# Norms of Communication

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Outline

#### 1 The Standard Model

- Prom Social Dilemmas to Social Norms
- **3** Norms of Communication

# The Main Thesis Communicating is Like Standing in Line



- 'Implicit social grammar' organizing competing demands
- Consists of subconscious conditional, social preferences
  - I prefer to queue if I think that most of 'us' queue, and if I think that most of 'us' think we ought to queue.
  - Encoded as scripts/schemas about interactions/people
- These are **social norms** (Bicchieri 2006, 2017)
- Efficient, necessary; but often also: oppressive, suboptimal

# The Standard Rationalist Model To Foreshadow

#### Communication Requires Common Interests

... [C]ommon interest and common knowledge are necessary for the possibility of communication. Only against a relatively rich background of common belief is it possible to get people to recognize the very specific intentions that must be recognized for successful acts of meaning, and only where there are mutually recognized common interests will the recognition of the intentions be effective in changing beliefs. (Stalnaker 2014: 42)

 Central assumption: we can abstract away from the social facts that shape our interests when we communicate.
Common interests are given, not explained.

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#### 1 The Standard Model

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## The Standard Model Of Meaning and Communication

#### The Tools

- Signaling Games/Conventions (Lewis 1969)
- 2 Communicative Intentions (Grice 1957)
- 3 Conversational Scorekeeping/Common Ground (Stalnaker 1978; Lewis 1979)
- Interactive Rationality: game-theory
- Many ways of packaging/tweaking these tools together to explain meaning and communication
- One prominent package: Stalnaker (2014)

## Common Ground A Range of Views (Stalnaker 2002; Lewis 1979; Clark 1996)



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## The Standard Model Looking at the Tea Leaves

#### **Communication Requires Common Interests**

... [C]ommon interest and common knowledge are necessary for the possibility of communication. Only against a relatively rich background of common belief is it possible to get people to recognize the very specific intentions that must be recognized for successful acts of meaning, and only where there are mutually recognized common interests will the recognition of the intentions be effective in changing beliefs. (Stalnaker 2014: 42)

## The Standard Model Of Meaning and Communication

#### The Standard Model (Stalnaker 2014: 42)

Communication involves the transmission of belief via communicative intentions, relying on common ground (CG):

- It's CG that speaker intended for hearer to form a belief p by recognizing speaker's intention to do so.
- It's CG that it's in everyone's best interest for belief p to be shared among speaker and hearer.
- Next: a clearer depiction, a concrete application.

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#### **Standard Model**





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#### Signalling signalhood and the emergence of communication

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#### A R T I C L E I N F O

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Symbolism

Communicative intent

#### ABSTRACT

A unique hallmark of human language is that it uses signals that are both learnt and symbolic. The emergence of such signals was therefore a defining event in human cognitive evolution, yet very little is known about how such a process occurs. Previous work provides some insights on how meaning can become attached to form, but a more foundational issue is presently unaddressed. How does a signal signal its own signalhood? That is, how do humans even know that communicative behaviour is indeed communicative in nature? We introduce an experimental game that has been designed to tackle this problem. We find that it is commonly resolved with a bootstrapping process, and that this process influences the final form of the communication system. Furthermore, sufficient common ground is observed to be integral to the recognition of signalhood, and the emergence of dialogue is observed to be the key step in the development of a system that can be employed to achieve shared goals.

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Me		Other

Press space when you're finished

#### Player 1 Viewpoint

- Remotely played via computer
- Can see:

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- Locations of both avatars
- Color of P1's squares
- Can't see:
  - Color of P2's squares
- Possible Actions:
  - Move P1 avatar
- Goal: color-match locations

#### **Player 2 Viewpoint**

- Remotely played via computer
- Can see:
  - Locations of both avatars
  - Color of P2's squares
- Can't see:
  - Color of P1's squares
- Possible Actions:
  - Move P2 avatar ▲
- Goal: color-match locations



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## Color Matching Game Further Details (Scott-Phillips et al. 2012)

- Players participate remotely via computer.
- 2 No ability to exchange text, talk, or see each other.
- 3 Color matches earn players an equal cash prize.
  - Non-matches earn nothing.
- 4 Game is played repeatedly w/same partner.
- **5** Colors randomly distributed at start of each round.
- 6 All of this information is presented to participants before agreeing to play.

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**Fig. 2.** A typical emergent system. In this communication system red is the default colour. If participants have a red square, they move to it and wait. If they do not have red they will signal one of the other colours by using the movements indicated. If one participant signals a colour that the other participant also has, that participant will move to the relevant square and hit space to end their turn. Otherwise, the participants will signal alternative colours until an agreement is reached. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

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- 12 pairs, played an average of 207 rounds
  - 7 reported some communicative success
    - Scores: 83, 66, 54, 49, 39, 17, 14
  - 5 reported none
    - Scores: 7, 5, 4, 3, 3
  - 5 of 7 successful cases evolved as above
  - 2 others were unilaterally imposed by one player, until the other recognized it (54, 39)

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## Applying The Standard Model Of Meaning and Communication

#### The Standard Model (Stalnaker 2014: 42)

Communication involves the transmission of belief via communicative intentions, relying on common ground (CG):

- It's CG that speaker intended for hearer to form a belief p by recognizing speaker's intention to do so.
- It's CG that it's in everyone's best-interest for belief p to be shared.
- Scott-Phillips et al. (2009) emphasize 1.

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- It's CG that it's in everyone's best-interest for belief p to be shared.
- Scott-Phillips et al. (2009) emphasize 1.
- I'm here to probe 2.

## Applying The Standard Model Mutual Interests and Rational Choice

	You go to Red $(R_y)$	You go to Blue $(B_y)$
I go to Red $(R_i)$	1, 1	0, 0
I go to Blue $(B_i)$	0, 0	1, 1

Table: Partial Payoff Matrix for Signaling Game

- Color-matching:  $\langle R_i, R_y \rangle$  or  $\langle B_i, B_y \rangle$
- Nash Equilibria: if they color-match, no agent can do better by changing their action alone.
- Rational Choice Theory: agents maximize (expected) utility (more or less).
- These mutual interests, and assumptions about rationality, are assumed to be common knowledge.
- So rational agents should color-match if possible.

# Applying The Standard Model Constraint on Rational Transmission of Belief

#### Mutual Interest Constraint

An utterance can rationally communicate a belief p between X and Y only if:

- 1 The outcome of X and Y both believing p is a Nash Equilibrium
- 2 1 above is common knowledge between X and Y.
- 3 And it is common knowledge between X and Y that X and Y are rational.

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## Applying The Standard Model Constraint on Rational Transmission of Belief

#### Mutual Interest Constraint

An utterance can rationally communicate a belief p between X and Y only if:

- 1 The outcome of X and Y both believing p is a Nash Equilibrium
- **2** 1 above is common knowledge between X and Y.
- 3 And it is common knowledge between X and Y that X and Y are rational.
- Best basic attempt to articulate informal remarks of Stalnaker (2014: 42), a.o.

## Applying The Standard Model When Rational Constraint isn't Met



Table: Partial Payoff Matrix for Signaling Dilemma

- One Nash Equilibrium:  $\langle B_i, B_y \rangle$ 
  - Prisoner's Dilemma! Rational agents all go to blue, even though it is socially suboptimal.
- Prediction: it will be impossible to communicate belief that I will go to red.

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## Applying The Standard Model The Prediction, More Generally



Table: Complete Payoff Matrix for Signaling Dilemma

- One Nash Equilibrium: (End, End)
- Prediction: communication is impossible; even if subjects could talk and say 'I will go to red'.

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# The Standard Model A Prediction

#### **Communication Requires Common Interests**

... [C]ommon interest and common knowledge are necessary for the possibility of communication. Only against a relatively rich background of common belief is it possible to get people to recognize the very specific intentions that must be recognized for successful acts of meaning, and only where there are mutually recognized common interests will the recognition of the intentions be effective in changing beliefs. (Stalnaker 2014: 42)

- Doesn't require common interests, in general.
- Just w.r.t. to particular belief communicated.

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## The Standard Model A Prediction Examined

#### Interim Summary

- The Standard Rationalist Model requires mutually recognized common interest in belief being communicated.
- Scott-Phillips et al. (2009) do not test this assumption.
  - What happens when cash prizes are restructured to form a social dilemma?
- To my knowledge, this particular experiment has not been performed.
- But, there is an extensive literature on communication in social dilemmas.

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Outline

#### 1 The Standard Model

### Prom Social Dilemmas to Social Norms

**3** Norms of Communication

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Outline

### Prom Social Dilemmas to Social Norms Communication without Common Interests Social Norms Enable Cooperation

## The Standard Model The Prediction, Reviewed



Table: Complete Payoff Matrix for Signaling Dilemma

- One Nash Equilibrium: (End, End)
- SM Prediction: communication is impossible; even if subjects could talk and say 'I will go to red'.

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## The Standard Model The Prediction Examined

#### • Terminology:

- 'Common interests': same preferred outcome
- 'Social dilemma': socially suboptimal NE/no NE.
- Can communication occur in social dilemmas?
- What do humans actually do?
- They communicate, contra Standard Model!
  - Dawes (1980), Sally (1995), Balliet (2010)
- Even in 'one-off' dilemmas, allowing subjects to talk and make commitments increases cooperation significantly.

# Social Dilemmas The Give Some Game

Givers	Payoff to Keep	Payoff to Give
5	—	\$12
4	\$20	\$9
3	\$17	\$7
2	\$14	\$3
1	\$11	\$0
0	\$8	—

Table: Payoffs for Individual in 'Give Some' Game (Dawes 1980)

- 5 subjects given \$8, one-off choice to keep or give away
  - If they give away: everyone else gets \$3
  - If everyone gives away: everyone gets \$12
- Each subject's payoff depends on what others do

## Prisoner's Dilemmas Results in the Give Some Game

- Across many studies, meta-studies
  - E.g. Dawes (1980), Sally (1995), Balliet (2010)
- Baseline cooperation rate (give):  $\approx$ 50%
  - Contra classical game-theory
- If choices are discussed, and commitments/promises made, cooperation significantly increases ( $\approx$ 40%)
  - Contra standard model
- If anything, a subject saying 'I will give' is evidence that they will defect (keep money).

# Social Dilemma Experiments Key Findings

#### Key Findings

 Discussion has "a strong positive effect on cooperation in a broad range of social dilemmas" (Balliet 2010: 46)

• d = 1.01, 95% CI, LL = 0.82, UL = 1.20

- 2 Effect stronger when face-to-face (Balliet 2010: 46)
- **3** Discussions primarily result in promises/commitments.
- 4 Effect correlated with unanimity of commitments.
- **5** Most likely when 'group leaders' emerge in discussion.

Dawes (1980), Sally (1995), Bicchieri (2006: Ch.4), Balliet (2010)

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**Discussion** Social Dilemma Results and the Standard Model

- This is a clear limitation for the Standard Model, but how much does it matter?
- How central to the phenomenon of communication are contexts of conflicting interests?
- Might this be a special kind of communication, deserving a specialized theory?
- No, not if we take a biological perspective.

#### A Biological Perspective (Maynard Smith & Harper 2003)

A fundamental question in the study of communication systems is how they can be stable and reliable, given the conflicting interests in a population that incentivize deception.

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### **Discussion** Every Day Counterexample



Outline

### Prom Social Dilemmas to Social Norms Communication without Common Interests Social Norms Enable Cooperation
## Social Norms Back in Line



- Common functionalist idea:
  - Social norms are rules for managing conflicting interests to promote social goods
  - E.g. Durkheim (1892), Ullman-Margalit (1977), Coleman (1990), Hechter & Opp (2001)
- *Question*: how, exactly, do they do that work?

Social Norms Bicchieri (2017, 2006) on How Social Norms Function

### Bicchieri (2017, 2006) Analysis

Social norms operate via conditional social preferences, e.g. I prefer to queue if:

- I Empirical Expectation: I think that most of 'us' queue in situations like this.
- Over a structure of the structure of
- Psychological implementation:
  - Preferences selectively triggered via scripts/schemas
  - Stereotypical representations of social interactions (scripts) and roles/categories (schemas) (Goffman 1959; Schank & Abelson 1977)

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### Social Norms Social Dilemmas Revisited



Table: Give-Some Social Dilemma Payoff Matrix

- One-off choice: X and Y can keep \$3 or give it back.
- If one gives, then:
  - One gets nothing if the other kept.
  - One gets \$4 if the other gave.
- If one keeps, then:
  - One gets \$3 if the other kept.
  - One gets \$5 if the other gave.

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### Social Norms Social Dilemmas and Cheap Talk



Table: Give-Some Social Dilemma Payoff Matrix

- Unique Nash Equilibrium: both Keep
- X: I'm going give.
  - Y: Me too.
  - X: Ok, let's do this.
- Game-theory: both will still Keep
- Experiments: X and Y are pprox 80% likely to give.

### Social Norms Commitment Keeping

### Social Norm of Commitment Keeping

Most agents A in X and Y's reference network N prefer to keep commitments in situations like this if A believes:

a. Empirical Expectations:
 Most agents in N keep commitments in situations like this

### b. Normative Expectations: Most agents in N believe A ought to keep commitments (and may sanction accordingly)

- A social norm of commitment keeping (Bicchieri 2006).
- Bicchieri (2006: Ch.4) argues that this is the best explanation of how discussion increases cooperation in one-off PD's.

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Social Norms Enable Coordination (Ullman-Margalit 1977; Bicchieri 2006)



Table: Give-Some Social Dilemma Payoff Matrix



Table: Give-Some Social Dilemma under Commitment Norm

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### Social Norms More on How They Work

### The Force of Norms

Normative expectations re-weight utilities toward compliance, but how exactly?

### Sanctions in Repeated Games

Cooperative norms are stable under certain social conditions not just because sanctions enforce compliance now, but future interactions provide indefinite opportunity to sanction. (Axelrod 1984)

• Limitation: people still comply in one-off games!

### Social Norms External + Internal Sanctions

### The Force of Norms

Normative expectations re-weight utilities toward compliance, but how exactly?

### Internal Sanctioning (Horne 2003; Bicchieri 2006: Ch.4)

Agents often, in effect, internally sanction.

- Social norms are learned in small close-knit networks...
- ...where one cares deeply about what others think of you.
- Observing/experiencing sanctions suffices to pair a prohibited action w/social pain.
  - "The perfection of power should tend to render its actual exercise unnecessary" (Foucault 1979: 201)
- Explains behavior in one-off interactions.

### Social Norms Variation in Compliance

### The Force of Norms

Normative expectations re-weight utilities toward compliance, but how exactly?

- There is a lot of interindividual variation in compliance
- Other factors identified in empirical work (Gross & Vostroknutov 2022):
  - Social & Self-image
  - 2 Power (van Kleef et al. 2015; Winter & Zhang 2018)

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### Social Norms Enable Pluralistic Ignorance (Bicchieri 2017)

- A social norm can persist, even if most people dislike it.
- Consider a domain where social norms dictate behavior that's not discussed
  - Then it will be difficult for a society to discover that most people privately disagree with the norm
- Bicchieri (2017: Ch.1) discusses examples of this 'pluralistic ignorance'
  - E.g. corporal punishment of children
  - See also: sexuality and gender ;)
- Relatedly, social norms that have immensely negative impacts on a subgroup are especially persistent when that subgroup is excluded from 'dominant discourse'.

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## Social Norms The Big Picture (Bicchieri 2017)

### Key Issues

- When does a collective behavior count as a social norm?
  - When empirical and normative expectations are met.
- How can we tell?
  - By interventions that target both expectations (Bicchieri 2017: Ch.2)
- Social norms can produce pro-social behavior, but...
  - Can also be oppressive (FGC, child marriage, gendered domestic work)
  - Help the powerful, harm the marginalized
- What differentiates social norms from customs, moral norms, and conventions?

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FIGURE 1.2 Diagnostic process of identifying collective behaviors. Source: C. Bicchieri, *Social Norms, Social Change*. Penn-UNICEF Lecture, < -> < -> < -> <

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### Social Norms Interim Summary

### Key Takeaways

- 1 SM requires common interest in what's communicated.
  - But communication influences choice in social dilemmas!
- 2 Best explanation: social norms shape our interests to facilitate communication
- 3 Social Norms: empirical & normative social expectations
  - Customs involve neither; conventions just empirical.
- 4 Social norms are a mixed bag
  - Facilitate quick, easily transmissible pro-social behavior
  - Automate oppressive behavior via schemas/scripts and fuel problematic power and group dynamics
  - Can persist even when unpopular ('pluralistic ignorance')

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Outline

### 1 The Standard Model

- Prom Social Dilemmas to Social Norms
- **3** Norms of Communication

Outline

# Orms of Communication A Social Normative Model Application: conversational inequities

Ok, maybe social norms shape our interests in the specific contexts involving social dilemmas, but how general is their influence?

## Every time you communicate!



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*Empirical Expectations*: do most agents like Y in *N* raise their hand in situations like this?

*Normative Expectations*: ought most agents like Y in *N* raise their hand in situations like this?

*Empirical Expectations*: do most agents like X in *N* come to believe Y has a question in situations like this?

Normative Expectations: ought most agents like X in N come to believe Y has a question in situations like this?





How should we model communication to make explicit how social norms influence common interests?



## Y Common interests mediated by Χ **Social Norms**

### Norms of Communication A General Form

### **Production Norms**

Specify conditions under which speakers are to make private commitments public.

• E.g. When X is an authority w.r.t. p and Y needs to know whether p, X should add p to CG.

### **Consumption Norms**

Specify conditions under which hearers should 'take up' public contributions.

- E.g. When p is added to CG by authority X and Y needs to know whether p, Y should believe p.
- What are the actual norms? Empirical question!

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### Norms of Communication Pragmatist Origins

### C.S. Peirce on Assertion

[Assertion is] an act which renders [the speaker] liable to the penalties of the social law (or, at any rate, those of the moral law) in case [the asserted proposition] should not be true, unless he has a definite and sufficient excuse; and an act of assent is an act of the mind by which one endeavors to impress the meanings of the propositions upon his disposition, so that it shall govern his conduct, including thought under conduct, this habit being read to be broken in case reasons should appear for breaking it. (Hartshorne & Weiss 1932: 2.315)

See also: Dewey (Belman 1977), Brandom (1983), Kukla & Lance (2009)

### Norms of Communication Psychological Implementation, Suboptimality

- Following Bicchieri (2006, 2017) a.o., norms of communication are expected to be contextually primed by schemas, scripts, and stereotypes.
  - E.g. Scripts for teacher/student interactions in classroom; schemas for 'teacher' and 'student'
  - E.g. Schemas for social identities
- Social norms are not always equitable:
  - Powerful sanctioned less harshly
  - Marginalized sanctioned more harshly
  - Pluralistic ignorance harbors unpopular norms

### Norms of Communication Dual Nature



### Norms of Communication General Highlights

### Key Theoretical Features

- Norms of communication govern how public contributions should be produced and consumed
- It is a open, largely empirical, question what the norms of communication in a given society are
- 3 Tools for investigating norms of communication: experiments, fieldwork, agent-based modeling, game-theoretic modeling, social media/corpus analysis
- 4 Predicted to be sites of inequity, despite their conflict-managing function.
- Subject to critique, change, improvement (Honneth 1996; Habermas 1998; bell hooks 2000; Freire 2009)

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Outline

# Orms of Communication A Social Normative Model Application: conversational inequities



### Norms of Communication Miscommunication in the Wild



https://twitter.com/Lemonanyway/status/926155375270821888

- Illocutionary disablement/frustration/injustice (Langton 1993; Kukla 2012; Hesni 2018; Maitra 2012)
- 'Communicative warping' akin to testimonial smothering (Dotson 2011)

### Norms of Communication Analysis: oppressive consumption norms

- 'Attractive Lemon': consumption/production norms are triggered by scripts and schemas
  - 'Woman' + 'has a problem'  $\rightarrow$  'woman needs advice'.
  - 'Woman needs advice' + 'male authority' → 'man advises woman'.
- It highlights how these norms marginalize women.
  - 1 Complicates signal choice.
  - 2 Disables appropriate uptake.
  - 3 Entitles men epistemic authority over women (Manne 2020: Ch.8)
- Parallel examples abound (Manne 2020: Ch.8)
  - Doktor Paul Bullen tweets correcting sex educator Laura Dodsworth using 'vulva' vs. 'vagina'

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### Norms of Communication Analysis: changing oppressive norms

- Bicchieri's (2017) approach makes predictions here
- To combat pluralistic ignorance:
  - Raise awareness about unpopular/problematic norms
  - As Manne (2020), social media, press do.
- But what do we do when normative expectations are actually met, and the practice is oppressive/maladaptive?
  - Legal means, media, economic incentives, public deliberation, trendsetters (Bicchieri 2017: Chs.3–5)
- These interventions aim at behavior via preferences/scripts/schemas, not belief.

### Norms of Communication And Conversational Inequities

### Conversational Inequity

What's gained by approaching these phenomena with norms of communication, rather than other tools from Standard Model?

- SM: communication fails here because there's no common interests.
- Normative Model: but why doesn't it fail in social dilemmas?
  - Also: maybe Attractive Lemon genuinely wants to hear women, and social norms short-circuit those interests.
- SM: <u>`</u>\_\_
- Normative Model: there's systematic connections between the successes in social dilemmas, and these failures!

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### Norms of Communication Compared to Langton's Conventionalism



- Social Normative framework offers a different perspective.
- Conventions are self-enforcing and necessarily coordinating (Bicchieri 2006, 2017)
  - So 'oppressive conventions' must be something else...
  - Legal/coercive norms, or: social norms!
- Harmful speech can change beliefs/behavior via oppressive production/consumption norms.
  - Actual application to misogynistic pornography?  $\sqrt{2}$

### Norms of Communication Compared to Fricker's Credibility Deficits



- Fricker (2007) testimonial injustice via credibility deficits
  - Marginalized people are thought to be less credible.
    - Roughly: they're assigned low probability of knowing
  - Blocks consumption of public contributions.
- Open to practicality and generality concerns
- Kukla (2012) focuses on directive language
  - E.g. woman boss's commands taken as suggestions
  - No clear link to credibility of her 'knowing'
- Táíwò (2022: Ch.2): general pattern in power dynamics
  - Elites can do more; marginalized less.
  - The problem is not beliefs, its the practices/culture. (Táíwò 2022: 46)
The Standard Model From Social Dilemmas to Social Norms Norms of Communication References

#### Norms of Communication Other Normative Frameworks



- Social Normative Model draws inspiration from other normative accounts:
  - C.S. Peirce (Hartshorne & Weiss 1932); Brandom (1983)
  - Kukla & Lance (2009); Kukla (2012); Tirrell (2012)
  - McGowan (2004, 2018, 2019)
- These accounts characterize speech acts in terms of how they transform social normative statuses
  - E.g. speaker's responsibility, hearer's license
- They don't say much about what mechanism drives this process, or where exactly it departs from SM.
- Via Bicchieri (2017), Social Normative Model provides one way to more systematically articulate this approach.

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#### **Standard Model**

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#### **Social Normative Model**

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# Norms of Communication

#### Take-Aways

- 1 Standard Model takes common interests as given.
- 2 This prevents it from explaining:
  - Communication in social dilemmas
  - How miscommunication is influenced by social norms
- **3** Social Normative Model makes this influence explicit:
  - Production/consumption norms
  - Each w/Empirical & normative expectations
- Via Bicchieri (2017) it provides empirical tools for norm measurement & change; highlights oppressive capacities.
- **5** Supplements existing work in social critique.
  - Freire (2009); bell hooks (2000); Manne (2020); Honneth (1996); Habermas (1998)



## Thanks!

This work is deeply influenced by two joint papers on speech acts with Sarah Murray (Murray & Starr 2020, 2018), and was improved by feedback from audiences at Dartmouth, Syracuse, and Rutgers, and my Spring 2023 seminar at Cornell.

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