The Cognitive Costs of Unravelling under Monitoring and Lenience

Jamil Civitarese & Alper Sukru Gencer

Department of Politics, NYU

May 7, 2024

Outline

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

- Monitoring is proposed as a potential solution

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

- Monitoring is proposed as a potential solution
  - Laws and regulatory institutions against the omission of critical information (Carpenter and Sin, 2007)

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

- Monitoring is proposed as a potential solution
  - Laws and regulatory institutions against the omission of critical information (Carpenter and Sin, 2007)
  - Auditing organizations against accounting frauds (Hamilton and Smith, 2021)

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

- Monitoring is proposed as a potential solution
  - Laws and regulatory institutions against the omission of critical information (Carpenter and Sin, 2007)
  - Auditing organizations against accounting frauds (Hamilton and Smith, 2021)
  - Fact-checking institutions and algorithms moderating content and curbing fake news (Gillespie, 2018)

Motivation

Problem: In information disclosure games, receivers are insufficiently skeptical about non-disclosed information (Jin et al., 2021)

- Information is not always available.
  - Even in theory, unravelling fails (Milgrom, 2008).
  - In real settings, we observe lack of knowledge exploited by informed players (Zaller, 1992; Kuklinski et al., 2000; Mosleh and Rand, 2022; Tripodi, 2022).

- Monitoring is proposed as a potential solution
  - Laws and regulatory institutions against the omission of critical information (Carpenter and Sin, 2007)
  - Auditing organizations against accounting frauds (Hamilton and Smith, 2021)
  - Fact-checking institutions and algorithms moderating content and curbing fake news (Gillespie, 2018)

- What are the consequences of monitoring?

Solving the Asymmetry of Information

- Accountability mechanisms:
  1. More information:
     - repeated feedback $\rightarrow$ receivers ($++$) skeptical (Jin, Luca and Martin, 2021)

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

  2. Monitoring:

     H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

  2. Monitoring:

     H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring
     H2: costly omission $\rightarrow$ receivers $(++)$ lenient on monitoring

Solving the Asymmetry of Information

- Accountability mechanisms:

1. More information:
   - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
   - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

2. Monitoring:

H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring
H2: costly omission $\rightarrow$ receivers $(++)$ lenient on monitoring
H3: costly omission $\rightarrow$ knowing that receivers $(++)$ lenient on monitoring, senders $(--)$ disclosure with monitoring

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

  2. Monitoring:

     H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring
     H2: costly omission $\rightarrow$ receivers $(++)$ lenient on monitoring
     H3: costly omission $\rightarrow$ knowing that receivers $(++)$ lenient on monitoring, senders $(--)$ disclosure with monitoring

- **Research Questions**:

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

  2. Monitoring:

     H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring
     H2: costly omission $\rightarrow$ receivers $(++)$ lenient on monitoring
     H3: costly omission $\rightarrow$ knowing that receivers $(++)$ lenient on monitoring, senders $(--)$ disclosure with monitoring

- **Research Questions**:
  - To what degree are monitoring mechanisms effective?

Solving the Asymmetry of Information

- Accountability mechanisms:

  1. More information:
     - repeated feedback $\rightarrow$ receivers $(++)$ skeptical (Jin, Luca and Martin, 2021)
     - complexity of feedback $\rightarrow$ receivers $(++)$ confused (Jin, Luca and Martin, 2022)

  2. Monitoring:

     H1: costly omission $\rightarrow$ senders $(++)$ disclosure with monitoring
     H2: costly omission $\rightarrow$ receivers $(++)$ lenient on monitoring
     H3: costly omission $\rightarrow$ knowing that receivers $(++)$ lenient on monitoring, senders $(--)$ disclosure with monitoring

- **Research Questions**:
  - To what degree are monitoring mechanisms effective?
  - Do receivers experience a cognitive moral hazard with monitoring?

Literature Review

1. **Disclosure Games** — Milgrom and Roberts (1986), Milgrom (2008),Jin, Luca and Martin (2021), Fréchette, Lizzeri and Perego (2022), Jin, Luca and Martin (2022)

Literature Review

1. **Disclosure Games** — Milgrom and Roberts (1986), Milgrom (2008),Jin, Luca and Martin (2021), Fréchette, Lizzeri and Perego (2022), Jin, Luca and Martin (2022)

2. **Lying and Omission** — Gneezy (2005), Sánchez-Pagés and Vorsatz (2009), DeScioli, Christner and Kurzban (2011), Hamilton and Smith (2021)

Literature Review

1. **Disclosure Games** — Milgrom and Roberts (1986), Milgrom (2008),Jin, Luca and Martin (2021), Fréchette, Lizzeri and Perego (2022), Jin, Luca and Martin (2022)

2. **Lying and Omission** — Gneezy (2005), Sánchez-Pagés and Vorsatz (2009), DeScioli, Christner and Kurzban (2011), Hamilton and Smith (2021)

3. **Regulation and Information** — Baron and Besanko (1984), Border and Sobel (1987), Shi (2024)

Outline

Theoretical Model Without Monitoring

- **Timeline:**

Theoretical Model Without Monitoring

- **Timeline:**

- **Actions:**
  - $a_S = \begin{cases} \text{Messages } \{\omega, \emptyset\} & \text{with probability } \gamma \\ \text{Message } \{\emptyset\} & \text{with probability } 1-\gamma \end{cases}$
  - $a_R \in [0,1]$ where:
    - $\omega \in U[0,1]$ is the state of the world
    - γ is a probability of the Sender having private and verifiable information.

Theoretical Model Without Monitoring

- **Timeline:**

- **Actions:**
  - $a_S = \begin{cases} \text{Messages } \{\omega, \emptyset\} & \text{with probability } \gamma \\ \text{Message } \{\emptyset\} & \text{with probability } 1-\gamma \end{cases}$
  - $a_R \in [0,1]$ where:
    - $\omega \in U[0,1]$ is the state of the world
    - γ is a probability of the Sender having private and verifiable information.

- **Utilities:**
  - $u_S(a_R) = a_R$
  - $u_R = -(a_R - \omega)^2$

Equilibrium Without Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender:**
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$

Equilibrium Without Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender:**
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$
- **Action of the Receiver:**
  - $a_R = \begin{cases} \omega & \text{if Sender reports} \\ \overline{\omega} & \text{if Sender doesn't report} \end{cases}$

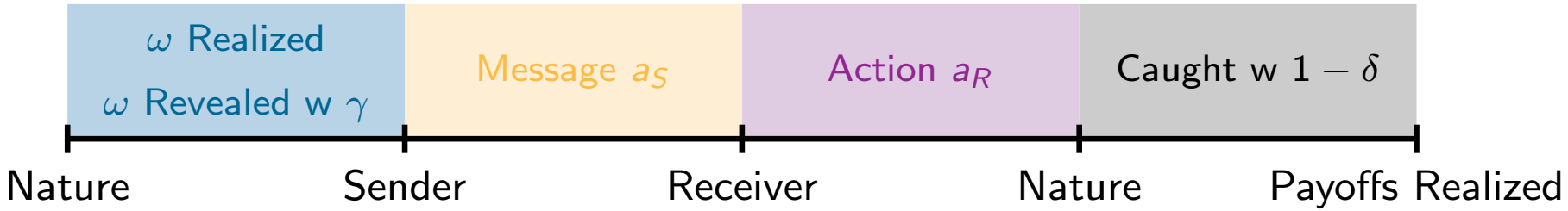
Equilibrium Without Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender:**
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$
- **Action of the Receiver:**
  - $a_R = \begin{cases} \omega & \text{if Sender reports} \\ \overline{\omega} & \text{if Sender doesn't report} \end{cases}$
- **Cut-off:**
  - $\overline{\omega} = \dfrac{\sqrt{1-\gamma} - (1-\gamma)}{\gamma}$

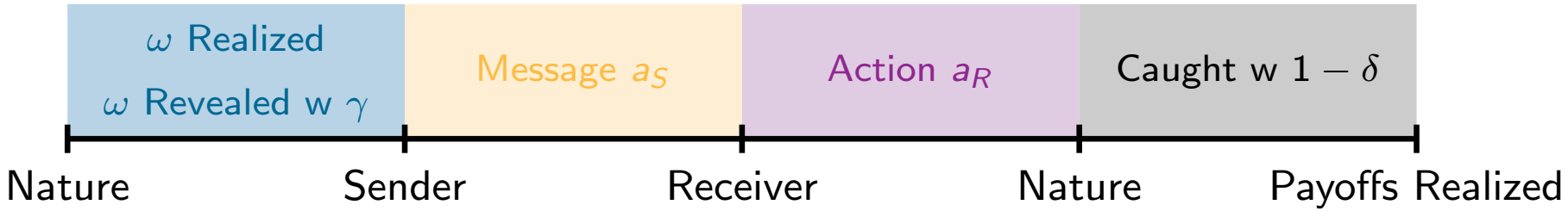
Theoretical Model With Monitoring

- **Timeline:**



Theoretical Model With Monitoring

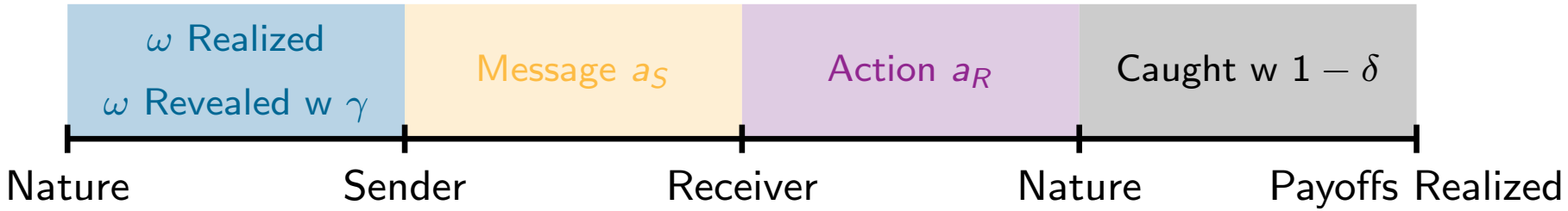
- **Timeline:**



- **Actions:**
  - $a_S = \begin{cases} \text{Messages } \{\omega, \emptyset\} & \text{with probability } \gamma \\ \text{Message } \{\emptyset\} & \text{with probability } 1-\gamma \end{cases}$
  - $a_R \in [0, 1]$

Theoretical Model With Monitoring

- **Timeline:**



- **Actions:**
  - $a_S = \begin{cases} \text{Messages } \{\omega, \emptyset\} & \text{with probability } \gamma \\ \text{Message } \{\emptyset\} & \text{with probability } 1-\gamma \end{cases}$
  - $a_R \in [0,1]$

- **Utilities**
  - $E[u_S] = \begin{cases} a_R & \text{if not omitting information} \\ \delta a_R & \text{if omitting information} \end{cases}$
  - $u_R = -(a_R - \omega)^2$

Equilibrium With Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender**:
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$

Equilibrium With Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender**:
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$

- **Action of the Receiver**:
  - $a_R = \begin{cases} \omega & \text{if Sender reports} \\ \overline{\omega} & \text{if Sender doesn't report} \end{cases}$

Equilibrium With Monitoring

Equilibrium Concept: Sequential Equilibrium

- **Action of the Sender**:
  - $a_S = \begin{cases} \text{Reports} & \text{if has information and } \omega > \overline{\omega} \\ \text{Does not Report} & \text{if does not have information or if } \omega \leq \overline{\omega} \end{cases}$
- **Action of the Receiver**:
  - $a_R = \begin{cases} \omega & \text{if Sender reports} \\ \overline{\omega} & \text{if Sender doesn't report} \end{cases}$
- **Cut-off**:
  - $\overline{\omega} = \dfrac{\sqrt{(1-\gamma)(1-(1-\delta)^2\gamma)} - (1-\gamma)}{(2-\delta)\gamma}$

Outline

Experiment Design

- **Recruitment.** We plan to conduct this experiment online/in-lab with 240 participants

Experiment Design

- **Recruitment.** We plan to conduct this experiment online/in-lab with 240 participants
- **Incentives.** Participants will receive a participation fee, incentives from 10 randomly chosen rounds (out of 60 rounds), plus elicitation incentives

Experiment Design

- **Recruitment.** We plan to conduct this experiment online/in-lab with 240 participants
- **Incentives.** Participants will receive a participation fee, incentives from 10 randomly chosen rounds (out of 60 rounds), plus elicitation incentives
- **Sessions Structure.** Each session is composed of 60 rounds
  - Sender and Receiver roles are determined at the beginning of each session
  - Roles and treatment arms remain fixed throughout the sessions
  - In every 10 rounds, randomly matching Senders and Receivers

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.
  - $T = 0$ sender knows that there is monitoring but
    - the sender has no information about the knowledge of the receiver and
    - the receiver does not know monitoring exists

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.
  - $T = 0$ sender knows that there is monitoring but
    - the sender has no information about the knowledge of the receiver and
    - the receiver does not know monitoring exists
  - $T = 1$ both sender and receiver know that there is monitoring
    - , but the sender has no information about the knowledge of the receiver

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.
  - $T = 0$ sender knows that there is monitoring but
    - the sender has no information about the knowledge of the receiver and
    - the receiver does not know monitoring exists
  - $T = 1$ both sender and receiver know that there is monitoring
    - , but the sender has no information about the knowledge of the receiver

- **Four super-games:**
  - $\{G1, G2, G3, \text{and } G4\}$

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.
  - $T = 0$ sender knows that there is monitoring but
    - the sender has no information about the knowledge of the receiver and
    - the receiver does not know monitoring exists
  - $T = 1$ both sender and receiver know that there is monitoring
    - , but the sender has no information about the knowledge of the receiver

- **Four super-games:**
  - $\{G1, G2, G3, \text{and } G4\}$
  - Feedback about own payoff after each match (to parse out the no-feedback optimism)

Experiment Design

- **Factorial Design**: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

  - $\gamma = 0.8$ to avoid corner solutions.
  - $T = 0$ sender knows that there is monitoring but
    - the sender has no information about the knowledge of the receiver and
    - the receiver does not know monitoring exists
  - $T = 1$ both sender and receiver know that there is monitoring
    - , but the sender has no information about the knowledge of the receiver

- **Four super-games:**
  - $\{G1, G2, G3, \text{and } G4\}$
  - Feedback about own payoff after each match (to parse out the no-feedback optimism)
  - No feedback about other players' gain (to prevent social considerations)

Expectations

Factorial Design: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

Expectations

Factorial Design: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

- Costly monitoring: (**H1:** $\theta_1 > 0$)

$$\mathbf{I}[a_{i,S} = \omega] = c_1 + \theta_1 \mathbf{I}[\delta_i = 0.25] + \epsilon_{i,S}$$

Expectations

Factorial Design: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

- Costly monitoring: (**H1:** $\theta_1 > 0$)

$$\mathbf{I}[a_{i,S} = \omega] = c_1 + \theta_1 \mathbf{I}[\delta_i = 0.25] + \epsilon_{i,S}$$

- Lenience: (**H2:** $\nu_2 > 0$)

$$a_{i,R} = c_2 + \beta_2 \mathbf{I}[T_i = 1] + \theta_2 \mathbf{I}[\delta_i = 0.25] + \nu_2 \mathbf{I}[T_i = 1]\mathbf{I}[\delta_i = 0.25] + \epsilon_{i,R}$$

Expectations

Factorial Design: 2x2

T		$\delta = 0.75$	$\delta = 0.25$
$T = 0$	Only Sender Knows about Monitoring	G1	G2
$T = 1$	Both Sender & Receiver Know about Monitoring	G3	G4

- Costly monitoring: (**H1:** $\theta_1 > 0$)

$$\mathbf{I}[a_{i,S} = \omega] = c_1 + \theta_1 \mathbf{I}[\delta_i = 0.25] + \epsilon_{i,S}$$

- Lenience: (**H2:** $\nu_2 > 0$)

$$a_{i,R} = c_2 + \beta_2 \mathbf{I}[T_i = 1] + \theta_2 \mathbf{I}[\delta_i = 0.25] + \nu_2 \mathbf{I}[T_i = 1]\mathbf{I}[\delta_i = 0.25] + \epsilon_{i,R}$$

- Composite Effect: (**H3:** $\beta_3 < 0$ and $\nu_3 < 0$)

$$\mathbf{I}[a_{i,S} = \omega] = c_3 + \beta_3 \mathbf{I}[T_i = 1] + \theta_3 \mathbf{I}[\delta_i = 0.25] + \nu_3 \mathbf{I}[T_i = 1]\mathbf{I}[\delta_i = 0.25] + \epsilon_{i,S}$$

Belief Elicitation and Lenience

Following Jin et al. 2021:

- Beliefs play a strong role in the informational sophistication of receivers.

Belief Elicitation and Lenience

Following Jin et al. 2021:

- Beliefs play a strong role in the informational sophistication of receivers.
- After the 60 rounds (10 rounds with 6 rematches), we will elicit beliefs about the average ω in cases where the sender did not send a message.
  - We will also ask about the proportion of cases in which the sender withheld information having it.

Belief Elicitation and Lenience

Following Jin et al. 2021:

- Beliefs play a strong role in the informational sophistication of receivers.
- After the 60 rounds (10 rounds with 6 rematches), we will elicit beliefs about the average ω in cases where the sender did not send a message.
  - We will also ask about the proportion of cases in which the sender withheld information having it.
- We will use this information to check if the behavior of players was close to the equilibrium values of $\overline{\omega}$.

Belief Elicitation and Lenience

Following Jin et al. 2021:

- Beliefs play a strong role in the informational sophistication of receivers.
- After the 60 rounds (10 rounds with 6 rematches), we will elicit beliefs about the average ω in cases where the sender did not send a message.
  - We will also ask about the proportion of cases in which the sender withheld information having it.
- We will use this information to check if the behavior of players was close to the equilibrium values of $\overline{\omega}$.
- We also estimate the below equation to study the existence of lenience effects on beliefs:

$$\hat{\omega}_R = c_4 + \beta_4 \mathbf{I}[T_i = 1] + \theta_4 \mathbf{I}[\delta_i = 0.25] + \nu_4 \mathbf{I}[T_i = 1]\mathbf{I}[\delta_i = 0.25] + \epsilon_{i,R}$$

and $\hat{\omega}_R$ is the elicited belief about the average ω when information was withheld.

Expectation: $\beta_4 > 0$ and $\nu_4 > 0$.

Outline

Thank you for your attention!

For any suggestions, please don't hesitate to reach out to us!

Jamil Civitarese jkc9878@nyu.edu
Alper Gencer: asg664@nyu.edu

References I

Baron, David P and David Besanko. 1984. "Regulation, asymmetric information, and auditing." *The RAND Journal of Economics* pp. 447–470.

Border, Kim C and Joel Sobel. 1987. "Samurai accountant: A theory of auditing and plunder." *The Review of economic studies* 54(4):525–540.

Carpenter, Daniel and Gisela Sin. 2007. "Policy tragedy and the emergence of regulation: The Food, Drug, and Cosmetic Act of 1938." *Studies in American Political Development* 21(2):149–180.

DeScioli, Peter, John Christner and Robert Kurzban. 2011. "The omission strategy." *Psychological science* 22(4):442–446.

Fréchette, Guillaume R, Alessandro Lizzeri and Jacopo Perego. 2022. "Rules and commitment in communication: An experimental analysis." *Econometrica* 90(5):2283–2318.

Gillespie, Tarleton. 2018. *Custodians of the Internet: Platforms, content moderation, and the hidden decisions that shape social media*. Yale University Press.

Gneezy, Uri. 2005. "Deception: The role of consequences." *American Economic Review* 95(1):384–394.

Hamilton, Erin L and Jason L Smith. 2021. "Error or fraud? The effect of omissions on management's fraud strategies and auditors' evaluations of identified misstatements." *The Accounting Review* 96(1):225–249.

References II

Jin, Ginger Zhe, Michael Luca and Daniel Martin. 2021. "Is no news (perceived as) bad news? An experimental investigation of information disclosure." *American Economic Journal: Microeconomics* 13(2):141–173.

Jin, Ginger Zhe, Michael Luca and Daniel Martin. 2022. "Complex disclosure." *Management Science* 68(5):3236–3261.

Kuklinski, James H, Paul J Quirk, Jennifer Jerit, David Schwieder and Robert F Rich. 2000. "Misinformation and the currency of democratic citizenship." *The Journal of Politics* 62(3):790–816.

Milgrom, Paul. 2008. "What the seller won't tell you: Persuasion and disclosure in markets." *Journal of Economic Perspectives* 22(2):115–131.

Milgrom, Paul and John Roberts. 1986. "Relying on the information of interested parties." *The RAND Journal of Economics* pp. 18–32.

Mosleh, Mohsen and David G Rand. 2022. "Measuring exposure to misinformation from political elites on Twitter." *nature communications* 13(1):7144.

Sánchez-Pagés, Santiago and Marc Vorsatz. 2009. "Enjoy the silence: an experiment on truth-telling." *Experimental Economics* 12(2):220–241.

Shi, Maggie. 2024. "Monitoring for waste: Evidence from medicare audits." *The Quarterly Journal of Economics* 139(2):993–1049.

Tripodi, Francesca Bolla. 2022. *The propagandists' playbook: How conservative elites manipulate search and threaten democracy*. Yale University Press.

Zaller, John. 1992. *The nature and origins of mass opinion*. Cambridge university press.