

The Wrong Kind of Information

Aditya Kuvalekar (essex)

João Ramos (qmu)

Johannes Schneider (uc3m & mannheim)

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Why does that happen? Because the verifiable evidence is weak and the agent fears to be *mistaken to have acted recklessly*

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“There is paralysis and fear about this Act (RTI). People are not taking decisions”

Chief Justice of India on a famous transparency law

⇒ **The chilling effect:** A cost to be paid when the law is designed to **deter** biased agents from acting against common interest

Question: if information (verifiable or unverifiable) improves, does welfare go up?

Answer:

better unverifiable information \Rightarrow higher welfare

better verifiable information \Rightarrow ?

Reason:

improving **verifiable** information **exacerbates** the chilling effect

This paper

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Reason:

improving **verifiable** information **exacerbates** the chilling effect

improving **unverifiable** information **mitigates** the chilling effect

A simple model

Players: designer of the law, court, agent

Project: can be good ($\theta = 1$) or bad ($\theta = -1$), β prior belief that good

Verifiable info: RV X with realization $x \in \{-1, 1\}$, $x = \theta$ w/ prob. p_x

Unverifiable info: RV Y with realization $y \in \{-1, 1\}$, $y = \theta$ w/ prob. p_y

→ p_x, p_y precision; signals conditionally independent

Agent types: agent can be unbiased ($\omega = u$) or biased ($\omega = b$), γ prior belief that unbiased

Actions: designer sets the punishment scheme \bar{F}

agent can implement the project ($a = 1$) or not ($a = 0$)

court can convict the agent to $F \in [0, \bar{F}]$

Preferences, Timing, and Solution Concept

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Timing

1. Designer sets \bar{F}
2. Agent observes (ω, x, y) and selects $a \in \{0, 1\}$
3. Court observes (x, θ, a) and selects $F \in [0, \bar{F}]$ if $a\theta = -1$
4. Payoffs realize

Solution concept: designer-preferred PBE

Some Preliminary Results

Today: efficient to act if $\max\{x, y\} = 1$
prior belief about agent $\gamma > 1/(1 + L) =: \bar{\gamma}$

If $x = 1$ everybody acts $\Rightarrow \gamma > \bar{\gamma} \Rightarrow F(x = 1) = 0$.

Lemma

There are only three relevant punishment levels

- 0: The universal free pass
- F^b : The lowest punishment such that the biased agent does not act when $x = y = -1$
- F^u : The largest punishment such that the unbiased agent acts when $y = 1, x = -1$

Some Preliminary Results (2)

Whether $F^b \leq F^u$ depends on p_x and p_y

Lemma

$F^b - F^u$ increases in p_x and decreases in p_y

$F^b < F^u$: moderate effects

$F = F^b$. Court indifferent at $x = -1$.

- unbiased agent acts when $y = 1$ not when $x = y = -1$.
 - biased indifferent when $x = y = -1$. Acts w/ prob. $\eta^b > 0$
- moderate deterrence.

Table: $F = F^b$

(x, y)	u	b
$(-1, -1)$	0	η^b
$(-1, 1)$	1	1

$F^b < F^u$: moderate effects

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$F = F^u$. Court indifferent at $x = -1$.

- no one acts when $y = x = -1$, biased acts when $y = 1$.
 - unbiased indifferent when $x = -1$ and $y = 1$. Acts w/ prob. $\eta^u > 0$
- moderate chilling.

Table: $F = F^b$

(x, y)	u	b
$(-1, -1)$	0	η^b
$(-1, 1)$	1	1

Table: $F = F^u$

(x, y)	u	b
$(-1, -1)$	0	0
$(-1, 1)$	η^u	1

$F^b > F^u$: strong effects

Cannot deter b without fully chilling u .

$F = 0$. (free pass)

→ No chilling, no deterrence. (same for $F = F^u$)

$F = F^b$.

→ Full chilling, full deterrence.

Table: When $F = 0$

(x, y)	u	b
$(-1, -1)$	0	1
$(-1, 1)$	1	1

Table: When $F = F^b$

(x, y)	u	b
$(-1, -1)$	0	0
$(-1, 1)$	0	1

Comparison of 2 Cases

$F^b > F^u$:

Table: When $F = 0$

(x, y)	u	b
$(-1, -1)$	0	1
$(-1, 1)$	1	1

Table: $F = F^b$

$F^b < F^u$:

(x, y)	u	b
$(-1, -1)$	0	η^b
$(-1, 1)$	1	1

Table: When $F = F^b$

(x, y)	u	b
$(-1, -1)$	0	0
$(-1, 1)$	0	1

Table: $F = F^u$

(x, y)	u	b
$(-1, -1)$	0	0
$(-1, 1)$	η^u	1

Observation

from $F^b < F^u$ (bottom) to $F^b > F^u$ (top), reduces welfare discretely.

What Happens When Information Changes?

intuition: as $p_x \uparrow \Rightarrow$ negative x signal implies: project fails more likely

- expected punishment goes up—*the conviction effect*.
- expected payoff goes down—*the outcome effect*.

U cares about both,

B only about the conviction effect.

\rightarrow Both F^u and F^b decrease, but F^u decreases faster.

For p_y same effects, but

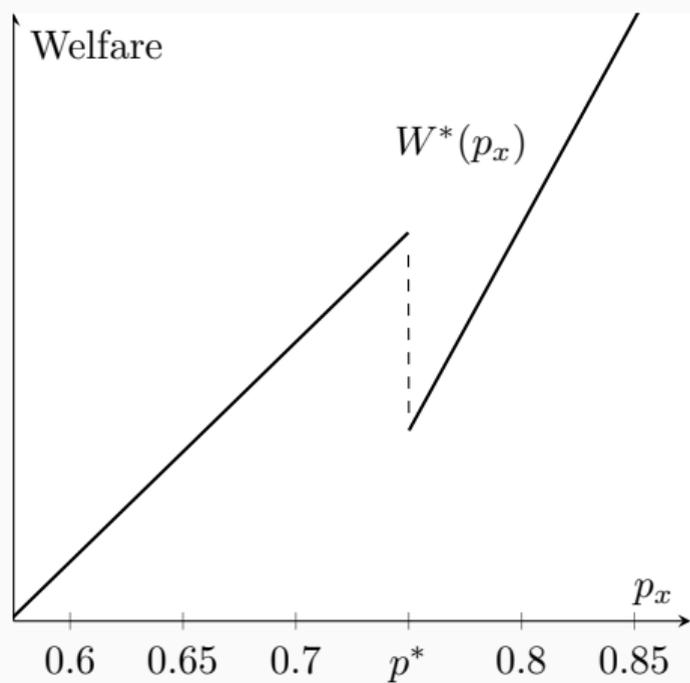
- relevant for B is $(-1, -\mathbf{1})$
- relevant for U $(-1, \mathbf{1})$

$\rightarrow F^u$ goes up, F^b goes down.

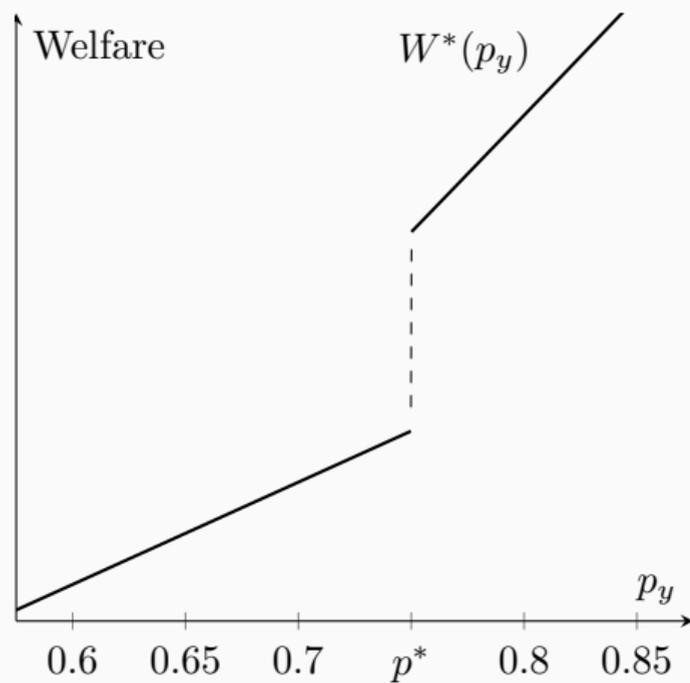
Main Result

1. An increase in the precision of verifiable information can reduce welfare.
2. An increase in the precision of unverifiable information always improves welfare.

Main Result in Pictures



change in p_x (left)



and p_y (right).

local comparative static.

takeaway: when the unverifiable information is valuable, slight improvements in the quality of verifiable information can backfire.

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Discussion on Federal Rules 403 and 404 (exclusion of character evidence) is untouched here. All information is about the act, *not* the character.

takeaway: even if information is only on the act itself, improving that information is not always good for welfare.

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takeaway: even if information is only on the act itself, improving that information is not always good for welfare.

Persuasion or signaling on either side completely absent in the model

⇒ Court fully “inquisitorial” and rational

takeaway: even absent the strategic manipulation of information, more disclosure may cause trouble.

similar results if

- the court could commit to a punishment scheme.
- the maximum punishment was exogenously fixed.
- the court also punishes for inaction.
- the court wanted to punish the wrong action, rather than wrong type ('objective mens rea').
- more than 2 types of agents.
- continuous signals (spreading-order).

a simple model to analyze the interplay of the following:

- delegated decision making with potential bias
- verifiable and non-verifiable information
- deterrence and the chilling effect

characterized the equilibrium outcomes.

improving the unverifiable information always desirable.

small improvements in verifiable information may be harmful.

- channel: stronger chilling effect on the unbiased agents.