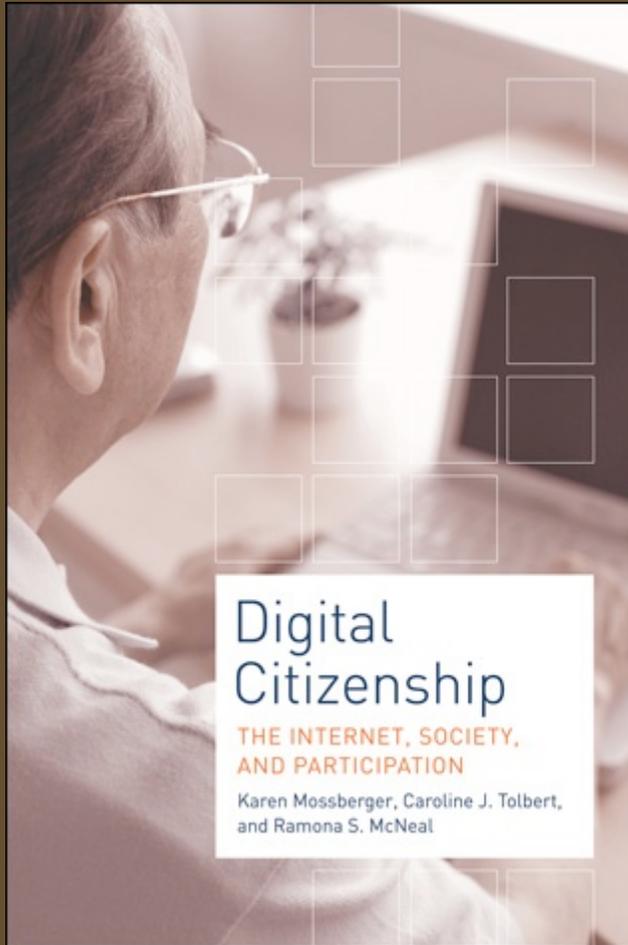


Digital Citizenship



The Internet, Society, and Participation

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Mossberger, Tolbert, and McNeal
2008, MIT Press

<http://www.mitpress.mit.edu>

Why “Citizenship”?

“Citizenship is a status that is bestowed on those who are full members of a community.”

T.H. Marshall, 1949

Ability to participate in society online

From positive externalities to equality of opportunity

Internet Use Has Grown, But Many are Offline

- Pew Internet and American Life Project reports that **74%** of Americans use the Internet *at least occasionally* . . .

Who is still less likely to be online?

- African-Americans 64%
- Latinos 58%
- Less than \$30,000/yr. 57%
- High School Education 67%
- Less than High School 35%
- Age 65+ 41%

December 2008 at pewinternet.org

Defining Digital Citizenship

- Digital citizenship as regular and effective use (daily use)
- Skills
 - technical competence
 - information literacy/educational disparities (Mossberger, Tolbert and Stansbury 2003)
- Access
 - most frequent use at home or work (Mossberger, Tolbert and Stansbury 2003)
- Frequency of use
 - deepening of activities online, human capital uses (DiMaggio and Celeste 2004)

Daily Use

Between 2000 and 2008

Daily users are 60% - 70%

of those who say that they ever or occasionally go online

Pew Internet and American Life Project

African-Americans who live in poor communities are among those who are likely to be occasional internet users

Mossberger, Kaplan and Gilbert 2008; Mossberger and Tolbert 2009

Digital Citizenship: Ability to Participate in Society Online

Political and economic participation central to American conceptions of citizenship

Multiple Traditions of Citizenship in U.S. (Rogers Smith 1993)

- **Liberalism**
 - individual rights, economic opportunity
- **Civic republicanism**
 - civic engagement, community
- **Ascriptive hierarchy**
 - inequality

Digital citizenship – skills, access, education needed for participation in the information age

Internet Use and Citizenship

- Economic Opportunity (Liberalism)
- Civic Engagement & Political Participation (Civic Republicanism)
- Exclusion from prevailing forms of information and communication (Ascriptive Hierarchy?)
- What are the benefits for internet use at work?
- Does internet use matter for the less-educated?
- Does internet use influence political knowledge, discussion and interest?
- How do different forms of internet use influence voting?
- Patterns of disparity in internet use/digital citizenship
- What is the significance of broadband use?

Liberalism: Does Digital Citizenship Foster Economic Opportunity?

- Information technology responsible for productivity growth since 1990s
- Future growth and investment will be use of IT throughout “old economy sectors”
- Use of IT changes jobs, work practices, and raises skills needed – IT, cognitive skills, education, soft skills
- Does it matter for less-educated workers? Some prior evidence (4-city study of employers)

Data and Methods: Economic Opportunity

- 2003 Current Population Survey; national sample with 103,000 respondents
- Last survey with internet use supplement
- Questions on weekly wages and detailed questions on employment
- Multivariate analysis, controlling for education, age, gender, race, ethnicity, location, occupation and industry, full-time
- Supplemental analysis of Pew 2002, 2005 to examine impact of frequent use at work

Technology Use At Work

Computer Use at Work

Educational Attainment	% of employed
More than HS	72%
HS or less	35%

Internet Use at Work

Educational Attainment	% of employed
More than HS	58%
HS or less	21%

Benefits of Inclusion: Economic Opportunity

All workers

Internet use at work	\$118/week more
Computer use at work	\$101/week more
Online courses	\$ 30/week more

Workers with high school education or less

Internet use at work	\$111/week more
Computer use at work	\$ 90/week more
Online course	\$ 63/week more

2003 CPS

Pew Analysis – income increases with frequency of use

Benefits of Inclusion: Less-Educated Workers By Race/Ethnicity

(HS education or less)

Wage Premium

Internet Use

African-American Men

18.36% more

African-American Women

17.31%

Latinos

16.99%

Latinas

16.11%

White Men

14.77%

White Women

13.56%

2003 CPS

Liberal Tradition

Citizenship as equal chances if not equal outcomes

- African-Americans, in particular, connect technology use with economic opportunity; Latinos see as necessary to keep up with the times (Mossberger, Tolbert and Stansbury 2003)
- **Internet use on the job benefits less-educated workers, especially minorities**
- Technology use growing across labor market, and technology disparities compound unequal chances for disadvantaged workers

Civic Republicanism: Does Internet Use Contribute to Civic Engagement?

- Politics as usual (Margolis and Resnick 2000)
 - Diminished social capital (Putnam 2000)
 - Less knowledge of other views (Sunstein 2001)
-

- Positive effects on:
- voter turnout (Krueger 2002; Bimber 2003; Tolbert and McNeal 2003; Graf and Darr 2004)
- campaign contributions (Bimber 2001, 2003; Graf and Darr 2004)
- contacting officials (Thomas and Streib 2003; Bimber 1999)

Online News and Civic Engagement

Civic engagement as political knowledge, discussion, and interest

- Media use more generally enhances political knowledge
- More learning through reading-intensive media (recall, depth)
- Interactive medium encourages discussion
- Diverse sources may encourage interest

Data and Methods: Civic Engagement

- 2000 American National Elections Studies (NES): political discussion, political interest, political knowledge
- 2002 Pew Internet & American Life Project: political interest
- 2004 Pew Center for People & the Press: political interest, political knowledge
- 2-stage models, predicting use of online news in 1st stage; controls include use of other media, partisanship, demographics in 2nd stage

Benefits of Inclusion: Civic Engagement

- Use of online news is associated with greater civic engagement
 - knowledge, interest, discussion in all years
- This is true even when controlling for TV and print news
 - More consistent effects than other media; newspapers not associated with interest
- Gains in political knowledge (but not interest) larger for younger individuals
- Young most likely to get news online
- Civic engagement – the foundation for participation

Civic Republicanism: Does Internet Use Encourage Participation?

- Voting has special status as democratic duty; generally lower in past few decades
- Prior studies looked at effects of internet use or online news, but not interactive uses
- **Chat rooms** – deliberative democracy and opinion formation
- **E-mail** – political mobilization, with low costs and potentially broad networks
- **Online news** – information subsidy (cuts costs) through convenience, richer content, diversity

Data and Methods: Political Participation

- Voting in 2000, 2002, 2004
- Post-election surveys from Pew Internet and American Life Project
- 2-stage models to predict use of chat rooms, political email, or online news in 1st stage; voting in 2nd
- Controls for demographic variables, TV and newspaper use, political interest (available in 2002 only), state ballot initiative use, state racial diversity

Benefits of Inclusion: Political Participation

All related to higher probability of voting – especially chat rooms and political e-mail

PREDICTED PROBABILITY OF VOTING 2000

- **Online news (information costs)** – increases likelihood of voting by 16% for those who use TV and newspapers as well as internet news
- **Chat rooms (discourse)** – increase of 21% controlling for traditional media
- **E-mail (mobilization)** - increase of 21% controlling for traditional media

Civic Republican Tradition

Citizenship as the right and duty to participate in the polis

- IT facilitates civic engagement beyond the impact of other media, which has long-term implications for participation
- Interactive properties of the internet encourage voting through discussion and mobilization as well as information
- Technology has the ability to engage the young, who are traditionally underrepresented
- It can also widen existing disparities in civic engagement and participation based on income and education

Ascriptive Hierarchy: Inequality Online

Why do disparities remain despite the growth of internet use?

Will they simply fade with time?

Do they fit the ascriptive hierarchy concept – which includes race, ethnicity, gender?

PRIOR EVIDENCE: GENDER

- Women use the internet less frequently
- Differences in use
- No difference in information literacy or search skills; few other basic skill differences (Mossberger, Tolbert and Stansbury 2003; Hargittai and Shaefer 2006)

Prior Evidence: Race and Ethnicity

- African-Americans and Latinos do not have home access because of cost; older and white respondents cite lack of interest (2003 CPS descriptive data)
- African-Americans (and to a lesser extent Latinos) have more positive attitudes toward technology than similarly-situated whites (Mossberger, Tolbert and Stansbury 2003)
- Poor neighborhoods matter for all, and explain black/white gaps (Mossberger, Tolbert and Gilbert 2006)
- African-Americans in poor communities more likely than whites to go online without home access (Mossberger, Kaplan and Gilbert 2008)

Data and Methods: Patterns of Exclusion

- 2003 CPS – large size facilitates separate analysis for subsamples of African-American, Latino, low-income, less-educated, younger, and older respondents
- Multivariate logistic regression
- Controls for parental status, marital status, location, industry and occupation categories as well as demographic variables

Ascriptive Hierarchies – What role do race, ethnicity and gender play?

Patterns of Exclusion: What Matters

HOME ACCESS

Gender*
Race and Ethnicity
Age
Education
Income
Suburban Residence (+)
Professional, Mgmt., Sales,
and Secretarial Occupations (+)
Children (+)
Marriage (+)

DAILY USE

Gender*
Race and Ethnicity
Age
Education
Income
Suburban or Urban (+)
Professional, Mgmt., Sales,
Secretarial and Repair (+)
Children (-)
Marriage (+)

*Probability estimates – less than 2% difference

Probability of Daily Internet Use

Age 63	21%	
Age 29	49%	+28
HS grad	22%	
Assoc. Degree	44%	+22
\$20-25,000 income	23%	
\$75-100,000 income	45%	+22
African-American	21%	
Latino	18%	
White	34%	+13-16

Probability estimates for female respondent, mean or modal values on all factors, varying education, age, income, race or ethnicity

Findings: African-Americans and Latinos

- Race and ethnicity matter even within low-income and less-educated populations for both home access and digital citizenship.
- Access outside the home is more important for African-Americans than other groups.
- Occupations do less to increase home access for African-Americans (only professional occupations).
- African-American women are more likely to be digital citizens than male peers.
- Gender and children don't affect digital citizenship among Latinos.
- Age is not significant for home access among Latinos.
- Race, ethnicity, and education matter for Internet use even among those who are age 32 or younger – disparities aren't disappearing.

Broadband Use

- Broadband needed for full connectivity
- Broadband matters for frequency of use (skill)
- Broadband encourages wider range of uses: political sites, e-government, job search, classes online (deepening) (Horrigan 2005; Tolbert and Mossberger 2005)
- **Multivariate logistic regression, Pew Internet and American Life surveys, 2003 and 2005**
- **Controls for demographic variables, location, marital status, age of children**

Patterns of Exclusion: Broadband (2005)

- Age – 31% difference (69 vs. 33)
- Income – 22% difference (20/30K vs. 50/75K)
- Education – 21% difference (HS vs. BA/BS)
- Children age 11 & under – 16% less likely than for those with older children
- Rural vs. suburban – 16% less likely
- Rural vs. urban – 15% less likely
- African-Americans – 13% less likely
- Asian-Americans – 12% less likely
- Not married – 3% less likely

2003 similar, English-speaking Latinos only both years

Ascriptive Hierarchy

Exclusion from citizenship or second-class citizenship based on race, ethnicity, or gender

- Race and ethnicity are significant for disparities, but it is **poor** minorities who are offline
- Poor African-Americans and Latinos are disadvantaged in comparison to other poor and less-educated
- **Poor communities have unequal education, unequal access to job opportunities**
- Gender differences have narrowed for access and frequency of use

Ascriptive hierarchy calls attention to racial and ethnic inequality, but doesn't fully describe the interaction of poverty and education

Toward Digital Citizenship



- Digital citizenship part of economic opportunity and political participation in the information age
- Disparities persist, entangled with other inequalities – in education, in jobs
- Equality of opportunity and democracy require policy attention to technology gaps
 - Affordable broadband
 - Skills, including information literacy
- Equal educational opportunities, not just technology