How to encourage the reporting of sexual assault and sexual harassment

Michael Chwe

April 2015
What is “sexual assault”?

In 2012, the Department of Defense asked the RAND Corporation to administer the Workplace and Gender Relations Survey of Active Duty Personnel (n=23,000).

Here is the question on sexual assault:

In the past 12 months, have you experienced any of the following intentional sexual contacts that were against your will or occurred when you did not or could not consent where someone... PF32

- Sexually touched you (e.g., intentional touching of genitalia, breasts, or buttocks) or made you sexually touch them?
- Attempted to make you have sexual intercourse, but was not successful?
- Made you have sexual intercourse?
- Attempted to make you perform or receive oral sex, anal sex, or penetration by a finger or object, but was not successful?
- Made you perform or receive oral sex, anal sex, or penetration by a finger or object?
In 2014, RAND designed an improved survey, the RAND Military Workplace Study (n=145,000).

It asked the following questions.

Since [X Date], did you have any unwanted experiences in which someone put his penis into your [If Intro1=2 (Female), display: “vagina,”] anus or mouth? SA1

Since [X Date], did you have any unwanted experiences in which someone put any object or any body part other than a penis into your [If Intro1=2 (Female), display: “vagina,”] anus or mouth? The body part could include a finger, tongue or testicles. SA2

Since [X Date], did anyone make you put any part of your body or any object into someone’s mouth, vagina, or anus when you did not want to? A part of the body could include your [If Intro1=1 (Male) display: “penis, testicles,”] tongue or fingers. SA3

Since [X Date], did you have any unwanted experiences in which someone intentionally touched private areas of your body (either directly or through clothing)?

Private areas include buttocks, inner thigh, breasts, groin, anus, vagina, penis, or testicles. SA4
Also:

Since [X Date], did you have any unwanted experiences in which someone made you touch private areas of their body or someone else’s body (either directly or through clothing)? This could involve the person putting their private areas on you. SA6

Since [X Date], did you have any unwanted experiences in which someone attempted to put a penis, an object, or any body part into your [If Intro1=2 (Female), display: “vagina,”] anus or mouth, but no penetration actually occurred? SA6a

As part of this attempt, did the person touch you anywhere on your body? This includes grabbing your arm, hair or clothes, or pushing their body against yours. SA6a

Military sexual assault survey criticized for being too graphic

BY LOLITA C. BALDOR  October 31, 2014 at 2:26 PM EDT
Why the change?

Defining sexual assault involves lots of conceptual issues.

### Table 8.2
**Relation of Behavioral Screening Questions to Article 120**

<table>
<thead>
<tr>
<th>Behavioral Screening Question</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Since [X date], did you have any unwanted experiences in which someone put his penis into your [vagina,] anus or mouth?</td>
<td>This is defined as a <em>Sexual Act</em> under Article 120(g)(1)(A). Vulva in the code is replaced with “vagina” to improve comprehension. This type of act is separated out from other penetration (Item 2) because penile penetration is defined as a <em>Sexual Act</em>, and therefore, does not require additional intent questions.</td>
</tr>
<tr>
<td>2. Since [X date], did you have any unwanted experiences in which someone put any object or any body part other than a penis into your [vagina,] anus, or mouth? The body part could include a finger, tongue, or testicles.</td>
<td>This is defined as a behavior that might qualify as a <em>Sexual Act</em> under Article 120(g)(1)(B) provided the intent was abusive/degrading/humiliating/harassing or sexual. The specific body part examples do not appear in the code, but are given to better cue respondents’ memories of events.</td>
</tr>
<tr>
<td>3. Since [X date], did anyone make you put any part of the body or any object into someone’s mouth, vagina, or anus when you did not want to? A part of the body could include your [penis, testicles,] tongue, or fingers.</td>
<td>This is defined as a behavior that might qualify as a <em>Sexual Act</em> under Article 120 (g)(1)(A) or (B). Article 120 does not distinguish whether the victim is being penetrated or being made to penetrate, so long as the act meets the other criteria for sexual assault under the code. The instrument separates out these experiences to better cue respondents’ memories.</td>
</tr>
<tr>
<td>4. Since [X date], did you have any unwanted experiences in which someone intentionally touched private areas of your body (either directly or through clothing)? Private areas include buttocks, inner thigh, breasts, groin, anus, vagina, penis, or testicles.</td>
<td>This is defined as a behavior that might qualify as a <em>Sexual Contact</em> under Article 120 (g)(2)(A) or (B). The term “genitalia” in the code has been replaced with “vagina, penis, or testicles” for improved comprehension. To narrow the scope of what needs to be recalled, we restrict the question to events that are “intentional.” However, the detailed assessment of intent is assessed in follow-up questions.</td>
</tr>
<tr>
<td>5. Since [X date], did you have any unwanted experiences in which someone made you touch private areas of your body or someone else’s body (either directly or through clothing). This could involve the person putting their private areas on you. Private areas include buttocks, inner thigh, breasts, groin, anus, vagina, penis, or testicles.</td>
<td>This is defined as a behavior that might qualify as a <em>Sexual Contact</em> under Article 120 (g)(2)(A) or (B), and is parallel to question 4. Article 120 includes both “touching” and “causing another person to touch”; however, these are asked as two separate screening questions to better cue respondents’ memories of events.</td>
</tr>
<tr>
<td>6. Since [X date], did you have any unwanted experiences in which someone attempted to put a penis, an object, or any body part into your [vagina,] anus or mouth, but no penetration actually occurred? <em>If Yes, then:</em> 6a. As part of this attempt, did the person touch you anywhere on your body? This includes grabbing your arm, hair or clothes, or pushing their body against yours.</td>
<td>The second question of this series, Item 6a, is a behavior that might qualify as a <em>Sexual Contact</em> under Article 120(g)(2)(B). Even if the contact is not with private body parts (which would have been captured earlier in Item 4 and Item 5), if that contact is being made as part of an attempted sexual act, the survey will classify this as a possible <em>Sexual Contact</em>.</td>
</tr>
</tbody>
</table>
Results

In 2014, roughly 1% of male service members and 5% of female service members experienced sexual assault in the past year (20,000 in total).

The 2012 survey substantially undercounts penetrative sexual assaults relative to the 2014 survey.

<table>
<thead>
<tr>
<th></th>
<th>2012 survey</th>
<th>2014 survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penetrative sexual</td>
<td>3,500</td>
<td>8,000</td>
</tr>
<tr>
<td>assaults (men)</td>
<td>1,000</td>
<td>3,500</td>
</tr>
</tbody>
</table>
Results on sexual harassment

In 2014, roughly 7% of male service members and 22% of female service members experienced sexual harassment in the past year.

"We have a lot of people who call our hotline who aren't sure if what they're experiencing is sexual harassment," says Noreen Farrell, executive director of Equal Rights Advocates, a nonprofit civil-rights law firm. "Then they tell us they're getting persistent comments and dating requests and coworkers are calling women bitches. Nearly 100 percent of those callers are experiencing harassment." If comments single you out for being a woman—and are severe or pervasive enough—they can add up to a hostile work environment, a legal definition of harassment.
Sexual assault is very underreported.
Sexual assault is very underreported.

<table>
<thead>
<tr>
<th>TABLE 6</th>
<th>Percent of victimizations reported to police, by type of crime, 2004, 2012, and 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of crime</td>
<td>2004</td>
</tr>
<tr>
<td>Violent crime</td>
<td></td>
</tr>
<tr>
<td>Rape/sexual assault</td>
<td>29.3</td>
</tr>
<tr>
<td>Robbery</td>
<td>60.6</td>
</tr>
<tr>
<td>Assault</td>
<td>50.1</td>
</tr>
<tr>
<td>Aggravated assault</td>
<td>69.8</td>
</tr>
<tr>
<td>Simple assault</td>
<td>43.9</td>
</tr>
<tr>
<td>Domestic violence</td>
<td></td>
</tr>
<tr>
<td>Intimate partner violence</td>
<td>56.4</td>
</tr>
<tr>
<td>Stranger violence</td>
<td>54.4</td>
</tr>
<tr>
<td>Violent crime involving injury</td>
<td>60.8</td>
</tr>
<tr>
<td>Serious violent crime</td>
<td></td>
</tr>
<tr>
<td>Serious domestic violence</td>
<td>69.7</td>
</tr>
<tr>
<td>Serious intimate partner violence</td>
<td>69.1</td>
</tr>
<tr>
<td>Serious stranger violence</td>
<td>67.9</td>
</tr>
<tr>
<td>Serious violent crime involving weapons</td>
<td>68.5</td>
</tr>
<tr>
<td>Serious violent crime involving injury</td>
<td>69.0</td>
</tr>
<tr>
<td>Property crime</td>
<td></td>
</tr>
<tr>
<td>Household burglary</td>
<td>53.3</td>
</tr>
<tr>
<td>Motor vehicle theft</td>
<td>85.6</td>
</tr>
<tr>
<td>Theft</td>
<td>32.4</td>
</tr>
</tbody>
</table>

Bureau of Justice Statistics, US Dept of Justice
How do you encourage people to report?

MIKE THOMSON
MARINES, 1997–99
I wasn't "afraid" to report it—I was ashamed and disgusted. Guys aren't supposed to be raped. I didn't want to tell anybody about it. I didn't want to say anything.

BIGO
I didn't talk about this for nearly fifty years.

TRENT SMITH
AIR FORCE, ENLISTED 2011
He was a senior aide—he had a direct line to the top. Being invited over to his house, I just took it as I should go. Looking back, I ask myself, Why didn't you do anything? It wasn't like he held me down or tied me up. I didn't want to cross him. I really didn't feel like I had any choice. I had just turned 19. It could be my career. I froze and went along with it.

WELCH
Hell no, I didn't report this. Who was I going to report it to? He had serious rank over me. After they ordered me to return to work with him, I stabbed myself in the neck so I could go home.

BRIAN LEWIS
NAVY, 1997–2001
No commanding officer wants to have to pick up the phone to his or her boss and say, "I've had a sexual assault aboard my command."
Here I will focus on four topics.

1. The low rate of reporting is self-fulfilling: if a phenomenon is believed rare, then only the very few people with extremely strong evidence report. But as more people report and it becomes more widely believed, “positive feedback” effects kick in. Small changes in reporting conditions and “conceptual innovation” can cause big changes in reporting.

2. A person with medium-quality evidence might not feel confident enough to report, but will report if she knows that her evidence will be combined with another’s. “Information escrows” (Ayres and Unkovic) make this possible.
3. Often the colleagues of a perpetrator do not report after seeing evidence accumulate over time. One reason is that once you make a report, your own record of past inaction is then revealed.
How do we represent beliefs, quality of evidence, etc.?

For example, are two pieces of good evidence better than one piece of excellent evidence?

What do you mean by “good” and “excellent”? 
I’M AFRAID WE NEED TO USE...


MATH
Our mathematical interlude
We represent a belief with percentages.

<table>
<thead>
<tr>
<th>probability</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>guilty</td>
<td>30%</td>
</tr>
<tr>
<td>innocent</td>
<td>70%</td>
</tr>
</tbody>
</table>

These are just numbers which add up to 1.
We represent a belief with percentages.

We can make a graph too.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>guilty 0.3</td>
<td></td>
</tr>
<tr>
<td>innocent 0.7</td>
<td></td>
</tr>
</tbody>
</table>
We represent a belief with percentages.

We can make a graph too.

These are just numbers which add up to 1.
We represent quality of evidence also with a percentage. High quality evidence is correct 90% (0.9) of the time. Medium quality evidence is correct 70% (0.7) of the time.
Say my belief that a person is guilty is 0.3. I receive strong evidence (correct with probability 0.9). What is my new belief?

Note there are four possibilities:

- 0.3 truly guilty, evidence indicates guilt × 0.9
  - 0.27
- 0.7 truly innocent, evidence indicates guilt × 0.1
  - 0.07
- 0.3 truly guilty, evidence indicates innocence × 0.1
  - 0.03
- 0.7 truly innocent, evidence indicates innocence × 0.9
  - 0.63

What is the likelihood of each of these four possibilities?
Say my belief that a person is guilty is 0.3.
I receive strong evidence (correct with probability 0.9).
What is my new belief?

Note there are four possibilities:

- Truly guilty, evidence indicates guilt: 0.27
- Truly guilty, evidence indicates innocence: 0.03
- Truly innocent, evidence indicates guilt: 0.07
- Truly innocent, evidence indicates innocence: 0.63

What is the likelihood of each of these four possibilities?
Say my belief that a person is guilty is 0.3. I receive strong evidence (correct with probability 0.9). What is my new belief?

<table>
<thead>
<tr>
<th>Truly Guilty, Evidence Indicates Guilt</th>
<th>Truly Guilty, Evidence Indicates Innocence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.27</td>
<td>0.03</td>
</tr>
<tr>
<td>Truly Innocent, Evidence Indicates Guilt</td>
<td>Truly Innocent, Evidence Indicates Innocence</td>
</tr>
<tr>
<td>0.07</td>
<td>0.63</td>
</tr>
</tbody>
</table>
Say the evidence indicates guilt.

<table>
<thead>
<tr>
<th></th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>truly guilty,</strong> evidence indicates guilt</td>
<td>0.27</td>
</tr>
<tr>
<td><strong>truly innocent,</strong> evidence indicates guilt</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Then these two states go away.

<table>
<thead>
<tr>
<th></th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>truly guilty,</strong> evidence indicates innocence</td>
<td>0.03</td>
</tr>
<tr>
<td><strong>truly innocent,</strong> evidence indicates innocence</td>
<td>0.63</td>
</tr>
</tbody>
</table>
Say the evidence indicates guilt.

true guilty, evidence indicates guilt
0.27

true innocent, evidence indicates guilt
0.07
Say the evidence indicates guilt.

These are my new beliefs.

truly guilty,
evidence indicates
guilt

0.27

truly innocent,
evidence indicates
guilt

0.07
Say the evidence indicates guilt.

These are my new beliefs.

truly guilty

0.27

truly innocent

0.07
Say the evidence indicates guilt.

These are my new beliefs.

- guilty
  - 0.27

- innocent
  - 0.07
Say the evidence indicates guilt.

These are my new beliefs.

\begin{itemize}
\item guilty
  \begin{itemize}
  \item 0.27
  \end{itemize}
\item innocent
  \begin{itemize}
  \item 0.07
  \end{itemize}
\end{itemize}
Say the evidence indicates guilt.

These are my new beliefs.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.27</td>
<td>guilty</td>
</tr>
<tr>
<td>0.07</td>
<td>innocent</td>
</tr>
</tbody>
</table>

\[
\frac{0.27}{0.34} = 0.79 \\
\frac{0.07}{0.34} = 0.21
\]

The only problem is that the probabilities don’t add up to 1.

So we divide by \(0.27 + 0.07 = 0.34\).
Say the evidence indicates guilt.

These are my new beliefs.

guilty

0.79

innocent

0.21
Say the evidence indicates guilt.

These are my new beliefs.

0.79  guilty

0.21  innocent

We are done.
I started with these beliefs.

<table>
<thead>
<tr>
<th>guilty</th>
<th>0.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>innocent</td>
<td>0.7</td>
</tr>
</tbody>
</table>

I received evidence of guilt which is correct with probability 0.9.

\[
\begin{align*}
guilty & \quad 0.3 \quad \times \quad 0.9 \\
& \quad = \quad 0.27 \\
\text{evidence indicates guilt} \\
\hline
\text{0.3 truly guilty, evidence indicates guilt} & \quad 0.27 \\
\text{0.7 truly innocent, evidence indicates guilt} & \quad 0.07 \\
\end{align*}
\]

These are my new beliefs.

<table>
<thead>
<tr>
<th>guilty</th>
<th>0.79</th>
</tr>
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<td>innocent</td>
<td>0.21</td>
</tr>
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“Bayes’ rule,”
“Bayesian updating,”
“Bayesian learning”
[live examples]

If my prior belief that a person is guilty is very low, it takes very strong evidence to reach a certain threshold.

If my prior belief is higher, less strong evidence is required.
End of our mathematical interlude
1. The low rate of reporting is self-fulfilling: if a phenomenon is believed rare, then only the very few people with extremely strong evidence report. But as more people report and it becomes more widely believed, “positive feedback” effects kick in. Small changes in reporting conditions and “conceptual innovation” can cause big changes in reporting.
When you report your own experience, you make it easier for other people to report their experience.

In part, this is because when you report your experience, others are more likely to be believed.

People are explicitly aware of this “positive feedback” effect.
A Woman Recounted Her Horrifying Rape Ordeal Live On Air To Encourage Others To Speak Out

Her experience left the radio host and listeners stunned.

posted on Jan. 30, 2016, at 7:49 a.m.

Rosalyn Warren
BuzzFeed News Reporter

A woman has revealed on live radio how she was brutally raped while working abroad, in a brave effort to encourage other possible victims of sexual assault and rape to speak out.

Speaking live on air with broadcaster Ryan Tubridy on his RTE 2fm show, Hazel Behan – a mother of one from Dublin – said that what she had to say “is not something that everyone would talk about”.

'I felt so guilty, so responsible': Joan Collins encourages other rape victims to speak out as she reveals she 'felt to blame' for attack at 17 by her future husband Maxwell Reed

• Joan was still a virgin when she was date-raped by actor Maxwell Reed
• Actress, 81, went on to marry the star, who died in 1974, as she 'felt guilty'
• She spoke about ordeal on This Morning to help other victims speak out
• Joan also criticised porn industry for making women seem like objects

By NAOMI GREENAWAY FOR MAILONLINE and CAROLINE MCGUIRE FOR MAILONLINE

Joan Collins has revisited the trauma of being date-raped as a teenager and revealed she is petitioning the government to build more refuges for victims of rape and domestic violence.

The actress appeared on This Morning today to discuss the incident which happened when she was just 17 by her future husband Maxwell Reed who drugged her drink.

Joan, 81, spoke to hosts Phillip Schofield and Amanda Holden on the ITV1 breakfast show about her ordeal and revealed that in 1950, when the incident happened, there were very few places for rape victims to go to for support.

Scroll down for video
“Andrew has decided to share his story in hopes that victims of assault—and specifically male victims—be taken more seriously.”
My super-simple model

A person who has experienced sexual assault (a “survivor”) can either report or not.

If he reports, he presents evidence to an authority.

Based on the pre-existing belief about the general prevalence of assault, and on the quality of evidence the survivor presents, the authority forms a belief (via Bayes’ rule) about whether the accused is guilty.

Investigating is costly. Thus the authority will investigate only if her belief that the accused is guilty is greater than a certain threshold.
It is costly to report a sexual assault that is not investigated. Hence a survivor reports only if it will be investigated.

Each survivor has a different quality of evidence (some have very strong evidence, some have weak evidence).

Only those survivors who have evidence strong enough to start an investigation will report.

The number of survivors who report determines the new belief about the general prevalence of assault.
Say we have 100 people.
Say we have 100 people.

Say that 10 are survivors.
Say we have 100 people.

Say that 10 are survivors.
Say we have 100 people.

Say that 10 are survivors.
Each has a different quality of evidence.
Say we have 100 people.

Say that 10 are survivors. Each has a different quality of evidence.
Say we have 100 people.

Say that 10 are survivors.
Each has a different quality of evidence.
We can arrange them into a distribution.
Say we have 100 people.

Say that 10 are survivors.
Each has a different quality of evidence.
We can arrange them into a distribution.
Say we have 100 people.

Say that 10 are survivors.
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Each has a different quality of evidence.
We can arrange them into a distribution.
Say we have 100 people.

Say that 10 are survivors. Each has a different quality of evidence. We can arrange them into a distribution.
Say we have 100 people.

This is our distribution of survivors.
Say we have 100 people.

This is our distribution of survivors.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say the survivor with quality 0.9 reports.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say the survivor with quality 0.9 reports. It will be investigated. Thus he reports.
Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say a survivor with quality 0.8 reports.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say a survivor with quality 0.8 reports. It will be investigated. Thus she reports.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say a survivor with quality 0.7 reports.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Say a survivor with quality 0.7 reports.

It will not be investigated. Thus she does not report.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.
Who reports?

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.

Thus these four people will report.

Now the prevalence of assault is believed to be 4% (because 4 out 100 reported).
Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.
We do it again...

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.
We do it again…

Say that the prevalence of assault is believed to be 8%.

Say that the authority will investigate if the probability of guilt is at least 20%.
We do it again...

Say that the prevalence of assault is believed to be 4%.

Say that the authority will investigate if the probability of guilt is at least 20%.
We can see how the number of people who report changes over time.

Note our simplifying assumptions:

We assume there is complete agreement about the quality of evidence.

We assume that all investigations are perfect (they find that a guilty person is guilty).

We did not account for lots of other bottlenecks in reporting, investigation, and prosecution in real life.
Here is the continuous version of the model.

Here 20% of the population are survivors.

These survivors have very strong evidence.

Most survivors have quality of evidence around 0.82.

These survivors have weak evidence.

20%
Say that the investigation threshold is 10%.

A survivor will report only if his evidence is strong enough to make the authority investigate.
Say we start with the belief that 0.1% of people are sexually assaulted.

Thus to reach the 10% threshold, you need very strong evidence.

These people have this evidence.

They are 0.16% of the population.

So now we all believe that 0.16% of people are sexually assaulted.
Now we all believe that 0.16% of people are sexually assaulted.

Now to reach the 10% threshold, you need very strong evidence, but not quite as strong as before.

These people have this evidence.

They are 0.26% of the population.

So now we all believe that 0.26% of people are sexually assaulted.
Now we all believe that 0.26% of people are sexually assaulted.

Again, to reach the 10% threshold, you need very strong evidence, but not quite as strong as before.

These people have this evidence.

They are 0.46% of the population.

So now we all believe that 0.46% of people are sexually assaulted.
Now we all believe that 0.46% of people are sexually assaulted.

Now to reach the 10% threshold, you again need strong but not very strong evidence.

These people have this evidence.

They are 0.94% of the population.

So now we all believe that 0.94% of people are sexually assaulted.
Now we all believe that 0.94% of people are sexually assaulted.

Now to reach the 10% threshold, you need fairly strong evidence.

These people have this evidence.

They are 2.48% of the population.

So now we all believe that 2.48% of people are sexually assaulted.
Now we all believe that 2.48% of people are sexually assaulted.

Now to reach the 10% threshold, you just need pretty good evidence.

A lot of people have this evidence.

They are 10.17% of the population.

So now we all believe that 10.17% of people are sexually assaulted.
Now we all believe that 10.17% of people are sexually assaulted.

Now to reach the 10% threshold, you don’t need any evidence at all.

Everyone has this evidence.

They are 20% of the population.

Now the social perception corresponds to reality.
Our model is an example of classic models with positive feedback ("coordination problem," "increasing returns," "strategic complementarity", "supermodular games," "more the merrier").

Schelling (1978)
Granovetter (1978)
Keynes’s “multiplier” (1936) via Cooper and John (1988)

The main result is ABRUPTNESS.

The equilibrium (what you end up with) can change abruptly when initial conditions and external factors change.

[live examples]
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
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</table>

![Graph showing Quality of evidence vs. Number of people and Reporting today vs. Reporting tomorrow.]
<table>
<thead>
<tr>
<th>Actual Incidence</th>
<th>Average Evidence Quality</th>
<th>Initial Belief</th>
<th>Investigation Threshold</th>
<th>Perceived Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>0.82</td>
<td>0.1%</td>
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<td>20%</td>
</tr>
</tbody>
</table>

![Graph showing quality of evidence and reporting probability]

*Note: The graph illustrates the relationship between quality of evidence and reporting probability.*
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
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<tbody>
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<td>0.1%</td>
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<td>actual incidence</td>
<td>average evidence quality</td>
<td>initial belief</td>
<td>investigation threshold</td>
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<td><img src="image1.png" alt="Diagram 1" /></td>
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<td><img src="image2.png" alt="Diagram 2" /></td>
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<td><img src="image3.png" alt="Diagram 3" /></td>
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<td><img src="image1.png" alt="Graph 1" /></td>
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<td><img src="image2.png" alt="Graph 2" /></td>
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<td>40%</td>
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<td>19%</td>
<td>0.30</td>
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</tbody>
</table>

![Graph showing number of people versus quality of evidence and reporting rate today and tomorrow.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
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<th>perceived incidence</th>
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</thead>
<tbody>
<tr>
<td>40%</td>
<td>0.62</td>
<td>19%</td>
<td>0.30</td>
<td>0</td>
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</tbody>
</table>

![Graph showing the relationship between quality of evidence and number of people reporting today and tomorrow.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
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<th>perceived incidence</th>
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</thead>
<tbody>
<tr>
<td>40%</td>
<td>0.62</td>
<td>19%</td>
<td>0.30</td>
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<tr>
<td>40%</td>
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<td>21%</td>
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<td>0</td>
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</table>

![Graph showing the relationship between quality of evidence and number of people reporting today or tomorrow.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
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<td>40%</td>
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<td>0.62</td>
<td>21%</td>
<td>0.30</td>
<td>40%</td>
</tr>
</tbody>
</table>

The table shows the relationship between the actual incidence, average evidence quality, initial belief, and investigation threshold, with perceived incidence as the dependent variable. The diagrams illustrate the distribution of reporting based on the quality of evidence and the threshold for investigation.
<table>
<thead>
<tr>
<th>actual incidence</th>
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<tr>
<td>40%</td>
<td>0.80</td>
<td>40%</td>
<td>0.56</td>
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</table>

![Graph showing the relationship between quality of evidence and reporting behavior.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>0.80</td>
<td>40%</td>
<td>0.56</td>
<td></td>
</tr>
</tbody>
</table>

![Graph showing the relationship between quality of evidence and reporting today and tomorrow.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
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<th>perceived incidence</th>
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<tr>
<td>40%</td>
<td>0.80</td>
<td>40%</td>
<td>0.56</td>
<td>0</td>
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<tr>
<td>40%</td>
<td>0.80</td>
<td>40%</td>
<td>0.53</td>
<td>36.75%</td>
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<td><img src="image2.png" alt="" /></td>
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<td>actual incidence</td>
<td>average evidence quality</td>
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<td>0.80</td>
<td>40%</td>
<td>0.56</td>
<td>0.00</td>
</tr>
</tbody>
</table>

![Graphical representation of actual incidence and perceived incidence.](image)

<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
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<tr>
<td>40%</td>
<td>0.80</td>
<td>40%</td>
<td>0.53</td>
<td>0.36</td>
</tr>
</tbody>
</table>

![Graphical representation of actual incidence and perceived incidence.](image)
<table>
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<td>0</td>
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<tr>
<td>40%</td>
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<td>40%</td>
<td>0.53</td>
<td>37%</td>
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<tr>
<td>25%</td>
<td>0.79</td>
<td>20%</td>
<td>0.40</td>
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</tbody>
</table>

![Graph showing the relationship between quality of evidence and number of people reporting, with an investigation threshold of 0.4.](image)

![Graph showing the relationship between reporting today and reporting tomorrow, where 0% report today and 0% report tomorrow.](image)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
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<tbody>
<tr>
<td>25%</td>
<td>0.79</td>
<td>20%</td>
<td>0.40</td>
<td>0</td>
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</tbody>
</table>

![Graph showing perceived incidence](image-url)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
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<tbody>
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<td>0.79</td>
<td>20%</td>
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<td>0</td>
</tr>
<tr>
<td>25%</td>
<td>0.82</td>
<td>20%</td>
<td>0.40</td>
<td>0</td>
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</table>

![Graph showing reporting percentage vs. quality of evidence for different thresholds.](image-url)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
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</thead>
<tbody>
<tr>
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<td>0.79</td>
<td>20%</td>
<td>0.40</td>
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</table>

![Graph](image1)

<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
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</thead>
<tbody>
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<td>0.82</td>
<td>20%</td>
<td>0.40</td>
<td>0</td>
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</table>

![Graph](image2)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
<th>investigation threshold</th>
<th>perceived incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>0.79</td>
<td>20%</td>
<td>0.40</td>
<td>0</td>
</tr>
<tr>
<td>25%</td>
<td>0.82</td>
<td>20%</td>
<td>0.40</td>
<td>22%</td>
</tr>
<tr>
<td>actual incidence</td>
<td>average evidence quality</td>
<td>initial belief</td>
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</table>

![Graph showing relationship between quality of evidence and investigation threshold.](image-url)
<table>
<thead>
<tr>
<th>actual incidence</th>
<th>average evidence quality</th>
<th>initial belief</th>
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<tbody>
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<td>0.79</td>
<td>20%</td>
<td>0.40</td>
<td>0.0</td>
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</tbody>
</table>

![Diagram showing quality of evidence vs. number of people and reporting today vs. reporting tomorrow.](image-url)

- **Investigation threshold** = 0.4
- **Report today**
- **Report tomorrow**
<table>
<thead>
<tr>
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<tr>
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<tr>
<td>30%</td>
<td>0.79</td>
<td>20%</td>
<td>0.40</td>
<td>29%</td>
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</tbody>
</table>
1. The low rate of reporting is self-fulfilling: if a phenomenon is believed rare, then only the very few people with extremely strong evidence report. But as more people report and it becomes more widely believed, “positive feedback” effects kick in. Small changes in reporting conditions and “conceptual innovation” can cause big changes in reporting.
Some implications...
<table>
<thead>
<tr>
<th>actual incidence</th>
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<tr>
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<td></td>
<td>0.79</td>
<td>20%</td>
<td>0.40</td>
<td>29%</td>
</tr>
</tbody>
</table>

Actual incidence is not necessarily related to perceived incidence.

What we perceive as social phenomena are determined by complicated social processes.
Because reporting can change abruptly, social activism (and repression) can at times be extremely effective.

Because of this abruptness, we should expect to be surprised by the sudden appearance of new social phenomena.

Phenomena for which our cyclical process is heavily attenuated (because people don’t like to talk about it, etc.) are exactly those which will surprise you.
Probability you will get cancer (UK, born after 1960): 50%

Probability a known pregnancy will result in miscarriage: 15-20%

Percent taking 5 or more prescription drugs (US): 20%

Which single has sold more copies?

“TiK ToK” by Ke$ha

"I Want To Hold Your Hand" by the Beatles

15 million

12 million
Lots of other things attenuate our cyclical process (how reporting builds on itself).

The main reference on national crime rates is the FBI’s Uniform Crime Reporting (UCR) program.

There is evidence that police departments systematically underreported rapes to the UCR program. Yung (2014) estimates that from 1995 to 2012, 1 million forcible vaginal rapes of females were not reported.
Undercounting of sexual assault does not simply affect our perception ("first order" effects).

It prevents people from reporting, police from investigating, society from taking it seriously, etc. ("multiplier" effects).

Undercounting by half (for example) can drive the perceived prevalence down by much more than half.
Until 2013, the FBI’s definition of rape for the purposes of UCR reporting was “the carnal knowledge of a female forcibly and against her will.”

The new definition is “Penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without consent of the victim.”

Here the attenuation is definitional.

The cyclical process of reporting building on itself cannot happen if rape of males (for example) is by definition not in the data.
The cyclical process of reporting building on itself relies on clear, widely-understood definitions of what constitutes an assault.

Conceptual “fuzziness” attenuates the process.
“Conceptual innovation” (creating new terms and making them widely understood) can have large effects because it allows the cyclical process to occur.
Personal anecdote

In 2008, the Santa Monica-Malibu Unified School District found that Ari Marken, a high school teacher, had sexually harassed a thirteen-year-old student.

The student’s family’s lawyer emailed parents asking if anyone had any information about Marken.

Tim Cuneo, district superintendent, then sent out this letter asking parents to destroy the email.
When a public employee has been disciplined, all records of the case must be made public if requested under the California Public Records Act (CPRA).

I made a CPRA request for the investigator’s report of Marken in December 2010.

The district actively cooperated with Marken to delay its release, illegally delaying an additional month to allow him to sue the district to stop the release of the report.

I sued the district to release the report.
In January 2012, the Court of Appeal, Second Appellate District, ruled that the report must be released and had “serious questions” about the legality of the district’s additional one month delay.

The decision was covered by state and national news outlets.
The district, teachers’ union, etc. went to extreme lengths to suppress information about this case, which was not extremely severe.

What about more severe cases?
2. A person with medium-quality evidence might not feel confident enough to report, but will report if she knows that her evidence will be combined with another’s. “Information escrows” (Ayres and Unkovic 2012) make this possible.
Lisak and Miller (2002) asked 1882 male students at a mid-sized, urban commuter university, from 1991 to 1998, the following questions:

1. Have you ever been in a situation where you tried, but for various reasons did not succeed, in having sexual intercourse with an adult by using or threatening to use physical force (twisting their arm, holding them down, etc.) if they did not cooperate?
2. Have you ever had sexual intercourse with someone, even though they did not want to, because they were too intoxicated (on alcohol or drugs) to resist your sexual advances (e.g., removing their clothes)?
3. Have you ever had sexual intercourse with an adult when they didn’t want to because you used or threatened to use physical force (twisting their arm; holding them down, etc.) if they didn’t cooperate?
4. Have you ever had oral sex with an adult when they didn’t want to because you used or threatened to use physical force (twisting their arm; holding them down, etc.) if they didn’t cooperate?

120 men (6.4%) answered “yes” to one of these questions.

44 men out of the 120 admitted to a single rape.

The other 76 accounted for 439 out of the 483 rapes.
Most sexual assaults are caused by repeat assailants.

There is lots of information about a repeat assailant, but it is dispersed among the several survivors.

How can we bring this information together?

Ayres and Unkovic (2012) propose “information escrows.”

A person can report evidence to an information escrow, who collects evidence from different people and reports to authorities once a certain number of people (say three) provide evidence about the same assailant.
Project Callisto is a web-based reporting system which implements this.

Callisto allows people to upload evidence (photos, videos, testimony, etc.) and time-stamp it without having to decide at the moment whether to report to police.

It also allows a person the option to automatically forward his evidence to authorities if another person uploads evidence about the same assailant.
Reporting Sexual Assault Is Difficult, but a New Technology May Help

One of the key factors driving the growing scandal surrounding Bill Cosby is shared awareness of the numerous rape allegations against him, which has prompted media companies and his beloved Temple University to distance themselves from him while encouraging new accusers to come forward.

A Rolling Stone article has had a similarly galvanizing effect at the University of Virginia by reporting a pattern of sexual assaults on campus. The attention it drew to the issue prompted Teresa Sullivan, the university's president, to suspend all fraternity activities until January.

By Marissa Miller
How does Callisto encourage reporting?

It separates the storing of evidence from the decision to report to authorities.

Many survivors, even if unsure about pressing their own case, feel strongly about preventing the assailant from attacking others.

You can report knowing that you will never be the sole accuser.

Often after a sexual assault, it is very confusing and all options look uncertain. Reporting to Callisto is a way to do something positive and empowering.
Here I focus on how Callisto encourages people to upload medium-quality evidence.

This is evidence that is not strong enough to start an investigation by itself, but is powerful when combined with evidence supplied by other people.
Say my belief that a person is guilty is 0.1.

I receive evidence which is correct with probability 0.8.

Note there are four possibilities:

0.1 truly guilty, evidence indicates guilt
0.8 truly guilty, evidence indicates guilt

0.9 truly innocent, evidence indicates guilt
0.2 truly innocent, evidence indicates guilt

0.1 truly guilty, evidence indicates innocence
0.2 truly innocent, evidence indicates innocence

0.9 truly innocent, evidence indicates innocence
0.8 truly innocent, evidence indicates innocence
Now say I can receive either strong or medium evidence.

0.1 truly guilty,
0.8 evidence indicates guilt
0.9 truly innocent,
0.2 evidence indicates guilt
0.1 truly guilty,
0.2 evidence indicates innocence
0.9 truly innocent,
0.8 evidence indicates innocence
Now say I can receive either strong or medium evidence.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Statement</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>truly guilty,</td>
<td>evidence indicates guilt</td>
</tr>
<tr>
<td>0.8</td>
<td>truly innocent,</td>
<td>evidence indicates guilt</td>
</tr>
<tr>
<td>0.9</td>
<td>truly guilty,</td>
<td>evidence indicates guilt</td>
</tr>
<tr>
<td>0.2</td>
<td>truly innocent,</td>
<td>evidence indicates innocence</td>
</tr>
<tr>
<td>0.1</td>
<td>truly guilty,</td>
<td>evidence indicates innocence</td>
</tr>
<tr>
<td>0.2</td>
<td>truly innocent,</td>
<td>evidence indicates innocence</td>
</tr>
</tbody>
</table>
Now say I can receive either strong or medium evidence.
Now say I can receive either strong or medium evidence.

Note there are six possibilities.

We must adjust the probabilities.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Description</th>
<th>Probability</th>
<th>Description</th>
<th>Probability</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>truly guilty,</td>
<td>0.1</td>
<td>truly guilty,</td>
<td>0.1</td>
<td>truly guilty,</td>
</tr>
<tr>
<td>0.8</td>
<td>evidence indicates guilt (strong)</td>
<td>0.8</td>
<td>evidence indicates guilt (medium)</td>
<td>0.8</td>
<td>evidence indicates guilt (medium)</td>
</tr>
<tr>
<td>0.9</td>
<td>truly innocent,</td>
<td>0.9</td>
<td>truly innocent,</td>
<td>0.9</td>
<td>truly innocent,</td>
</tr>
<tr>
<td>0.2</td>
<td>evidence indicates guilt (strong)</td>
<td>0.2</td>
<td>evidence indicates guilt (medium)</td>
<td>0.2</td>
<td>evidence indicates guilt (medium)</td>
</tr>
</tbody>
</table>
Now say I can receive either strong or medium evidence.

Note there are six possibilities.

We must adjust the probabilities.

0.1 truly guilty, evidence indicates guilt (strong)
0.1 truly guilty, evidence indicates guilt (medium)
0.1 truly guilty, evidence indicates innocence

0.9 truly innocent, evidence indicates guilt (strong)
0.9 truly innocent, evidence indicates guilt (medium)
0.9 truly innocent, evidence indicates innocence
Now say I can receive either strong or medium evidence.

Note there are six possibilities.

We must adjust the probabilities.

0.1  truly guilty, 
evidence indicates guilt (strong)  
0.4
truely innocent,  
evidence indicates guilt (strong)  
0.9 0.02

0.1  truly guilty, 
evidence indicates guilt (medium)  
0.4
truely innocent,  
evidence indicates guilt (medium)  
0.9 0.18

0.1  truly guilty, 
evidence indicates innocence  
0.2
truely innocent,  
evidence indicates innocence  
0.9 0.8
0.1 truly guilty, evidence indicates guilt (strong)
0.4
0.9 truly innocent, evidence indicates guilt (strong)
0.02

0.1 truly guilty, evidence indicates guilt (medium)
0.4
0.9 truly innocent, evidence indicates guilt (medium)
0.18

0.1 truly guilty, evidence indicates innocence
0.2
0.9 truly innocent, evidence indicates innocence
0.8
Say that the threshold for investigation is 0.3.

- 0.1 truly guilty, evidence indicates guilt (strong)
- 0.9 truly innocent, evidence indicates guilt (strong)
- 0.18 truly guilty, evidence indicates guilt (medium)
- 0.9 truly innocent, evidence indicates guilt (medium)
- 0.1 truly guilty, evidence indicates innocence
- 0.2 evidence indicates innocence
- 0.02 evidence indicates innocence
- 0.8 evidence indicates innocence
Say that the threshold for investigation is 0.3.

Say that a person has strong evidence.

0.1 truly guilty, evidence indicates guilt (strong)

0.4

0.9 truly innocent, evidence indicates guilt (strong)

0.02

0.1 truly guilty, evidence indicates guilt (medium)

0.4

0.18

0.9 truly innocent, evidence indicates guilt (medium)

0.18

0.2

0.8 truly guilty, evidence indicates innocence

0.2

0.9 truly innocent, evidence indicates innocence

0.8
Say that the threshold for investigation is 0.3.

Say that a person has strong evidence.

- **Truly guilty:**
  - Evidence indicates guilt (strong)
  - $0.1 \times 0.4 = 0.04$
  - Probability of guilt: $0.04 \div 0.058 = 0.69$

- **Truly innocent:**
  - Evidence indicates guilt (strong)
  - $0.9 \times 0.02 = 0.018$
  - Probability of guilt: $0.018 \div 0.058 = 0.31$

A person with strong evidence will report 0.69% probability of guilt.
Say that the threshold for investigation is 0.3.
Say that a person has medium evidence.
Say that the threshold for investigation is 0.3.

Say that a person has medium evidence.
Say that the threshold for investigation is 0.3.
Say that a person has medium evidence.

0.1 truly guilty, evidence indicates guilt (medium)
0.4
true guilty, evidence indicates guilt (medium)
0.9 truly innocent, evidence indicates guilt (medium)
0.18
Say that the threshold for investigation is 0.3.

Say that a person has medium evidence.

0.1 truly guilty, evidence indicates guilt (medium)

0.4

0.9 truly innocent, evidence indicates guilt (medium)

0.18
Say that the threshold for investigation is 0.3.

Say that a person has medium evidence.

0.1 truly guilty, evidence indicates guilt (medium) × 0.4
0.04

0.9 truly innocent, evidence indicates guilt (medium) × 0.18
0.162

0.04 guilty ÷ 0.202
0.20

0.162 innocent ÷ 0.202
0.80

A person with medium evidence will not report.
Now say there are two people who might have evidence.

We can make this table.

<table>
<thead>
<tr>
<th></th>
<th>Evidence indicates guilt (strong)</th>
<th>Evidence indicates guilt (medium)</th>
<th>Evidence indicates innocence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Person 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Person 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence indicates guilt (strong)</th>
<th>Evidence indicates guilt (medium)</th>
<th>Evidence indicates innocence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person 1</td>
<td>Person 2</td>
<td></td>
</tr>
</tbody>
</table>

Person 2
We calculate our belief the person is guilty in each case (recall our original belief is that the person is guilty is 0.1).

<table>
<thead>
<tr>
<th>Evidence Indicating Guilt</th>
<th>Person 1</th>
<th>Evidence Indicating Innocence</th>
<th>Person 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence indicates guilt</td>
<td>0.36</td>
<td>0.01</td>
<td>0.36</td>
</tr>
<tr>
<td>(strong)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evidence indicates guilt</td>
<td>0.06</td>
<td></td>
<td>0.06</td>
</tr>
<tr>
<td>(medium)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evidence indicates</td>
<td>0.83</td>
<td>0.35</td>
<td>0.36</td>
</tr>
<tr>
<td>innocence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.98</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recall that the threshold for investigation is 0.3.

When will a person report?

<table>
<thead>
<tr>
<th>Evidence</th>
<th>Person 1</th>
<th>Person 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>indicates guilt (strong)</td>
<td>0.36</td>
<td>0.98</td>
</tr>
<tr>
<td>indicates guilt (medium)</td>
<td>0.06</td>
<td>0.83</td>
</tr>
<tr>
<td>indicates innocence</td>
<td>0.01</td>
<td>0.36</td>
</tr>
<tr>
<td>indicates guilt (medium)</td>
<td>0.06</td>
<td>0.83</td>
</tr>
<tr>
<td>indicates guilt (strong)</td>
<td>0.36</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Recall that the threshold for investigation is 0.3.
A person with strong evidence will surely report, because the resulting belief is always at least 0.3, the threshold.
Will a person with medium evidence report?

<table>
<thead>
<tr>
<th>Evidence Indication</th>
<th>Person 1</th>
<th>Person 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>strong guilt evidence</td>
<td>0.36</td>
<td>0.83</td>
</tr>
<tr>
<td>medium guilt evidence</td>
<td>0.06</td>
<td>0.35</td>
</tr>
<tr>
<td>innocence evidence</td>
<td>0.01</td>
<td>0.06</td>
</tr>
</tbody>
</table>

No. The threshold for investigation (0.3) might not be met.
So when both have medium evidence, an investigation should take place but does not.
Say we have an information escrow system like Callisto. It allows your report to be sent to authorities only when another person also reports.

With Callisto, you don’t have to worry about the 0.06.

You report.
Callisto is an example of an “incentive compatible mechanism” or “incentive compatible mediation plan” (Myerson 1982).

Most applications have been to trade (auctions and bargaining), voting, etc.
2. A person with medium-quality evidence might not feel confident enough to report, but will report if she knows that her evidence will be combined with another’s. “Information escrows” (Ayres and Unkovic 2012) make this possible.
3. Often the colleagues of a perpetrator do not report after seeing evidence accumulate over time. One reason is that once you make a report, your own record of past inaction is then revealed.

BY KEVIN HERRERA
Editor in Chief

PUBLIC SAFETY FACILITY A Lincoln Middle School teacher was being held on $1 million bail Sunday for allegedly sexually molesting four female students, authorities said.

Thomas Arthur Beltran, 60, was arrested on Saturday in the 6100 block of Centinela Avenue in Culver City and booked at the Santa Monica city jail for performing lewd and lascivious acts on children under the age of 14, Santa Monica Police Department’s Lt. Alex Padilla said during a news conference Sunday outside the Public Safety Facility.

Investigators believe that in at least one case, the alleged molestation took place for a year.

“We are still trying to interview kids to see when and where these incidents occurred,” Padilla said.

Officers were alerted on Friday, May 2 by the parents of a 12-year-old girl who was a student of Beltran’s. The girl told investigators that the abuse occurred during the school year in his classroom at Lincoln.

Beltran, who taught at the school for 20 years and has been employed by the Santa Monica-Malibu Unified School District for the last 30 years, specialized in teaching English as a second language. On the Lincoln Middle School Web site it lists Beltran as working in the Humanities Department.

A substitute teacher will be assigned to cover Beltran’s classes while the investigation continues.

SMMUSD Superintendent Dianne Talarico said crisis counselors, both internal and external, will be made available at Lincoln to provide support to students, their families and faculty.

The district’s administrative team met with school officials and members of the PTA on Sunday afternoon to formulate a response plan, which will include an adults-only meeting with school officials and parents to discuss the situation tonight at 7 p.m. on the Lincoln campus.

Talarico added that a statement would be made to students sometime during the school day but wasn’t sure of the specifics as of press time.

District and school officials have decided to proceed with plans to administer state assessment tests that were previously scheduled to take place.

“I just feel awful,” Talarico said. “I know these are allegations at this point, but my heart and my thoughts and prayers are with the families and the children at this time.”

The district is fully cooperating with detectives, she said.

School board President Oscar de la Torre said he too is concerned about the well being of the students and the entire Lincoln Middle School family.

“This is our number one concern right now, because [Beltran] has been an employee for many years we want to see if there are any other victims,” de la Torre said.

“Because a lot of students speak English as a

SEE TEACHER PAGE 10
Say you are part of a school community.

If your belief that a teacher is assaulting a student is above a certain threshold, you will report to the police.
What determines that threshold?

The consequences if you report and he is guilty

The consequences if you report and he is innocent

The consequences if you don’t report and he is guilty

<table>
<thead>
<tr>
<th>Probability of Guilt</th>
<th>Parent</th>
<th>Principal</th>
<th>Colleague</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Say that the teacher’s co-workers and principal observe evidence about the teacher over time.

Assume that the parent only sees this evidence if the principal reports to the police, in which case all past evidence becomes public.
Say that the principal sees very little evidence that the teacher is guilty.

She never reports, and the principal’s decisions are just like a parent’s.

Even if evidence were made public, the principal can say that her priority for child safety is the same as the parent’s.
Say that the principal observes extremely strong evidence that the teacher is guilty.

The principal reports.

Again, after the evidence is made public, the principal can claim to have the same priorities as the parent.
Now say that evidence builds up slowly over time that the teacher is guilty.

The principal must now decide whether to report.

If the principal reports, the past evidence becomes public.

Now the principal’s threshold is publicly revealed. She cannot claim to be just like a parent. Her partiality for the teacher is made public.
Because of this problem, say the principal decides not to report (after all, the teacher might be innocent).

Her threshold essentially goes up.

Say more evidence comes in.

The principal faces the same problem again, but even worse.
Story from Holly Harrison, USCG Commander:

In her ship, there was an alarm in one room which was broken.

Everyone who worked there knew it was broken, but no one reported it for months.

Why?

A new person who works in this room cares most about peer pressure and fitting in.

Once you have worked there long enough to fit in, if you report you would reveal your months of past inaction.
Situations in which evidence slowly builds up over time are most dangerous (organizations are most likely to fail).

By the way, the accumulation of medium-quality evidence is what Callisto is good at.
One possible approach is to get an outside reviewer to review infrequently.

The reviewer could have the same threshold as the principal but less is revealed when the evidence is made public.
3. Often the colleagues of a perpetrator do not report after seeing evidence accumulate over time. One reason is that once you make a report, your own record of past inaction is then revealed.