LOYOLA MARYMOUNT UNIVERSITY

System Thinking
Social Media Dating Analysis

Eve Huang
March 2016

Agenda

Common Good

- The end goal of dating = **LIFE LONG PARTNERSHIP**! - Huge commitment
- Humans are psychologically hard wired to mate for species survival and evolution.
- No previous sophisticated system available to increase chances of finding a "good match"
  - Online dating allows for filters to be established in hopes to eliminate individuals who do not align with a user
- Match.com was the first, started in 1995 - 21 years ago - early stage stigmatisms - yet 5% of Americans married or in a serious relationship and growing
- ⅓ of new marriages in the U.S. began with an online dating meeting
- **Additionally online dating:**
  - » Creates Partnerships
  - » Diversifies the Pool
  - » Saves Time and Money
  - » Provides an Investment Opportunity (Match Group Inc.)

Define Problem

- Overall problem: Dating has become increasingly difficult
- Accessibility to a quality "match" has seemed to decrease for eligible bachelors and bachelorettes
- Shift in dating climate in a generation where millennials are the majority
- Social media has paved the way for online dating opportunities
- More focus on career and other this amongst single people, minimizing the need to date in the traditional sense.

Question of focus - What effect does social media have on dating?

Unstructured & Structured Problem

Unstructured Problem:

Love has become difficult to find in today's society because adults careers are taking precedence over finding love.

Structured Problem:

Online dating sites have made it convenient for adults to use the internet as an avenue to find love, by helping connect individuals based on similarities(ex. Match, Ashley Madison, OKC, Adult Friend Finder). These sites have made it convenient for career oriented adults, but has it destroyed conventional communication skills.

Biggest Age Groups

U.S. Estimated Population, By Age

Millennials make up the largest share of the U.S. population, at 28.7 percent.

Millennials
28.7%
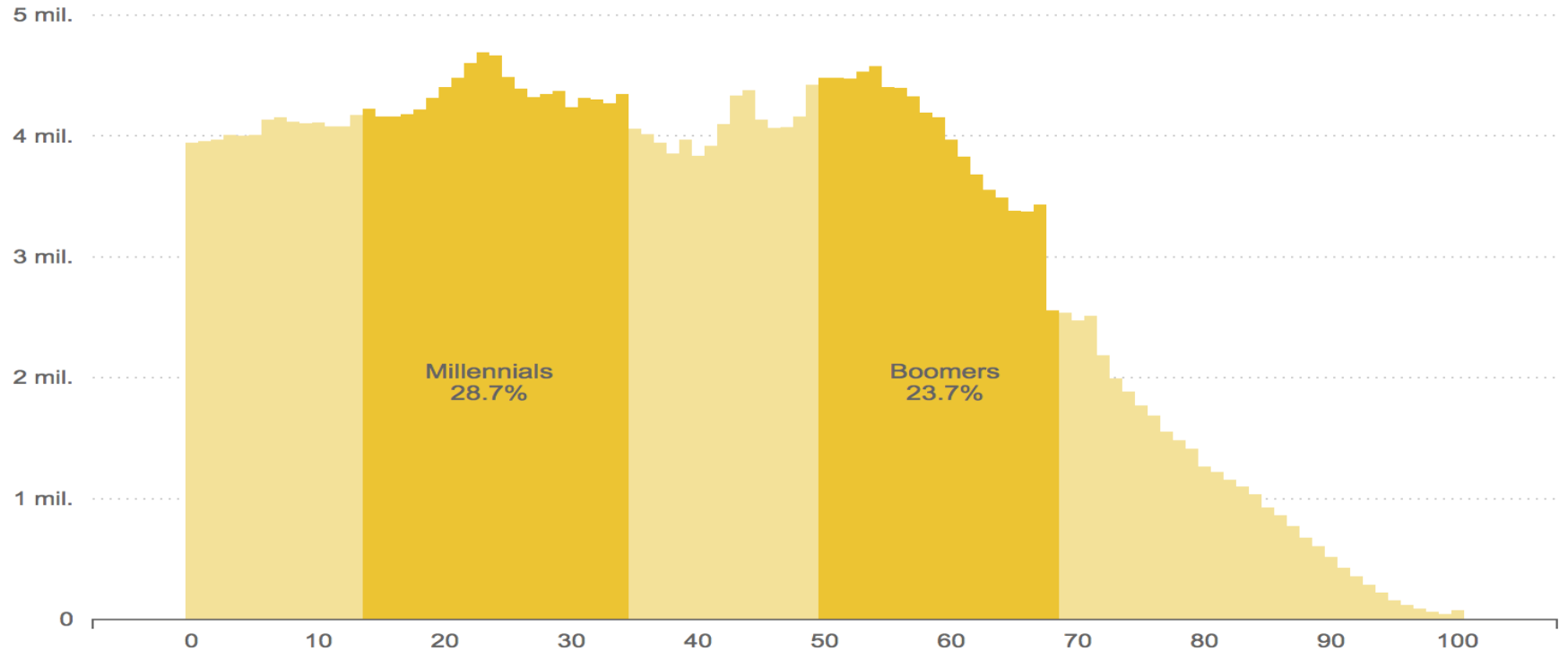
Boomers
23.7%

Notes

Here, we define millennials as being born between 1980 and 2000, and baby boomers, between 1946 and 1964.

Source: U.S. Census Bureau Monthly Population Estimates (June 2014)
Credit: Alyson Hurt/NPR

Marriage Age

Marriage

Average Age At First Marriage (1947-2013)

■ Men   ■ Women
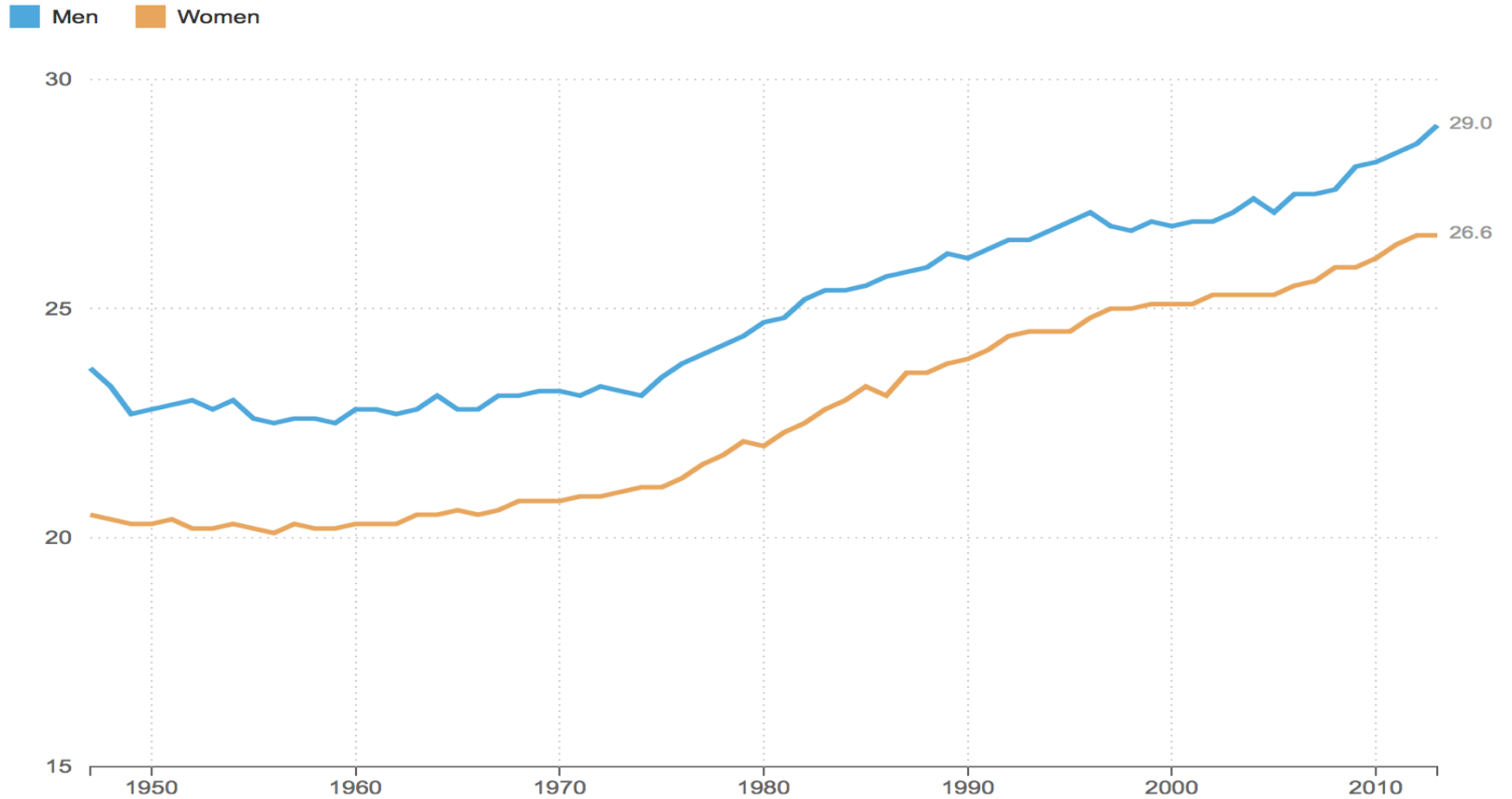
Source: Current Population Survey (U.S. Census Bureau)
Credit: Alyson Hurt/NPR

Define System & Boundary

- Team Definition of Social Media:
  - Electronic media hosted on a website or application to share and express information by individuals usually with multidirectional communication. Most have running history, some do delete after certain time (example SnapChat).
  - Has some form of personal investment with photos, message, information and/or opinions.
- Specific System of Interest: Social Media Dating Networks
- Boundary: platform for Social Media, limiting to single users
- System Graphic defines Subsystems, Stakeholders and External Systems

System Graphic

SUBSYSTEM: Internet

STAKEHOLDERS:
- Server Providers
- Internet Providers
- Domain Providers

SUBSYSTEM: User Interface -
Website and/or Phone Application (App)

STAKEHOLDERS:
- Developers
- Owning Company
- Users

SUBSYSTEM: User Profile Database

STAKEHOLDERS:
- User's provide info
- Developers decision on format

SYSTEM: Social Media Dating Networks

SUBSYSTEMS:
- Internet
- User Interface: Website and/or Phone Application (App)
- User Profile Database
- Matching Algorithm
- User Messaging to Connect & Meet

STAKEHOLDERS:
- Users using social media dating networks
- Families/ friends
- Developers, employees, shareholders
- Advertisers
- Media/ Press
- Government

EXTERNAL SYSTEMS:
- Legal system
- Media and PR
- Internet
- Linked other social media not primarily used for dating

SUBSYSTEM: Matching Algorithm

STAKEHOLDERS:
- Users
- Developers
- Database for sorting

SUBSYSTEM: User Messaging to Meet

STAKEHOLDERS:
- Users
- Developers
- Notification: Email or Application

Stakeholder Interactions-Users

Server Provider-Allows the user to have connection to the dating site or app and prevent the site or app from crashing.

Internet Provider-Gives users access to the dating site or app.

Developers-They design the dating site and/or app for the user.

Owning Company-Provides their service of match-making to the users.

Notifications-A way for the owning company to let the user know that they have either received a new match or message.

Families-The children of single parents who use the dating site will be exposed to various possibilities of a new parental figure.

Stakeholder Interactions-Developers

Owning Company-Gives the developers a set of requirements that their dating site and/or app must have.

Users-Provide feedback for the developers to take into account when making changes or updates to the dating site and/or app.

Developer's Format-A constraint which specifies how the dating site and/or app must look and function.

Database-A storage system which the developers use in order to design the proper algorithm for matching two users.

Advertisers-They require their products to be shown on the dating site.

Stakeholder Interactions- Owning Company

Developers-Design a dating site and/or app for the owning company. They also give the owning company a set cost to start dating site and/or app

Users- The customers of the dating site and/or app which also drives the possible themes the company might be going for.

Domain Provider-Provides the name of the dating site which is important in being able to create relevance in the name so they can be found easily on the internet.

Government-Provides rules and regulations that the owning company must follow.

Shareholders-Drive the aspirations which the owning company has, in order to make more money

Media/Press-Their portrayal of the owning company's dating site can determine the success of which the site may have.

Root Definition

- **C = Customer: Beneficiaries and Victims**

     Beneficiaries: Single People, Communities, Online Daters, Online Date Business, Advertisers

11% of American adults, 38% of those who are currently "single and looking" for a partner, have used online dating sites or mobile dating apps (since 2005)

11% of internet users (representing 9% of all adults) say that they have personally used an online dating site such as Match.com, eHarmony, or OKCupid.

7% of cell phone apps users (representing 3% of all adults) say that they have used a dating app on their cell phone.

66% of online daters have gone on a date with someone they met through a dating site or app, and 23% of online daters say they have met a spouse or long term relationship through these sites

Online dating, is now over a [$2 billion industry](#). Over [40 million](#) Americans have given online dating a try, and over [a third](#) of the American couples married between 2005 and 2012 met online.

Familiarity with online dating through others, 2005-2013
% of American adults who...

Chart legend: ■ 2005 ■ 2013

Bar values:
- Know someone who has used online dating: 2005 = 31%, 2013 = 42%
- Know someone who has been in a long-term relationship or marriage w/ someone they met through online dating: 2005 = 15%, 2013 = 29%
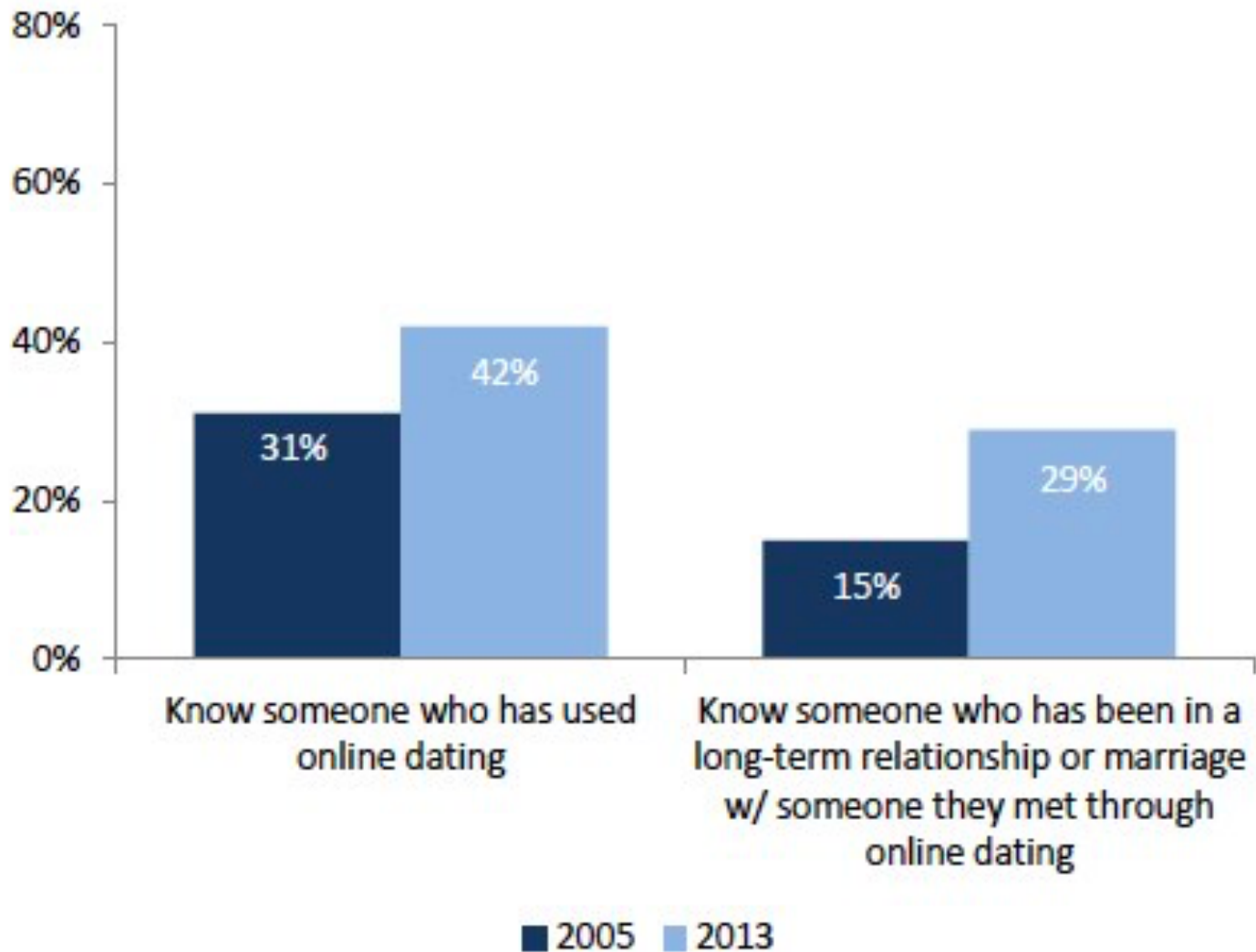
Root Definition

- **C = Customer: Beneficiaries and Victims**

Victims: heartbroken because of failed dating / relationships broken because of cheating through social media/ stalkers

32% of internet users agree with the statement that "online dating keeps people from settling down because they always have options for people to date."

24% of internet users have flirted with someone online, up from 15% in 2005.

29% of internet users with recent dating experience have gone online to search for information about someone they were currently dating or about to meet for a first date.

24% of internet users have searched for information online about someone they dated in the past, up from 11% in 2005.

For young adults especially, social networking sites can cause "relationship drama"

Negative relationship experiences on social networking sites
% of SNS/Twitter users who have...
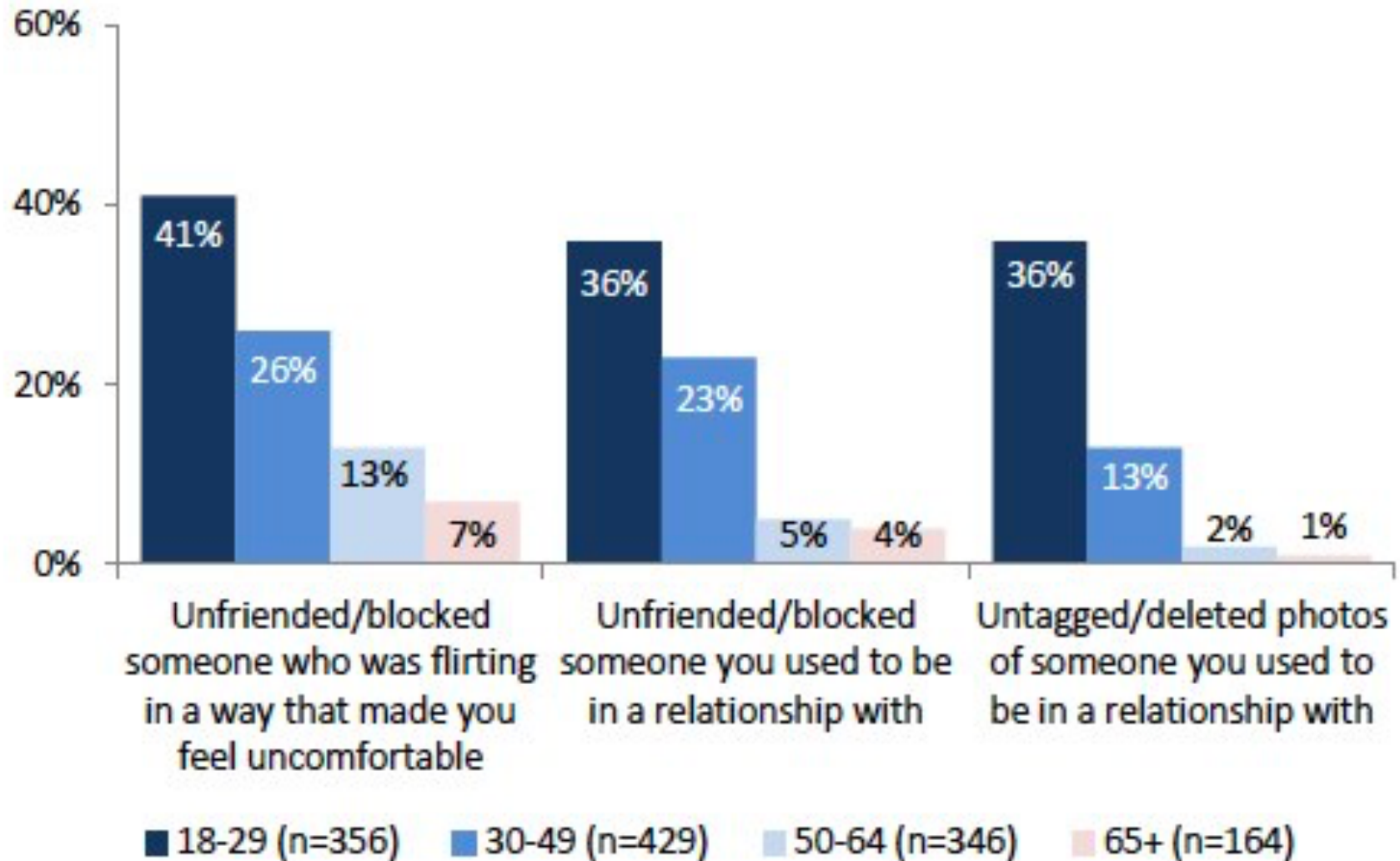
Root Definition

- **A = Actors who make things happen**

  Actors: Web developers, App developers, Programmers, Media, and Social media Businesses, Communities

The first prominent online dating site was Match.com, which launched in 1995. eHarmony started in 2000, OkCupid in 2004, and more recently, a wave of mobile people-swiping apps, like Tinder and Hinge, have become wildly popular.

- **V = viewpoint, or aspect of common goods**
  Common goods: meet a lot of people, find better matches

59% of all internet users agree with the statement that "online dating is a good way to meet people,"

53% of internet users agree with the statement that "online dating allows people to find a better match for themselves because they can get to know a lot more people,"

Some list of Online Dating Website

Name	Descriptions	Registered Users	Free	Support Same Sex
Adult FriendFinder	Members can connect with other adult members based on profiles.	30,000,000,	Partial	Yes
AnastasiaDate	Connects Western men with women from Russia and former Soviet Republics – CIS.	4,000,000,	Non-free	No
Ashley Madison	Members are matched up with other married adult members based on profiles.	17,815,000,	Partial	Yes
Badoo	Badoo enable users to meet new people in their area for chat, dating or to make new friends. Available in 44 languages on the web and on 12 different mobile platforms.	244,494,412	Free	Yes
BeautifulPeople.com	Dating website where membership is based on a vote, in which existing members rate how attractive they perceive prospective members to be.	800,000	Partial	Yes
Chemistry.com	A sister site of Match.com, members are matched up with other members based on their profiles.	11,000,000	Partial	Yes
DateMySchool	Dedicated to verified college students and alumni (via education database). Strong emphasis on privacy and safety. Can block by departments and schools. Members only see intersection of what they are looking for and what other members are looking for.	179,000	Partial	Yes
Lovestruck.com	Online dating for single professionals in UK, Hong Kong and Singapore	300,000 registered as of 201 [25	Non-free	Yes
Mamba	Social-network-like dating site, primarily CIS/former Soviet Union, but some international presence. Primary language is Russian, but all languages welcome (and searchable). Caters to all audiences.	11,673,451	Free: communication, profile and picture views, simpler engine, blogs	Yes
Manhunt	Profile-based dating website for men seeking men.		Free: Messaging, search, 20 profile views per day, video chat.	Yes (exclusively)
Match.com	One of the biggest online singles meeting sites	96,000,000 registered; as of 201 [11 1,377,000 active (2009 [30	Non-free	Yes
Meetic	One of the biggest online singles meeting sites; N.1 in Europe (in June 2009, Meetic acquired Match.com's European activities)	42,000,000 registered as of 201 [33	Non-free	Yes
MeetMindful	An online dating site and online publisher for those who live a lifestyle of health and sustainability, spirituality, and social responsibility.	60,000 registered as of 201 [35	Yes All free members can browse the community and Like other members to let them know they're interested.	Yes
OkCupid (OKC)	Uses answers from user-generated questions to find matches that conform to a user's stated preferences.	5,600,000+ active as of 201 [37	Free	Yes

Root Definition

- ## T = input - output transformation process

    Transformation process: Web/App business developers build the dating social media; members registered and connect each other through text message/email, etc; members meet/date each other in real life

- ## O = system owners

    System Owners: Online Business Company/ Website Owner / Agency/ Marriage Intermediaries

- ## E = environmental (external) constraints

    External Environmental: Internet Technology, Social Values, Communities, the Education Level of the User, Local laws and Regulations, Safety Issues

Skout Shut Down Case (safety issues, regulations)

  Users of the programme can search for people nearby and then chat to them through a built-in messaging service. Skout boasts 10 million users and has grown rapidly over the last three years with many using the service every month.

A 21-year-old man from Waukesha, Wisconsin, who is facing charges that he met a 13-year-old boy who he then sexually assaulted.

Root Definition Graphic

Conceptual Model

```
┌─────────────────────────────┐          ┌─────────────────────────────┐
│ Application Development      │          │  User Creates Profile or    │
│ Team + User Test Team +      │─────────▶│         Logs-in             │
│        Investors            │          │                             │
└─────────────────────────────┘          └─────────────────────────────┘
              │                                         │
              ▼                                         ▼
┌─────────────────────────────┐          ┌─────────────────────────────┐
│   Front End and Back End    │          │  User Updates Personal      │
│  Architecture Development   │          │    Profile Information      │
└─────────────────────────────┘          └─────────────────────────────┘
              │                                         │
              ▼          From App Development           ▼
┌─────────────────────────────┐  to User  ┌─────────────────────────────┐
│  Write Preliminary Code for │ Interface │  User Browses Database of   │
│      Application/Site       │           │     Potential Matches       │
└─────────────────────────────┘           └─────────────────────────────┘
              │                                         │
              ▼                                         ▼
┌─────────────────────────────┐           ┌─────────────────────────────┐
│  Test Code and Fix any      │           │ User Matches With Another   │
│       Known Defects         │           │           User              │
└─────────────────────────────┘           └─────────────────────────────┘
              │                               │              │
              ▼                               ▼              ▼
┌─────────────────────────────┐     ┌──────────────┐  ┌──────────────┐
│ Retest to Verify Correction │     │  Good Match  │  │  Bad Match   │
│ Then Go Live with Complete  │     └──────────────┘  └──────────────┘
│           Site              │            │                 │
└─────────────────────────────┘            ▼                 ▼
                                    ┌──────────────┐  ┌──────────────┐
                                    │   Continue   │  │  Return to   │
                                    │   Dating     │  │   Matches    │
                                    └──────────────┘  └──────────────┘
```
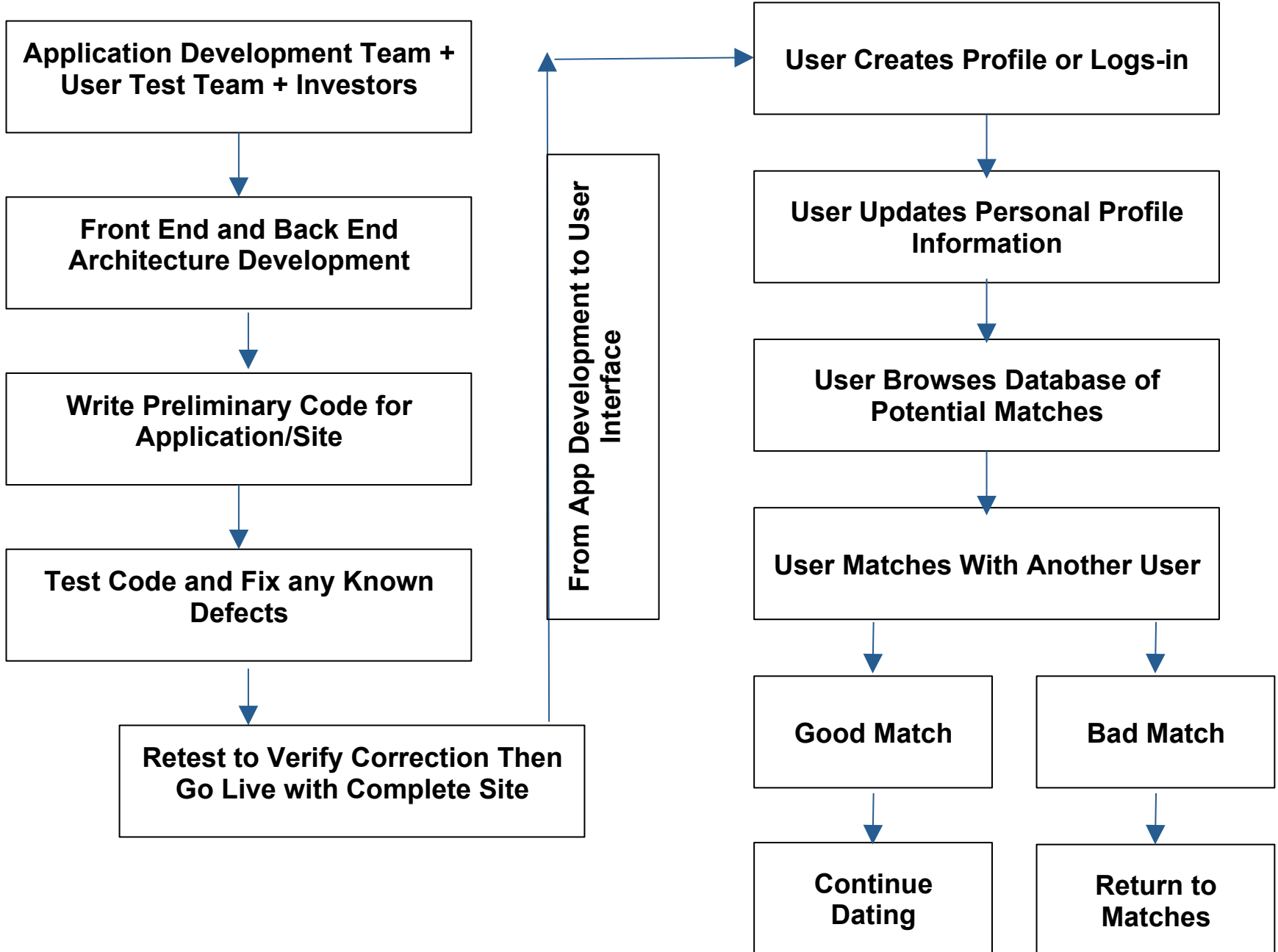
Application Development Team + User Test Team + Investors

Front End and Back End Architecture Development

Write Preliminary Code for Application/Site

Test Code and Fix any Known Defects

Retest to Verify Correction Then Go Live with Complete Site

From App Development to User Interface

User Creates Profile or Logs-in

User Updates Personal Profile Information

User Browses Database of Potential Matches

User Matches With Another User

Good Match

Bad Match

Continue Dating

Return to Matches

Unintended Consequences

- Threats to user safety
    - Age restrictions
    - Fake profiles
    - Location settings
    - Rape and sexual assault
- Users may be in a current relationship
- Losing control of media and texts sent
- Diminishes face-to-face social adequacy

Unintended Consequences

- UK's National Crime Agency – reports of rape from 33 in 2009 to 184 in 2014
- GlobalWebIndex research claims that 30% of Tinder users surveyed are married, while another 12% are in a relationship. 54% classed themselves as single, while 3% were divorced or widowed
- 55 crimes related to grindr and tinder in England and Wales in 2013, 204 in 2014, 412 in 2015
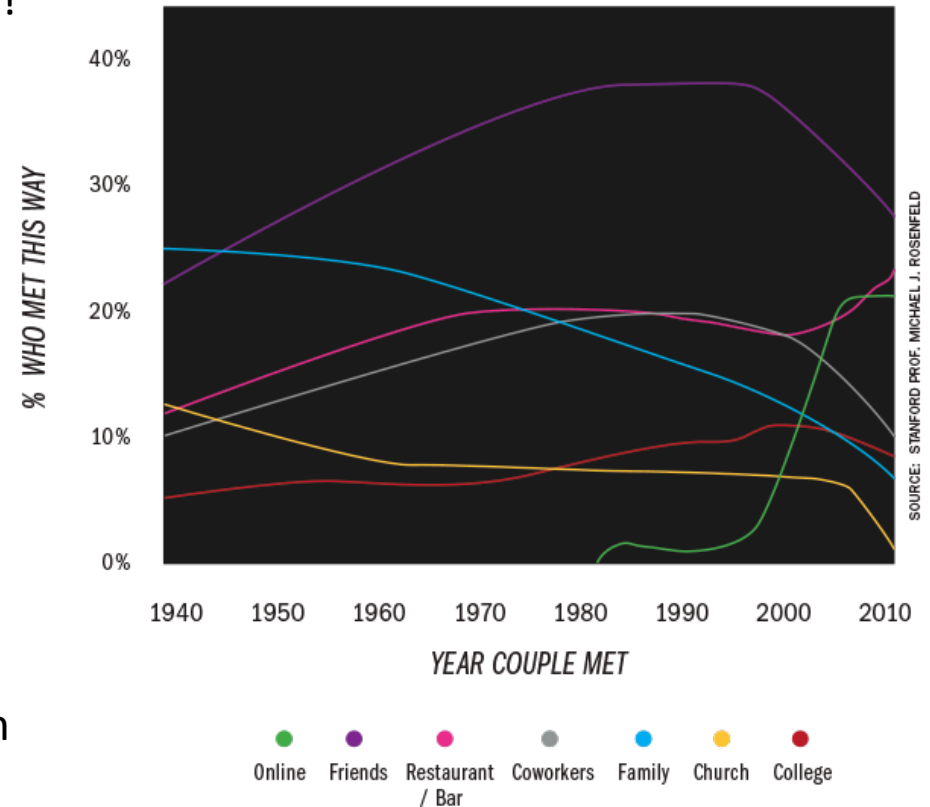
Crimes mentioning Grindr or Tinder

30 police forces which provided figures
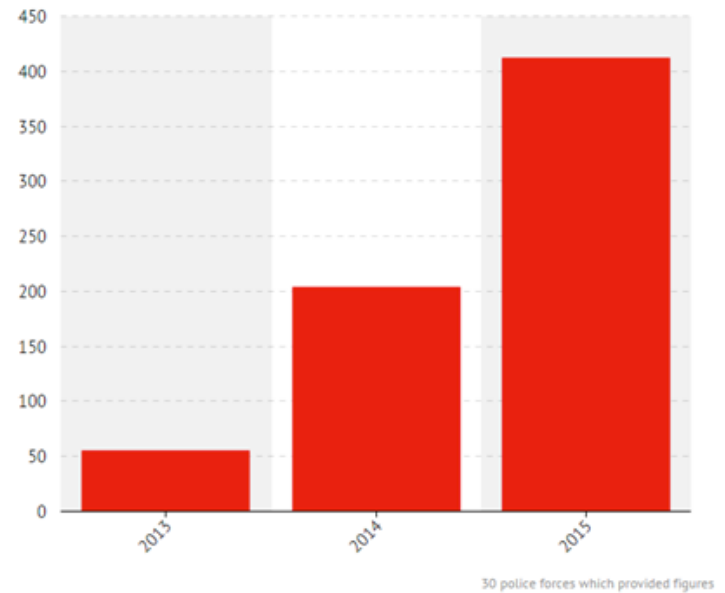
Unintended Consequences

- Promotes superficial thinking, making snap judgements
  - In his book *Dataclysm*, OkCupid founder Christian Rudder estimates, based on data from his own site, that photos drive 90% of the action in online dating.
  - Excessive Internet use has effects on brain structure. Changes brain structure in areas involving emotional processing, executive attention. damage to "insula" affects our capacity to develop empathy and compassion

- Gamification of dating

- Some platforms (such as Tinder) contribute to hook-up culture

- Some believe it has led to shift in mating habits towards short term dating
  - Seemingly infinite options "deter commitment to any choice"
  - David Buss, a professor of psychology at the University of Texas at Austin who specializes in the evolution of human sexuality. "Apps like Tinder and OkCupid give people the impression that there are thousands or millions of potential mates out there," Buss says. "One dimension of this is the impact it has on men's psychology. When there is a surplus of women, or a perceived surplus of women, the whole mating system tends to shift towards short-term dating. Marriages become unstable."

Big Questions

- Does this make sense and is it doable?
  - Easily doable
    - Socially
      - Proven acceptance
    - Economically
      - Development costs
    - Technically
      - Proven possible
    - Politically
      - No rejection from political platforms
- Does it serve the common good?
  - Results in more partnerships
  - Increased partnerships outweigh unintended consequences

HOW **HETEROSEXUAL** AMERICANS MET THEIR SPOUSES & ROMANTIC PARTNERS
*MULTIPLE ANSWERS ALLOWED

SOURCE: STANFORD PROF. MICHAEL J. ROSENFELD

% WHO MET THIS WAY

YEAR COUPLE MET

Online   Friends   Restaurant / Bar   Coworkers   Family   Church   College

Sources

- Root definition/ Yingfen Huang

http://www.pewinternet.org/2013/10/21/online-dating-relationships/

https://en.wikipedia.org/wiki/Comparison_of_online_dating_websites

http://time.com/aziz-ansari-modern-romance/

http://www.vanityfair.com/culture/2015/08/tinder-hook-up-culture-end-of-dating

http://www.dailydot.com/technology/tinder-effect-on-online-dating-apps/

http://www.psychologyinaction.org/2015/04/16/love-me-tinder-a-psychological-perspective-on-swiping/

https://www.psychologytoday.com/blog/mental-wealth/201402/gray-matters-too-much-screen-time-damages-the-brain

https://www.psychologytoday.com/blog/behind-online-behavior/201408/the-psychology-behind-social-media-interactions

Deborah Chambers. (February 2013). *Social Media and Personal Relationships* . Retrieved from http://electra.lmu.edu:2326/pc/doifinder/ 10.1057/9781137314444.0001

Raphelson, S. (2014, November 18). *Amid The Stereotypes, Some Facts About Millennials.* Retrieved 02 27, 2016, from NPR News: http://www.npr.org/2014/11/18/354196302/amid-the-stereotypes-some-facts-about-millennials