

# Trust

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“Never trust a computer you can’t throw out of a window.” Steve Wozniak.

# Trust

- We may well end up trying to model trust
- We'd like your help in answering a few questions:
  - What is it?
  - What data are available about it, and how much should we worry about the problems with these?
  - What should we model, and how should we model it?

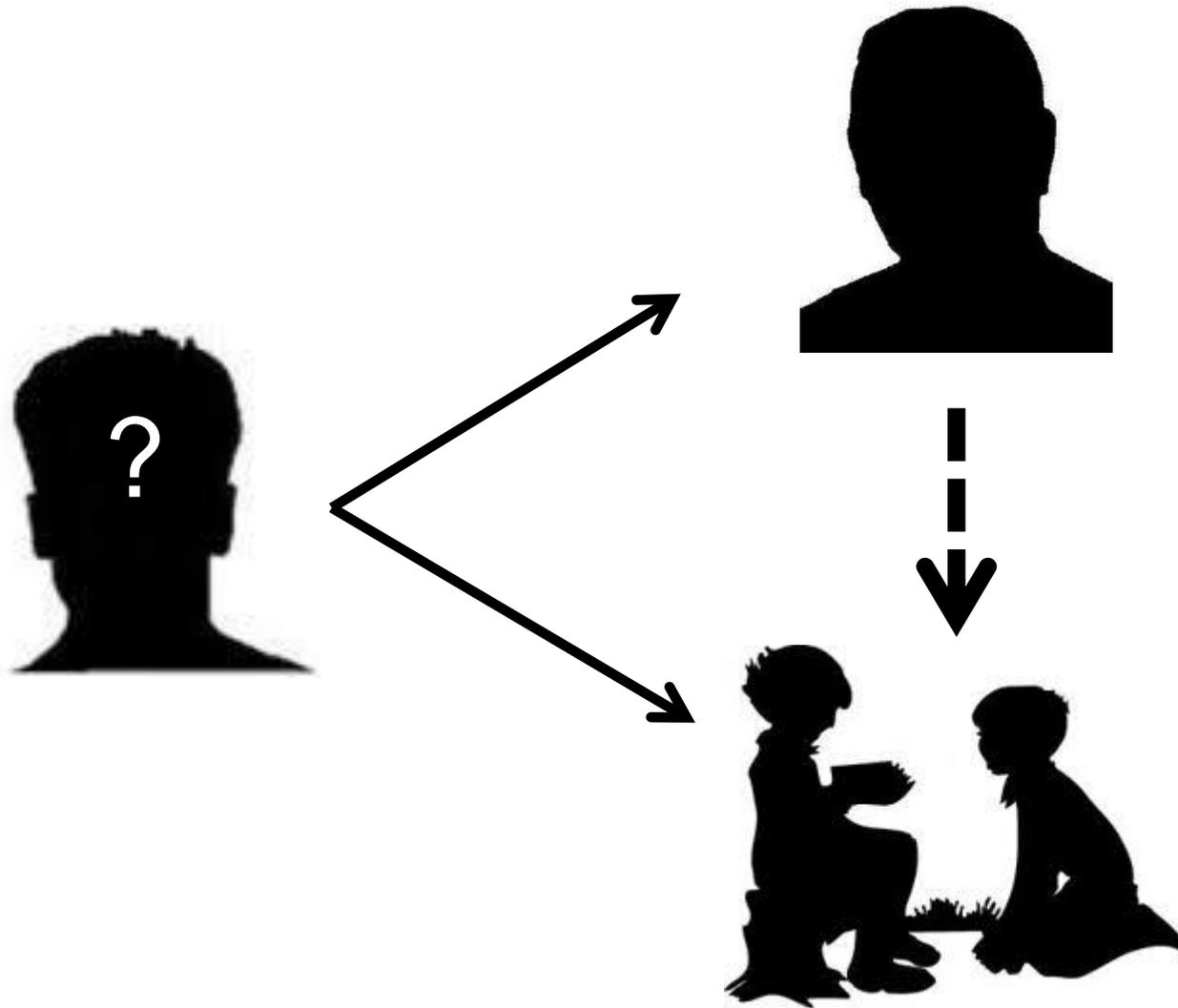
# What is trust?

- Its seen as very important (e.g. Coleman, 1990; Putnam, 1993, 2007; Uslaner, 2002)
- Its seen as being in decline of late
- Its seen as being related to ethnicity and ethnic diversity (Smith, 2010)
  - (but, obviously, also related to lots of other things: e.g. age, education/social class, religiosity)

# A definition

- “a psychological state comprising the intention to accept vulnerability based upon the positive expectations of the intentions or behavior of another”
  - Rousseau, Sitkin, Burt & Camerer (1998: p.395).

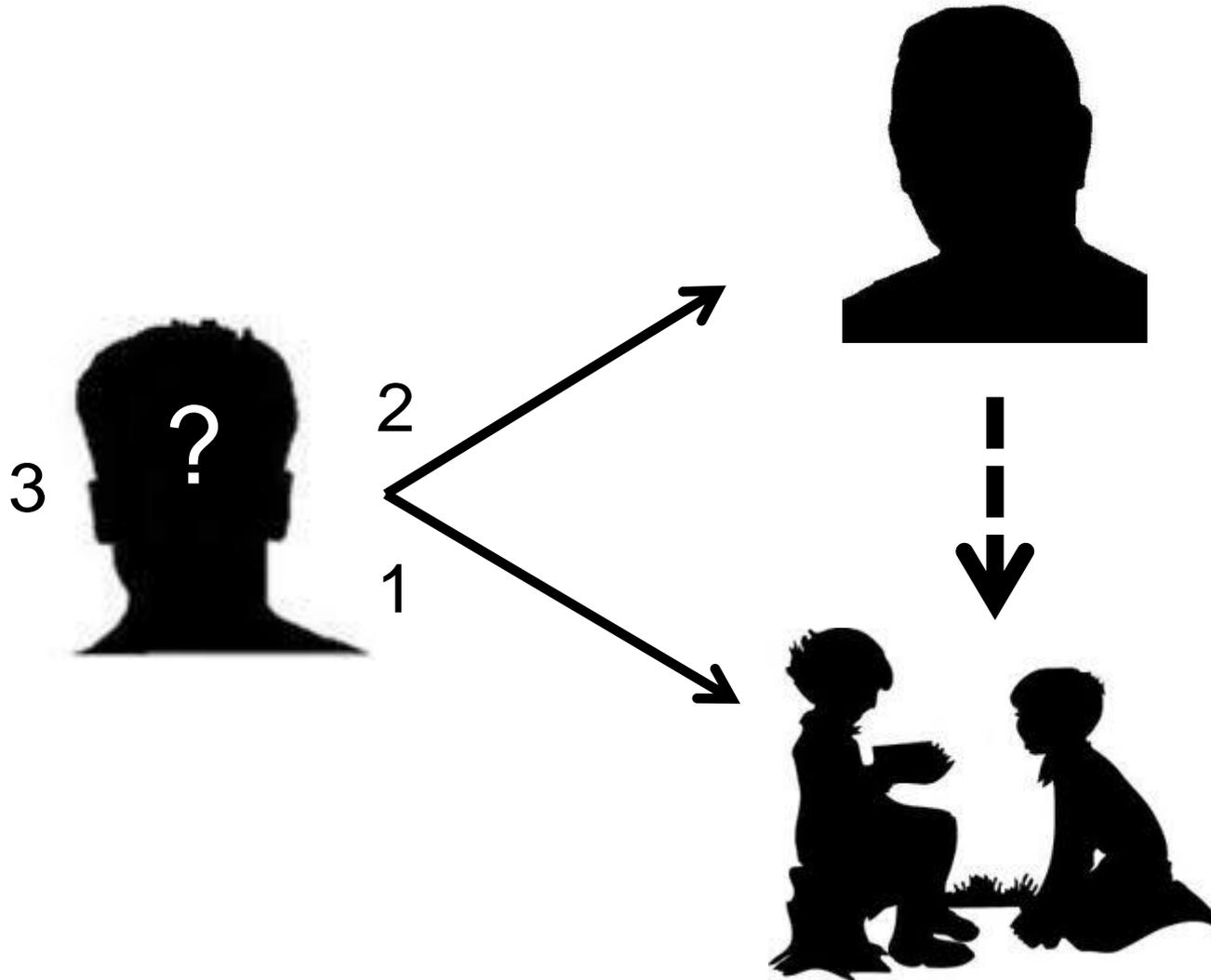
# Trust



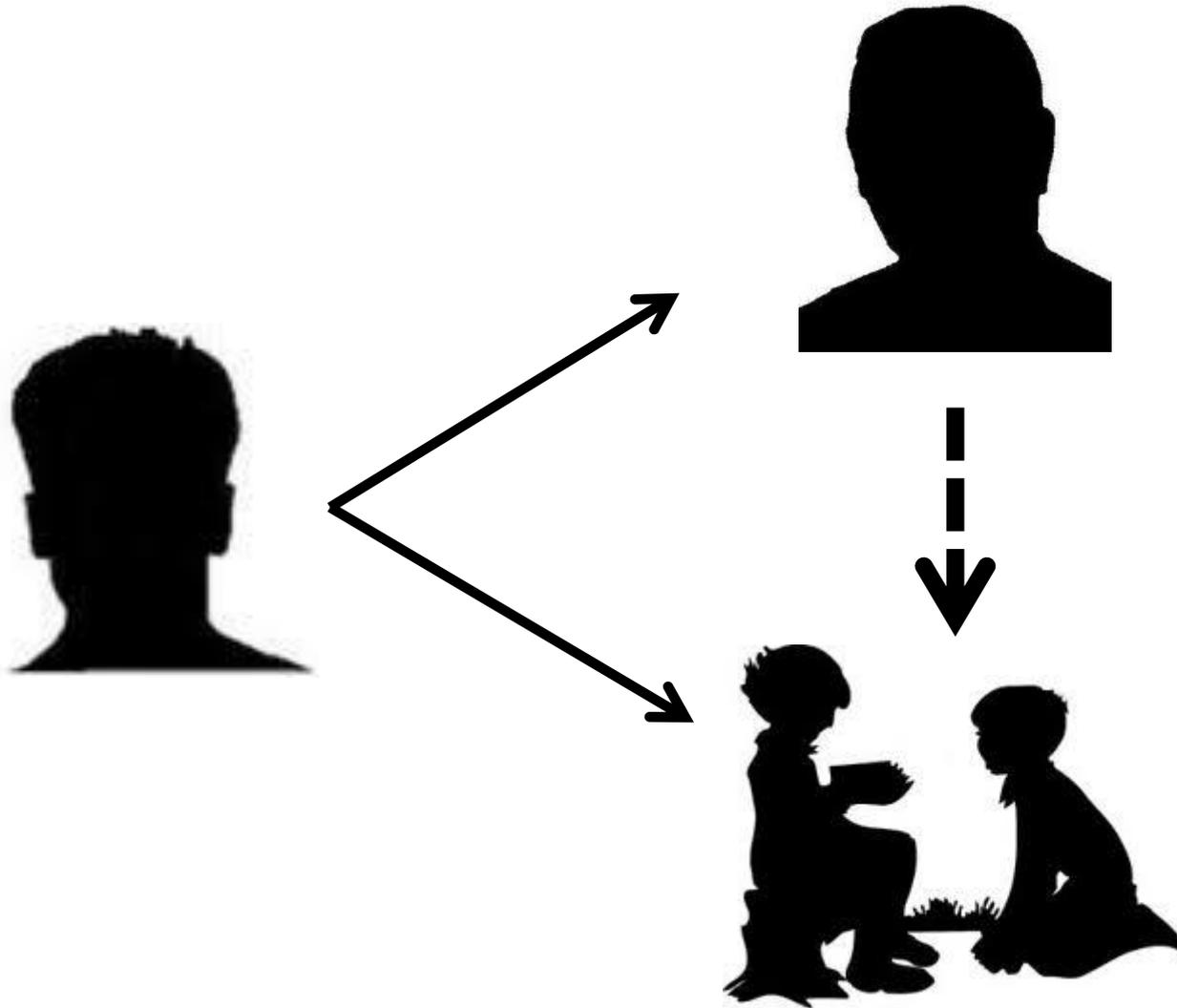
# Trust

1. Truster's perceptions of what is at stake
  - How important is the outcome? What could be gained / lost?
2. Truster's perceptions of the trustee
  - Willingness to cooperate
  - Ability to cooperate
3. Truster's propensity to go through with the arrangement, given 1 & 2.
  - Propensity to take risks? Social Intelligence / ToM?
  - Availability of monitoring, sanctions, etc.

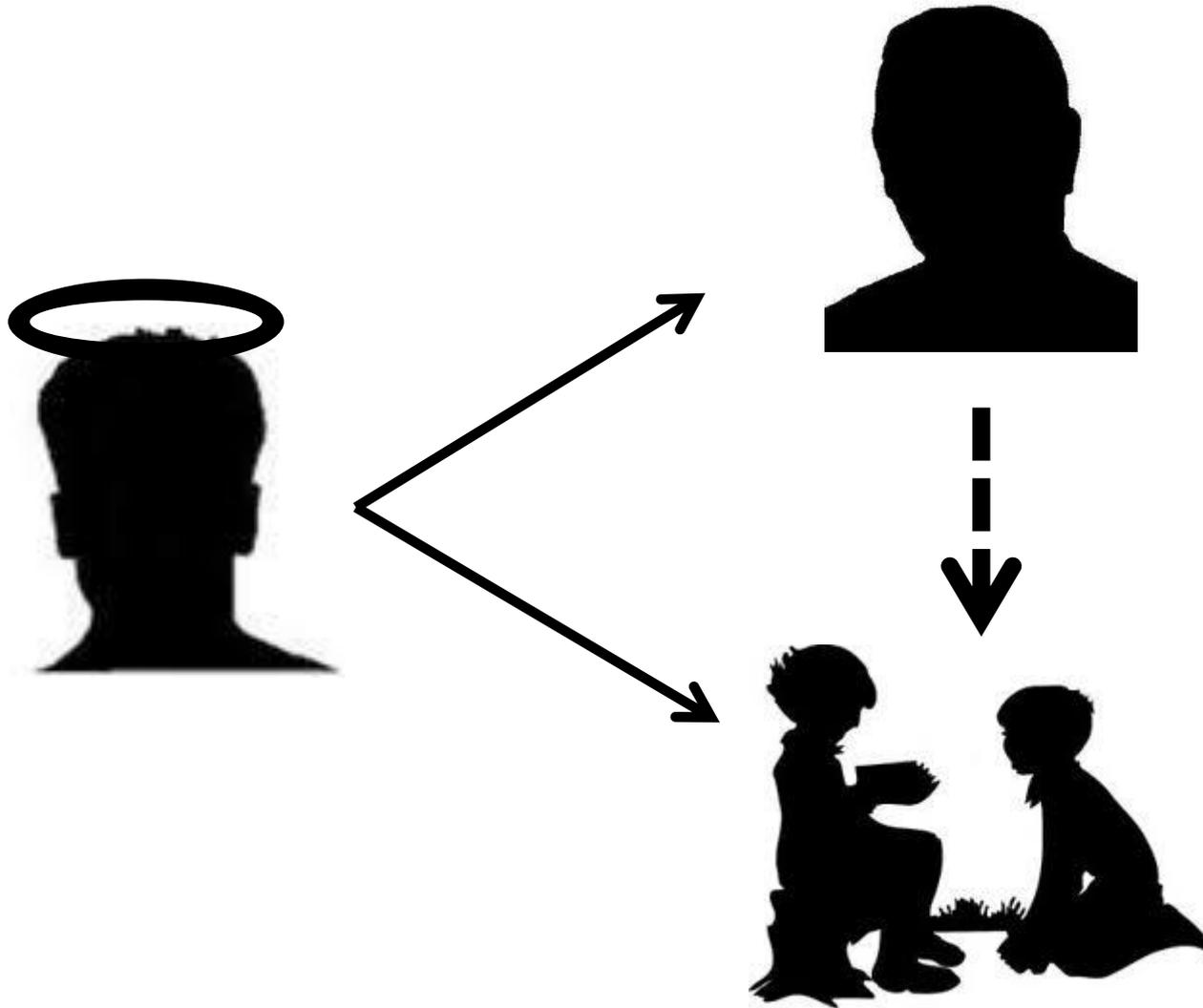
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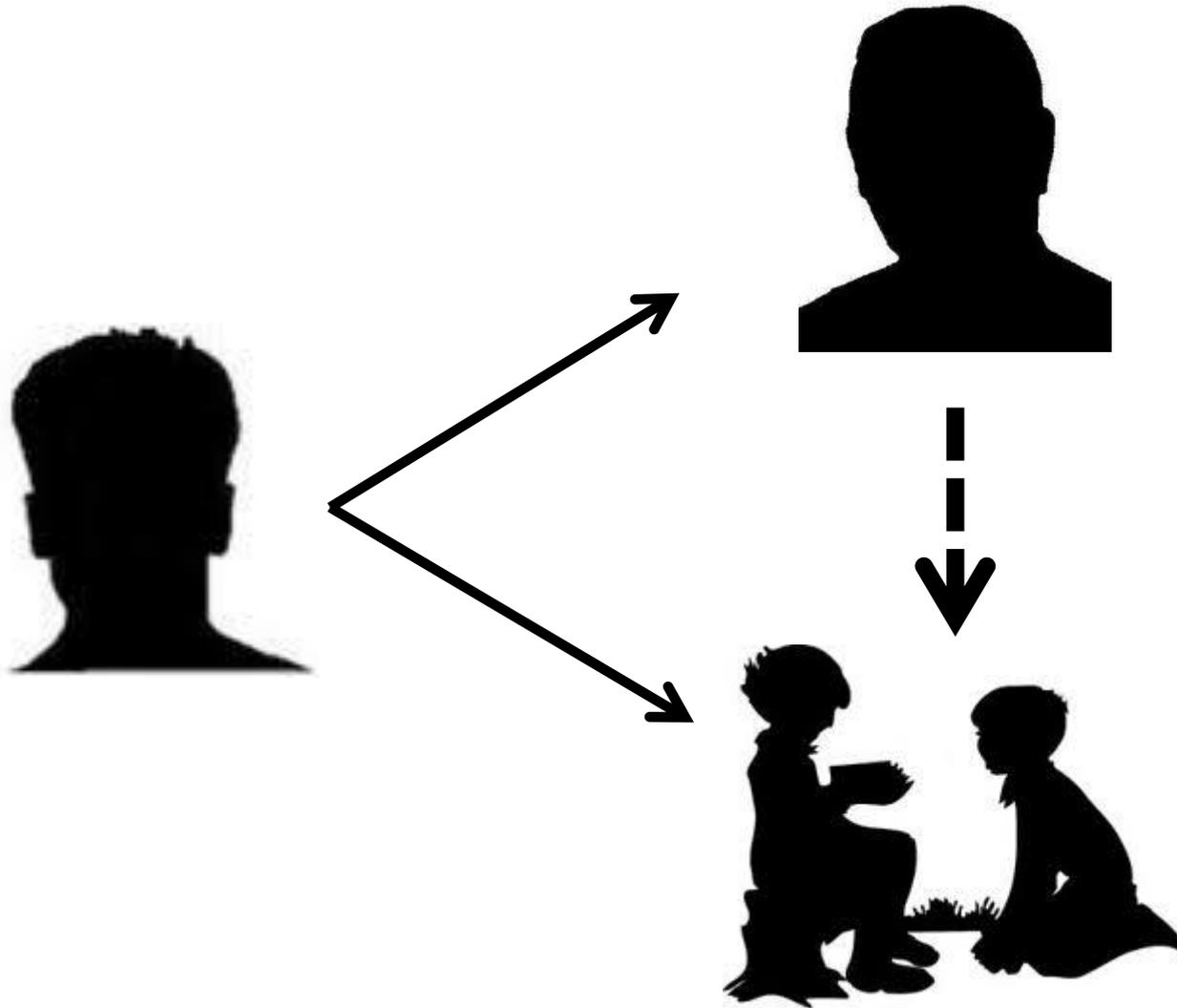
# Some examples



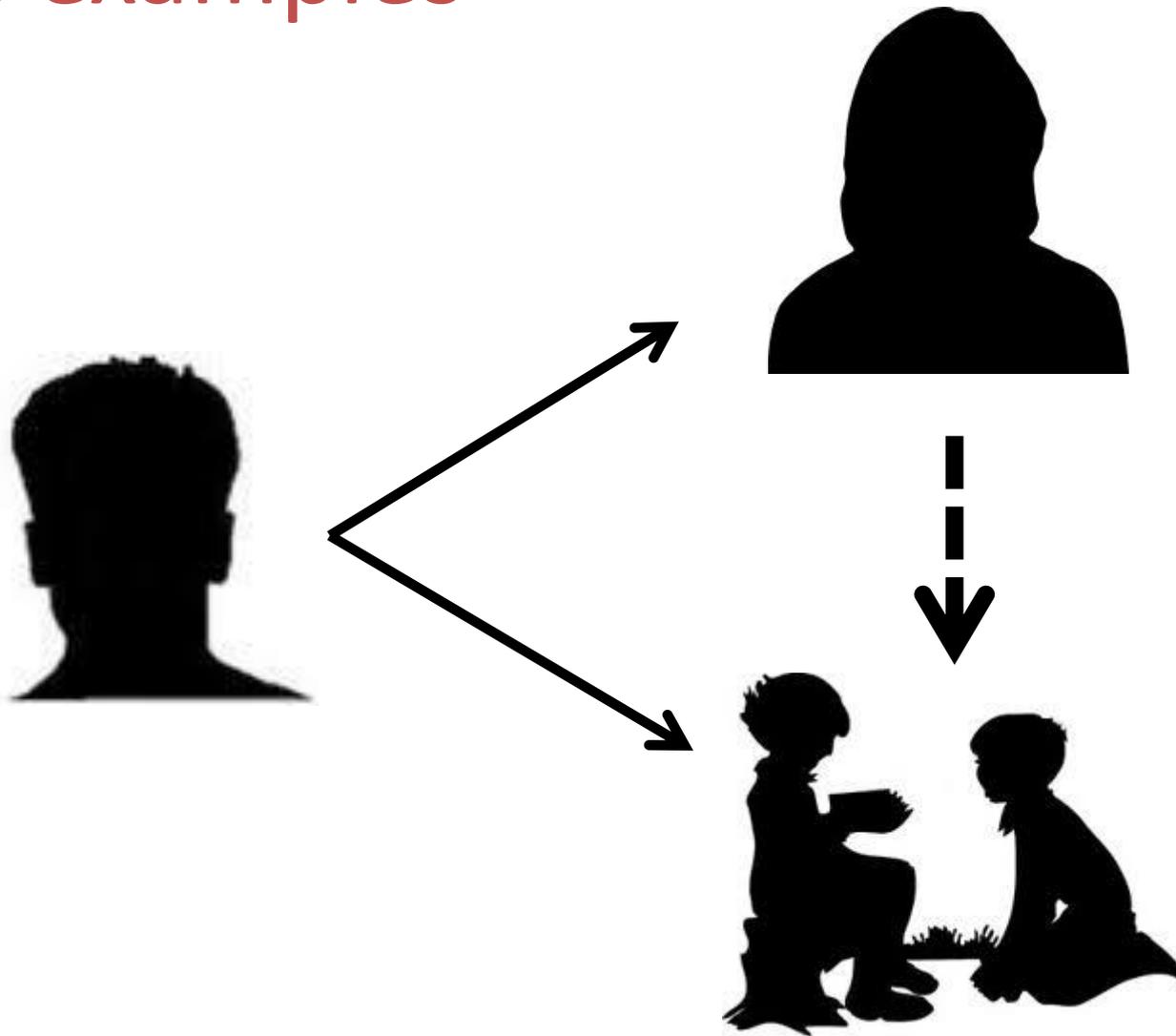
# Some examples



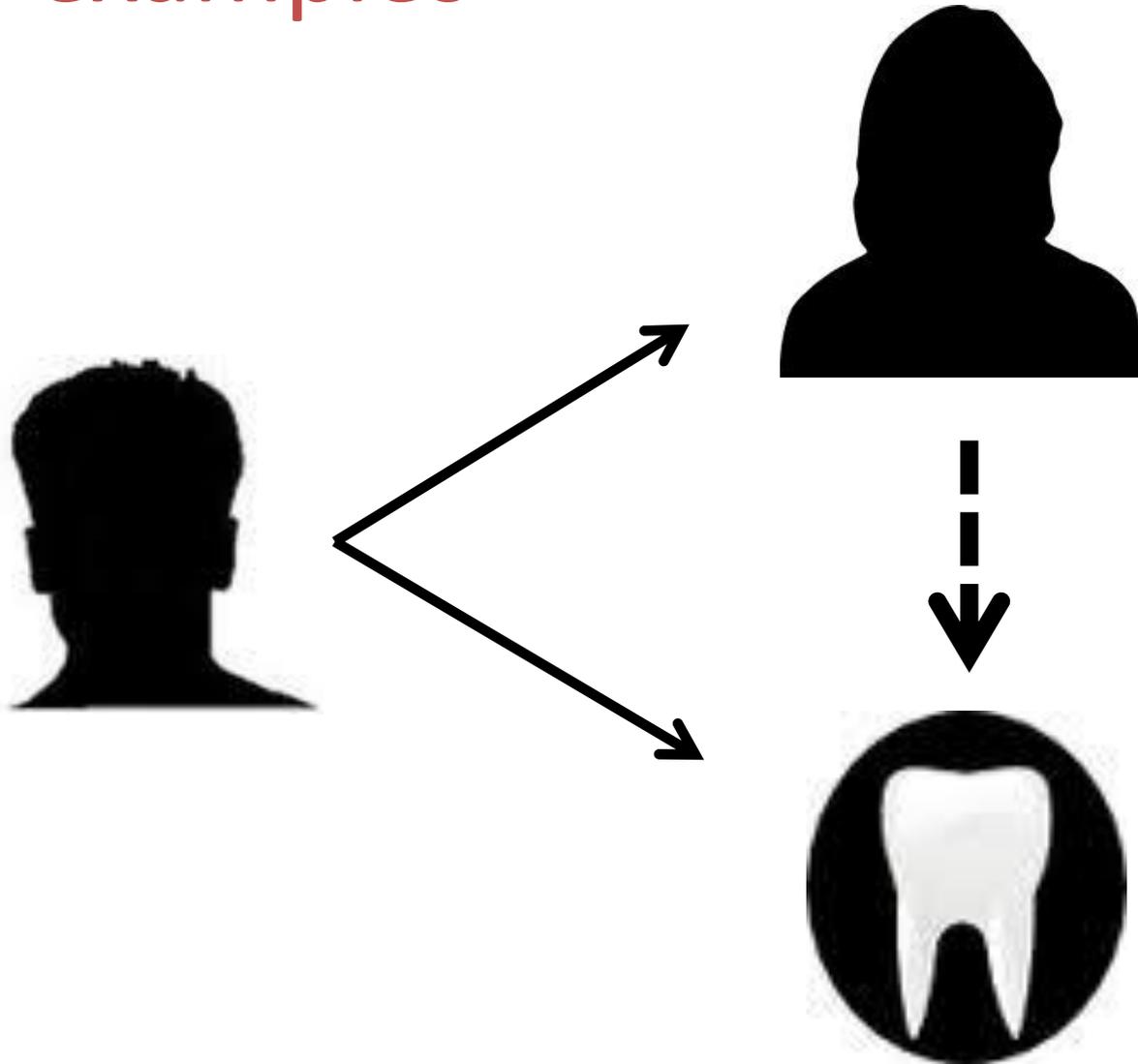
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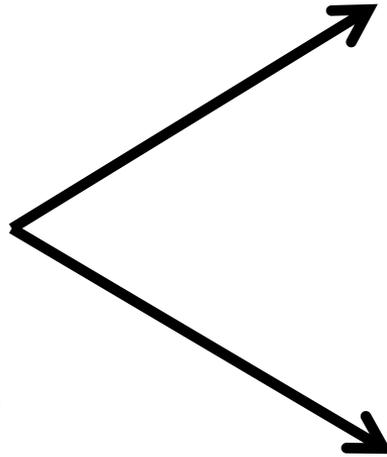
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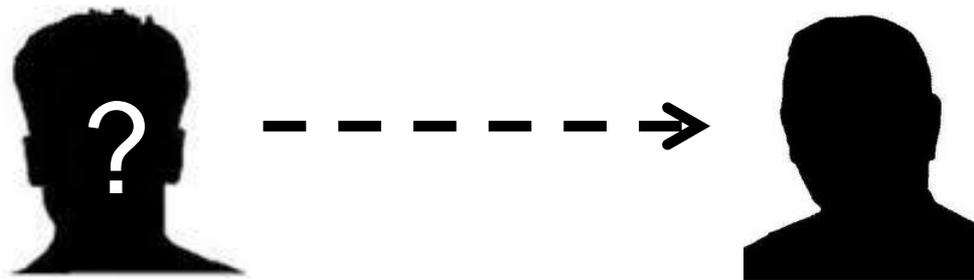


# Types of trust in the literature

- ‘Strategic’ trust (e.g. Hardin, 2002)
  - The **truster’s** perceptions of the **trustee** and **situation** seen as paramount
- ‘Personalized’ trust (e.g. Uslaner, 2002)
  - The **truster’s** perceptions of types of **trustee** seen as paramount.
- ‘Generalized’ trust (e.g. Uslaner, 2002)
  - The characteristics of the **truster** seen as paramount

# Perceptions of trustworthiness

- A central issue in trust research is the perceptions of the truster with regard to the **motivations** of the trustee
  - People are more adverse to **betrayal** than equivalent loss through chance factors (Bohnet & Zeckhauser, 2004)



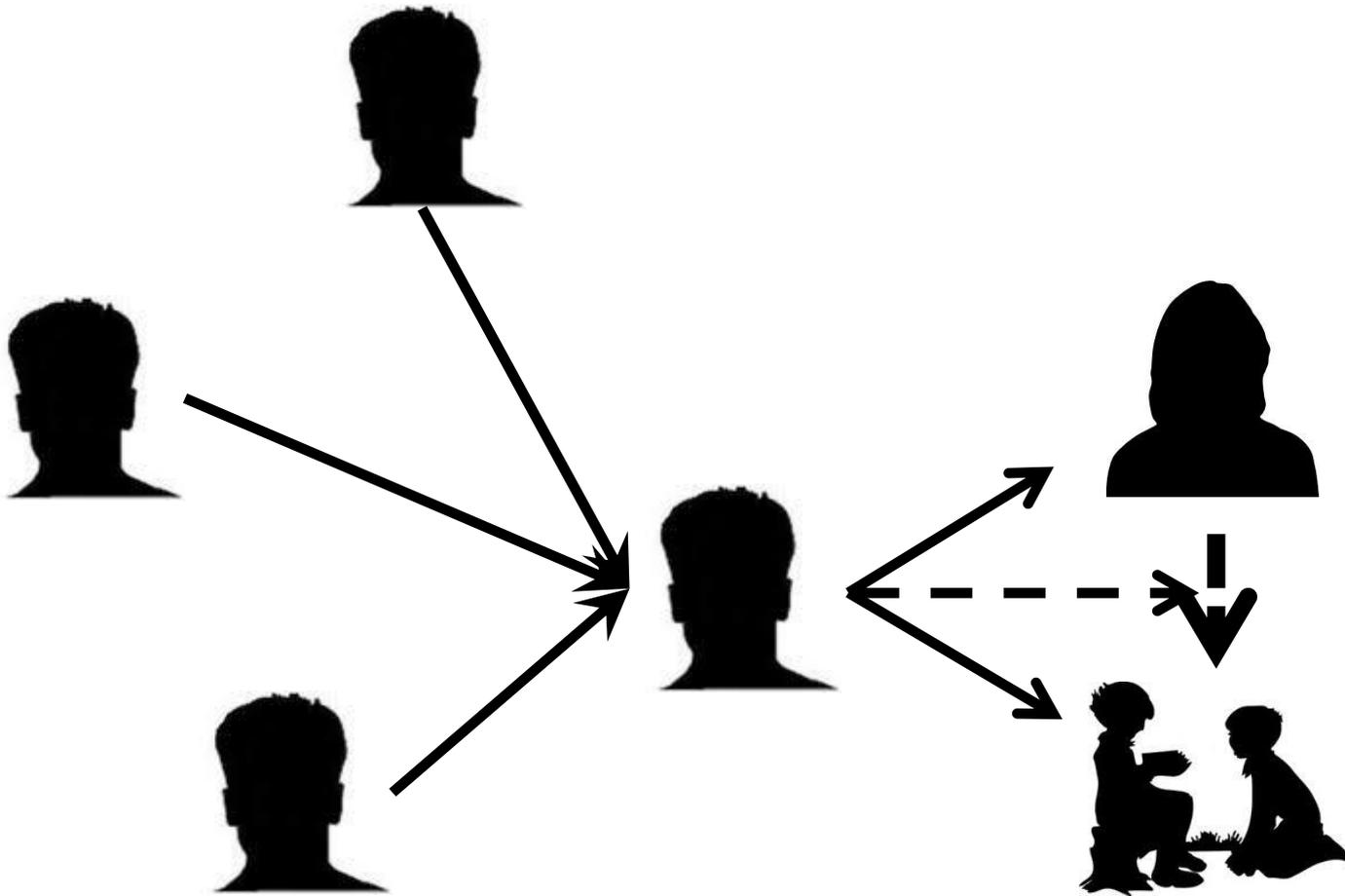
# How do perceptions of trustworthiness come about?

- Generalized trust account
  - For the most part, through early life socialization. People come to have a generalized expectancy of the trustworthiness of others, which then remains pretty much stable.
- Strategic trust account
  - For the most part, through experience throughout life. People have general dispositions, but these adapt to different types of people and situations

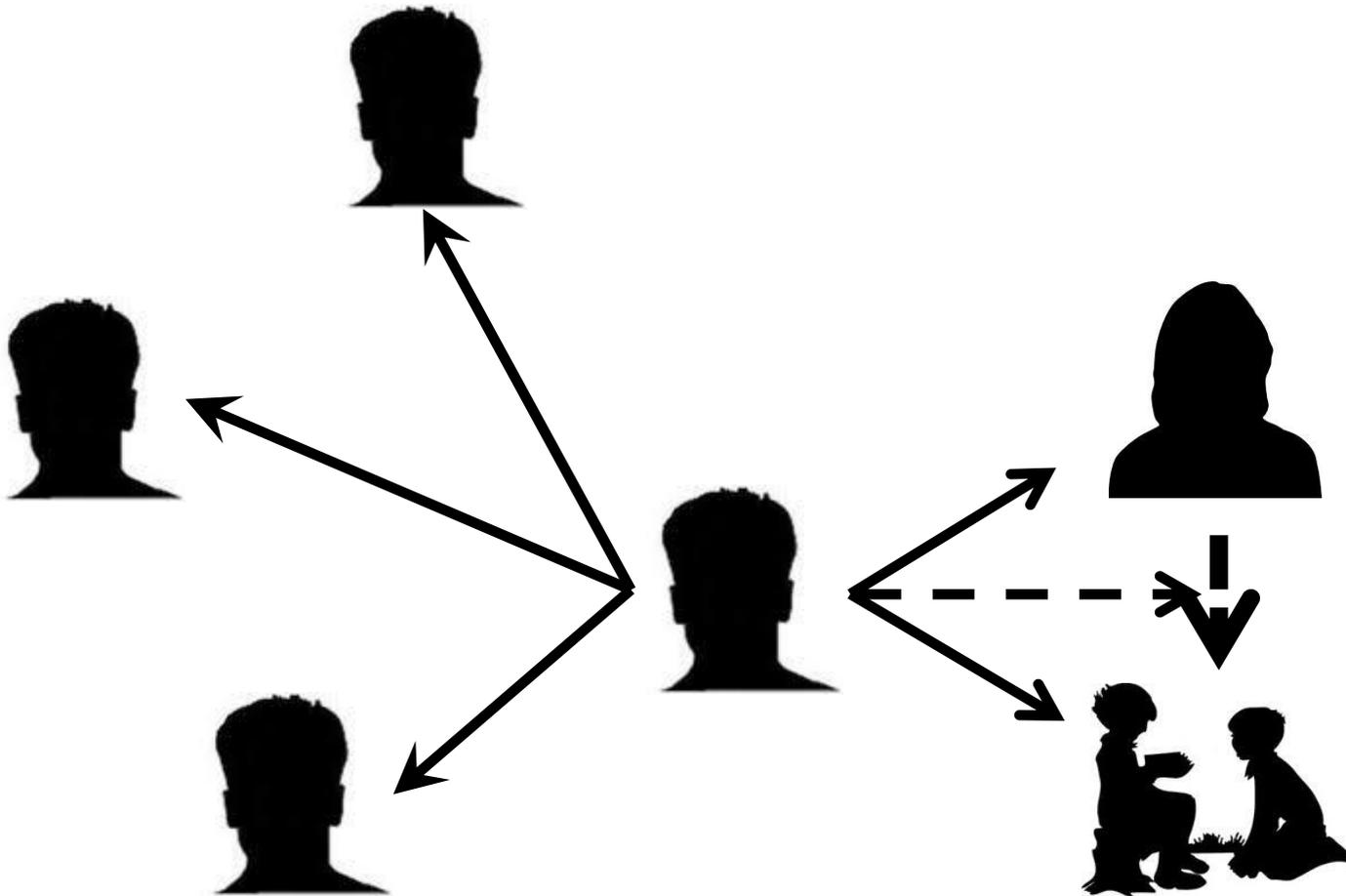
# How do perceptions of trustworthiness come about?

- So far, I've just presented dyads in one-shot scenarios. This is hardly the whole story.
  - People are embedded in social networks
  - People may interact repeatedly over time

# Some examples – network norms



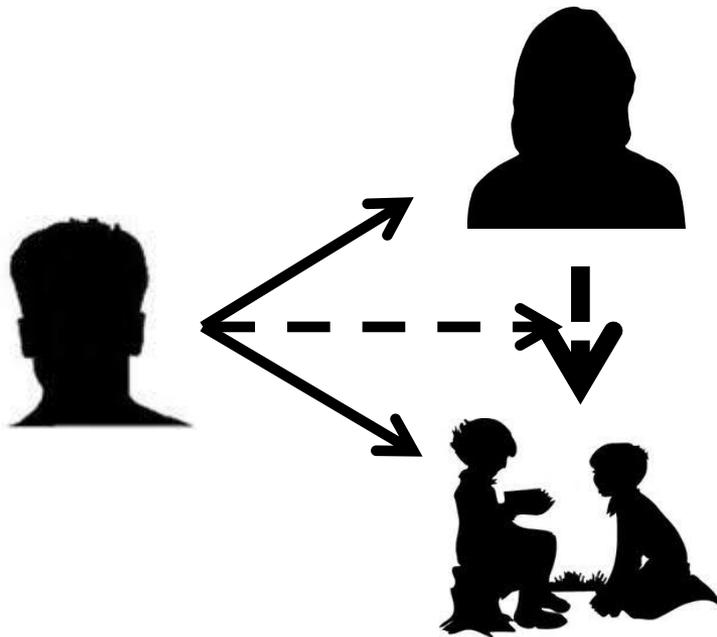
# Some examples – network norms



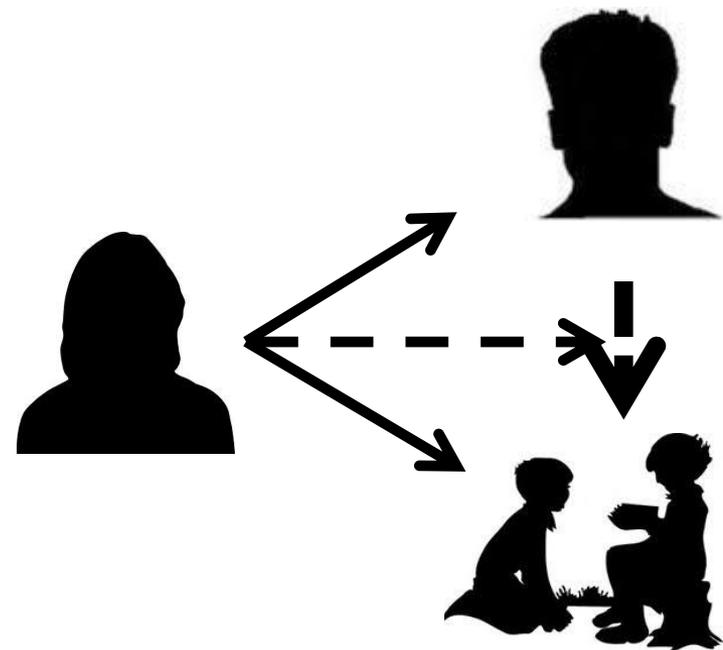


# Some examples – reciprocity and reputation

Today



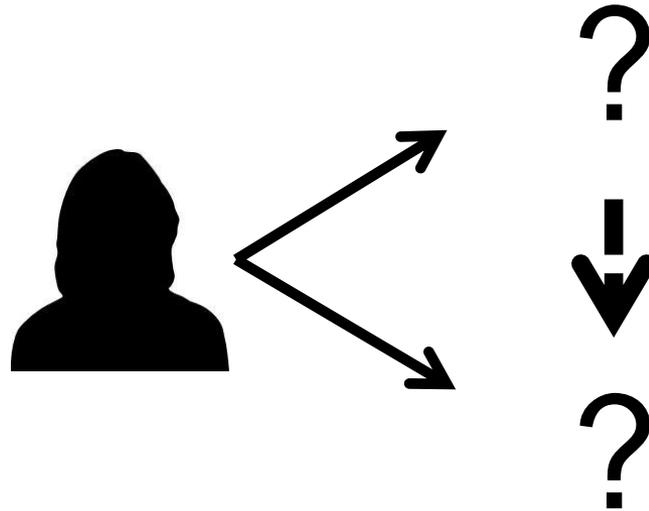
Next week



# Data

- Majority of data are from
  - Surveys, asking questions about how much I trust people, who should be trusted, and how much
  - Behavioural experiments, where participants play games for monetary incentives

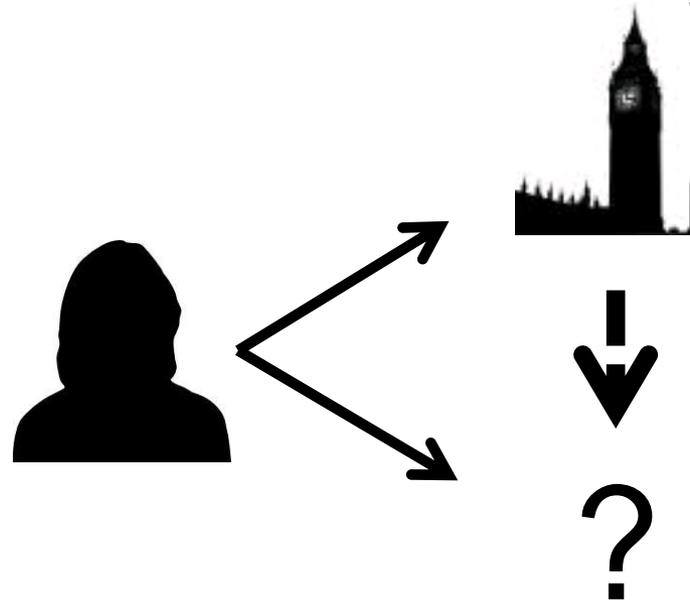
# Surveys



“Do you think most people can be trusted, or do you think you can’t be too careful?”

- Somewhat reliable
- Validity problems though, e.g. ‘Radius of trust’
  - Who is “most people”?
  - Sometimes more specific questions are used

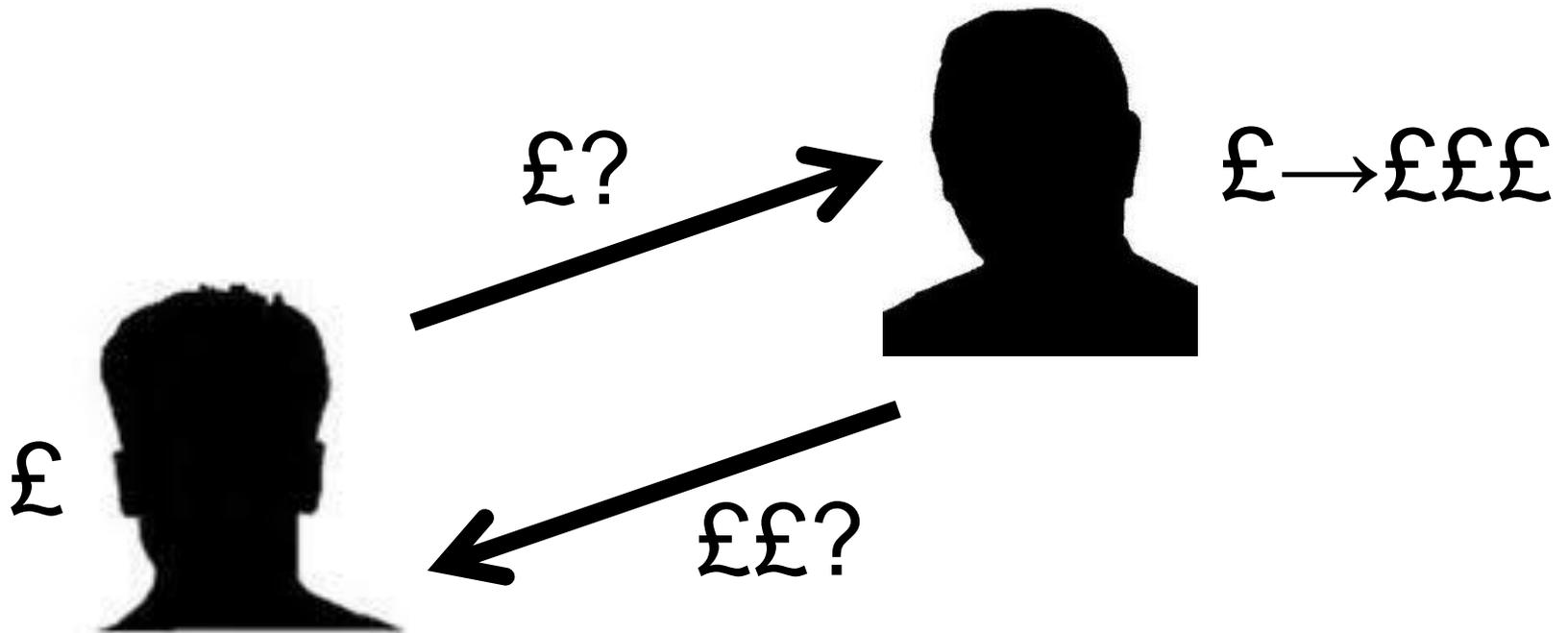
# Surveys



“Do you think parliament can be trusted?”

- To do what? Competence, benevolence?
- A very different relationship between citizen and parliament than between citizen and citizen

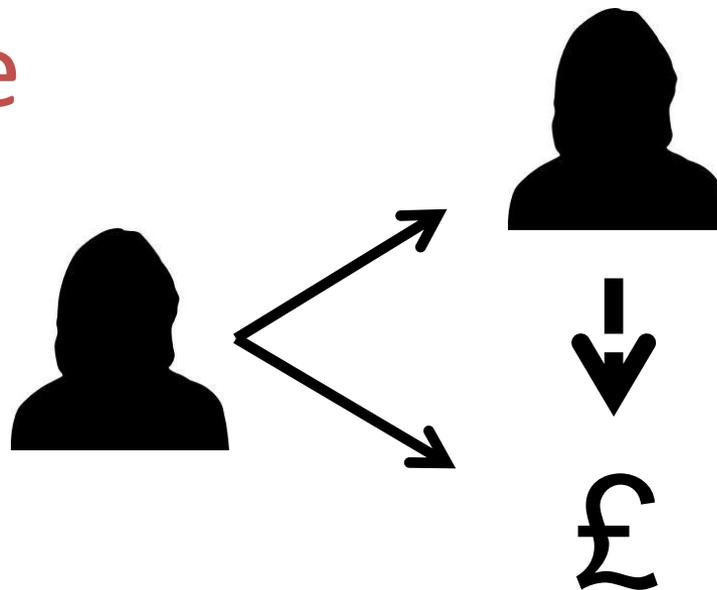
# Experiments – Investor Game



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- ‘Toy’ scenario – how generalizable?
- Interpretation of behaviour is ambiguous
  - Amount sent by truster usually labelled ‘trust’
  - Amount returned by trustee usually assumed to be a signal of ‘trustworthiness’
    - ‘Generalized trust’ question not a great predictor of these behaviours
  - These could be labelled as cooperation, risk taking, altruism, gullibility, etc.

# Investor game



- Some versions include information about the trustee
  - Glaeser *et al.* (2000): Ethnically diverse pairings exchange less than ethnically homogenous pairings
  - Ethnicity used as a signal of trustworthiness?

# Potential topics

- When and how is trust/trustworthiness affected by agents perceiving each other as different, due to ethnicity and migration?
  - Could address ‘contact’ hypotheses.
    - Agents exist in a space (geography?), interacting with each other based upon homophilous association networks and random encounters with ‘neighbours’
    - Agents have needs, which they can satisfy via cooperative interactions
    - Agents have internal states representing stereotypes of other agent types, perceptions of trustworthiness of others, etc.

# Potential topics

- When and how is trust/trustworthiness affected by agents perceiving each other as different, due to ethnicity and migration?
  - Could address ‘contact’ hypotheses.
    - Agents must select interaction partners to satisfy needs
    - Decisions based upon individual perceptions, group norms, reputation and history of interaction
    - Perceptions, stereotypes and norms act upon visible markers of similarity /difference (e.g. Ethnicity, new migrant)
    - Agents may cooperate or cheat

# Potential topics

- When and how is trust/trustworthiness affected by agents perceiving each other as different, due to ethnicity and migration?
  - Could address ‘contact’ hypotheses.
    - Homophily, stereotyping and group norms would tend to keep interactions within groups.
    - Random encounters coupled with successful cooperation and reputation effects would allow some agents to ‘operate’ across groups.
    - These successes could be allowed to affect stereotyping and norms (negatively as well as positively)

# Potential topics

- When and how is trust/trustworthiness affected by agents perceiving each other as different, due to ethnicity and migration?
  - Could address ‘contact’ hypotheses.
    - Influence of history of interaction
    - Influence of network-mediated reputation/monitoring
    - Influence of network structures, where non-random processes might mix agents
- What other factors should be in such a model?

# Potential problems

- Propensity to trust, or perceptions of trustworthiness, would be key outcomes.
  - How would this map on to the ‘real’ world?
  - The ‘behaviours’ in the model are artifice
- Survey data on trust/trustworthiness is known to be contaminated by measurement bias
  - Include a “measurement model” (cf. confirmatory factor analysis) within the agent-based model?
  - ‘Survey’ trust mapped only weakly to ‘experimental’ trust outcomes

# Potential problems

- Fewer (!) measurement issues with other trust outcomes, e.g. Trust in parliament?
  - This would be a completely different model, however
  - Even further from the world of observable behaviours
  - What would such trust depend upon?
- Model experimental outcomes?
  - Data represent actual behaviours, and some experiments collect self-reported trust, etc.
  - Would for the most part exclude network-related factors

# Potential problems

- Where to get detailed, meso-level data on dynamic trust within networks with which to validate the model?
  - Ideally, data on how perceptions of trust may change over days, weeks and months.
- Collect our own experience sampling data?

Help appreciated!