

FTC PrivacyCon  
January 14, 2016  
Segment 1  
Transcript

>> -- EXCUSE ME --

COULD YOU TAKE YOUR SEATS  
PLEASE?

I THINK WE'RE STARTING.

>> GOOD MORNING AND WELCOME TO  
PrivacyCon.

I AM CHRISTINA YOUNG, A  
PARALEGAL IN FTC'S OFFICE OF  
RESEARCH AND INVESTIGATION OR  
OTEC.

BEFORE WE COMMENCE I HAVE BRIEF  
HOUSEKEEPING DETAILS TO RUN  
THROUGH WITH YOU.

FIRST, IF YOU COULD PLEASE SAY  
HELPS ANY MOBILE PHONES AND  
OTHER ELECTRONIC DEVICES.

SECOND, IF YOU LEAVE THE  
BUILDING DURING THE EVENT, YOU  
WILL HAVE TO COME BACK THROUGH  
SECURITY.

PLEASE BARE THIS IN MIND,

ESPECIALLY IF YOU'RE  
PARTICIPATING ON A PANEL SO YOU  
DON'T MISS IT.  
MOST OF YOU RECEIVED AN FTC CARD  
AT REGISTRATION.  
WE REUSE THESE SO PLEASE RETURN  
THESE TO OUR EVENT STAFF  
WHEN YOU LEAVE TODAY.  
IF AN EMERGENCY OCCURS THAT  
REQUIRES YOU TO LEAVE THE  
CONFERENCE CENTER BUT REMAIN IN  
THE BUILDING, FOLLOW THE  
INSTRUCTIONS PROVIDED OVER THE  
P.A. SYSTEM.  
IF AN EMERGENCY OCCURS THAT  
REQUIRES THE EVACUATION OF THE  
BUILDING, AN ALARM WILL SOUND.  
EVERYONE SHOULD LEAVE THE  
BUILDING THROUGH THE MAIN 7th  
STREET EXIT, TURN LEFT AND  
ASSEMBLE ACROSS E STREET E  
PLEASE REMAIN IN THE ASSEMBLY  
AREA UNTIL FURTHER INSTRUCTION

IS GIVEN.

IF YOU NOTICE ANY SUSPICIOUS  
ACTIVITY PLEASE LETTER BILLSAL  
BUILDING SECURITY.

WE'RE ALMOST DONE.

JUST A FEW MORE ITEMS.

THE BUILDING CAFETERIA IS NOT  
OPEN TO THE PUBLIC TODAY.

HOWEVER, BOX LUNCHESES WILL BE  
AVAILABLE FOR PURCHASE IN THE  
HALLWAY OUTSIDE OF THE  
AUDITORIUM AND OVERFLOW ROOMS.

YOU MAY USE THE OVERFLOW ROOMS  
TO EAT LUNCH NO.

FOOD OR DRINK OTHER THAN WATER  
IS LOW IN THE AUDITORIUM.

THE RESTROOMS ARE IN THE HALLWAY  
OUTSIDE OF THE AUDITORIUM.

THIS IS A PUBLIC EVENT WHICH IS  
BEING WEBCAST AND RECORDED.

WELCOME TO EVERYONE WATCHING THE  
LIVE WEB OKAY AN ARCHIVE WEBCAST  
AND THE CONFERENCE MATERIALS

WILL BE AVAILABLE VIA FTC.GOV

AFTER IT ENDS.

AND WE ARE USING #privacyCon

FOR TODAY. THANK YOU.

NOW OVER TO DAN!

THANK YOU.

I'M DAN SALZBURG, THE ACTING

CHIEF IN THE FTC OFFICE OF

RESEARCH AND INVESTIGATION AND

MEMBER OF THE PrivacyCon TEAM.

WE KNOW PRIVACY AND DATA

SECURITY ARE FORTUNE ALL OF YOU

GATHERED HERE TODAY AND THAT

MANY OF YOU ARE NOW SEEING IN

PERSON PEOPLE THAT YOU KNEW HAD

PREREGISTERED FOR THIS EVENT.

WE'RE SORRY FOR SHARING THAT

INFORMATION WITH YOU LAST WEEK

AND ARE ADDRESS OUR BULK

DISTRIBUTION SETUP TO PREVENT

SUCH A RELEASE FROM HAPPENING

AGAIN.

I HOPE YOU HAVE HAD A CHANCE TO

REVIEW TODAY'S AGENDA.

WE HAVE A GREAT AND DIVERSE

ROSTER OF PRESENTERS AND

PARTICIPANTS AND LOOK FORWARD TO

AN INFORMATIVE DAY OF NONSTOP

CUTTING-EDGE PRESENTATIONS

COVERING THE LATEST PRIVACY AND

DATA SECURITY RESEARCH.

NOW LET'S KICK OFF PrivacyCon

WITH REMARKS FROM FIREFIGHT

CHAIRWOMAN EDITH RAMIREZ WHO LED

THE AGENCY'S EFFORTS TO PROTECT

FROM UNFAIR DATA AAND SECURITY

PRACTICES.

CHAIRWOMAN RAMIREZ.

[ APPLAUSE ]

>> THANK YOU, DAN.

I'M DELIGHTED TO BE HERE WITH

YOU SO GOOD MORNING EVERYBODY

AND WELCOME TO PrivacyCon, A

FIRST-OF-ITS-KIND CONFERENCE AT

COMMISSION BRINGING TOGETHER

LEADING EXPERTS WITH ORIGINAL

RESEARCH ON PRIVACY AND DATA  
SECURITY.

TODAY COMPANIES IN ALMOST EVERY  
SECTOR ARE EAGER TO SCOOP UP THE  
DIGITAL PRINTS THAT WE LEAVE  
BEHIND WHEN WE POST, SHOP AND  
BROWSE ONLINE.

THE NEW GENERATION OF PRODUCTS  
THAT WE SEE IN THE MARKETPLACE,  
FROM SMART APPLIANCES TO  
CONNECTED MEDICAL DEVICES TO  
SEMI AUTONOMOUS CARS, ALL OF  
THESE MEAN THE CONSUMERS MUST  
NAVIGATE AN INCREASINGLY COMPLEX  
AND DYNAMIC DIGITAL ECOSYSTEM.  
IN SHORT, THE INNER PLAY BETWEEN  
TECHNOLOGY AND DATA IS A  
RADICALLY TRANSFORMING HOW WE  
INTERACT WITH EVERYTHING AROUND  
US.

THESE TRENDS WILL NOT ONLY  
CONTINUE; THEY WILL MULTIPLE.  
AT THE FTC WE'RE CONSTANTLY

SEEKING TO EXPAND OUR  
UNDERSTANDING OF EMERGING  
TECHNOLOGIES AND THEIR IMPACT ON  
CONSUMERS AS WE WORK TO ENSURE  
THAT CONSUMERS ENJOY THE BURNS  
OF INNOVATION CONFIDENT THEIR  
PERSONAL INFORMATION IS BEING  
HANDLED RESPONSIBLY.

WE KNOW THAT ENFORCEMENT IN  
POLICY NEEDS TO BE GUIDED BY  
RESEARCH AND DATA.

WE DO A GREAT DEAL OF RESEARCH  
AND ANALYSIS INTERNALLY BUT WITH  
THE INCREASINGLY RAPID PACE OF  
TECHNOLOGICAL EXCHANGE  
COMPLEXITY OF THE CHALLENGES  
CONSUMERS FACE, MORE THAN EVER  
WE NEED TO TAP INTO THE  
EXPERTISE AND INSIGHTS OF THE  
RESEARCH COMMUNITY TO HELP US  
FULFILL OUR CONSUMER PROTECTION  
MANDATE.

TODAY'S CONFERENCE PROVIDES A

UNIQUE OPPORTUNITY TO DO JUST  
THAT.

>> WITH PrivacyCon OUR AIM IS  
TO BRIDGE THE GAP BETWEEN THE  
ACADEMIC, TECH, AND POLICY  
WORLDS.

OUR AMBITION AGENDA IS FILLED  
WITH CUTTING-EDGE AND  
PROVOCATIVE PRESERVE.

SOME OF THE PRESENTATIONS WILL  
LEND SUPPORT FOR CURRENT PRIVACY  
AND DATA SECURITY POLICIES.

OTHERS MAY LEAD US TO RETHINK  
OUR ASSUMPTIONS.

EITHER WAY, WE HOPE TO SPUR A  
RICHER DIALOGUE ABOUT PRIVACY  
AND DATA SECURITY.

AND WE HOPE THIS DIALOGUE WILL  
BE A TWO-WAY STREET AS WE SEEK  
VALUABLE INPUT FROM THE ACADEMIC  
AND TECH COMMUNITIES WE ALSO AIM  
TO PROVIDE USEFUL FEEDBACK TO  
RESEARCHERS ABOUT THE TYPE OF

WORK THAT WOULD BE MOST RELEVANT  
TO HELPING US AND OTHER POLICY  
MAKERS MAKE INFORMED POLICY  
DECISIONS.

SO THIS MORNING TO SET THE STAGE  
FOR OUR PROGRAM AND TO HIGHLIGHT  
THE IMPORTANCE OF RESEARCH AT  
THE FTC, I WOULD LIKE TO SPEAK  
ABOUT HOW WE INCORPORATED  
PRIVACY AND DATA SECURITY  
RESEARCH INTO OUR ENFORCEMENT  
AND POLICY WORK.

THE XRFT WAS FOUNDED ON THE --  
FTC WAS FOUNDED THAT RESEARCH  
MAKES SOUND POLICY.

TODAY THE RESEARCH IS A POLICY  
HUB ON A WIDE ARRAY OF FRONTLINE  
AND COMPETITION ISSUES, AMONG  
THEM PRIVACY AND DATA SECURITY.

AS YOU KNOW, WE HAVE HOSTED  
WORKSHOPS AND ISSUED REPORTS ON  
SIGNIFICANT AND CUTTING-EDGE  
ISSUES SUCH AS FACIAL

RECOGNITION, THE INTERNET OF THINGS, DATA BROKERS, MOBILE DEVICE TRACKING, MOBILE SECURITY, AND MOBILE PRIVACY DISCLOSURES.

OUR WORKSHOPS HAVE BROUGHT TOGETHER ACADEMICS, CONSUMER ADVOCATES, INDUSTRY, TECHNOLOGISTS AND OTHER DESTAKEHOLDERS TO HELP INFORM POLICY DISCUSSIONS AND OUR REPORTS ON EMERGING TECHNOLOGIES PROVIDE CONCRETE GUIDANCE ON HOW TO HELP CONSUMERS IN TODAY'S DIGITAL WORLD.

MOST RECENTLY, WE HELD A WORKSHOP ON CROSS-DEVICE TRACK. TO EVALUATE THE BENEFITS AND RISKS OF CROSS DEVICE TRACKING WE NEED TO KNOW WHAT IT IS AND HOW IT WORKS.

OUR WORKSHOP INCLUDED A SESSION WHERE EXPERTS EXPLAINED HOW

TRACKING TECHNIQUES FUNCTION AND  
DISCUSSED WHETHER TECHNICAL  
MEASURES SUCH AS HASHING MIGHT  
BE USED TO PROTECT CONSUMERS  
PRIVACY.

AND JUST LAST WEEK WE ISSUED OUR  
BIG DATA REPORT WHICH OUTLINES A  
NUMBER OF SUGGESTIONS FOR  
BUSINESSES TO HELP ENSURE THAT  
THEIR USE OF BIG DATA ANALYTICS  
PRODUCES BENEFITS FOR CONSUMERS  
WHILE AVOIDING OUTCOMES THAT  
MAYBE EXCLUSIONARY OR  
DISCRIMINATORY.

IN THIS REPORT WE HIGHLIGHT  
POSSIBLE RISKS THAT COULD RESULT  
FROM INACCURACIES OR BIASES  
ABOUT CERTAIN GROUPS AND DATA  
SETS INCLUDING THE RISKS THAT  
CERTAIN KIERMS, ESPECIALLY LOW  
INCOME OR UNDER SERVED CONSUMERS  
MIGHT MISTAKENLY BE DENIED  
OPPORTUNITIES OR THAT BIG DEALT

ANALYTICS MIGHT REVERSE  
SOCIOECONOMIC DISAPPARENTS.  
ON THE ENFORCEMENT FRONT, THE  
WORK OF TECH RESEARCHERS HAS  
HELPED US IDENTIFY DECEPTIVE OR  
UNFAVOR PRACTICES OF COMPANIES  
SUCH AS HTC, SNAPCHAT AND  
FANDANGO.

LAST MONTH, WE ANNOUNCED AN  
ACTION AGAINST ORACLE WHERE WE  
ALLEGE THAT THE COMPANY'S  
FAILURE TO DISCLOSE THAT OLDER  
INSECURE VERSIONS OF JAVA WOULD  
NOT BE REMOVED AS PART OF THE  
SOFTWARE UPDATE PROCESS.

WE ALLEGE THAT THAT WAS A  
DECEPTIVE PRACTICE.

VARIOUS RESEARCHERS HAD POINTED  
OUT PROBLEMS WITH MALWARE  
EXPLOITS FOR OLDER VERSIONS HAD  
OF JAVA WHICH LED TO OUR  
INVESTIGATION OF THE ISSUE.

THE CONSENT ORDER THAT WE

ENTERED INTO REQUIRES ORACLE TO  
MAKE AN EFFECTIVE TOOL FOR  
UNINSTALLING OLDER VERSIONS OF  
JAVA AVAILABLE TO CONSUMERS.

IN SHORT, OUR ENFORCEMENT  
ACTIONS HAVE PROVIDED IMPORTANT  
PROTECTIONS FOR CONSUMERS AND  
RESEARCH VERSE OFTEN PLAYED A  
CRITICAL ROLE IN HELPING US  
ACHIEVE THAT GOAL.

IN CERTAIN AREAS WE HAVE ALSO  
ASKED TECHNOLOGISTS AND  
RESEARCHERS TO HELP US COME UP  
WITH TECHNICAL COUNTERMEASURES  
TO HELP US ADDRESS VEXING  
PROBLEMS.

ILLEGAL ROBOCALLS ARE A KEY  
EXAMPLE.

VOICE OVER IP TECHNOLOGY ALLOWS  
CALLERS TO SPOOF IDENTIFYING  
INFORMATION SUCH AS THE CALLING  
PARTY'S PHONE NUMBER.

FRAUDSTERS WITH NOW PLACE

MILLIONS OF CHEAP AUTOMATED  
CALLS WITH THE CLICK OF A MOUSE  
AND DO SO FROM ANYWHERE IN THE  
WORLD THAT HAS AN INTERNET  
CONNECTION WHILE HIDING THEIR  
IDENTITIES IN THE PROCESS.

THESE DEVELOPMENTS HAVE REDUCED  
THE EFFECTIVENESS OF THE FTC'S  
TRADITIONAL LINE ENFORCEMENT  
TOOLS.

RECOGNIZING THE NEED FOR NEW  
SOLUTIONS, THE FTC HAS HELD FOUR  
PUBLIC CONTESTS TO SPUR THE  
CREATION OF TECHNICAL SOLUTIONS  
TO THE ROBOCALL PROBLEM.

AS PART OF THESE CHALLENGES WE  
SOLICITED TECHNICAL EXPERTS TO  
HELP SELECT THE MOST INNOVATIVE  
SUBMISSIONS.

ONE OF THE WINNING SOLUTIONS IN  
OUR FIRST CHALLENGE IS IN THE  
MARKETPLACE AND AVAILABLE TO  
CONSUMERS.

PNEUMO ROBO REPORTS IT HAS MORE THAN 360,000 SUBSCRIBERS AND IT HAS BLOCKED MORE THAN 60 MILLION ROBOCALLS.

WE ARE ALSO CONTINUING TO BUILD OUR INTERNAL CAPACITY.

LAST YEAR WE CREATED THE OFFICE OF TECHNOLOGY RESEARCH AND INVESTIGATION OR OTEC AS WE CALL IT.

OTEC WHICH 3WEU89DZ ON OUR FORMER TECHNOLOGY UNITS GUIDES THE DEVELOPMENT OF ENFORCEMENT PRIORITIES AMONG OTHER IMPORTANT WORK: THE TEAM INCLUDES LAWYERS AND TECHNOLOGIES THAT WORK HAND IN HAND TO HELP US STUDY NEW TECHNOLOGIES AND DEVELOPMENT NETS MARK PLACE. WITH OTEC WE'RE EMBARKING ON A BROADER ARRAY OF INVESTIGATIVE RESEARCH ON TECHNOLOGY RELATED ISSUES THAT WILL AID US IN ALL FACETS

OF THE FTC DULY COMPETITION  
MISSION.

PrivacyCon BUILDS ON ALL OF  
THESE.

OUR AIM IS TO BUILD OUR DIES IN  
THE TECH COMMUNITIES AND ENSURE  
THE FTC AND OTHER POLICY MAKERS  
HAVE THE BENEFIT OF THE LEADING  
THINKING AND PRIVACY AND DATA  
SECURITY ARENAS.

OUR PROGRAM TODAY WILL FEATURE  
FIVE MAIN TOPICS.

AS TO EACH WE WILL HAVE THREE OR  
FOUR SHORT RESEARCH  
PRESENTATIONS FOLLOWED BY A  
PERIOD OF DISCUSSION FEATURING  
TOP EXPERTS: WE WILL START THE  
SESSIONS ADDRESS THE CURRENT  
STATE -- WE WILL START WITH  
SESSIONS ADDRESSING THE CURRENT  
STATE OF ONLINE PRIVACY  
QUESTIONS.

THERE'S NO QUESTION THAT WE NEED

TO BETTER UNDERSTAND CONSUMER EXPECTATIONS AND THE DEGREE TO WHICH CONSUMER PERCEPTIONS OF COMPANY'S DATA PRACTICES ALIGN WITH WHAT IS ACTUALLY HAPPENING IN THE MARKETPLACE.

JUST THIS MORNING THE PEW RESEARCH CENTER RELEASED A STUDY BINDING AMERICANS SEE THE ISSUES AS DEPEND.

A MAJORITY OF AMERICANS ARE WILLING TO SHARE THEIR INFORMATION IF THEY PERCEIVE THEY'RE GETTING VALUE IN A RETURN AND THAT THEIR INFORMATION IS BEING PROTECTED.

FOR INSTANCE HALF OF THOSE SURVEYED SAID THAT THE BASIC BARGAIN OFFERED BY LOYALTY CARDS IS ACCEPTABLE TO THEM.

WHILE A THIRD VIEWED THAT AS UNACCEPTABLE.

THE STUDY ALSO FOUND THAT

CONSUMERS ARE OFTEN CAUTIOUS ABOUT DISCLOSING THEIR INFORMATION AND FREQUENTLY UNHAPPY ABOUT WHAT HAPPENS TO THAT INFORMATION ONCE COMPANIES HAVE COLLECTED IT.

WE WILL SEE WHAT OUR SPEAKERS HAVE TO SAY ABOUT THIS AND OTHER TOPICS.

OUR OTHER SESSIONS WILL ADDRESS BIG DATA IN ALGORITHMS, THE ECONOMICS OF PRIVACY AND DATA SECURITY, AND SECURITY AND USABILITY.

AMONG THE ISSUES ADDRESSED WILL BE BIG DISPEAT BIAS, THE ECONOMIC INCENTIVES UNDERLYING COMPANIES DATA PRACTICES, THE COSTS OF CYBER INCIDENTS AND AVAILABLE OPTIONS FOR CONSUMERS TO AVOID UNWANTED TRACKING.

YOU WILL ALSO HEAR FROM MY COLLEAGUE, COMMISSIONER JULIE

BRILL AND CHIEFOLOGIST LAURIE  
KRAMER, AND THIS IS JUST TO GIVE  
YOU A FLAVOR OF WHAT YOU WILL  
HEAR TODAY.

WE'RE JUST NOW SCRATCHING THE  
SURFACE OF WHAT IS TO COME AS A  
RESULT OF TECHNOLOGICAL  
ADVANCEMENT.

IF WE WANT TO ENSURE CONTINUED  
PROGRESS WE MUST CRAFT POLICIES  
BUILT ON INNOVATIVE THINKING AND  
BREAKTHROUGHS THAT WE MAKE  
THROUGH RESEARCH.

AND AT THE SAME TIME, WE WANT TO  
ENCOURAGE RESEARCH THAT WILL AID  
THE COMPLEX AND PRACTICAL  
QUESTIONS THAT POLICY MAKERS ARE  
EAGERLY SEEKING TO ANSWER.

SO THANK YOU FOR BEING HERE  
TODAY. YOUR PRESENCE MOVES US  
ONE STEP CLOSER TO THAT GOAL.

NOW, TO CLOSE, LET ME JUST TAKE  
THIS OPPORTUNITY TO EXPRESS MY

GRATITUDE TO ALL OF THE  
PARTICIPANTS IN TODAY'S  
CONFERENCE.

WE HAVE AN INCREDIBLY IMPRESSIVE  
GROUP OF THE TOP THINKERS IN  
PRIVACY AND DATA SECURITY.

I'D ALSO LIKE TO THANK THE  
ORGANIZERS IN OTEC AND OUR  
DIVISION PRIVACY DIVISION AND  
CHRISTIAN ANDERSON AND DAN  
SALZBURG FOR THEIR HARD WORK IN  
PUTTING THIS EVENT TOGETHER SO  
THANK YOU VERY MUCH.

>> GOOD MORNING. THANK YOU VERY  
MUCH.

THANK YOU ALL FOR COMING OUT TO  
OUR FIRST PrivacyCon.

I'M POLICY DIRECTOR OF THE  
OFFICE OF TECHNOLOGY RESEARCH  
AND INVESTIGATION.

WE ARE CO-PRESENTING THIS  
WORKSHOP ALONG WITH THE DIVISION  
OF PRIVACY AND IDENTITY

PROTECTION.

AND I'M ALSO THE CHAIR OF OUR  
FIRST PANEL, THE CURRENT STATE  
OF ONLINE PRIVACY.

IF MY CO-PANELISTS COULD MAKE  
THEIR WAY TO THE STAGE.

SO WE PUT OUT A CALL FOR  
RESEARCHERS AND WEREN'T SURE  
WHAT TO EXPECT AND WE GOT NEARLY  
90 FASCINATING PROPOSALS SO WE  
WERE GOING TO TRY TO DO 12 OR SO  
AND DECIDED TO PACK THE SCHEDULE  
TO HAVE AT LEAST 19 PEOPLE  
PRESENTING WHICH WE HONESTLY  
COULD HAVE DONE MORE.

SO WE TRIED TO MAXIMIZE THE  
SCHEDULE TO LET THEM PRESENT  
THEIR RESEARCH TO YOU.

THEY'RE EACH GOING TO PRESENT  
FOR ABOUT 15 MINUTES.

WE'RE GOING TO TRY TO KEEP THEM  
AGGRESSIVELY TO THAT.

AND THEY HAVE HAD A CLOCK RIGHT

THERE THAT SHOWS WHEN THEY'RE  
OVER TIME AND A CHIME WILL MAY.  
THEY WILL KNOW THEY'RE OVER.  
YOU KNOW THEY'RE OVER.  
THEY WILL KNOW THAT YOU KNOW  
THAT THEY'RE OVER.  
WE WILL TRY TO STAY ON SCHEDULE.  
AFTER THAT, A SHORT DISCUSSION  
PERIOD OF TIME AND OMER TENE AND  
ELANA ZEIDE WILL NYU WILL GIVE A  
FEW THOUGHTS, ASKING A FEW  
QUESTIONS AND THAT WILL BE IT.  
THIS IS OUR FIRST TIME DOG THIS  
AND I WOULD LOVE YOUR FEEDBACK  
IF YOU WANT TO DO THIS IN THE  
FUTURE.  
APPARENTLY WE HAVE A LOT OF  
INTEREST IN THIS AND THAT IS  
GREAT.  
I WILL START BY INTRODUCING  
IBRAHIM ALTAWEEL FROM BERKELEY  
TO PRESENT ON WEB PRIVACY CENSUS  
3.0.

>> HELLO, MY NAME IS IBRAHIM

ALTAWHEEL.

I'M THE COAUTHOR OF WEB PRIVACY  
CENSUS.

MOST PEOPLE MAY BELIEVE THAT  
ONLINE ACTIVITIES ARE TRACKED  
MORE PERVASIVELY THAN IN THE  
PAST.

AS EARLY AS 1999, THE PRIVACY  
RIGHTS CLEARING HOUSE SUGGESTED  
THAT FEDERAL AGENCIES CREATE  
BENCHMARK FOR ONLINE PRIVACY.

OF THE CENSUS IS ONE SUCH  
BENCHMARK AND I WILL DISCUSS  
TODAY HOW THE LITERATURE SHOWS  
THE DRAMATIC INCREASE IN THE USE  
OF COOKIES.

THE FIRST ATTEMPTS AT WEB  
MEASUREMENT FOUND RELATIVELY  
LITTLE TRACKING ONLINE IN 1997.  
ONLY 2369 MOST POPULAR WEB SITES  
USE COOKIES ON THEIR HOME PAGES.  
BUT WITHIN A FEW YEARS TRACKING

FOR ADVERTISING APPEARED ON MANY  
WENT.

BY 2011 ALMOST ALL OF THE  
POPULAR WEB SITES EMPLOYED  
COOKIES.

IN 2011 WE START OF THE  
SURVEYING THE ONLINE MECHANISM  
TO TRACK PEOPLE ONLINE.

WE CALLED THEY SAY THE WEB  
PRIVACY CENSUS AND WE REPEATED  
THE STUDY IN 2012 AND 2015.

THE MAIN GOAL THE CENSUS IS TO  
SELECT AND ANALYZE KEY METRICS  
AND MEASURES FOR THE STATE OF  
ONLINE PRIVACY AND USE THAT TO  
ANSWER THE FOLLOWING QUESTIONS:

HOW MANY ENTITIES ARE TRACK  
USERS ONLINE?

WHAT TECHNOLOGIES ARE MOST  
POPULAR FOR TRACKING USERS?

IS THERE A SHIFT FROM ONE  
TRACKING TECHNOLOGY TO ANOTHER  
IN TRACKING PRACTICES?

IS THERE A GREATER CONCENTRATION  
OF TRACK COMPANIES ONLINE?

WHAT ENTITIES HAVE THE GREATEST  
POTENTIAL TO ONLINE TRACKING AND  
WHY?

I WILL DIVE INTO DETAIL ON THE  
DATA COLLECTION METHODS.

WE COLLECTED COOKIES, AND FLASH  
COOKIES ON A QUANTITY CAST TOP  
1 MILLION WEB SITES USING OWPM,  
THE PLATFORM PRESENTED BY ONLINE  
UNIVERSITY.

WE RAN A SHALLOW CRAWL AND A  
DEEP CRAWL MEANING THAT WE  
VISITED THE HOME PAGES AND TWO  
LINKS ON THE WEB SITES.

>> THE DATA COLLECTION METHODS  
HAVE LIMITATIONS.

FOR EXAMPLE, WE USE A FIREFOX  
BROWSER SO WE DON'T HAVE  
FORMATION WITH DIFFERENT  
BROWSERS.

ANOTHER EXAMPLE THE CRAWLER DID

NOT LOG INTO WEB SITES WHICH  
COULD RESULT IN MORE COOKIES TO  
BE SENT.

OVERALL THESE LIMITATIONS MEAN  
THAT THE PRIVACY CENSUS IS A  
CONSERVATIVE MEASURE OF THE  
AMOUNT OF TRACKING ONLINE.

SO HOW MUCH TRACKING IS GOING  
ON?

WE FOUND THAT USERS WHO MERELY  
VISIT THE HOME PAGES OF THE TOP  
100 MOST POPULAR SITES WOULD  
COLLECT 6,000 COOKIES, TWICE AS  
MANY AS WE DETECTED IN 2012.

SOME POPULAR WEB SITES USE A LOT  
OF COOKIES N JUST VISITING

APPROXIMATE THE HOME PAGE OF  
POPULAR SITES WE FOUND THAT 24

WEB SITES PLACED OVER-100  
COOKIES.

SIX WEB SITES PLACED OVER 200  
COOKIES.

AND THREE WEB SITES PLACED OVER

300 COOKIES.

WHAT TECHNOLOGIES ARE MOST  
POPULAR TO TRACKING USERS?

ONE OBVIOUS OBSERVATION IS THAT  
THERE WERE SIGNIFICANTLY MORE  
HTML5 AND FLASH COOKIES.

5 IS A NEW FORM OF TECHNOLOGY  
THAT BECAME POPULAR IN RECENT  
YEARS FOR ITS LARGE STORAGE  
CAPABILITY, ROUGHLY ONE THOUSAND  
TIME OF FLASH COOKS.

AND HTML 5 DOES NOT INCREASE  
WITH TRACKING AS AN OM CAN HOLD  
ANY INFORMATION THAT IT NEEDS TO  
STORE LOCALLY HOWEVER THIS  
INFORMATION CAN POTENTIALLY  
CONTAIN INFORMATION USED TO  
TRACK USERS AND IT CAN PERSIST.

>> IS THERE A SHIFT FROM ONE  
TRACKING TECHNOLOGY TO ANOTHER  
TRACKING PRACTICES?

IT IS VERY INTERESTING TO SEE  
THAT THE TOTAL COUNT OF COOKIES

HAS INCREASED AND THERE ARE MORE  
AND MORE THIRD-PARTY COOKIES  
BEING USED.

83% OF HTTP COOKIES ARE SENT BY  
THIRD PARTY HOST AND JUST  
VISITING THE HOME PAGE OF  
POPULAR SITES USERS WOULD HAVE  
COOKIES PLACED BY 275  
THIRD-PARTY HOSTS.

IF THE USER BROWSED JUST TWO  
MORE LINKS, THE NUMBER OF HTTP  
COOKIES WOULD DOUBLE.

IS THERE A GREATER CONCENTRATION  
OF TRACKING COMPANIES ONLINE?

GOOGLE'S PRESENCE ON THE TOP 100  
WEB SITES INCREASED FROM 74 IN  
2012 TO 92 IN 2015.

PERCENTAGE OF COOKIES SET BY 30  
PARTY HOST HAS INCREASED FROM  
84.7% TO 93.5%.

SO WHAT ENTITIES HAVE THE  
GREATEST POTENTIAL FOR ONLINE  
TRACKING AND WHY?

THE MOST PROMINENT IS GOOGLE.  
WE FOUND THAT GOOGLE'S TRACKING  
INFRASTRUCTURE IS ON 92 OF THE  
TOP 100 MOST POPULAR WEB SITES  
AND ON 923 OF THE TOP ONE  
THOUSAND WEB SITES PROVIDING  
GOOGLE WITH A SIGNIFICANT  
SURVEILLANCE INFRASTRUCTURE  
ONLINE.  
GOOGLE'S ABILITY OF TRACKING IS  
UNPARALLELED.  
MOST THIRD PARTY COOKIES ARE SET  
BY DOUBLE-CLICK.  
FACEBOOK HAD PRESENCE ON 57 OF  
THE TOP 100 WEB SITES AND 548 OF  
THE TOP ONE THOUSAND WEB SITES.  
THIS IS IMPORTANT.  
BECAUSE COMPANIES LIKE GOOGLE  
CAN TRACK USERS ALMOST AS MUCH  
AS AN INTERNET SERVICE PROVIDER  
SUCH AS VERIZON OR COMCAST.  
IN CONCLUSION, THIS PROJ T WILL  
PRODUCE DATA ON HOW MUCH

TRACKING IS ON THE WHEN.

WE HAVE FOUND OVER A SERIES OF  
SURVEYS COVERING THREE YEARS  
THAT THERE'S A CONSISTENT UPWARD  
TREND IN COOKIE USABLE AND THAT  
A SMALL GROUP OF COMPANIES HAVE  
TRACK COOKIES ALMOST EVERY ON  
THE WEB.

IN THE FUTURE WE HAD CONTINUE TO  
COLLECT AND ANALYZE KEY METRICS  
AND MEASURES TO MONITOR THE  
STATE OF ONLINE PRIVACY.

THANK YOU VERY MUCH.

AND THANKS TO MY CO-AUTHOR  
NATHAN.

THANK YOU.

[ APPLAUSE ]

>> IS AND THE NEXT PRESENTER IS  
STEVEN ENGLEHARDT ON "THE WEB  
NEVER FORGETS."

>> HELLO EVERYONE.

I'M STEVEN ENGLEHARDT FROM  
PRINCETON UNIVERSITY AND TODAY

I'M GOING TO BE TALKING TO YOU  
ABOUT HOW THE WEB PRIVACY  
PROBLEM IS A TRANSPARENCY  
PROBLEM AND SHOW YOU THE WORK  
WE'RE DOING TO IMPROVE THAT.  
WHEN YOU'RE BROWSING THE WEB AND  
VISIT A SITE, SAY "THE NEW YORK  
TIMES," YOUR ME NOT JUST  
VISITING THAT FIRST PARTY SITE  
BUT YOU'RE VISITING ALL OF THE  
INCLUDED THIRD PARTIES ON THAT  
SITE AND THIS MIGHT BE PEOPLE  
THAT YOU RECOGNIZE, LIKE  
FACEBOOK PROVIDES SOCIAL BUTTONS  
OR YOU WENT WITH HAVE TO BUT  
WHAT ABOUT THE ADVERTISING  
COMPANIES AND ANALYTICS  
COMPANIES THAT ARE NOT OBVIOUS  
WHO THEY ARE TO THE CONSUMER.  
WELL, THEY COULD BE, YOU KNOW,  
ANYONE FROM THIS GRAPH, RIGHT?  
IT COULD BE, USERS MIGHT BE ABLE  
TO FIGURE OUT WHO A THEY ARE IF

THEY USE AN EXTENSION LIKE GO  
STREAM BUT WHAT ARE THE  
PRIVACYTRAS AND WHICH  
TECHNOLOGIES DO THEY USE?  
IT'S NOT REALLY OBVIOUSLY  
BECAUSE THE WEB LACKS  
TRANSPARENCY BUT WHAT I'M GOING  
TO SHOW YOU TODAY IS HOW WE'RE  
CHANGING THAT AND HOW WE ALREADY  
HAVE.

SO THROUGH THE THIS TALK I'M  
GOING TO TALK ABOUT REFERENCE  
BACK TO OUR PAPER FROM 2014  
CALLED THE WEB NEVER FORGETS.  
IT'S A PAPER THAT LOOKED AT  
PERSISTENT TRACKING MECHANISMS  
BUT IN PARTICULAR I WILL FOCUS  
ON CANVAS FINGERPRINTING.  
IF YOU'RE NOT FAMILIAR WITH THAT  
TYPE OF TRACKING MEMBERNISM,  
INSTEAD OF SETTING A STATE INTO  
THE BROWSER OR COOKIES ON THE  
BROWSER YOU CAN LOOK AT THE

BROWSER'S PROPERTIES AND USE  
THAT TO UNIQUELY IDENTIFY  
SOMEONE ACROSS DIFFERENT WEB  
SITES, IF YOUR HE A TRACKER.  
SO IN 2012 THERE WAS A PAPER  
CALLED PIXEL PERFECT WHICH  
CALLED ABOUT CANVAS  
FINGERPRINTING AND LIKE US AND OTHER COMPANIES  
STARTED USING THIS TO TRACK  
COMPANIES.

IN 2014 WE DID OUR OWN MEASURE.  
WE WANTED TO SEE WHO WAS DOING  
THIS, WHERE THEY WERE DOING IT  
AND HOW THE TECHNOLOGY WORKED  
AND SO ON.

AND THEN AFTER RELEASING OUR  
PAPER, WE SAW A BUNCH OF NEWS  
COVERAGE AND THIS REALLY  
SURPRISED US.

WE DIDN'T EXPECT SUCH A RESPONSE  
FROM THE NEWS AND SUCH A  
RESPONSE FROM USERS, LIKE PRO  
PUBLISHERS, BBC AND SO ON.

AND THEN JUST TWO DAYS AFTER ALL  
OF THAT NEWS COVERAGE HAPPENED,  
THEY PROVIDED LIKE  
FINGERPRINTING ON 95 PERCENT OF  
SITES AND THEY STOPPED DOING IT  
AS WELL AS LIGATATUS, THE THIRD  
LARGEST PROVIDING.

AND CANVAS FINGERPRINTING WAS A  
KNOWN TECHNIQUE FOR TWO YEARS  
BUT IN JUST TWO MONTHS FOLLOWING  
OUR MEASUREMENT WORK PEOPLE  
STOPPED USING IT.

WHY WAS THAT?

WHAT WAS DIFFERENT ABOUT OUR  
WORK VERSUS CANVAS  
FINGERPRINTING BEING KNOWN AND  
BEING KNOWING WHAT IT WAS?

THE KEY POINT IS THAT OUR WORK  
REMOVED THE ASYMMETRY BETWEEN  
THE TRACKERS AND THE REST OF THE  
WEB.

SO LIKE I SAID WE GOT A BUNCH OF  
NEWS COVERAGE FROM THAT FROM

DIFFERENT COMPANIES.

AND THEN WE SAW USERS TAKE TO  
TWITTER TO COMPLAIN ABOUT IT, AS  
YOU CAN IMAGINE AND WE SAW  
PEOPLE SAYING YOU SHOULD REMOVE  
THIS FROM YOUR SITE, THIS IS A  
WAY OF STALKING, THIS IS IS --  
THE FIRST PARTIES HERE ARE  
VIOLATING MY PRIVACY.

WE SAW PEOPLE JUST COMPLAINING  
ABOUT IT AND THEN WE ALSO SAW  
SOMEONE SAY, YOU KNOW, I FEEL  
GROSS BECAUSE I HAD TO ADD THIS  
TO SHARE THIS BUT EVERYONE  
SHOULD KNOW ABOUT CANVAS  
FINGERPRINTING AND THERE WAS A  
BIG RESPONSE ON TWITTER AND NOT  
JUST TWITTER BUT WE SAW PEOPLE  
COMPLAIN TO MOZILLA AND SAY WHY  
DOESN'T FIREFOX PROTECT ME FROM  
THIS TECHNIQUE.

AND WE EVEN SAW IT WAS BEYOND  
JUST USERS.

IT WAS ALSO BETWEEN TRACKERS AND  
THE SITES THAT THEY TRACK ON.

SO PRO PUBLICA FOCUSED ON YOU  
PORN.

AND THEN YOU POR NSAI D WE DIDN'T  
KNOW ADD WAS DOING THIS, CAN YOU  
LET THEM KNOW WE REMOVED THIS  
FROM OUR SITE.

WE SEE THAT TRANCE SIGN, SEE IS  
EFFECTIVE AT RETURNING CONTROL  
TO USERS AND PUBLISHERS.

THE USERS CAN SEE WHAT TRACKING  
TECHNOLOGY IS USED ON THEIR SITE  
AND THEY CAN MAKE DECISIONS AND  
COMPLAIN OR SEE WHAT KIND OF  
TRACKING TECHNOLOGY AROUND THE  
SITE THAT THEY VISIT AND THEN  
THEY CAN COMPLAIN TO THE FIRST  
PARTY OR SITE THAT THEY'RE  
VISITING AND CHOOSE NOT TO GO  
THERE, AND THEY CAN HAVE  
CONTROL THEY DIDN'T HAVE BEFORE  
WHEN THEY DIDN'T HAVE THAT

KNOWLEDGE.

AND AUTOMATED LARGE SCALE  
MEASUREMENTS LIKE THE ONE WE DID  
CAN HELP PROVIDE THIS  
TRANSPARENCY.

SO AT PRINCETON I'M GOING TO  
TALK ABOUT WHAT WE DID TO MAKE  
THIS HAPPEN.

WE DEVELOPED OPEN WPM, LIKE THE  
FIRST INFRASTRUCTURE TO RUN A  
REAL BROWSER ACROSS A LARGE  
NUMBER OF SITES.

AND WE'RE USING IT TO PRUN OUR  
OWN MONTHLY MILLION SITE  
MEASUREMENTS OF THIS TYPE OF  
THING.

SO WE WILL ALSO BUILD SOME  
ANALYSIS ON TOP OF THAT TO LOOK  
AT, YOU KNOW, WHOSE FINGERPRINTS  
ON THIS SITE AND YOU I WILL GO  
INTO OPEN WPM AND HOW IT WORKS  
AND THEN I WILL SHOW YOU HOW WE  
CAN SCALE THIS UP TO ALL

DIFFERENT KINDS OF TECHNOLOGIES.

OPEN WPM RUNS FIREFOX.

WE DO SOMETHING USING SELENIUM  
AND WHICH TELLS THE BROWSESSER  
GO TO THIS WENT AND DO CERTAIN  
THINGS WHEN YOU'RE OWN THE WEB  
SITE AND WE RUN EVERYTHING FROM  
A PROXY THAT LETS US CONTROL ALL  
OF THE TRAFFIC AND COMMUNICATION  
BETWEEN THE BROWSER AND THE  
SITES WE'RE VISITING AND THEN WE  
HAVE THE FIREFOX EXTENSION BASED  
OFF OF FOURTH PARTY.

IF IF YOU'RE NOT FAMILIAR WITH  
THAT IT'S ANOTHER MEASUREMENT  
FRAMEWORK PROBABLY THE MOST WELL  
USED PRIOR TO US BUILDING OUR  
INFRASTRUCTURE AND WE TOOK ALL  
OF THE FEATURES THAT THAT HAD,  
ADDED SOME MORE TO IT AND BUILT  
IT RIGHT INTO THE PLATFORM AS  
WELL.

SO WE GIVE A RESEARCHER ACCESS

TO THE DIFFERENT LOCATION NEPTS  
BROWSER AND THEN WE WRAP THAT UP  
IN SOMETHING CALLED THE BROWSER  
INSTANCE.

AND AS YOU CAN SEE HERE, WE'RE  
BASICALLY ABLE TO RUN MULTIPLE  
INSTANCES OF FIREFOX OR MULTIPLE  
BROWSER INSTANCES AT THE SAME  
TIME.

SO WHEN WE DO OUR OWN CRAWLS WE  
RUN IT OVER, SAY, 20 BROWSERS  
AND EACH ONE HAS THEIR OWN  
INSTRUMENTATION SO YOU CAN EASY  
APPLY SCALES UP TO DO  
MEASUREMENT ON A LOT OF SITES  
AND THERE'S A COUPLE OF THINGS  
THIS LET'S US DO.

WE CAN KEEP A PROFILE CONSISTENT  
THROUGH CRASHES OR FREEZES AND  
KEEP THE SAME COOKIES AS WE  
BROWSE THROUGH DIFFERENT SITES  
JUST HIKE A REAL USER WOULD.

WE CAN RUN THIS WITH EXTENSIONS

OR PRIVACY FEATURES, SEE HOW WELL THEY WORK, SEE IF THEY'RE ACTUALLY PROTECTING USERS AND WHERE THEY'RE FALLING SHORT AND IF THERE'S ANY NEW WEB ELSE TO USED FOR TRACKING LIKE WEBRTC OR AUDIO AND SO ON WE CAN TAKE A LOOK AT THAT.

WE JUST HEARD A GREAT PRESENTATION BY THE WEB PRIVACY CENTER GUYS THAT DO IT AND IT'S USED BEYOND ACADEMIA FROM JOURNALIST AND I SEE PREGHTTORS.

SO I WILL TALK A LITTLE BIT ABOUT THE MEASUREMENTS WE'RE DOING.

WE'RE GOING ON MONTHLY CRAWLS OF A MILLION SITES AND CHECKING THINGS LIKE ALL OF THE JAVASCRIPT CALLS USED FOR FINGERPRINTING OR ALL OF THE JAVASCRIPT S. FILES ON ALL OF THOSE SITES SO WE CAN GO AND

CHECK ON WHAT IS GOING ON LATER.

AND WE'RE ALSO LOOKING AT THE  
REQUESTS AND RESPONSES AND  
DIFFERENT STORAGE LOCATIONS IN  
THE BROWSER.

AND THIS LET'S US DO A BUNCH OF  
THINGS LIKE SEE HOW EFFECTIVE  
PRIVACY SCHOOLS ARE, LIKE  
GHOSTERR OR ADD BLOCK PLUS AND  
SEE HOW JAVASCRIPT MIGHT BE USED  
FOR TRACKING AND ALSO LOOK AT  
TRACKING PRACTICES.

NOW I'M GOING TO GIVE YOU TWO  
QUICK CASE STUDIES.

I WILL GO THROUGH CANVAS  
FINGERPRINTING AND GO THROUGH  
WEB RTC AFTER.

CANVAS LIKE I SAID BEFORE IS  
JUST A SITE GOES AND DRAWS TEXT  
TO THE CANVAS AND THAT TEXT  
LOOKS DIFFERENT ON THE DIFFERENT  
MACHINE BUT SAME ON THE SAME  
MACHINE SO IT'S USEFUL IF YOU

WANT TO DIFFERENTIATE BETWEEN  
DIFFERENT USERS BUT KNOW WHO THE  
SAME USER IS.

AS YOU CAN SEE HERE, THE  
DIFFERENCES CAN BE QUITE LARGE.

THIS IS JUST A ZICIALATION OF  
DIFFERENT MACHINES CARE TO EACH  
OTHER AND I WANT TO GIVE CREDIT  
TO ALL OF THE COAUTHORS ON THIS  
CONSTITUTE.

I WAS JUST ONE PART OF IT AND WE  
WORKED WITH PEOPLE AND AUTHORS  
AT PRINCETON.

THE WAY THAT THIS WORKS IS A WEB  
SITE WILL DRAW A BUNCH OF TEXT  
TO THE CANVAS AND MAKE IT  
OVERLAPPING AND MAXIMIZE THE  
CHANCE IT'S UNIQUE AND THAT'S  
WHAT YOU SAY TRADITIONALIZED UP  
HERE.

IF WE WANT TO MEASURE THIS WE  
FIRST HAD TO WRITE A FIREFOX  
PATCH TO LOOK FOR WHEN THESE

METHODS WERE CALLED, YOU KNOW,  
WHEN WRITE TEXT OR WHEN PULLING  
BACK THE CANVAS AS A STRING,  
WHEN THIS HAPPENS.

WE HAD TO WRITE AUTOMATION WITH  
SELENIUM TO GO AND RUN THIS  
ACROSS A BUNCH OF SITES AND  
BUILD THAT FROM THE GROUND UP  
AND THEN, OF COURSE, WE HAD TO  
WRITE ANALYSIS CODE ON TOP OF  
THAT.

AND NOW I'M GOING TO SHOW YOU  
ALLOW THINGS WERE EASIER TO  
MEASURE ANOTHER TECHNIQUE THAT  
COULD BE HELPFUL FOR TRACKING.

IF YOU'RE NOT FAMILIAR WITH  
WEBRTC, USING IT FOR LOCAL IP  
DISCOVERY, IT ADDS NETWORKING  
CAPABILITY IN THE BROWSER THAT  
YOU CAN ACCESS FROM JAVASCRIPT  
AND BASICALLY YOU'RE ABLE TO GET  
THE USER'S LOCAL IP. IF YOU'RE  
BEHIND A MAP.

IT MIGHT BE SOMETHING LIKE  
192.68.192 BUT IT CAN BE USUAL  
FOR TRACKING.

SO I SAW A TWEET THAT THIS WAS  
HAPPENING AND I SAID OH, WE CAN  
MEASURE THAT AND TO LOOK AT  
THAT.

THIS WON'T BE THAT HARD.

I WAS ABLE TO ADD A SINGLE LINE  
OF JAVASCRIPT INTO THE NEXT  
CRAWL TO DO THIS.

SO THIS IS THE SAME THING  
THAT -- I HAVE A METHOD HERE  
THAT ALLOWS KNEE LOOK AT ANY  
TYPE ANYONE ACCESSES WEBRTC I  
CAN SEE WHERE THEY'RE SETTING  
AND WHAT THEY'RE DOING WITH IT,  
THE SAME METHOD I CAN LOOK AT  
WHO IS DOING WHAT WITH CANVAS.  
IT'S JUST ONE ADDED LINE OF CODE  
TO RUN OUR CRAWLS.

I HAD TO WRITE ANALYSIS CODE ON  
TOP OF THAT, SIMILAR TO CANVAS.

WITH CANVAS I WANTED TO KNOW WHO  
WROTE TEXT AND WHO READ BACK AND  
HERE I DID SIMILAR THING TO SEE  
WHEN TEXT IS BEING USED.

I FOUND THIS HAPPENING ON A  
BUNCH OF SITES BEYOND "THE NEW  
YORK TIMES."

"THE NEW YORK TIMES" ACTUALLY  
STOPPED DOING IT.

SO 1212 FIRST-PARTY SITES AND 24  
OF THOSE WERE UNIQUE ONLY ONE OF  
WHICH IS BLOCKED BY ADD BLOCK  
PLUS OR OTHER SIMILAR PRIVACY  
TOOLS SO EVEN IF YOU'RE USING  
PRIVACY TOOLS THIS TECHNIQUE MAY  
STILL BE ABLE TO RUN ON YOUR  
MACHINE.

AND I GUESS THE POINT I WANT TO  
MAKE IS MURT IS EASIER WITH  
WMENT PM.

AND INSTEAD OF WRITING  
INFORMATION TWH SELENIUM WE CAN  
USE OPEN WPM AND WE STILL NEED

TO WRITE THE ANALYSIS CODE.

YOU HAVE ALWAYS NEED SOME EXTRA  
HUMAN COMPONENT IN THERE BUT THE  
FIRST TWO STEPS GOT A LOT  
EASIER.

SO WHERE DO WE WANT TO GO WITH  
IT?

WE THINK WE CAN USE THIS TO  
INFORM THE PUBLIC, RIGHT, LET  
PEOPLE KNOW, HEY, HERE IS WHAT  
IS HAPPENING ON THE SITES THAT  
YOU'RE VISITING AND WHO IS DOING  
THIS AND IT WILL HELP PEOPLE  
UNDERSTAND WHAT IS GOING ON WHEN  
THEY'RE BROWSING THE WEB.

WE WANT TO PROVIDE DATA FOR  
PRIVACY TOOLS, AND DISCONNECT  
WHICH IS LIKED A BLOCK TRUST OR  
GHOSTRY, THEY TOOK INTO ACCOUNT  
DISTRICTS FROM OUR CANVAS STUDY  
AND WILLED IT IN THEIR TOOL.

SO WE WANT TO PROVIDE THAT SAME  
DATA FOR OTHER PRIVACY TOOLS

WITH OUR FUTURE STUDIES AND WE  
ALSO WANT TO MAKE THE DATA  
ACCESSIBLE TO LESS TECHNICAL  
INVESTIGATORS WHO MAY WANT TO  
DIG THROUGH IT THEMSELVES BUT  
NOT WITH THE SAME SKILL LEVEL  
SOMEONE THAT WRITES THE CODE  
WOULD DO.

AND WE WOULD ALSO LOVE TO  
COLLABORATE WITH PEOPLE SO YOU  
CAN -- THE INFRASTRUCTURE IS  
OPEN SOURCE AND YOU CAN GET HUB  
AND I WILL HAVE A LINK ON THE  
NEXT SLIDE TO USE IT.

YOU CAN DOWNLOAD IT AND IF YOU  
SEE ANYTHING WRONG WITH IT OR IF  
YOU SEE NEW FEATURES YOU'RE  
WELCOME TO SUBMIT BACK TO IT.

WE ALSO ENVISION PEOPLE USING IT  
TO RUN THEIR OWN MEASUREMENTS  
LIKE WEB PRIVACY CENSUS AND  
THAT'S AN AWESOME USE CASE AND  
WE HOPE THAT PEOPLE START DOING

THAT.

AND LASTLY NOT FUTURE WE HOPE  
THAT YOU WILL BE ABLE TO BUILD  
OUR DATA AND BUILD ANALYSIS OF  
YOUR ONTARIO ON TOP OF IT.

WE WILL BE COMING FURTHER WITH  
THAT IN THE COMING MONTHS.

SO IF YOU WANT TO HELP US MAKE  
THE WEB MORE TRANSPARENCY YOU  
CAN CHECK OUT OUR HUBBLE OR  
RESEARCH PAGE.

THANK YOU.

[ APPLAUSE ]

>> THANK YOU VERY MUCH STEVEN.

NOW WE'RE GOING TO HEAR WITH A  
CRITIQUE OF HOMO ECONOMICUS.

>> GOOD MORNING, EVERYONE.

I WANTED TO START BY THANKING  
THE FEDERAL TRADE COMMISSION IN  
FISHING THE STAFF FOR PUTTING  
TOGETHER THIS EVENT.

THE DIFFERENT PRESENTERS ARE  
VERY SUBSTANTIVE, AND I'M PROUD

TO BE AMONG THEM AND I THINK YOU  
HAVE DONE A FANTASTIC JOB.

YOU SHOULD BE PROUD.

MY TEAM AS BERKELEY OVER THE  
YEARS HAS SHOWN DIFFERENT WAYS  
WEB SITES AND OTHER WEB SERVICES  
TRACK PEOPLE.

FOR INSTANCE MY TEAM PUBLISHED  
THE FIRST BIG PAPER ABOUT FLASH  
COOKIES EXPLAINING HOW FLASH  
COOKIES COULD BE USED TO  
OVERRIDE USERS' COOKIE DELETION  
AND SHOWED HOW HTML5 COULD BE  
USED AND THE THEME OF HOW THAT  
WORKED WAS A CONFLICT BETWEEN  
THE RHETORIC ONE HEARS HERE IN  
WASHINGTON ABOUT USERS BEING IN  
CONTROL AND USERS BEING ABLE TO  
MAKE CHOICES ABOUT HOW THEY  
ATTRACT ONLINE AND THE TECHNICAL  
REALTY, THE TECHNICAL REALTY  
THAT EVEN MAINSTREAM COMPANIES  
TO USE FLASH AND JAVASCRIPT TO

OVERRIDE DELETED COOKIES.

IT WAS AN ATTACK THAT LOOKED  
SOMEWHAT LIKE A COMPUTER CRIME.

MY PRESENTATION TODAY IS IN A  
SIMILAR VEIN.

IT'S ABOUT THE CONFLICT BETWEEN  
THEORY AND RHETORIC AND HOW  
CONSUMERS ACTUALLY OPERATE IN  
THE MARKETPLACE.

THE FTC'S NOTICE TO CONSUMER  
INFORMATION PRIVACY IS BASED ON  
THE IDEA THAT CONSUMERS FOLLOW A  
RATIONAL CHOICE MODEL OF MAKING  
DECISIONS ONLINE.

NOW THE PROBLEM WITH NOTICE AND  
CHOICE THEN BECOMES IS IT THE  
MODEL OF A HOMO ECONOMICUS, THE  
MODEL OF THE RATIONAL CONSUMER  
WHO IS MAKING CHOICES IN THE  
MARKETPLACE HAS TO BE RELIABLE  
AS A MODEL.

SO MUCH OF MY TALK TODAY IS  
ABOUT THE TRADEOFF TALK, THE

IDEA THAT PEOPLE ARE MAKING  
TRADEOFFS IN THE MARKETPLACE ON  
PRIVACY.

THE THEORETICAL BACKGROUND IS  
ABOUT RATIONAL CHOICE THEORY AND  
I'M GOING TO SKIP OVER A BUNCH  
OF SLIDES TO STAY ON TIME TODAY  
BUT THE KEY POINT OF MY PAPER IS  
THAT ALAN WESTIN'S THEORY WAS  
BASED ON RATIONAL CHOICE THEORY  
AND HIS MAIN THESIS WAS THAT  
PUBLIC POLICY SHOULD SERVE THE  
PRIVACY PRAGMATIST, THOSE WHO  
WEIGH THE CHOICES IN THE  
MARKETPLACE AND MAKE DECISIONS  
ACCORDING TO THEIR PRIVACY  
PREFERENCES.

SO WE'RE FAMILIAR WITH THESE  
DIFFERENT DEFINITIONS, THE  
PRIVACY FUNDAMENTALIST, AND THE  
MAGMA ACTIVITY AND UNCONCERNED  
BUT LET ME DRAW YOUR ATTENTION  
TO SOME OF THE VERBS WESTIN USED

TO DESCRIBE THE PRIVACY

PRAGMATIST.

IF YOU LOOK AT THE VERBS

HIGHLIGHTED IN BOLD HERE THESE

ARE ALL ACTIVE CHARACTERISTICS

OF CONSUMERS, THE PRIVACY

PRAGMATISTS ARE PEOPLE WHO WEIGH

EVIDENCE, WHO EXAMINE EVIDENCE,

WHO LOOK TO SEE WHETHER FAIR

INFORMATION PRACTICES ARE BEING

WIDELY OBSERVED.

THIS IS AN ACTIVE, ENGAGED

CONSUMER.

I FRANKLY DON'T KNOW MANY PEOPLE

WHO ARE LIKE THIS.

I'M NOT EVEN SURE THAT I'M LIKE

THIS.

BUT THIS IS THE BASIS FOR MUCH

OF U.S. POLICY ON CONSUMER

DECISION-MAKING AND PRIVACY.

AND, OF COURSE, WESTIN FAMOUS I

HAD SAID IN THE PATEL FOR

PRIVACY, THIS IS IN THE HEARTS

AND MIND OF THE PRIVACY  
PRAGMATIST AND THESE ARE THE  
PEOPLE THAT POLICY SHOULD BE  
DESIGNED FOR.

WELL, HOW DID WESTIN COME TO THE  
SEGMENTATION OF AMERICANS?  
THE WAY HE DID IT WAS BY ASKING  
THIS SET OF QUESTIONS.

>> ONE HAD TO DEAL WITH CONSUMER  
CONTROL.

ONE HAD TO DO WITH WHETHER DATA  
IT WERE TREATED CONFIDENTIALLY  
AND THE LAST QUESTION IS A  
ATTITUDINAL QUESTION ABOUT  
WHETHER LAW IN SELF REGULATION  
IS SUFFICIENT FOR PRIVACY.

SO MY FIRST CRITIQUE FOCUSES ON  
THIS TEGHT.

ON THE MOST BASIC LEVEL, THE  
PROBLEM WITH WESTIN IS THAT HE  
SEGMENTED IT SUCH SO PEOPLE WERE  
PRAGMATIST BY DEFAULT AND THIS  
SEMANTICALLY DOESN'T MAKE SENSE

BECAUSE WE'RE NOT PRAGMATIST BY  
DEFAULT.

PRAGMATIST REQUIRES A CERTAIN  
ACTION AND OUT LOOK OPEN LIFE  
AND I WOULD ARGUE PRAGMATISM IS  
CONTROVERSIAL.

MANY AMERICANS FIND PRAGMATISM  
DISTASTEFUL BUT YET HE DECODED  
IT AS THE BEST RESULT, AND THERE  
ARE OTHER PROBLEMS HERE.

WESTIN'S QUESTIONS, THE  
SCREENING QUESTIONS USED REALLY  
HAD NOTHING TO DO WITH  
PRAGMATISM.

NOTHING IN THERE ASKING DO YOU  
READ PRIVACY POLICIES, HOW MUCH  
TIME DO YOU SPEND RESEARCHING  
PRODUCTS AND THE LIKE.

IT'S NOT IN THERE.

AND A NUMBER OF CONSUMERS SIMPLY  
WON'T ANSWER ONE OF THE  
QUESTIONS.

OUR STUDY WE FOUND BETWEEN TWO

AND FIVE PERCENT OF CONSUMERS  
WOULDN'T ANSWER ONE OF THE THREE  
QUESTIONS, WHAT DO YOU DO WITH  
PEOPLE THAT DON'T ANSWER  
QUESTIONS AND WESTIN'S METHODS  
YOU MAKE THEM PRIVACY PRAGMATIST  
AND THAT IS PROBLEMATIC AND IT  
EXPLAINS ANOTHER CRITIQUE THAT  
WESTIN NEVER PUBLISHED HIS WORK  
IN PART BECAUSE I DON'T THINK IT  
WAS PUBLISHABLE, THIS  
WORK -- EXCUSE ME -- THIS WORK  
I DON'T THINK WAS PUBLISHABLE.  
ANOTHER WAY TO LOOK AT DATA  
IS -- THIS IS WHERE I'M STANDING  
ON THE SHOULDERS OF PEOPLE SUCH  
AS PROFESSOR TUROW AND HE  
POINTED OUT WHEN YOU ASK PEOPLE  
ABOUT RULES OF PRIVACY MOST OF  
THEM DON'T GET THE BASIC ANSWERS  
RIGHT.  
HE SHOWS ESSENTIALLY THAT  
CONSUMERS THINK THAT PRIVACY

POLICY IS A SEAL.

MOST CONSUMERS THINK IF A  
PRIVACY POLICY IS MERELY PRESENT  
THAT WEB SITE CANNOT SELL  
PERSONAL INFORMATION TO THIRD  
PARTIES: FOR THIS REASON WE  
SHOULD BE SKEPTICAL OF TRADEOFF  
TALK.

PEOPLE DON'T UNDERSTAND THE  
TRADE TO BEGIN WITH.

AND I'M GOING TO GET TO A SECOND  
REASON WHY WE SHOULD BE  
SKEPTICAL OF IT.

TUROW WAS STANDING ON THE  
SHOULDERS OF OTHER PEOPLE IN THE  
PRIVACY FIELD INCLUDING OSCAR  
GRANDE AND IN HIS VIEW OF DATA  
HE VIEWED KNOWLEDGE OF PRIVACY  
AS A POWERFUL EXPLANATORY FACTOR  
OF WHY PEOPLE CARE ABOUT PRIVACY  
AND HOW THEY MAKE DECISIONS AND  
THIS IS WHERE A LOT OF MY WORK  
PICKED UHM AND I WROTE A NUMBER

OF STUDIES THAT -- ACTUALLY, THE  
FUN COVERS STARTED WHEN I  
STOPPED WRITING WITH JOE.

THE JOE COVERS ARE BORING BUT MY  
COVERS ARE I THINK MORE  
EXCITING.

YOU WILL SEE THE PARTHENON MARCH  
FELLS IN MY STUDIES BECAUSE I  
THINK THEY'RE QUITE BEAUTIFUL.  
AND.

>> NOT ONLY THAT, PEOPLE WHO  
SHOPPED ONLINE WERE LESS  
KNOWLEDGEABLE OF RULES AND  
PRACTICES THAN PEOPLE WHO DIDN'T  
SHOP ONLINE.

STRANGE.

YOU THINK PEOPLE SHOPPING I  
DON'T MEAN WOULD READ PRIVACY  
POLICY.

SO WE DID A WHOLE BUNCH OF  
SURVEYS OVER THE YEARS WHERE WE  
PRESENTED PEOPLE WITH QUIZZES  
ASKING THEM QUESTIONS THAT TUROW

USED AND THAT OTHER  
INVESTIGATORS USED AND WE FOUND  
OVER AND OVER THAT THE BASICS,  
PEOPLE FAILED THE BASIC QUIZZES  
AND JUST PASS AN EXAMPLE, IN OUR  
2009 SURVEY, 75% ANSWERED TWO OR  
FEWER QUESTIONS CORRECT LIMIT  
30% GOT NONE OF THEM CORRECTLY  
AND PEOPLE SAY THE DIGITAL  
NATIVES ARE GOING TO SAVE US.

THIS IS A GENERATIONAL PROBLEM.  
THE DIGITAL NATIVES ARE GOING TO  
FIGURE THIS OUT.

NO.

THEY'RE THE WORST PERFORMERS IN  
OF THE GROUP, ONLINE AND OFF,  
WHEN WE ASK ABOUT ONLINE PRIVACY  
SO WE REPLICATE THE STUDY AGAIN  
IN 2012, AND WE FIND AGAIN THAT  
THERE'S -- THAT OUR SUBSTANTIAL  
MISCONCEPTIONS ABOUT PEOPLE'S  
RIGHTS AND ABOUT WHAT PRACTICES  
ARE AND WE FIND OVER AND OVER

AGAIN AND THE THREE STARS MEAN A  
P-VALUE OF .001, THAT THE  
PRIVACY FUNNEL MENTALISTS ARE  
MORE KNOWLEDGEABLE OF OTHER  
GROUPS, THE OTHER GROUPS THAT  
ARE SO-CALLED WHO APPARENTLY  
DON'T CARE OR WHO ARE MAKING  
TRADEOFFS.  
SO THE MAIN POINT OF OUR PAPER  
IS THAT WESTIN'S SEGMENTATION  
HAS CONFUSED PRAGMATISM WITH  
ORDINARY CONSUMER  
DECISION-MAKING.  
AND THAT MOST -- MANY CONSUMER  
NETS MARKETPLACE ARE SIMPLY  
UNINFORMED.  
THEIR VIEWING PRIVACY POLICIES.  
ANOTHER MAJOR PART THIS PAPER,  
IS IT THE IDEA ABOUT WHETHER  
PEOPLE -- WHETHER AMERICANS ARE  
MORE CONCERNED ABOUT GOVERNMENT  
COLLECTION OF PERSONAL  
INFORMATION OR PRIVATE SECTOR

PERSONAL INFORMATION COLLECTION  
AND WHAT WE HAVE FOUND OVER AND  
OVER IN OUR SURVEYS IS THAT  
AMERICANS ARE CONCERNED ABOUT  
BOTH.

AND THIS IS NOT JUST OUR  
FINDINGS.

IF YOU LOOK AT THE MAJOR  
LITERATURE REVIEWS IN PUBLIC  
OPINION QUARTERLY AND THESE ARE  
THE COMPLETE COMPEL SCIENTISTS  
THAT STUDY POLICY AND THEY LOOK  
AT ALL OF THE STUDIES OVER  
DECADES, THEY FIND GOING BACK TO  
THE 1980s, AMERICANS SAY  
THEY'RE JUST AS CONCERNED ABOUT  
THE PRIVATE SECTOR AS THEY ARE  
WITH THE GOVERNMENT SECTOR.  
SO WE ARGUE BASICALLY THAT RCT  
AS A MODEL FAILS IN THIS FIELD  
BECAUSE PEOPLE ARE LABORING WITH  
SUBSTANTIAL MISCONCEPTIONS ABOUT  
THEIR RIGHTS AND THEY DO CARE

ABOUT THOSE RIGHTS.

LET ME SAY SOMETHING ABOUT

WESTIN.

HE WAS A FANTASTIC ACADEMIC AND

HIS WORK, HIS ACADEMIC WORK WAS

GROUP.

AND HE IS TRULY A PROGENITOR OF

AMERICAN GENERALRATION PRIVACY.

IN HIS BOOK "PRIVACY AND

FREEDOM" AS YOU HAVE PROBABLY

HER, OMER'S GROUP REPUBLISHED IT

AND ITS WORTH A READ.

HE WAS AGAINST TECHNOLOGY

DETERMINISM WHICH IS A

PHILOSOPHY ONE HEARS A LOT OF IN

D.C. AND HE ALSO SAW PRIVACY AS

A LIBERAL VALUE.

SO HIS SURVEY WORK I CRITIQUE

TODAY IS NOT HIS ACADEMIC WORK

AND I HAVE A LOT OF RESPECT FOR

THAT ACADEMIC WORK.

SO WHAT DO WE DO?

WHAT ARE THE IMPLICATIONS FOR

FTC PRACTICE?

WE COULD VIEW PRIVACY POLICIES  
AS SEALS.

WHEN YOU GO TO THE MARKETPLACE  
AND BUY THE ORGANIC VEGETABLE  
YOU DON'T LOOK FOR AN ORGANIC  
POLICY.

YOU ASSUME THAT ORGANIC MEANS  
CERTAIN THINGS.

WE COULD START SAYING PRIVACY  
MEANS CERTAIN THINGS.

NOW, THE FTC HAS ALREADY STARTED  
TO DO THIS IN SECURITY.

IF YOUR PRIVACY POLICY SAYS  
ANYTHING ABOUT SECURITY, IT  
REQUIRES SOME TYPE OF REASONABLE  
CONTROL OVER PERSONAL  
INFORMATION.

ANOTHER APPROACH COMES FROM THE  
HISTORY OF THE FEDERAL TRADE  
COMMISSION.

IN THE 1970S THE FEDERAL TRADE  
COMMISSION STARTED RECRUITING

MARKETING ACADEMICS TO COME IN  
HOUSE AND THIS GREATLY PUNCHED  
UP THE FEDERAL TRADE  
COMMISSION'S UNDERSTANDING OF  
HOW CONSUMERS WERE MISLED BY  
FALSE ADVERTISING AND IF YOU  
LOOK AT TODAY'S COMMISSION  
ACTIONS, THEIR FALSE ADVERTISING  
THEORIES ARE MUCH MORE IN LINE  
WITH HOW CONSUMERS REALLY  
UNDERSTAND ADS AND HOW CONSUMERS  
REALLY ACT, AND THAT HAS NOT  
COME OVER TO THE PRIVACY SIDE.  
SO WE COULD REPLICATE THAT, AND  
THEN FINALLY I DO THINK THAT WE  
NEED TO LOOK AT UNFAIRNESS MORE  
AS A REMEDY FOR PRIVACY  
PROBLEMS.

NOW WHY IS THIS?

NOTICE AND CHOICE MIGHT WORK IN  
A WORLD WHERE YOU'RE SELLING  
PHYSICAL PRODUCTS BUT WE ARE NOT  
DOING THAT IN THIS WORLD.

THESE ARE PERSONAL INFORMATION  
PRODUCTS AND THE TRANSACTIONS  
ARE NOT DISCREET.

THE TRANSACTIONS ARE CONTINUOUS.  
THAT MEANS THAT LOCK IN,  
SHIFTING PRACTICES, NETWORK  
EFFECTS ARE ALL WAYS IN WHICH  
COMPANIES CAN SHAPE CHOICES AND  
IN EFFECT REMOVE CHOICE FROM THE  
CONSUMER.

AND I WRITE ABOUT THIS IN A MUCH  
GREATER DETAIL IN THIS PAPER  
WITH JAN WHITTINGTON.

FINAL LET ME SAY THANK YOU AND I  
CAN'T AVOID MAKING A PITCH FOR  
MY BOOK WHICH DISCUSSES THESE  
ISSUES IN MUCH GREATER DETAIL  
AND I KNOW THE AD PRACTICES  
DIVISION IS NOT IN ATTENDANCE  
TODAY SO WHAT I WILL SAY ABOUT  
IT IS, IF YOU READ THIS BOOK  
INSTEAD OF EATING CHOCOLATES AND  
OTHER THINGS YOU'RE GUARANTEED

TO LOSE WEIGHT, WITHOUT  
EXERCISE.

[LAUGHTER]

THANK YOU.

>> THANKS CHRIS.

FINALLY FROM PROFESSOR JOE TUROW  
ON THE TRADEOFF FALLACY.

>> THANK YOU.

I'M GOING TO GO THROUGH THIS  
FAIRLY QUICKLY.

IT'S A LOT TO TALK ABOUT BUT I  
WANT TO GIVE YOU A SENSE OF THE  
ARC.

THE IDEA IS THAT MARKETERS  
JUSTIFY THEIR WORK WITH THE  
ASSUMPTION THAT AMERICANS  
UNDERSTAND THE BENEFIT OF THE  
DATA TRADEOFFS.

WE CHALLENGED WITH THIS WITH A  
NATIONAL TELEPHONE SURVEY AND  
FURTHER WE PRESENT EVIDENCE THAT  
WHAT OBSERVERS INTERPRET AS  
TRADEOFF BEHAVIOR IS WIDESPREAD

RESIGNATION AMONG AMERICANS

MARKET USE OF DATA.

WHAT WE SOMETIMES INTERPRET AS

TRADEOFFS AND CAN BE LOOKED AT

WHEN PEOPLE DO THINGS AS GEE

THEY'RE DOING TRADEOFFS IS

REALLY REFLECTIVE OF RESIGNATION

OF LARGE PROPORTION OF THE

POPULATION.

SO WHAT'S THE ISSUE?

POLLS REPEATEDLY FIND THAT

CONSUMERS ARE CONCERNED ABOUT

WAYS MARKETERS ACCESS AND USE

THEIR DATA ONLINE.

AND THERE ARE STUDIES FROM PEW,

FROM BAIN AND COMPANY AND

ANNENBERG REFLECTING THAT.

AT THE SAME TIME OBSERVE HERS

CONCUR THAT PEOPLE OFTEN RELEASE

DEALT ABOUT THEMSELVES THAT

SUGGEST MUCH LESS CONCERN.

THAT'S CALLED THE PRIVACY

PARADOX, THE NOTION THAT PEOPLE

SAY THEY LOVE PRIVACY BUT IN  
EVERYDAY LIFE, IT'S DIFFERENT,  
THEY DON'T, THEY GIVE IT UP,  
THEY GIVE UP DATA FOR ANYTHING.  
SOME MARKETERS READ THIS PARADOX  
AS EVIDENCE THAT PEOPLE PLACE  
OTHER THINGS ABOVE PRIVACY,  
WHICH LEADS TO THE NOTION OF  
TRADEOFFS THAT CHRIS WAS TALKING  
ABOUT.

FOR EXAMPLE YAHOO SAYS THAT  
ONLINE AMERICANS "DEMONSTRATE A  
WILLINGNESS TO SHARE INFORMATION  
AS MORE CONSUMERS BEGIN TO  
RECOGNIZE THE VALUE AND THE  
BENEFIT OF ALLOWING ADVERTISERS  
TO USE DATA IN THE RIGHT WAY."

AND PRESIDENT MOBIQUITY SAID THE  
AVERAGE PERSON IS MORE THAN  
WILLING TO SHARE THEIR  
INFORMATION WITH COMPANIES IF  
THE ORGANIZATIONS SEE THE  
OVERALL GAIN FOR END USERS AS A

GOAL NOT JUST FOR THEMSELVES.

THIS REFLECTS SOME OF THE  
RATIONAL A CHOICE THINKING THAT  
CHRIS WAS ALLUDING TO.

A FEW CORPORATE VOICES IN THE  
PAPERS, BY ACCENTURE, BAIN,  
BRAND BOND LOYALTY, HAVE PUT  
CAUTIONS AROUND SUCH  
GENERALLY SATIONS HAD.

BAIN SAYS CUSTOMERS TRUST CANNOT  
BE BOUGHT BY COMPANIES OFFERING  
COMPENSATION IN EXCHANGE FOR  
SELLING OR SHARING PERSONAL DATA  
AND OTHERS HAVE URGED  
TRANSPARENCY AND NOT SAYING WHAT  
TRANSPARENCY MEANS.

THEY USE THE WORD THOUGH.

GENERALLY THOUGH FIRMS ARGUE  
THAT CONSUMERS' UNDERSTANDING OF  
TRADEOFF ALONG WITH INCREASING  
CONSUMER POWER JUSTIFIES  
CONSUMER DATA COLLECTION AND  
USE.

THE BIG DEAL TODAY IS THAT  
CONSUMERS HAVE THIS HUGE POWER  
WITH THE USE OF THE MOBILE  
PHONE, THE USE OF THE INTERNET  
IN OTHER WAYS AND AS A RESULT  
COMPANIES HAVE TO PUSH BACK  
SOMETIMES IN ORDER TO MAINTAIN  
SOME KIND OF PROFITABLE  
RELATIONSHIP.

AND MARKETERS INCREASINGLY SEE  
PERSONALIZATION RESULTING FROM  
PRE-DECORATIVE ANALYTICS AS A  
SAVIOR IN AN AGE OF HIGHWAY  
COMPETITION.

THIS IS A GREAT QUOTE FROM  
YAHOO: THIS CONCEPT OF VALUE  
CHANGE FOR PERSONALLY DATA IS  
STARTING TO COME DO LIFE THROUGH  
PERSONALIZATION THAT IT'S A  
PATHWAY TO ADVERTISING NIRVANA.  
THE TRADEOFF LOGIC JUSTIFIES  
360° TRACKING.

AND I WANTED TO CITE GARTNER, A

CONSULTING FIRM AND THEY TALK  
ABOUT FOUR STABLES BEHALF THAT  
CALL COGNIZANT COMPUTING THAT  
UNROLL OVER THE NEXT TWO TO FIVE  
YEARS.

THIS WAS WRITTEN I THINK TWO  
YEARS AGO.

WITH THE FIRST TWO WELL  
UNDERWAY.

THEY CALL THEM SYNCH ME, SEE ME,  
KNOW ME, BE ME.

IT'S THE IDEA OF REALLY GETTING  
TO KNOW PEOPLE AS MUCH AS YOU  
CAN DATA-WISE IN ALMOST AN  
ORGANIC WAY TO FIGURE OUT WHAT  
IS GOING ON AND HOW TO MAKE  
MONEY OFF OF THEM.

ALL RIGHT.

BUT THERE ARE ALTERNATIVES  
EXPLANATIONS TO TRADEOFFS.

ONE IS THE PUBLIC'S LACK OF  
KNOWLEDGE OF WHAT MARKETERS ARE  
DOING WITH THEIR DATA BEHIND THE

SECURITY SCREEN.

CHRIS TALKED ABOUT SOME OF THAT.

A LOT OF SURVEYS SHOW THAT LACK  
OF KNOWLEDGE.

AND CRANO AND McDONALD FOUND  
THAT PEOPLE DON'T UNDERSTAND  
PRIVACY POLICIES.

ALEXANDRA ACQUISTI AND OTHERS  
TALK ABOUT THE DIFFICULTY OF  
UNDERSTANDING DIGITAL AND  
INSTITUTIONAL SYSTEMS.

THIS KNOWLEDGE FAILURE RESEARCH  
EXPLAINS THE EASE WITH WHICH  
DATA RETAILERS AND ADVERTISERS  
RETRIEVE INFORMATION FROM  
INDIVIDUALS, THOUGH THE  
PROPOSITION HASN'T BEEN DIRECTLY  
TESTED.

BUT IT MIGHT GET MARKETERS OFF  
THE HOOK TOO EASILY SO WE SAY,  
PEOPLE HAVE LACK OF KNOWLEDGE.

IT'S BECAUSE OF THE SCHOOLS  
DON'T TEACH THEM ENOUGH OR LET'S

FIGURE OUT AN EDUCATIONAL  
PROGRAM.

AND ADD CHOICES, THE LITTLE  
ICONS THAT YOU'RE SUPPOSED TO  
SEED.

I GAVE A TALK AT THE PEN LAW  
SCHOOL SHOWING A SLIDE AND  
NOBODY SAW IT.

OK? BUT THEY CAN POINT TO THIS.

AND TO SOUND MORE OPTIMISTIC  
ABOUT THE PUBLIC -- WHAT THE  
PUBLIC IS THAN PEOPLE LIKE ME OR  
POLICY MAKERS AIVETS THIS.

SO WE DID A SURVEY TO TRY TO  
LOOK AT SOME HYPOTHESIS RELATE  
TODAY THIS.

A 20 MINUTE INTERVIEW TAKING  
PLACE FEBRUARY-MARCH 2015,  
ENGLISH OR SPANISH SPEAKING  
SAMPLE OF 750 LANDLINE, WIRELESS  
756 CONDUCTED BY PRINCETON  
SURVEY RESEARCH ASSOCIATES, MORE  
DATA ABOUT THAT IS IN THE PAPER.

OF WE LOOK FIRST AT THE PEOPLE'S  
PHILOSOPHY OF TRADEOFFS, NOT THE  
PARTICULARS BUT WHAT TO THEY  
KNOW ABOUT, WHAT DO THEY THINK  
ABOUT THE IDEA OF TRADEOFF?

AND YOU CAN SEE IT TEZ --

SORRY -- IF COMPANIES GIVE ME PA  
DISCOUNT IT'S A FAIR EXCHANGE  
FOR THEM TO COLLECT INFORMATION  
WITHOUT MY KNOWING OF IT.

91% SAID NO.

IT'S FAIR FOR AN ONLINE OR  
PHYSICAL STORE TO MONITOR WHAT  
I'M DOING ONLINE WHEN I'M THERE  
IN EXCHANGE FOR LETTING ME USE  
THE STORE'S WIRELESS INTERNET  
OR WiFi WITHOUT CHARGE.

71% SAID NO.

IT'S OK IF A STORE WHERE I SHOP  
USES INFORMATION IT HAS ABOUT ME  
TO CREATE A PICTURE OF ME THAT  
MINNEAPOLIS THE SERVICE THEY  
PROVIDE ANT ME?

55% SAID NO.

NOW, ODDLY IF WE LOOK AT HOW  
MANY PEOPLE AGREE WITH ALL THREE  
PROPOSITIONS ONLY 4% AGREE WITH  
ALL THREE PROPOSITIONS.

WE TOOK A BROADER DEGREE AND  
GAVE NUMBERS TO EACH, LIKE AGREE  
STRONGLY, DISGREE DISAGREE  
STRONGLY AND IN THAT BROADER  
INTERPRETATION WE FOUND STILL  
SMALL PROPORTION, 21% BELIEVES  
THAT COMMON TRADEOFFS WITH  
MARKETERS AMOUNT TO A FAIR DEAL.

PUT WE WANTED TO LOOK AT THE  
PRIVACY POLICY IN TERMS OF A  
SCENARIO OF REAL LIFE.

SO WE SAID FOR THE NEXT FEW  
QUESTIONS THINK ABOUT THE  
SUPERMARKET YOU GO TO MOST  
OFTEN.

SAY THE SUPERMARKET SAYS IT WILL  
GIVE YOU DISCOUNTS IN CHANGE FOR  
ITS COLLECTING INFORMATION ABOUT

ALL OF YOUR GROCERY PURCHASES.

WOULD YOU ACCEPT THE OFFER OR  
NOT?

52% SAID NO.

43% SAID YES.

WHICH IS INTERESTING BECAUSE  
IT'S CLOSE TO THAT OTHER -- OF  
THE THREE STATEMENTS WE SAID  
IT'S OK IF A STORE WHERE I SHOP  
USES INFORMATION IT HAS ABOUT ME  
TOO TO CREATE A PICTURE.

YOU SAY WELL THAT'S THOSE 43%.

TURNS OUT IT'S NOT.

>> BECAUSE WHEN WE LOOKED AT IT  
WE FOUND ONLY 40% OF THE PEOPLE  
WHO ACCEPT THAT AGREED WITH THE  
SUPERMARKET THING.

NOTICE PEOPLE ARE VERY IN  
SQUINT.

THE LACK OF MUCH CORRESPONDENCE  
UNDER SCORES THAT A SMALL  
PERCENTAGE CONSISTENTLY ACCEPTS  
THE IDEA OF TRADEOFF.

WE WANTED TO KNOW WHETHER PEOPLE  
WHO SAY THEY WILL ACCEPT A  
SUPERMARKET DISCOUNT WILL STILL  
TO IT WHEN PRESENTED WITH  
SPECIFIC ASSUMPTIONS A  
SUPERMARKET MAY MAKE.  
SO FOR EXAMPLE YOU MIGHT SAY I  
WILL TAKE IT DISCOUNT BUT WHAT  
IF YOU KNOW THE SUPERMARKET IS  
DOING WITH YOUR DATA.  
THIS IS KNOWLEDGE AMERICANS  
ALMOST NEVER RECEIVE DIRECTLY  
BUT MAY INTUIT FROM ADS AND  
COUPONS THEY THINK ARE TARGETED  
TOWARD THEM.  
SO WE HAVE A VARIETY OF THINGS  
WE ASK THEM.  
WE SAID, WILL YOU ACCEPT -- THE  
PEOPLE WHO SAID THEY WOULD  
ACCEPT THE DISCOUNT IN THE FIRST  
PLACE, WE SAID WOULD YOU ACCEPT  
IT IF THEY IF THE SUPERMARKET  
MAKES ASSUMPTIONS BASED ON YOUR

PURCHASES ABOUT WHETHER YOU BUY  
LOW-FAT FOODS.

IT WENT DOWN TO 33%.

THE MORE WE ASKED PARTICULAR  
QUESTIONS ABOUT INDIVIDUAL'S  
LIVES, THE LESS THEY SAID THEY  
WOULD DO IT.

SO SO IN THE END WHEN WE ASKED  
ABOUT SOCIAL ETHNIC BACKGROUND,  
INFERENCE ONLY 19% SAID THEY  
WOULD ACCEPT IT.

THE TABLE SHOWS THE LIMITS OF  
COST BENEFIT ANALYSES AS A  
RATIONALE FOR MARKETERS' CLAIMS  
THAT MOST PEOPLE WILL PROVIDE  
PERSONAL DATA IN EXCHANGE FOR  
STORE DEALS.

THE DECLINE IN ACCEPTANCE FROM  
43% TO AROUND 20% IS NOT  
CONSISTENT WITH MARKETERS'  
ASSERTIONS THAT PEOPLE ARE  
GIVING UP THEIR PERSONAL  
INFORMATION BECAUSE OF

COST-BENEFIT ANALYSIS.

IN THE SUPERMARKET SCENARIO

THEY'RE DOING JUST THE OPPOSITE.

RESISTING THE IDEA OF GIVING

DATA FOR DISCOUNTS BASED ON SOME

KIND OF ANALYSIS.

THEN WE WENT AHEAD AND OUR

HYPOTHETICAL SIS CAME OUT OF AN

EVERY DAY REALIZATION WHEN WE

MET PEOPLE THEY WOULD SAY THINGS

LIKE GEE I HAVE TO GIVE UP THE

DATA, I WANT TO BE ONLINE, I

HAVE TO BE ON FACE BOOB, I DO

THIS STUFF AND I DON'T KNOW WHAT

IS GOING ON BUT I HAVE TO DO IT

ANYWAY.

SO WE GAVE THE STATEMENTS

SEPARATED BY OTHER STATEMENTS SO

THEY WERE NOT FOLKS TO EACH

OTHER: I WANT TO HAVE CONTROL

OVER WHAT MARKETERS CAN LEARN

ABOUT ME.

I HAVE COME TO ACCEPT THAT I

HAVE LITTLE CONTROL OVER WHAT  
MARKETERS CAN LEARN ABOUT ME.  
IT TURNS OUT 58% OF PEOPLE AGREE  
WITH THOSE WHICH INDICATES  
RESIGNATION.

RESIGNATION MEANS THE ACCEPTANCE  
OF SOMETHING UNDESIRABLE BUT  
INEVITABLE.

GOT THAT FROM GOOGLE, GOOGLE  
DICTIONARY.

WE FIND THERE'S A STRONG  
POSITIVE STATISTICAL  
RELATIONSHIP BETWEEN LEAVING IN  
TRADEOFFS AND ACCEPTING OR  
REJECTING VARIOUS KINDS OF  
SUPERMARKETS USE OF DISCOUNTS.

YOU WOULD EXPECT THAT.

BY CONTRAST THERE'S NO  
STATISTICAL RELATIONSHIP BETWEEN  
BEING RESIGNED TO MARKETERS USE  
OF DATA AND ACCEPTING OR REJECT  
BEING THE SUPERMARKET TRADEOFF.

PEOPLE WHO ARE RESIGNED,

SOMETIMES THEY DO, SOMETIMES  
THEY DON'T.

THEY TRY TO NAVIGATE A WORLD  
THAT THEY DON'T UNDERSTAND OR  
ARE ANNOYED ABOUT POSSIBLY AND  
THEY SOMETIMES WILL DO IT.

THEY MAY LOOK LIKE THEY'RE  
ACCEPTING TRADEOFFS BUT IN THEIR  
HEADS THEY'RE SAYING, GEE, I'M  
RESIGNED TO IT.

BUT ANOTHER WAY, PEOPLE WHO  
BELIEVE IN TRADEOFFS GIVE UP  
THEIR DATA PREDICTABLY AND  
PEOPLE WHO ARE RESIGNED DON'T DO  
IT IN A PREDICTABLE MATTER.

THEY DO GIVE UP DAWN.

WE FOUND 57 OF THOSE WHO TOOK  
THE SUPERMARKET DEAL WERE  
RESIGNED, A MUCH SMALLER 32%  
WERE TRADEOFF SUPPORTERS USING  
THE BROADER MEASURE OF TRADEOFF  
SUPPORT THAT I SUGGESTED.

THE LARGER PERCENTAGE OF PEOPLE

IN THE POPULATION WHO ARE  
RESIGNED COMPARED TO THOSE WHO  
BELIEVE IN TRADEOFFS INDICATE  
THAT IN THE REAL WORLD PEOPLE  
WHO EXCHANGED THEIR DATA FOR  
BENEFITS ARE MORE LIKELY TO DO  
IT WHILE RESIGNED RATHER THAN AS  
A RESULT OF COST BENEFIT  
ANALYSIS.

MORE OVER WE FOUND THAT  
REGULATION NATION IS WIDESPREAD  
ACROSS THE U.S. POPULATION,  
REGARDLESS OF AGE, GENDER,  
EDUCATION, OR RACE.

THERE WERE NO STATISTICAL  
DIFFERENCES BETWEEN AGE AND  
GENDER.

THERE WERE BETWEEN EDUCATION AND  
RACE.

BUT STILL THE LARGE PERSONAL OF  
PEOPLE RESIGNED ANYWAY.

WE FOUND THAT MOST AMERICANS  
DON'T HAVE BASIC KNOWLEDGE TO

MAKE INFORMED COST BENEFIT  
CHOICES.

THIS IS SOME OF THE STUFF CHRIS  
WAS TALKING ABOUT.

>> 51% CANNOT RECOGNIZE  
PHISHING AND LARGE PERSONALS  
BELIEVE INCORRECTLY THAT  
GOVERNMENT LAWS PROTECT THEM  
FROM PRICE DISCRIMINATION AND  
CERTAIN FORMS OF DATA  
COLLECTION.

AND IT SUGGESTS WHEN AMERICANS  
DO WEIGH THE COST AND BENEFIT OF  
GIVING UP THEIR DATA THEY BASE  
THOSE CHOICES ON INCORRECT  
INFORMATION.

BUT WE ALSO FOUND -- THIS WAS  
SURPRISING TO ME -- THAT THOSE  
WHO KNOW MORE ABOUT MARKETING  
LAWS AND PRACTICES ARE MORE  
LIKELY TO BE RESIGNED.

WE FOUND, TOO, THAT RESIGNED  
PEOPLE WHO ACCEPT SEURK MARKET

DISCOUNTS EVEN AS THE  
SUPERMARKET COLLECTS  
INCREASINGLY PERSONAL DATA HAVE  
MORE KNOWLEDGE THAN OTHERS.  
SO HAVING MORE KNOWLEDGE IS NOT  
PROTECTIVE AS A PROTECTIVE  
FEATURE AS SOME ACADEMICS HAVE  
SUGGESTED.

SO WHAT DO WE DO ABOUT IT?  
THE RATIONALE OF TRADEOFF SAYS A  
FIGURE LEAF -- A FIG LEAF USED  
BY MARKETERS TO JUSTIFY A WORLD  
OF TRACKING AND INCREASINGLY  
PERSONALIZED PROFILING THAT  
PEOPLE KNOW IS THERE, DON'T  
UNDERSTAND, AND SHEA THEY DON'T  
WANT.

WE HAVEN'T BEGUN TO CONSIDER THE  
SOCIAL IMPLICATIONS OF HAVING A  
LARGE POPULATION THAT IS  
RESIGNED ABOUT A KEY ASPECT OF  
ITS EVERYDAY ENVIRONMENT.  
NOW THIS MAY SOUND REALLY DARK.

AND YOU KNOW, WHAT DO YOU DO  
ABOUT IT?

BUT I THINK IT'S IMPORTANT TO  
CONFRONT WHAT I SEE IN EVERYDAY  
LIFE WHEN I TALK TO PEOPLE --  
THAT PEOPLE DO THESE THINGS  
ONLINE, IN STORES WITH APPS, NOT  
BECAUSE THEY'RE THINKING IN A  
COST BENEFIT WAY RATIONALLY BUT  
BECAUSE THEY FEEL THEY HAVE NO  
OTHER CHOICE IF THEY WANT TO  
LIVE IN THIS WORLD.

WE'RE ONLY AT THE BEGINNING OF  
KEY ASPECTS OF THIS ERA.

THIS IS THE BEGINNING OF A NEW  
ERA, NOT EVEN THE MIDDLE.

AND THERE MAY BE TIME FOR  
CONCERNED PARTIES TO GUIDE IT.

ACADEMY MIX, JOURNALISTS AND  
ADVOCATES HAVE TO TRANSLATE THE  
KEY ISSUES FOR THE PUBLIC.

THERE ARE A LOT OF ISSUES  
OBFUSCATE AND ON FEW CASE AND

DECEPTION.

THE PUBLIC INTEREST, CONVENIENCE  
AND NECESSITY.

THE IMPORTANT THAT PEOPLE HAVE  
ALLUDED TO TO PRAISING AND  
NAMING GROUPS THAT DO RIGHT  
THINGS AND NOT SO RIGHT THING.

THANKS FOR LISTENING.

>> THANKS TO ALL OF OUR  
PRESENTERS AND NOW WE'RE GOING  
TO MOVE INTO A BRIEF PERIOD OF  
DISCUSSION.

>> ONE CAVEAT, JOE MAY HAVE TO  
LEAVE EARLY.

HE IS TEACHING TWO CLASSES TODAY  
AT PENN SO IF YOU SEE HIM SHRINK  
OFF HE IS NOT IN TROUBLE, HE IS  
NOT ANGRY AT US, WE'RE NOT MAD  
AT HIM.

SO I'M GOING TO START, YOU KNOW,  
SOME OF TREPPEDZ I SAW FROM THE  
PRESENTATIONS.

ONE, THE PROLIFERATION AND

GROWING PARTICIPATION AND  
COMPLEXITY OF ONLINE TRACKING  
REFLECTED IN STEVEN AND  
IBRAHIM'S WORK AND I LOVE THE  
REVISED CHART WITH THE HUNDREDS  
OF THOUSANDS OF COMPANIES AND  
YOU CAN SEE THEM ON THE BIG  
SCREEN, AND MORE TECHNOLOGY,  
TOO, NOT JUST COOKIES BUT HTTP 5  
AND ALL OF THIS.

AND LODGECALLY AND NOT  
SURPRISINGLY, THE THEORY OF JOE  
AND CHRIS' ARGUMENT IS THAT  
THERE'S AN INCREASING INABILITY  
TO CONSUMERS TO MANAGE OR  
CONTROL THEIR PRIVACY, GETTING  
ALL OF THESE -- GIVEN ALL OF  
THESE ADVANCES SO THE IDEA THAT  
A CONSUMER GOES TO THE WEB SITE  
AND MAKES A CHOICE THAT I'M  
SATISFIED HOW E TAGS ARE USED IN  
ON SITE AND I WILL EXCHANGE ANY  
CONTENT FOR THAT IS FLAWED AND

THIS BUILDS ON LORI CRANER'S  
WORK THAT IF YOU HAD TO READ  
EVERY PRIVACY POLICY IT WOULD  
TAKE A MONTH OF YOUR LIFE.  
SO INSTEAD OF THAT, IT SOUNDS  
LIKE THAT THERE'S THIS  
RESIGNATION, RIGHT, INSTEAD OF  
PRIVACY PRAGMATISM THERE'S  
RESIGNATION, AND THIS IS WHAT  
JOE'S WORK WAS TALKING ABOUT.  
THIS HIT HOME WITH ME THIS  
WEEKEND B I WENT SKIING WITH PA  
FRIEND OF MINE AND WE WERE  
TALKING AND HE SENT A LINK TO  
HIS DAD OF NEWS 74 AND THE DAD  
SAID I'M NOT OPENING THAT, DO  
YOU KNOW HOW MANY COOKIES ARE IN  
THERE?  
AND HE SATISFIED YEAH I KNOW.  
HE IS NOT A PRIVACY GUY, NEITHER  
OF THEM.  
HE IS LIKE YEAH I KNOW WHAT BUT  
WHAT ROUGH GOING TO ADD?

YOU CAN GO THROUGH INSTALLING  
ADD BLOCK OR DELETING COOKIES  
AND WE DON'T HAVE TIME TO THINK  
ABOUT THESE QUESTIONS AND WE ALL  
TALKED TO PEOPLE WITH SIMILAR  
EXPERIENCES AND WE HAVE HAD  
SIMILAR EXPERIENCES OURSELVES  
LIKE I DON'T KNOW WHAT IS GOING  
ON HERE AND I DON'T HAVE THE  
TIME TO FIGURE IT OUT.

AND IT'S NOT JUST THE WEB.

IT'S THE INTERNET OF THINGS.

>> WE HAD OUR CROSS DEVICE

TRACKING WORKSHOP WHERE TV'S AND

TOASTERS COLLECT INFORMATION

ABOUT US IN PHYSICAL SPACE WITH

THE AUTOMATIC LICENSE PLATE

READERS AND ARE WE MAKING AN

INFORMED CHOICE WHEN WE GO

OUTSIDE ABOUT FACIAL

RECOGNITION.

SO ONE THING IN I WOULD LIKE TO

HEAR FROM THE FOLKS ABOUT AND

I'M GOING TO TURN IT OVER TO MY  
OTHER DISCUSSION FIRST IS, SO  
WHAT DOES THE SOLUTION LOOK  
LIKE?

DO WE JUST RIDE IT OUT?

HAD A LOT OF FOLKS SAY THAT?

BRANDEIS WAS CONCERNED ABOUT

CAMERAS AND DO WE WANT

GOVERNMENT MAKING RULES ABOUT

HOW MUCH TRACKING CAN HAPPEN IF

CONSUMERS CAN'T MAKE THE CHOICES

THEMSELVES, SAY 15 COOKIES AND

THAT IS IT?

SO THE POINT OF PRIVACY, AND WE

CAN HEAR 42 SMART PEOPLE

THINKING ABOUT THIS TO HELP THEM

INFLUENCE POLICY DECISIONS SO I

WOULD LOVE TO HEAR YOUR THOUGHTS

ABOUT SOLUTIONS LATER.

AND I WILL ASK A QUESTION BUT

FIRST I WILL TURN IT OVER TO

ELANA ZEIDE.

>> ONE INTERESTING THEME I'M

NOTICING IS A SHIFT AWAY FROM  
INFORMED NOTICE NOR INDIVIDUALS  
BUT MORE TRANSPARENCY FOR THE  
POP LAS ,INCLUDING CONSUMERS AND  
MORE IMPORTANTLY SORT OF  
EXPERTS, ADVOCATES, POLICY MAKE  
HERS, ACADEMICS.

AND WHERE THAT SEEMS TO ALSO BE  
A SHIFT FROM THE IDEA OF  
QUESTIONING  
CONSUMERS-DECISION-MAKING  
CAPABILITIES TO WHETHER IN FACT  
THEY'RE ACTIVELY NEONATALLING IN  
A CHOICE AT ALL OR EITHER  
RESIGNED BECAUSE THEY SEE NO  
AGENCY AND NO REASONABLE  
ALTERNATIVES TO OPTING OUT OF  
THE MAINSTREAM OR BECAUSE THEY  
HAVE TRUST IN THE DEFAULT  
SYSTEM.

IF YOU LOOK AT THE IDEA OF  
WHETHER ATLANTIC PAIRNS SEE IS A  
MEANS TO SOLVE THOSE ISSUES AND

ACCOMPLISH THAT I THINK THERE  
ARE SEVERAL IMPLICATIONS BASED  
ON THIS RESEARCH.  
ONE IS: HOW DO YOU USE  
TRANSPARENCY AS A WAY TO  
GALVANIZE CONSUMERS TO  
ARTICULATE THEIR PREFERENCES OR  
ENGAGE IN PRIVACY SELF  
MANAGEMENT IF IN FACT IT MAY  
LEAD TO THEM BEING MORE RESIGNED  
BECAUSE THEY HAVE A FEELING OF  
HELPLESSNESS?  
ALSO HOW DO YOU ENSURE OR  
PREDICT WHEN COMPANIES WILL  
ACTUALLY BE PROMPTED BY PUBLIC  
OPINION TO MAKE A CHANGE AND  
WHETHER THOSE CHANGES WILL  
ACTUALLY OCCUR WITHOUT  
REGULATION OR OTHER ENFORCEMENTS  
MECHANISMS FOR THE MOST  
MEANINGFUL POTENTIAL PRIVACY  
ABUSES WHICH MIGHT ALSO BE MOST  
LIKELY TONIGHT MOST PROFIT

GENERATING CORE OF MANY

COMPANIES BUSINESSES.

THERE'S ALSO QUESTION OF WHETHER

TRANSPARENCY CAN OPERATE AS A

MECHANISM TO ENSURE CONSUMER

TRUST IN A WORLD WHERE THERE ARE

UNKNOWABLE UNKNOWNNS.

YEARS AGO PEOPLE WOULD ALLOW

THEIR FRIENDS TO POST PICTURES

ON FACEBOOK WITHOUT THINKING

THAT THEIR PICTURE WOULD REMAIN

IN OBSCURE TEE BECAUSE THEY

WEREN'T BEING TAGGED N A AGE OF

FACIAL RECOGNITION THAT IS NO

LONGER TRUE.

I THINK THE SHIFTS REALLY UNDER

MINE CONSUMERS' SENSE OF WHAT

THEY CAN PREDICT AND HOW THEIR

CHOICES, SENSE OF HELPLESSNESS

IN THE UNKNOWN AND WHAT MAY

HAPPEN IN THE FUTURE.

FINALLY I'M INTERESTED IN THE

IDEA OF WHETHER A MOVE TOWARD

TRANSPARENCY OR SHAMING AND  
BLAMING CREATES A SYSTEM WHERE  
WE MAY BE ABLE TO GET SOME  
CLARITY ABOUT CONSUMER ENORMOUS  
AND WHAT STANDARDS THEY PREFER.  
IT MAY ALSO CREATE A SITUATION  
WHERE SENSATION WITH MEDIA  
STORIES OR SMALL VOCAL SUBSETS  
WHO RESIST CERTAIN PRACTICES END  
UP CONTROLLING THE CONVERSATION  
AND GIVE A FALSE SENSE OF CLEAR  
CONSENSUS AND THE LAST POINT  
WOULD BE, IS DPRK DOES THIS  
ENTAIL A SYSTEM WHERE WE MUST  
WAIT FOR HARMS AND ABUSES TO  
OCCUR BEFORE WE CREATE SYSTEMS  
TO CORRECT THEM?  
IF SO DOES THAT IMPLY ALONG WITH  
TRANSPARENCY MECHANISMS WE ALSO  
NEED MECHANISMS THAT CONSUMERS  
CAN SEE FOR DUE PROCESS AND  
REDRESS?  
SO I THINK ALL FOUR

PRESENTATIONS HERE DREW A SORT  
OF GRIM AND SOMBER PICTURE OF  
THE STATE OF PLAY TODAY WITH  
CONSUMERS BEING MISLED OR  
RESIGNED AND KIND OF BEING  
DRAGGED ALONG FOR THE RIDE IN  
TECHNOLOGY OR BY BUSINESS.  
GIVEN THAT THE STARS SEEM  
ALIGNED ON THIS, I FEEL AN TO  
YOUR KNOWLEDGE PLAY DEVIL'S  
ADVOCATE AND IN THAT ROLE I'M  
GOING TO SUGGEST DIFFERENT  
ADJECTIVES TO DESCRIBE HOW  
CONSUMERS ARE ACTING OR FEELING  
OR FAIRING, AND INSTEAD OF BEING  
RESIGNED I SUGGESTED THEY'RE  
ACTUAL THRILLED OR MAYBE EVEN  
EXHILARATED, THEY'RE DELIRIOUS  
ABOUT NEW TECHNOLOGIES ABOUT THE  
FACT THAT YOU KNOW THEY CAN HAIL  
AN UBER AND RATE THE DRIVER AND  
GET LIKE THE NEWEST IPHONE OR  
ANDROID PHONE AND YOU KNOW EVEN

TAKE A SELFIE AND POST IT ON  
THEIR SNAPCHAT STORY OR USE A  
FIT BY THE AND SORT OF GIVE  
UP -- OR FITNESS AND HEALTH  
INFORMATION AND I THINK WE  
CLEARLY SEE THAT IN THE  
MARKETPLACE WE ALSO SEE GOOGLE  
AND FACEBOOK AND APPLE AS THREE  
OF THE MICROSOFT -- THREE OR  
FOUR OF THE STRONGEST BRANDS IN  
TERMS OF BRAND RECOGNITION IN  
THE MARKET AND YOU KNOW NOT TO  
MENTION THE NUMBER OF PEOPLE  
FLOCKING TO WORK AND THESE  
PLACES INCLUDING PEOPLE WHO ARE  
NOW IN GOVERNMENT AND EVEN  
REGULATORY AGENCIES.  
SO THE POINT IS THAT THERE SEEMS  
TO BE SOMETHING MORE COMPLEX AT  
PLAY HERE.  
AND I THINK WE SEE IT IN OTHER  
CONTEXT SO I CARE ABOUT HEALTH  
BUT I STILL EAT A CHEESEBURGER

AND I CARE ABOUT THE ENVIRONMENT

AND A FOUR-WHEEL DRIVE, AND I

THINK PART OF YOUR RESPONSE,

YOUR RETORT WILL BE YES BUT

CONSUMERS ARE IGNORANT.

THEY JUST DON'T KNOW.

AND RESEARCH SHOWS THAT THE MORE

INFORMED -- THEY BECOME MORE

RESIGNED SO MAYBE MORE -- YOU

KNOW MAYBE IT'S BETTER TO JUST

BE BLISS FLEE IGNORANT SO WITH

ALL OF THAT I WANT TO TURN BACK

TO YOU AND YOU KNOW HEAR YOUR

REACTION.

>> THESE ARE REALLY IMPORTANT

INSIGHTS.

I THINK THAT IT'S A COMPLICATED

WORLD.

IT'S VERY HARD NOT TO BE EXCITED

ABOUT THE ABILITY TO WALK

THROUGH A STORE AND COMPARE

PRICES IN YOUR HAND. THERE ARE

LEVELS OF EXCITEMENT ABOUT BEING

ABLE TO SHOW A KID A SNIPPET  
FROM THE WIZARD OF OZ ON A PHONE  
ON A BUS WHEN A KID IS STARTING  
TO GET ANTSY.

THERE ARE A LOT OF TERRIFIC  
THINGS ABOUT THIS.

I COULDN'T LIVE WITHOUT GOOGLE.

BUT WHERE I'M COMING FROM IS  
THAT I THINK PART OF MY JOB IS  
TO SAY -- I MEAN THERE ARE A LOT  
OF COMPANIES SAYING ALL OF THESE  
GREAT THINGS BUT UNDERLYING IT  
THERE ARE REAL PROBLEMS THAT WE  
HAVE TO FACE.

AND I THINK PART OF BEING A  
CITIZEN IN A SOCIETY IS TO SAY,  
YEAH, THERE ARE TERRIFIC THINGS  
ABOUT THIS BUT ALSO THINGS THAT  
IN THE LONG-TERM MIGHT -- AND I  
DO BELIEVE THIS -- MIGHT HARM  
OUR DEMOCRACY.

MIGHT HARM OUR RELATIONSHIP WITH  
OTHERS.

WHEN YOU WALK THROUGH A STORE  
NOW AND YOU'RE NOT SURE WHAT  
PROFILE THE STORE HAS ABOUT YOU,  
WHEN NOT FAR FROM NOW YOU CAN  
GET ON YOUR PHONE AND GET  
DIFFERENT PRICES BASED ON WHO  
YOU ARE, THAT'S A SCARY THING TO  
ME IN TERMS OF HOW ARE PEOPLE  
GEUNS THE PUBLIC'S FEAR RELATION  
TO OTHERS AND THE PROCESS WHEN  
THEY THINK THEY'RE GETTING  
INFORMATION THAT IS DEVELOPED  
PERSONALLY FOR THEM THAT ARE  
PERSONAL ADS SO IN WHILE I AGREE  
THERE ARE MANY TERRIFIC THINGS  
ABOUT THIS, I THINK THAT THERE  
HAVE TO BE SEGMENTS OF SOCIETY  
THAT THEY HAVE TO SAY, STOP, WE  
CAN FIX THE REALLY DIFFICULT  
THINGS THAT RELATE.

>> LET ME UNRAVEL SOME OF THE  
ISSUES.

AND I -- WHAT I WOULD SAY IS,

FIRST, THAT ONE CAN LOOK AT OUR  
WORK AND SAY IT'S ANTITECHNOLOGY  
BUT I WOULD ARGUE STRONGLY THAT  
IT IS NOT.

>> I PERSONALLY LOVE TECHNOLOGY  
AND I'M AN EARLY ADOPTER OF MANY,  
MANY THINGS.

I'M ALSO A PRACTITIONER AND I DO  
KNOW MUCH OF WHAT WE CALL  
INNOVATION DOES NOT DEPEND ON  
PERSONAL INFORMATION.

AND IT IS FUNDAMENTALLY  
COMPATIBLE WITH WHAT --  
FUNDAMENTALLY APPLICABLE WITH  
WHAT ALAN WESTIN CALLED -- LAW.  
WE'RE GOING TO KEEP THIS FOR SIX  
MONTHS OR DELETE IT AFTER A  
YEAR.

SO I THINK ONE OF THE RHETORICAL -- IT'S IN A WAY A  
STRAW MAN THAT WE HAVE TO  
RECOGNIZE AND DEAL WITH, IS THE  
IDEA THAT WE CAN'T HAVE PRIVACY  
AND THESE TECHNOLOGIES.

WE CAN HAVE UBER.

UBER IS ACTUALLY NOT THAT  
INNOVATIVE.

LONG BEFORE UBER TAXICAB  
COMPANIES HAD HAIL APPS.

DON'T NEED PERSONAL INFORMATION  
FOR A LOT OF THAT.

WHERE YOU DO NEED PERSONAL  
INFORMATION YOU HAVE RULES  
AROUND IT AND I SEE IT FROM  
PRACTICE ALL THE TIME.

THERE ARE SITUATIONS WHERE WE DO -- WHERE WE DO INTERESTING  
FORMS MUCH PERSONALIZATION WITH  
DEIDENTIFIED DATA WHERE WE AGREE  
THAT DATA WILL DISAPPEAR AFTER A  
CERTAIN AMOUNT OF TIME, WHERE WE  
AGREE THAT CERTAIN THINGS WON'T  
BE THE BASIS OF SELECTION AND  
THE LIKE.

SO I THINK WE SHOULDN'T FALL  
UNDER THE FALSE DILEMMA THAT  
PRIVACY MEANS WE CANNOT HAVE A  
SPECTACULAR CONVENIENCE IN OUR

LIFE.

>> I WANTED TO COMMENT OWN THE  
FEAR OF USERS BECOMING RESIGNED  
BY GETTING MORE INFORMATION  
ABOUT WHAT TRACKING WHAT WAS  
GOING ON OR THE NOTION THAT, YOU  
KNOW, WE CAN'T HAVE THE SERVICES  
WITHOUT HAVING THE TRACKING.  
BECAUSE I THINK THERE'S A CHANCE  
IF EVERYONE STARTS  
FINGERPRINTING, USERS MR. SEE  
OH, THIS SITE IS FINGERPRINTING  
ME AND I JUST HAVE TO DEAL WITH  
IT.

BUT I THINK WE CAN PREVENT THAT  
FROM HAPPENING WITH THE RIGHT  
POLICIES AND THE RIGHT TOOLS  
WHERE CONSUMERS COULD PROTECT  
THEMSELVES BY RELEASING THAT  
DATA NOT JUST TO CONSUMERS BUT  
FOR EVERYONE.

AND THEN THE NOTION THAT  
CONSUMERS MIGHT, YOU KNOW, SEE

OR CONSUMERS JUST HAVE TO BE  
TRACKED.

I DON'T THINK THAT IS TRUE  
EITHER BECAUSE YOU KNOW A LOT OF -- AT LEAST FOR ADVERTISERS  
THEY SPORT OPT OUTS AND YOU  
SHOULD BE ABLE TO SET AN OPT OUT  
COOKIE AND NOT BE TRACKED BUT WE  
STILL SEE THAT FINGERPRINTING  
GOES ON WHEN THE OPT-OUT COOKIE  
IS SET SO PERHAPS THERE SHOULD  
BE ENFORCEMENT IF YOU'RE GOING  
TO SELF TELL IETIONERS YOU HAVE  
OPTED OUT OF TRACKING YOU CAN  
SAY THINGS THAT YOU ARE NOT NOT  
GOING TO DO GOING TO DO  
FINGERPRINTING AND THE USER HAS  
TO TRUST THAT WON'T HAPPEN.

>> I'M GOING TO ASK ONE MORE  
QUESTION.

AND LOOKING AT THE PROUDER  
SOLUTION AND POLICY ALTERNATIVE  
BECAUSE I TALK TO A LOT OF  
COMPANIES AND THEY TELL THE SAME

STORY, OF COURSE CONSUMERS CAN'T  
CONTROL THIS SO THERE NEEDS TO  
BE AN ACCOUNTABILITY MODEL AND  
COMPANIES SHOULD BE RESPONSIBLE  
STEWARDS OF THE DATA, CONSUMERS  
CAN'T MAKE CONTROL, COMPANIES  
SHOULD MAKE SMART INFORMED  
DECISIONS ABOUT HOW THE  
INFORMATION IS USED.  
BECAUSE WHAT ARE THE ALTERNATIVE  
TO THAT?  
THAT'S ONE OPTION.  
AND THEN THERE'S THE FTC WHERE  
THE GOVERNMENT CAN BE MAKING  
CHOICES ON BEHALF OF PEOPLE AND  
THAT HAS PROBLEMS AS WELL, AND  
ONE THAT WE HEARD A FEW TIMES  
TODAY IS THE IDEA OF XRED  
TRANSPARENCY AND FILTERED  
THROUGH ELITES OR INSTITUTIONS,  
AND THE NAME AND SHAME APPROACH  
THAT JOE AND STEVEN TALKED ABOUT  
AND I GUESS MY QUESTION IS, IS

THAT SCALAGE?

"THE WALL STREET JOURNAL" DID  
WHAT THEY -- A SERIES STARTING  
IN 2010 AND SHOWED THAT THE  
TRACKING THEY'RE CONCERNED ABOUT  
IS STILL INCREASING, JOE AND  
CHRIS HAVE BEEN DOING THIS EVEN  
LONGER SO WHAT IS THE POLICY  
SOLUTION, CONSUMING THAT THIS IS  
A PROBLEM TO BE ADDRESSED, YOU  
KNOW, WHAT IS THE RIGHT  
APPROACH?

>> CAN I JUMP IN AND SAY THAT --

THANK YOU.

THAT I THINK THAT, YOU KNOW, AND  
ALSO REACTING TO WHAT CHRIS AND  
JOE SAID, I THINK THERE'S  
CONSENSUS THAT WE NEED TO DEAL  
WITH DATA ACCESS AND HAVE, LIKE,  
THE IDENTIFICATION AND CLEARLY  
STRONG DATA SECURITY BUT I THINK  
TO A LARGE EXTENT, INDUSTRY GETS  
IT.

AND CERTAINLY INDUSTRY GETS A  
BIG IMPACT THAT PRIVACY FAILS  
CAN HAVE ON BRANDS AND CONSUMER  
EXPECTATIONS AND I THINK ONE  
THING THAT ATTESTS TO THIS IS,  
YOU KNOW, THE FACT THAT WE'RE  
HAVING THIS CONFERENCE AND THE  
EXISTENCE OF THE PRIVACY  
PROFESSION THAT HAS BLOSSOMED SO  
THE IPP NOW HAS 25,000 MEMBERS  
WORLDWIDE.

IT HAD LESS THAN 10,000 JUST TWO  
AND A HALF YEARS AGO.

I THINK YOU KNOW THE RIGHT  
PROCESSES ARE IN PLACE AND IT'S  
REALLY THE EXCESS THAT WE NEED  
TO DEAL WITH AND I THINK YOU  
ILLUSTRATED SOME OF THIS IN  
TECHNOLOGICAL RESEARCH.

>> THE ACCESS AND ACCOUNTABILITY  
ISSUES HAVE TO BE DEALT WITH AND  
VERY INTERESTING PROPOSALS TO  
FOCUS MAINLY ON USE OF DATA BUT

I THINK ONE WEAKNESS OF THIS PROPOSAL IS THAT THEY DON'T TAKE INTO ACCOUNT E. TAKE INTO ACCOUNT THE ATTACKS OF ON ACCOUNTABILITY OCCURRING SUCH AS THE SPOKEO CASE.

IF YOU READ THAT AND READ THE BRIEFS, A LARGE PART OF THIS SAYS THAT THEY SHOULD BE ABLE TO WILFULLY VIOLATE THE LAW.

THAT MEANS THEY KNOW WHAT THE LAW IS AND THEY VIOLATE IT ANYWAY AND THAT THEY SHOULDN'T BE ABLE TO BE SUED.

WINDHAM WAS IN A WAY AN ATTACK ON ACCOUNTABILITY.

A CLASS ACTION -- WE DON'T LIKE CLASS ACTIONS.

WE DON'T LIKE THE FTC DOING ANYTHING.

WE DON'T WANT CONGRESS TO DO ANYTHING.

SO WHERE EXACTLY DOES THE

ACCOUNTABILITY COME FROM?

I THINK WHEN YOU LOOK AT USE  
MODELS, THE FIRST DEFENSE, THE  
FIRST TIME SOMEONE GETS CAUGHT  
IN A USE VIOLATION THEY'RE GOING  
TO MAKE AN IMS HEALTH ARGUMENT.

SO I THINK IF WE'RE GOING TO USE -- MOVE TO A USE MODEL THE  
ACCOUNTABILITY IS GOING TO HAVE  
TO INCLUDE A CONTRACTUAL WAIVER  
OF FIRST AMENDMENT DEFENSES AND  
AN AGREEMENT THAT THERE IS  
INJURY, IN FACT, THAT SUPPORTS  
STANDING.

OTHERWISE, YOU WILL NEVER BE  
ABLE TO SUE, NOT EVEN YOU,  
JUSTIN.

IF YOU TAKE THE POSITION  
SERIOUSLY NOT EVEN THE FTC WOULD  
BE ABLE TO SUE.

>> I THINK -- YOU KNOW SOME  
COMPANIES HAVE STAKED RADICAL  
POSITIONS AND FRANKLY I THINK  
DONE THEMSELVES A DISSERVICE,

WHICH IS SOMETHING THAT I THINK  
IS PRONE TO OCCUR IN LITIGATION.  
ON THE WHOLE, YOU KNOW, THE FTC  
HAS BEEN SUCCESSFUL AND I'M NOT  
SURE HOW, YOU KNOW, HOW MUCH  
TRACTION THE FIRST AMENDMENT  
ARGUMENT AGAINST PRIVACY  
ACCOUNTABILITY WILL HAVE.  
WE WILL SEE.

>> SO ONE QUESTION I HAVE  
FOLLOWING UP ON THAT IS: WHEN  
YOU TALK ABOUT USE AND THE  
ASSUMPTION OF HARM, ARE YOU  
LOOKING AT -- IT SEEMS THAT USE  
IS ALMOST, IN THIS CASE, A  
PROUDER WORD TO REALLY TALK AUNT  
DATA-DRIVEN DECISION-MAKING.  
AND IS THAT, I THINK, WHERE YOU  
SEE THE TROUBLES LIE?

>> I WOULD LIKE TO DEFER TO  
SOMEONE ELSE BECAUSE IT'S NOT MY  
EXPERTISE.

>> CAN YOU REPEAT?

>> IN THIS CASE WE'RE TALKING ABOUT WHAT ABUSES ARE AND THE HARM.

IS IT REALLY ABOUT THE ABUSES IN TERMS OF THE TRACKING AND WHAT PEOPLE ARE THEORETICALLY DOING WITH INFORMATION OR ABSTRACTLY OR DOES IT REALLY BECOME AN ISSUE WHEN THERE'S DATA DRIVEN DECISION-MAKING?

>> SO I THINK -- I GUESS THAT HERE I WOULD SAY IT'S MORE OF DATA USE, IT'S THE FEAR IF THIS DATA IS BEING COLLECTED HOW IS IT BEING USED AND THE CONSUMER HAS NO ABILITY TO GO IN AND PREVENT THAT COLLECTION OR NO ABILITY TO CONTROL THAT COLLECTION BEYOND, LIKE PREVENTING IT FROM HAPPENING. SO ONCE THE DATA GETS PUT INTO THE COMPANY'S DATABASES, THAT KIND OF IS UP TO TRUST.

>> SO I GUESS IT GOES TO THE  
POINT, SHOULD WE BE CONCERNED  
ABOUT THE COLLECTION ITSELF,  
RIGHTLY, YOU BOTH HAVE YOUR  
STUDIES LIKE -- A LOT MORE  
COLLECTION GOING ON AND I'M SURE  
A LOT OF PEOPLE THAT ROOM ARE  
LIKE IT'S NOT BAD COLLECTION.  
IT'S NOT MALICIOUS COLLECTION.  
IT'S BEING DONE TO SUPPORT THE  
AD ECOSOME AND THERE'S NOTHING  
NOTHING INHERENTLY WRONG IN THAT  
AND OTHERS SAY THE FTC SHOULD BE  
FOCUSED ON -- WELL THERE'S HARM  
DOWN THE ROAD.  
OTHERS HAVE WRITTEN ABOUT THIS  
AND THERE HAS BEEN A LOT OF  
FOCUS ON THE USE OF DATA FOR  
DISCRIMINATION, RIGHT, WE HAVE A  
PANEL ON THAT LATER TODAY.  
AND SO SHOULD WE BE FOCUSED --  
TO SEE YOUR POLICY IN GENERAL,  
BE CONCERNED ABOUT THE RAW

COLLECTION IN THE FIRST PLACE OR  
IS IT JUST THE FACT THAT WE  
SHOULD BE WORRIED ABOUT HOW IT  
COULD BE ABUSED DOWN THE ROAD?

>> I HAVE WRITTEN PRETTY  
EXTENSIVELY ABOUT THE NEED TO  
FOCUS OWN COLLECTION BECAUSE THE  
INABILITY TO POLICE USES.

AND I THINK TO GET TO A POINT TO  
POLICE USE WE NEED TO HAVE A SEE  
CHANGE AND A FORM OF  
ACCOUNTABILITY THAT DOESN'T  
CURRENTLY EXIST.

WHAT MY TEAM HAS FOUND OVER AND  
OVER, WHEN WE DISCOVER THINGS  
LIKE HTML 5, WE GO TO THE  
COMPANIES AND SAY WE THINK  
YOU'RE DOING THIS AND THEY SAY  
WE ARE NOT DOING IT AND THEY  
DON'T ACTUALLY KNOW WHAT THEY'RE  
DOING.

>> ANY CLOSING THAT?

>> WE THOUGHT WE ARE OVER TIME.

WE WILL HAVE A QUICK TEN-MINUTE

BREAK AND COME BACK FOR THE

SECOND SESSION AT 10:45.

WE WILL COME BACK AT 10:45.

>> BREAK.