS REGARDING
25 THE EFFECTS OF SMOKING ON THEIR HEALTH?

26 A. YES, THERE WAS A FOLLOWUP QUESTION
27 AS WELL.

28 Q. WHAT WAS THE FOLLOWUP QUESTION?

1 A. HOW LIKELY DO YOU THINK IT IS THAT
2 YOU WILL HAVE SERIOUS HEALTH PROBLEMS FROM SMOKING
3 IF YOU CONTINUE TO SMOKE AND 78 PERCENT OF THE
4 PEOPLE THOUGHT IT WAS LIKELY OR VERY LIKELY THAT
5 SMOKING WOULD GIVE THEM SERIOUS HEALTH PROBLEMS.

6 Q. AND THAT IS 11090.

7

8 * (EXHIBIT 11, 090,
9 DEMONSTRATIVE, MARKED FOR I. D.)

10

11 Q BY MR. CARLTON: DID THE GALLUP
12 ORGANIZATION ASK PEOPLE ABOUT THEIR PERCEIVED
13 LIKELIHOOD OF DEVELOPING LUNG CANCER BECAUSE OF
14 CIGARETTE SMOKING?

15 A. YES, IT DID. NOT WITH MY KIND OF
16 QUESTION, BUT THEY DID.

17 Q. IS THIS A DEMONSTRATIVE YOU HAVE
18 PREPARED?

19 A. YES.

20 Q. AND WHAT DOES THIS ILLUSTRATE?

21 A. ONCE AGAIN, IT ILLUSTRATES THAT
22 PEOPLE PERSONALIZE THE RISK. THE QUESTION WAS,
23 THINKING ABOUT YOURSELF, SPECIFICALLY, HOW LIKELY
24 DO YOU THINK YOU ARE TO DEVELOP LUNG CANCER BECAUSE
25 OF CIGARETTE SMOKING?

26 THE BLUE BARS INDICATE VERY LIKELY
27 OR SOMEWHAT LIKELY, AND THE ORANGE BARS ARE NOT
28 VERY LIKELY OR NOT AT ALL LIKELY. AND YOU CAN SEE

1 THE CONTINUOUS SMOKERS, THE SECOND BAR THERE, 70
2 PERCENT.

3 Q. SO WHEN YOU SAY THE SECOND BAR, YOU
4 MEAN THE SECOND GROUPS OF BARS FROM THE LEFT?

5 A. THE SECOND PURPLE BAR. SO THE
6 SECOND PURPLE BAR IS FOR CONTINUOUS SMOKERS. ON
7 THE LEFT OF THAT YOU HAVE RELAPSING SMOKERS, PEOPLE
8 BACK AND FORTH, 74 PERCENT THINK THEY ARE VERY
9 LIKELY OR SOMEWHAT LIKELY TO DEVELOP LUNG CANCER.

10 Q. OKAY. AND PERCEPTIONS WENT DOWN
11 FOR FORMER SMOKERS AND NON-SMOKERS?

12 A. THAT IS CORRECT.

13 Q. THIS IS 11, 091.

14

15 * (EXHIBIT 11, 091,
16 DEMONSTRATIVE, MARKED FOR I. D.)

17

18 Q BY MR. LEITER: AGAIN, THIS IS
19 BASED ON ANOTHER GALLUP POLL?

20 A. THAT IS RIGHT.

21 Q. FROM WHEN, 1995?

22 A. THAT'S WHAT IT LOOKS LIKE FROM
23 HERE, YES.

24 Q. AND HERE'S THE DEMONSTRATIVE, DID
25 YOU ALSO HAVE THIS PREPARED?

26 A. I DID DO ANOTHER ONE, YES.

27 Q. AND WHAT DOES THIS ONE SHOW?

28 A. THIS LOOKS LIKE -- IT IS DIFFERENT.

1 Q. IT IS DIFFERENT. IT IS NOT THE
2 SAME.

3 WE WILL GO BACK JUST TO ASSURE
4 OURSELVES?

5 A. THEY LOOK VERY SIMILAR AND THERE'S
6 A REASON FOR THAT AND THAT PEOPLE THINK SIMILARLY,
7 ABOUT HEART DISEASE THAT THEY DO ABOUT LUNG CANCER,
8 BUT THE NUMBERS ARE A LITTLE BIT LOWER. BUT YOU
9 HAVE RELAPSING SMOKERS SAYING THAT THERE'S 65 OUT
10 OF A HUNDRED SAY THEY WILL GET HEART DISEASE AND
11 CONTINUOUS SMOKERS, 57 OUT OF A HUNDRED THINK THEY
12 ARE SOMEWHAT LIKELY TO DEVELOP HEART DISEASE.

13 AND ONCE AGAIN, THE NUMBERS ARE
14 LOWER FOR FORMER SMOKERS AND NON-SMOKERS.

15 Q. HOW ARE ALL OF THESE POLLS RELEVANT
16 TO YOUR OPINION IN THIS CASE?

17 A. WELL, WE HAVE ALREADY SEEN SMOKERS
18 RISK BELIEFS IN GENERAL. AND WHAT THESE POLLS
19 IMPLY IS THAT SMOKERS ACTUALLY INTERNALIZE THE RISK
20 AND BELIEVE THAT SMOKING WILL HARM THEM IT'S NOT
21 JUST A QUESTION OF SMOKING HARMING OTHER PEOPLE.

22 Q. NOW, WE HAVE HEARD TESTIMONY IN THE
23 CASE ABOUT CONFLICTING MESSAGES, ABOUT THE EFFECT
24 OF CONFLICTING MESSAGES ON PEOPLE'S PERCEPTION OR
25 BELIEF IN RISKS.

26 HAVE YOU DONE ANY RESEARCH THAT'S
27 RELEVANT TO THAT?

28 A. YES, I HAVE.

1 Q. CAN YOU TELL US ABOUT THAT
2 RESEARCH?

3 A. WELL, THIS IS AN ISSUE THAT'S NOT
4 ONLY RELEVANT TO WHAT WE ARE DOING BUT IT IS
5 RELEVANT TO WHAT THE GOVERNMENT DOES. THE
6 ENVIRONMENTAL PROTECTION AGENCY CAME TO ME, WHAT
7 THEY WANTED TO FIND OUT IS WHERE THERE IS THIS
8 SCIENTIFIC DEBATE, ONE SCIENTIST SAYS THE RISK IS
9 HIGH AND SOMEBODY ELSE SAYS THE RISK IS LOW, WHAT
10 DO PEOPLE THINK.

11 SO WHERE DO THEY COME OUT AFTER
12 THERE IS THIS DEBATE AND SCIENTIFIC DISAGREEMENT.

13 Q. THIS WAS THE E. P. A. THAT WAS
14 INTERESTED IN THIS?

15 A. YES, IT WAS THE E. P. A.

16 Q. WHAT DID YOU DO TO FIND OUT?

17 A. WELL, I DEVELOPED ANOTHER SURVEY,
18 AND THIS ONE WAS RUN IN NORTH CAROLINA WITH
19 HUNDREDS OF PEOPLE, THAT WE BROUGHT IN AND WE GAVE
20 THEM DIFFERENT KINDS OF INFORMATION ABOUT CHEMICAL
21 POLLUTION.

22 SO, FOR EXAMPLE, 100 PEOPLE MIGHT
23 CONSIDER A SITUATION WHERE THE GOVERNMENT HAS A
24 STUDY THAT SAYS, THERE'S A HIGH RISK OF CANCER, BUT
25 THE POLLUTING COMPANY HAS A STUDY SAYING THE RISK
26 OF CANCER IS LOW

27 THEN BASED ON THESE TWO STUDIES,
28 WHAT IS YOUR ASSESSMENT OF THE RISK OF CANCER.

1 ESSENTIALLY, THAT'S WHAT WE ARE TRYING TO GET AT.

2 Q. AND EXACTLY HOW DID YOU PROCEED
3 WITH THIS, HOW WAS THIS SURVEY ORGANIZED?

4 A. WELL, WE HAD FOUR DIFFERENT GROUPS
5 OF PEOPLE, ONE GROUP HAD TWO STUDIES BY GOVERNMENT
6 SCIENTISTS WHO DISAGREED. ONE GROUP HAD TWO
7 INDUSTRY SCIENTISTS WHO DISAGREED, A THIRD GROUP
8 HAD A GOVERNMENT SCIENTIST WHO SAID THE RISK WAS
9 HIGH, AND INDUSTRY SCIENTIST WHO SAID THE RISK WAS
10 LOW AND A FOURTH GROUP HAD AN INDUSTRY SCIENTIST
11 SAYS THE RISK WAS HIGH BUT THE GOVERNMENT SCIENTIST
12 SAID THE RISK WAS LOW

13 AND THEY ACTUALLY GAVE NUMBERS, NOT
14 JUST HIGH AND LOW

15 Q. AND WHAT INDUSTRY WAS INVOLVED IN
16 THIS SURVEY?

17 A. IT WAS THE CHEMICAL INDUSTRY, AND
18 THE RISK WAS AIR POLLUTION THAT WOULD CAUSE CANCER.

19 Q. OKAY, WHAT DID YOU FIND?

20 A. WELL, THE RESULTS WERE SURPRISING.
21 WE THOUGHT THAT PEOPLE MIGHT SIMPLY AVERAGE WHAT
22 THE TWO SCIENTISTS SAID SO IF ONE PERSON SAID THE
23 RISK WAS HIGH AND ONE PERSON SAID THE RISK IS LOW,
24 YOU MIGHT PUT SOMETHING IN THE MIDDLE.

25 ANOTHER HYPOTHESIS IS THAT IF ONE
26 PERSON SAYS IT IS HIGH AND ONE PERSON SAYS IT IS
27 LOW, WE WILL JUST THROW UP OUR HANDS AND WAIT UNTIL
28 THEY FIGURE IT OUT.

1 AS IT TURNS OUT, A THIRD HYPOTHESIS
2 WAS TRUE, IF THE PARTIES ARE DIFFERENT, IF THE
3 INDUSTRY IS ONE AND THE GOVERNMENT IS ANOTHER,
4 PEOPLE GO WITH THE HIGH RISK ESTIMATE.

5 SO WHOEVER SAYS THAT RISK IS
6 HIGHER, THAT'S THE ONE THAT DRIVES PEOPLE'S OWN
7 RISK BELIEFS.

8 SO THEY TEND TO DISCOUNT THE LOW
9 RISK ESTIMATE AND GO WITH THE HIGHER RISK ESTIMATE
10 WHICH, IN CASES WHERE THERE'S A DISAGREEMENT OF
11 DIFFERENT KINDS OF PARTIES LIKE AN INDUSTRY
12 SCIENTIST AND A GOVERNMENT SCIENTIST.

13 Q. DID YOU FIND THAT WAS TRUE
14 REGARDLESS OF WHICH PARTY WAS SAYING THAT RISK WAS
15 HIGH?

16 A. THAT'S TRUE. PROVIDED INDUSTRY AND
17 GOVERNMENT, THAT THEY WERE DISAGREEING. WHETHER IT
18 WAS INDUSTRY HIGH OR GOVERNMENT HIGH, PEOPLE STILL
19 WENT WITH THE HIGH RISK ESTIMATE, WHEN THERE WAS
20 DISAGREEMENT FROM DIFFERENT PARTIES LIKE THAT.

21 Q. OKAY. WHEN THE DISAGREEMENT WAS
22 BETWEEN THE SAME PARTY, TWO DISAGREEING GOVERNMENT
23 STUDIES OR TWO DISAGREEING INDUSTRY STUDIES, WHAT
24 DID PEOPLE DO?

25 A. PEOPLE DIDN'T GO WITH THE HIGH RISK
26 ESTIMATE THEN.

27 THEY JUST AVERAGED.

28 SO IT'S ONLY WHEN YOU HAVE A

1 SCIENTIFIC DEBATE FROM TWO DIFFERENT INSTITUTIONS,
2 LIKE GOVERNMENT AND INDUSTRY, THAT'S THE ONLY CASE
3 IN WHICH PEOPLE REALLY GRAVITATE TOWARD HIGH RISK
4 ESTIMATE.

5 Q. AND THIS WAS A STUDY THAT HAD
6 NOTHING TO DO WITH THE TOBACCO INDUSTRY?

7 A. NOTHING TO DO WITH THEM, THEY WERE
8 NOT AWARE OF IT, DIDN'T FUND IT, AND THE STUDY WAS
9 ABOUT CANCER RISKS FROM CHEMICAL POLLUTION.

10 Q. DID YOU PUBLISH THIS RESEARCH?

11 A. YES, I DID.

12 Q. AND IS THIS THE ARTICLE?

13 A. YES, IT IS.

14 Q. "ALARMIST DECISIONS WITH DIVERGENT
15 RISK INFORMATION."

16 A. THAT IS RIGHT.

17 Q. PUBLISHED IN NOVEMBER OF 1997?

18 A. THAT IS RIGHT.

19 Q. AND THIS IS EXHIBIT 7031.

20

21 * (EXHIBIT 7031, ARTICLE, MARKED
22 FOR I. D.)

23

24 Q BY MR. CARLTON: WAS THIS ARTICLE
25 PEER REVIEWED?

26 A. YES, IT WAS.

27 Q. WHAT'S THE ECONOMIC JOURNAL?

28 A. IT'S A LEADING ECONOMIC JOURNAL,

1 IT' S PUBLISHED IN ENGLAND, SO IT' S BEEN AROUND FOR,
2 I THINK, OVER A HUNDRED YEARS, SO IT' S A VERY
3 PRESTIGIOUS JOURNAL.

4 Q. DID YOU RECEIVE ANY AWARDS FOR THIS
5 ARTICLE?

6 A. YES, I DID.

7 Q. WHAT?

8 A. THIS WAS SELECTED AS THE ARTICLE OF
9 THE YEAR BY THE ROYAL ECONOMIC SOCIETY WHICH IS
10 INTERNATIONAL ECONOMIC ASSOCIATION BASED IN
11 ENGLAND.

12 Q. JUST GETS TO THE BOTTOM LINE THEN,
13 DO YOU HAVE AN OPINION, TO A REASONABLE DEGREE OF
14 ECONOMIC CERTAINTY, WHETHER OR NOT THE PUBLIC
15 ADEQUATELY PERCEIVES A SMOKER' S RISK OF GETTING
16 LUNG CANCER?

17 A. YES, I DO.

18 Q. WHAT IS THAT?

19 A. THE PUBLIC NOT ONLY ADEQUATELY
20 PERCEIVES THE RISK OF LUNG CANCER, BUT THEY OVER
21 ESTIMATE THE RISK OF LUNG CANCER RELATIVE TO THE
22 TRUE SCIENTIFIC ESTIMATES OF THE RISK.

23 Q. DO YOU HAVE AN OPINION, WITHIN A
24 REASONABLE DEGREE OF ECONOMIC CERTAINTY, WHETHER OR
25 NOT THE PUBLIC ADEQUATELY PERCEIVES A SMOKER' S RISK
26 OF DYING FROM SMOKING-RELATED DISEASE?

27 A. YES, I DO.

28 Q. AND YOUR OPINION?

1 A. ONCE AGAIN, SMOKERS AND THE PUBLIC
2 AT LARGE OVER ESTIMATE THE RISK OF DEATH DUE TO
3 CIGARETTES.

4 Q. AND THEN LASTLY, DO YOU HAVE AN
5 OPINION WITHIN A REASONABLE DEGREE OF ECONOMIC
6 CERTAINTY, AS TO WHETHER THE PEOPLE ACCURATELY
7 PERCEIVE THE REDUCTION IN LIFE EXPECTANCY
8 ASSOCIATED WITH SMOKING?

9 A. YES, I DO.

10 Q. WHAT IS THAT?

11 A. THE PUBLIC OVER ESTIMATES THE LIFE
12 EXPECTANCY LOSS CAUSED BY SMOKING.

13 MR. CARLTON: THANK YOU. I HAVE NOTHING
14 FURTHER.

15 THE COURT: THANK YOU, COUNSEL.

16 MR. PIUZE.

17

18 CROSS-EXAMINATION

19

20 BY MR. PIUZE:

21 Q. SO YOU WERE THE SECOND IN COMMAND
22 FOR THE 300 PERSON TASK FORCE TO KEEP INFLATION
23 DOWN DURING THE CARTER ADMINISTRATION; RIGHT?

24 A. WELL, IT WAS A GOVERNMENT AGENCY,
25 NOT A TASK FORCE AND --

26 Q. RIGHT?

27 A. YES.

28 Q. DIDN'T DO VERY WELL, DID YOU?

1 A. WE DID AFTER I GOT THERE.
2 INFLATION WAS 0.0 IN AUGUST JUST BEFORE I LEFT.
3 Q. STATISTICS AGAIN, HUH?
4 A. WELL, THAT'S HOW YOU MEASURE
5 INFLATION, WITH PERCENT CHANGE IN PRICES.
6 Q. WHEN DID YOU GET THERE?
7 A. 1979.
8 Q. WASN'T 1979 ABOUT THE HIGHEST
9 INFLATION PERIOD WE HAD IN HOW LONG?
10 A. WELL, SINCE I GOT THERE IN DECEMBER
11 1979, I DON'T THINK I CAN TAKE BLAME FOR THE ENTIRE
12 YEAR.
13 Q. I AM NOT BLAMING YOU, I AM JUST --
14 A. OKAY.
15 Q. -- PUTTING SOME OF YOUR TESTIMONY
16 IN PERSPECTIVE.
17 WASN'T 1979 ABOUT THE WORST
18 INFLATION WE HAVE HAD IN THIS COUNTRY FOR A LONG,
19 LONG, LONG TIME?
20 A. THAT WHOLE PERIOD WAS PRETTY BAD,
21 YES. '78, '79, WAS VERY, VERY BAD.
22 Q. HOW LONG HAD IT BEEN SINCE WE HAD
23 ANYTHING THAT BAD BEFORE?
24 A. I DON'T KNOW IF WE EVER HAVE HAD
25 ANYTHING THAT BAD.
26 Q. SO IN 1996, WHAT PERCENTAGE OF THE
27 PEOPLE KNEW WHO MICHAEL JORDAN WAS?
28 A. ABOUT 60 PERCENT.

1 Q. DOESN' T THAT SOUND AWFULLY LOW TO
2 YOU?

3 A. LOWER THAN YOU MIGHT HAVE EXPECTED,
4 YES.

5 Q. WELL, THAT WASN' T THE QUESTION THAT
6 WAS ASKED, WAS IT?

7 A. NO.

8 Q. YOU DON' T KNOW, THAT' S WHAT YOU
9 SAID TO THE JURY, ABOUT 60 PERCENT OF THE PEOPLE
10 KNEW WHO MICHAEL WAS, BUT YOU GOT NO BASIS FOR
11 SAYING THAT, DO YOU?

12 A. WELL, WHAT I SAID WAS, THE NUMBER
13 OF PEOPLE THAT COULD IDENTIFY MICHAEL JORDAN AS THE
14 N. B. A. M V. P. AND THE STAR OF THE CHICAGO BULLS
15 CHAMPIONSHIP BASKETBALL TEAM

16 Q. THAT WAS THE SECOND TIME AROUND,
17 YOU ARE RIGHT.

18 A. I DID SAY THAT.

19 Q. THE FIRST TIME AROUND, DIDN' T YOU
20 SAY THAT ONLY 62 PERCENT OF THE PEOPLE COULD
21 IDENTIFY WHO MICHAEL JORDAN WAS?

22 A. BASED ON THAT QUESTION.

23 Q. THAT' S A YES?

24 A. YES.

25 Q. AND THAT' S WRONG INFORMATION, ISN' T
26 IT?

27 A. WELL, IT' S INTERPRETING WHAT THE
28 QUESTION WAS.

1 Q. WELL, MICHAEL JORDAN IS FAR AND
2 AWAY -- HOW LONG AGO DID HE RETIRE, DO YOU KNOW?

3 A. WELL, HE MAY BE COMING BACK, BUT HE
4 RETIRED ABOUT FOUR YEARS AGO, FOUR OR FIVE YEARS
5 AGO.

6 Q. MICHAEL JORDAN, TODAY, IS THE BEST
7 KNOWN ATHLETE IN THE WORLD; RIGHT?

8 A. MICHAEL AND TIGER WOODS, YES.

9 Q. RIGHT. AND IN 1996, FIVE YEARS
10 AGO, MICHAEL JORDAN WAS FAR MORE THE BEST KNOWN
11 ATHLETE IN THE WORLD; RIGHT?

12 A. YES.

13 Q. AND THIS POLL WASN'T OF THE WORLD,
14 THIS POLL WAS OF THE UNITED STATES OF AMERICA;
15 CORRECT?

16 A. YES.

17 Q. AND SO WHEN YOU SAID 62 PERCENT OF
18 THE PEOPLE IN AMERICA KNEW WHO MICHAEL JORDAN WAS,
19 THAT WAS WRONG, WASN'T IT?

20 A. NO, I WAS SAYING, 62 -- IN TERMS OF
21 THE QUESTION, THE PROFILE OF MICHAEL JORDAN, THE
22 M.V.P., M.V.P. OF THE N.B.A. AND THE STAR OF THE
23 CHICAGO BULLS, CAN YOU IDENTIFY THAT PERSON, ONLY
24 62 PERCENT OF THE PEOPLE COULD SAY MICHAEL JORDAN.

25 Q. I KNOW BUT THAT'S A DIFFERENT
26 QUESTION. THAT'S EXACTLY WHAT I AM GETTING AT.

27 WHEN YOU FIRST SAID TO THE JURY,
28 ONLY 62 PERCENT OF THE PEOPLE COULD IDENTIFY WHO

1 MICHAEL JORDAN WAS, THAT IS AN INACCURATE
2 STATEMENT, ISN'T IT?

3 A. NO, I THEN DESCRIBED THE QUESTION.

4 Q. YES, YOU DID.

5 A. AND I GAVE THE WORDING OF THE
6 QUESTION.

7 Q. RIGHT. BUT THE TWO WERE VERY
8 DIFFERENT PIECES OF INFORMATION, THEY DON'T EQUATE
9 AT ALL, DO THEY?

10 MR. CARLTON: OBJECTION, ARGUMENTATIVE.

11 THE COURT: OVERRULED.

12 THE WITNESS: THEY ARE NOT DIFFERENT
13 PIECES OF INFORMATION, IF THE FIRST IDENTIFICATION
14 IS AN INFERENCE BASED ON THE QUESTION.

15 Q BY MR. PIUZE: OH, WATCH, BECAUSE
16 HERE'S YOUR QUESTION RIGHT HERE.

17 WHAT PERCENTAGE OF THE PEOPLE COULD
18 IDENTIFY MICHAEL JORDAN AS THE M.V.P.; RIGHT?

19 A. THE INFORMATION THEY ARE GIVEN WAS
20 TWO THINGS, DO YOU KNOW WHO THE M.V.P. OF THE
21 N.B.A. AND STAR OF THE CHICAGO BULLS BASKETBALL
22 TEAM IS.

23 Q. I AM WITH YOU. AND IF THE QUESTION
24 WAS, DO YOU KNOW MICHAEL JORDAN'S SCORING AVERAGE
25 FOR 1996, THAT PERCENTAGE WOULD HAVE BEEN A LITTLE
26 SMALLER; RIGHT?

27 A. I EXPECT IT WOULD HAVE BEEN.

28 Q. IF THE QUESTION WAS, DO YOU KNOW

1 WHAT HIS SCORING AVERAGE WAS FOR THE PLAYOFFS, THE
2 PERCENTAGE WOULD HAVE BEEN EVEN SMALLER THAN THAT;
3 RIGHT?

4 A. PROBABLY, YES.

5 Q. ALL I AM GETTING AT HERE IS, WHEN
6 YOU ORIGINALLY STATED THIS, YOU HAD EXTRAPOLATED OR
7 INTERPOLATED OR DONE SOMETHING SO THAT YOU SAID
8 ONLY 62 PERCENT OF THE PEOPLE KNEW WHO MICHAEL
9 JORDAN WAS, AND THAT'S NOT TRUE INFORMATION, IS IT?

10 A. I THINK I HAVE ALREADY DISCUSSED
11 THIS, BUT I THINK THAT'S AN ACCURATE
12 CHARACTERIZATION BASED ON THIS QUESTION, IF YOU ARE
13 GOING FROM THAT QUESTION. SO IF YOU ARE ASKING
14 WHAT INFERENCE AM I MAKING FROM THIS, ONLY 62
15 PERCENT COULD IDENTIFY MICHAEL JORDAN AS THE M.V.P.
16 OF THE N.B.A. AND THE STAR OF THE CHICAGO BULLS.

17 Q. LOOK --

18 A. THAT'S DIFFERENT.

19 Q. I CAN ASK A BETTER QUESTION,
20 OBVIOUSLY.

21 IF 62 PERCENT OF THE PEOPLE COULD
22 TELL YOU THAT, OBVIOUSLY, A GREATER PERCENTAGE
23 COULD TELL WHO MICHAEL JORDAN WAS; RIGHT?

24 A. WHO WAS MICHAEL JORDAN, HE IS A
25 BASKETBALL PLAYER; RIGHT.

26 Q. WAY GREATER THAN 62 PERCENT; RIGHT?

27 A. I THINK YOU MIGHT GET HIGHER. I
28 HAVEN'T TRIED THE QUESTION, BUT YOU WOULD PROBABLY

1 GET HIGHER.

2 Q. WELL, THINK ABOUT IT. IF 62
3 PERCENT KNOW HE IS THE M V. P. , OBVIOUSLY MORE THAN
4 62 PERCENT KNOW WHO HE IS. THAT'S OBVIOUS, ISN'T
5 IT?

6 A. PROBABLY, YES.

7 Q. SO WHEN YOU ARE USING THIS
8 PARTICULAR NUMBER TO SAY TO THE JURY, WELL, IN THAT
9 PARTICULAR YEAR, 62 PERCENT OF AMERICANS KNEW WHO
10 MICHAEL JORDAN WAS, MISINFORMATION, ISN'T IT?

11 A. I THINK I HAVE ANSWERED THIS
12 QUESTION ABOUT THREE TIMES. BUT I DON'T THINK IT'S
13 MISINFORMATION. THIS WAS CHARACTERIZING THE
14 RESPONSE TO THE QUESTION, COULD YOU IDENTIFY
15 MICHAEL JORDAN AS THE N. B. A. M V. P. AND STAR OF THE
16 CHICAGO BULLS.

17 Q. HERE, YOU SEE THIS, WELL, YOU HAVE
18 ANSWERED IT FOUR TIMES SO I AM GOING TO LEAVE IT
19 ALONE.

20 DO YOU SEE THE QUESTION I WROTE UP
21 AT THE TOP THERE, CAN YOU READ THAT?

22 A. "PERCENTAGE OF KIDS IN BEIJING,
23 CHINA AWARE OF MARLBORO. "

24 Q. RIGHT.

25 DO YOU KNOW WHERE THAT FITS ON THE
26 GRAPH?

27 A. NO.

28 Q. HOW ABOUT RIGHT THERE. DOES THAT

1 SURPRISE YOU?

2 A. NO.

3 Q. THE 1985 STUDY THAT YOU WERE
4 TALKING ABOUT WAS DONE, PREPARED FOR THE SAME LAW
5 FIRM THAT HIRED YOU IN THIS CASE; RIGHT, ARNOLD
6 & PORTER?

7 A. THEY ARE ONE OF THREE LAW FIRMS, I
8 THINK.

9 Q. YOU ARE TESTIFYING RIGHT NOW FOR
10 ARNOLD & PORTER; RIGHT?

11 A. THEY ARE THE ONES HERE, YES.

12 Q. WHAT DOES THAT MEAN?

13 A. I AM JUST GIVING MY OPINION, I AM
14 NOT TESTIFYING FOR THE LAW FIRM THEY ARE HIRING
15 ME, BUT I AM TESTIFYING ON MY EXPERT OPINION.

16 Q. THAT'S A GOOD POINT, SORRY.
17 YOU WERE RETAINED BY ARNOLD
18 & PORTER?

19 A. THAT IS CORRECT.

20 Q. IN 1985, THIS SURVEY THAT YOU
21 TALKED ABOUT WAS PREPARED FOR ARNOLD & PORTER AND A
22 COUPLE OTHER MAJOR FIRMS; RIGHT?

23 A. THAT IS CORRECT.

24 Q. AND THIS 1997 SURVEY THAT YOU
25 TALKED ABOUT WAS ALSO PREPARED FOR ARNOLD & PORTER
26 AND ANOTHER MAJOR LAW FIRM?

27 A. THAT IS CORRECT.

28 Q. AND THIS IS THE 1998 SURVEY THAT

1 WAS PREPARED?

2 A. YES.

3 Q. FOR ARNOLD & PORTER?

4 A. AT LEAST FOR THEM, I AM NOT SURE IF
5 ANYBODY ELSE SPONSORED IT.

6 Q. AT LEAST THESE LAST TWO REPORTS
7 THAT WERE PREPARED WERE DONE FOR USE IN LITIGATION
8 AGAINST STATES' ATTORNEY GENERALS' CASES AGAINST
9 PHILIP MORRIS; RIGHT?

10 A. AND OTHER COMPANIES, YES.

11 Q. AND THE 1985 SURVEY THAT WAS DONE
12 WAS PREPARED IN ANTICIPATION OF LITIGATION ALSO,
13 WAS IT NOT?

14 A. I AM NOT SURE IF THEY ARE EVER
15 GOING TO USE IT. I DON'T KNOW WHY THEY RAN IT
16 OTHER THAN THEY HAD SOME INDIVIDUAL LUNG CANCER
17 SUITS AND THEY WANTED TO GET DATA ON IT. BUT I AM
18 SURE IT WAS FOR BACKGROUND INFORMATION FOR
19 LITIGATION. BUT I DON'T THINK IT WAS EVER
20 PRESENTED IN TRIAL.

21 Q. ALL I ASKED WAS, THE 1985 SURVEY
22 THAT YOU WERE TALKING ABOUT, I CAN'T READ IT UPSIDE
23 DOWN FROM HERE BECAUSE THE PRINT IS SMALL, BUT I
24 KNOW IT SAYS IT WAS PREPARED IN ANTICIPATION OF
25 LITIGATION; RIGHT?

26 A. THAT'S WHAT IT SAYS, YES.

27 Q. NOW, YOU WERE GIVEN, WAY BACK IN
28 THE 80'S, A COPY OF THIS 1985 SURVEY?

1 A. YES, I BELIEVE IT WAS 1987.

2 Q. YOU WERE ASKED TO CRITIQUE ONE OF
3 THESE SURVEYS, WEREN' T YOU?

4 A. I WAS ASKED TO EVALUATE THE
5 ANALYSIS OF AUDITS AND SURVEYS OF THE DATA.

6 Q. YOU WERE ASKED TO REEVALUATE IT BY
7 ONE OF THESE LAW FIRMS, WEREN' T YOU?

8 A. THE ACTUAL -- YOU WANT ME TO
9 DESCRIBE THE HISTORY OF THIS?

10 Q. NO.

11 A. I WAS THE ONE THAT ASKED THEM IF I
12 COULD DO AN ANALYSIS OF THE DATA.

13 Q. YOU DID A 30-PAGE REEVALUATION OF
14 THE DATA?

15 A. YES. THEY PAID ME FOR IT BUT I WAS
16 THE ONE THAT ASKED TO DO AN EVALUATION OF THE DATA.

17 Q. THAT' S OKAY, I THINK YOU SHOULD GET
18 PAID.

19 MR. CARLTON: OBJECTION.

20 THE COURT: SUSTAINED.

21 Q BY MR. PIUZE: I DIDN' T ASK YOU IF
22 YOU GOT PAID. IT DOESN' T MATTER.

23 A. OKAY.

24 Q. YOU DID A 30-PAGE RE-ANALYSIS OF
25 THIS 1985 SURVEY; RIGHT?

26 A. YES.

27 Q. YOU CRITIQUED IT AND PUT YOUR SPIN
28 ON IT; RIGHT?

1 A. I ANALYZED THE SURVEY DATA.

2 Q. YOU CRITICIZED SOME OF THE SURVEY
3 DATA?

4 A. I SAID I DEVELOPED -- I DIDN'T
5 CRITICIZE THE SURVEY ITSELF OR THE RAW DATA. WHAT
6 I DID IS I SAID I PREPARED MY OWN ANALYSIS AND I
7 LIKED MY ANALYSIS BETTER THAN THE ANALYSIS DONE BY
8 AUDITS AND SURVEYS.

9 Q. RIGHT.

10 A. THAT'S DIFFERENT THAN SAYING, I
11 CRITICIZED THE DATA.

12 Q. WELL, I WILL TELL YOU WHAT, DIDN'T
13 YOU ADVISE ONE OF THE LAWYERS THAT HIRED YOU
14 THAT -- DIDN'T HIRE YOU, BUT WAS COMPENSATING YOU
15 AT THAT TIME, THAT YOU WOULDN'T PUT SOME OF THESE
16 NUMBERS OUT IN THE PUBLIC DOMAIN, YOU THOUGHT THE
17 SURVEY SAMPLE WAS A LITTLE TOO SMALL?

18 A. NOT FOR THE RISK PERCEPTION
19 NUMBERS.

20 Q. WHAT ABOUT ANSWERING THE QUESTION.
21 DIDN'T YOU TAKE PART OF THAT SURVEY
22 AND TELL THEM YOU WOULDN'T PUT NUMBERS OUT IN THE
23 PUBLIC DOMAIN BECAUSE THE SAMPLE WAS TOO SMALL?

24 A. THIS WOULD BE FOR OPEN ENDED
25 QUESTIONS WHERE MAYBE ONLY THREE OR FOUR
26 RESPONDENTS ANSWERED A PARTICULAR THING. SO IF YOU
27 HAVE A SMALL SAMPLE SIZE FOR SOME OF THE OPEN-ENDED
28 ONES, THEN THAT WOULD BE TOO SMALL A SAMPLE.

1 SO NOT EVERY QUESTION IN THE
2 SURVEY, IN EVERY RESPONSE, YIELDS STATISTICALLY
3 SIGNIFICANT RESULTS. AND THAT WAS PARTICULARLY IN
4 THE CASE OF THE OPEN-ENDED ONES WHERE THEY ASKED
5 PEOPLE SIMPLY, WHAT DO YOU THINK OF CIGARETTES, AND
6 YOU MAY HAVE GOTTEN 200 DIFFERENT RESPONSES.

7 SO THAT YOU DIDN'T HAVE ENOUGH
8 PEOPLE GIVING PARTICULAR RESPONSES FOR THEM TO BE
9 STATISTICALLY SIGNIFICANT.

10 Q. SO HERE WAS MY QUESTION.

11 DIDN'T YOU ADVISE THE LAWYERS THAT
12 WERE COMPENSATING YOU THAT PARTS OF THE SURVEY YOU
13 WOULDN'T PUT OUT IN THE PUBLIC DOMAIN?

14 A. NO. WHAT I AM SAYING IS THAT
15 CERTAIN OF THE RESULTS, IN THE ANALYSIS, IF THEY
16 ARE NOT STATISTICALLY SIGNIFICANT, THEN YOU SHOULD
17 TREAT THEM WITH CAUTION. AND THAT'S NOT TRUE OF
18 THE RISK OF BELIEF RESULTS, THAT'S OTHER RESULTS.

19 Q. YOU HAVE NEVER STUDIED SURVEY
20 DESIGN?

21 A. IS THAT A QUESTION?

22 Q. YES.

23 A. THAT'S NOT TRUE.

24 Q. WHY IS IT NOT TRUE?

25 A. I HAVE BEEN DOING SURVEY DESIGN AS
26 PART OF MY STATISTICS TRAINING. I HAVE ACTUALLY
27 BEEN RUNNING SURVEYS FOR THE UNITED STATES
28 GOVERNMENT, NON-STOP SINCE 1983.

1 Q. YOU HAVE NEVER STUDIED SURVEY
2 DESIGN, ISN'T THAT RIGHT?

3 A. NO.

4 Q. YOU HAVE NEVER TAKEN COURSES IN
5 SURVEY DESIGN?

6 A. NO. THE COURSES ARE NOT
7 SPECIFICALLY CALLED "SURVEY DESIGN." THEY ARE PART
8 OF COURSES IN STATISTICS.

9 SO I HAVE TAKEN NO PARTICULAR
10 COURSE WHERE THE COURSE IS CALLED "SURVEY DESIGN."
11 BUT IT'S A COMPONENT OF COURSES. IN FACT, IT'S
12 WHAT I AM TEACHING NOW

13 Q. YOU TESTIFIED FOR RJ REYNOLDS
14 TOBACCO COMPANY IN THE JOE CAMEL CASE; RIGHT?

15 A. IN THE DEPOSITION, YES.

16 Q. YOU TESTIFIED FOR THE TOBACCO
17 INDUSTRY REGARDING F. D. A. JURISDICTION AND
18 POTENTIAL RESTRICTIONS?

19 A. I HAD HAD NO OPINION ON F. D. A.
20 JURISDICTION.

21 Q. YOU TESTIFIED ON BEHALF OF THE
22 TOBACCO INDUSTRY IN PUBLIC HEARINGS REGARDING
23 F. D. A. AND OSHA JURISDICTION?

24 A. ON OSHA, I DID NOT TESTIFY ON OSHA
25 JURISDICTION. I PRESENTED ECONOMIC EVIDENCE
26 RELATING TO THE POLICY ISSUES BEING CONSIDERED BUT
27 I DID NOT TESTIFY ON LEGAL ISSUES OF JURISDICTION.

28 Q. HERE, LET ME JUST SHOW YOU THIS

1 TRANSCRIPT HERE.

2 MR. CARLTON: EXCUSE ME, YOUR HONOR, MAY
3 I SEE WHAT THAT IS.

4 MR. PIUZE: SURE, I APOLOGIZE.

5 Q BY MR. PIUZE: DO YOU KNOW WHAT
6 THIS IS?

7 A. A TRANSCRIPT OF A TRIAL, IRON
8 WORKERS.

9 Q. OKAY.

10 A. OHIO IRON WORKERS TRIAL.

11 Q. YOU WERE INVOLVE IN THE OHIO IRON
12 WORKERS TRIAL?

13 A. YES.

14 Q. ON BEHALF OF PHILIP MORRIS?

15 A. RJ REYNOLDS, I THINK.

16 Q. I AM JUST SEEING PHILIP MORRIS UP
17 HERE. DO YOU SEE THAT?

18 A. YES.

19 Q. OKAY, RJ REYNOLDS.

20 SO HERE WAS THE QUESTION, AND I AM
21 AT PAGE 4129. AND THE LAWYER ASKED YOU:

22 "YOU TESTIFIED ON BEHALF OF
23 THE TOBACCO INDUSTRY IN PUBLIC
24 HEARINGS REGARDING THE F. D. A. AND OSHA
25 JURISDICTION, CORRECT?

26 AND AT THAT TIME YOU SAID

27 "YES. "

28 A. I STILL SAY YES BUT NOT ON THE

1 ISSUE, THE LEGAL ISSUE OF JURISDICTION, BUT ON THE
2 ECONOMIC ASPECTS.

3 Q. YES.

4 AND THEN ON THIS OTHER TOPIC THAT I
5 WAS DISCUSSING HAD TO DO WITH CRITIQUING THAT
6 ORIGINAL 1985 SURVEY?

7 A. RIGHT.

8 Q. DID YOU DISCUSS THE FACT THAT SOME
9 OF THOSE QUESTIONS, YOU DIDN'T LIKE THE WAY THEY
10 WERE PUT TOGETHER?

11 A. NO. WHAT I AM SAYING HERE IS THAT
12 WHEN YOU GET ANSWERS THAT GO OUT -- YOU INTERVIEW
13 3,000 PEOPLE, THEIR ANSWERS GO INTO 192 DIFFERENT
14 CATEGORIES, IT'S EXACTLY THE KIND OF THING I JUST
15 EXPLAINED, AND WHEN YOU HAVE SMALL CELLS TO THE
16 CATEGORIES, THEN YOU ARE NOT GOING TO GET
17 STATISTICAL SIGNIFICANCE.

18 THAT'S WHAT I SAID. SINCE THE
19 GROUPINGS INVOLVE SUCH A SMALL NUMBER OF
20 INDIVIDUALS, IN ANY PARTICULAR CATEGORY, THE
21 STATISTICAL RELIABILITY OF THE RESULTS OF THIS
22 REFINED A LEVEL IS NOT GREAT. THAT'S NOT THE
23 QUESTION I AM TALKING ABOUT HERE TODAY. THAT WAS
24 AN OPEN-ENDED QUESTION REGARDING WHAT PEOPLE
25 THOUGHT ABOUT CIGARETTES.

26 Q. I DON'T WANT TO BE STANDING BEHIND
27 YOUR BACK HERE.

28 THE COURT: GOOD.

1 Q BY MR. PIUZE: BUT YOU SEE WHAT I
2 HAD ASKED YOU IS, AND WHAT I WANTED TO ASK YOU
3 AGAIN, WHETHER YOU VOLUNTEERED OR WERE RECRUITED,
4 YOU CRITIQUED ONE OF THESE VERY STUDIES THAT'S HERE
5 AND TOLD THE TOBACCO LAWYERS THAT PARTS OF IT YOU
6 DIDN'T THINK WERE IMPORTANT; RIGHT?

7 A. NO, NO. YOU'RE TOTALLY
8 MISINTERPRETING IT.

9 WHAT I DID, I DID A STATISTICAL
10 ANALYSIS OF THE DATA. WHEN I DID A STATISTICAL
11 ANALYSIS, NOT ALL THE QUESTIONS THEY ASK ARE GOING
12 TO HAVE LOTS OF SAMPLES OF PEOPLE GIVING THE
13 ANSWERS.

14 SO IN THIS CASE, THEY HAD AN
15 OPEN-ENDED QUESTION ABOUT WHAT PEOPLE THINK ABOUT
16 CIGARETTES. THERE ARE 192 DIFFERENT CATEGORIES OF
17 RESPONSES, YOU HAVE A FEW PEOPLE IN ONE CATEGORY,
18 AND YOU SHOULDN'T MAKE A BIG DEAL OF IT BECAUSE YOU
19 ONLY HAVE A FEW PEOPLE. YOU CAN'T MAKE AN
20 INFERENCE FROM THAT. SO THAT'S ALL I WAS SAYING.
21 I WAS NOT CRITICIZING THE SURVEY, I WAS JUST SAYING
22 THAT AS WITH ANY STATISTICAL ANALYSIS YOU WANT TO
23 FOCUS ON THE QUESTIONS FOR WHICH YOU HAVE ENOUGH
24 DATA TO MAKE RELIABLE INFERENCE.

25 Q. REMEMBER PROFESSOR SLOVIC?

26 A. I REMEMBER HIM

27 Q. REMEMBER PART OF PROFESSOR SLOVIC'S
28 THING WAS PUT UP ON THE BOARD HERE?

1 A. YES.

2 Q. AND YOU PUT YOUR ARM AROUND IT AND
3 SAID, I AM WITH HIM, HE IS WITH ME?

4 MR. CARLTON: OBJECTION TO THE
5 CHARACTERIZATION.

6 THE COURT: SUSTAINED.

7 MR. PIUZE: WITHDRAWN.

8 Q BY MR. PIUZE: DON'T YOU REMEMBER
9 THE QUESTION BEING HE FOUND THE SAME THING YOU
10 FOUND, HE AGREES WITH YOU?

11 A. WELL, I NEVER SAID HE AGREES WITH
12 ME IN GENERAL. I SAID HE TRIED TO REPLICATE MY
13 WORK AND HE FOUND THE SAME THING I DID, WITH THE
14 LUNG CANCER RISK BELIEF QUESTION.

15 Q. I KNOW YOU DIDN'T SAY HE AGREES
16 WITH YOUR WORK IN GENERAL AND JUST IN CASE THERE'S
17 A MISPERCEPTION OR MISCONCEPTION HERE, HE DOESN'T
18 AGREE WITH YOUR WORK IN GENERAL AT ALL, DOES HE?

19 A. HE IS A TESTIFYING EXPERT ON BEHALF
20 OF PLAINTIFFS IN THESE CASE.

21 Q. THAT'S A --

22 A. THAT WOULD BE THE OPPOSITE OF ME.

23 Q. THAT'S A NO?

24 A. THAT WOULD BE "NO."

25 Q. THIS GUY WHOSE WORK WAS PUT UP ON
26 THE BOARD AND YOU SAID, YEAH, THAT'S WHAT I THINK,
27 HE'S A GUY WHO IS USUALLY SAYING YOU ARE WRONG?

28 A. NO, NOTWITHSTANDING THE FACT THAT

1 HE TRIED TO FIND ME WRONG WHEN HE RAN THE SURVEY,
2 HE ENDED UP VERIFYING MY RESULTS.

3 Q. AS A MATTER OF FACT, HE FINDS YOU
4 WRONG ENOUGH AND CRITICIZED SOME OF YOUR
5 INFORMATION ENOUGH THAT YOU PUBLICLY WROTE A
6 CRITIQUE OF HIS CRITIQUE WHEN HE SAID, PROFESSOR
7 VISCUSI IS ALL WET, YOU FELT COMPELLED TO GO OUT
8 AND SAY, NO, HE IS WETTER THAN I AM?

9 A. WE DID HAVE AN EXCHANGE ALONG THOSE
10 LINES, YES.

11 Q. OKAY. WELL, WITH THAT WET EXCHANGE
12 IN MIND, I THINK THIS MAY BE A GOOD TIME.

13 THE COURT: ALL RIGHT, LADIES AND
14 GENTLEMEN, WE WILL SEE YOU AT 1:30 THIS AFTERNOON,
15 DON'T DISCUSS THE CASE WITH ANYONE.

16

17 (AT 12 NOON, THE LUNCH
18 RECESS WAS TAKEN TO
19 1:30 P.M. OF THE SAME DAY.)

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