

Value Formation: The Role of Esteem

Robert Akerlof

University of Warwick

February 6, 2016

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

This paper: gives approach to answering these questions.

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

This paper: gives approach to answering these questions.

Applications to disparate problems, such as:

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

This paper: gives approach to answering these questions.

Applications to disparate problems, such as:

- ▶ Why some schools fail while others succeed.

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

This paper: gives approach to answering these questions.

Applications to disparate problems, such as:

- ▶ Why some schools fail while others succeed.
- ▶ Why inner cities suffer from persistent high nonemployment.

Introduction

The values people hold are critical determinants of outcomes in many different contexts.

But, how do they form? What causes them to change?

This paper: gives approach to answering these questions.

Applications to disparate problems, such as:

- ▶ Why some schools fail while others succeed.
- ▶ Why inner cities suffer from persistent high nonemployment.
- ▶ Why workers, in many firms, put up resistance.

Introduction

Values are chosen in the model.

Introduction

Values are chosen in the model.

Choice motivated by economic considerations, but crucially, also by desire for esteem.

Introduction

Values are chosen in the model.

Choice motivated by economic considerations, but crucially, also by desire for esteem.

Two components of esteem, which result in conflicting desires:

Introduction

Values are chosen in the model.

Choice motivated by economic considerations, but crucially, also by desire for esteem.

Two components of esteem, which result in conflicting desires:

- ▶ People have desire to be esteemed by peers, which is satisfied by conforming to them.

Introduction

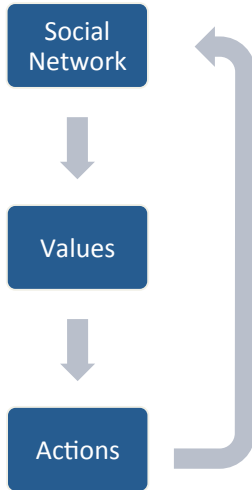
Values are chosen in the model.

Choice motivated by economic considerations, but crucially, also by desire for esteem.

Two components of esteem, which result in conflicting desires:

- ▶ People have desire to be esteemed by peers, which is satisfied by conforming to them.
- ▶ People have a desire for self-esteem, which is often best satisfied by differentiating.

Introduction



Introduction

Sketch of Model:

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

- (1) Effort at two activities.

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

(1) Effort at two activities.

- ▶ Corresponding to two traditional categories in US schools, “nerds” and “burnouts,” will refer to activities as academics and rock music (music for short).

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

(1) Effort at two activities.

- ▶ Corresponding to two traditional categories in US schools, “nerds” and “burnouts,” will refer to activities as academics and rock music (music for short).
- ▶ Achievement at activities depends upon effort and ability.

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

(1) Effort at two activities.

- ▶ Corresponding to two traditional categories in US schools, “nerds” and “burnouts,” will refer to activities as academics and rock music (music for short).
- ▶ Achievement at activities depends upon effort and ability.

(2) Whether to value achievement at activities.

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

(1) Effort at two activities.

- ▶ Corresponding to two traditional categories in US schools, “nerds” and “burnouts,” will refer to activities as academics and rock music (music for short).
- ▶ Achievement at activities depends upon effort and ability.

(2) Whether to value achievement at activities.

(3) Whether to initiate interaction.

Introduction

Sketch of Model:

Two-player, simultaneous-move game.

Players make three choices:

(1) Effort at two activities.

- ▶ Corresponding to two traditional categories in US schools, “nerds” and “burnouts,” will refer to activities as academics and rock music (music for short).
- ▶ Achievement at activities depends upon effort and ability.

(2) Whether to value achievement at activities.

(3) Whether to initiate interaction.

- ▶ Interaction takes place if either player initiates it.

Introduction

Sketch of Model:

Three main assumptions:

Introduction

Sketch of Model:

Three main assumptions:

- (1) Basis upon which a player confers esteem depends upon his values.

Introduction

Sketch of Model:

Three main assumptions:

- (1) Basis upon which a player confers esteem depends upon his values.
 - ▶ A player who only values academics (music), confers esteem only on the basis of academic (musical) achievement.

Introduction

Sketch of Model:

Three main assumptions:

- (1) Basis upon which a player confers esteem depends upon his values.
 - ▶ A player who only values academics (music), confers esteem only on the basis of academic (musical) achievement.
- (2) Players are esteemed for their relative achievement.

Introduction

Sketch of Model:

Three main assumptions:

- (1) Basis upon which a player confers esteem depends upon his values.
 - ▶ A player who only values academics (music), confers esteem only on the basis of academic (musical) achievement.
- (2) Players are esteemed for their relative achievement.
- (3) Players value self-esteem; when they interact, also value esteem of the other player.

Introduction

Equilibria resolve tension between desires to conform and differentiate.

Introduction

Equilibria resolve tension between desires to conform and differentiate.

They have the following properties:

Introduction

Equilibria resolve tension between desires to conform and differentiate.

They have the following properties:

- ▶ Players focus effort on a single activity (whichever has highest esteem-returns to effort).

Introduction

Equilibria resolve tension between desires to conform and differentiate.

They have the following properties:

- ▶ Players focus effort on a single activity (whichever has highest esteem-returns to effort).
- ▶ May or may not focus on the same activity.

Introduction

Equilibria resolve tension between desires to conform and differentiate.

They have the following properties:

- ▶ Players focus effort on a single activity (whichever has highest esteem-returns to effort).
- ▶ May or may not focus on the same activity.
- ▶ Players value activities they focus on when achievement is sufficiently high.

Introduction

Equilibria resolve tension between desires to conform and differentiate.

They have the following properties:

- ▶ Players focus effort on a single activity (whichever has highest esteem-returns to effort).
- ▶ May or may not focus on the same activity.
- ▶ Players value activities they focus on when achievement is sufficiently high.
- ▶ Players seek (avoid) interaction with those with the same (different) values: “value homophily.”

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Encouraging interaction (reducing its cost): makes players care more about conforming.

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Encouraging interaction (reducing its cost): makes players care more about conforming.

- ▶ Players more likely to focus on same activities/hold same values.

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Encouraging interaction (reducing its cost): makes players care more about conforming.

- ▶ Players more likely to focus on same activities/hold same values.

Increase in peer ability: ambiguous effect on own achievement.

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Encouraging interaction (reducing its cost): makes players care more about conforming.

- ▶ Players more likely to focus on same activities/hold same values.

Increase in peer ability: ambiguous effect on own achievement.

- ▶ If peer ability is low, an increase in peer ability has a positive effect on own achievement. (desire to conform dominates)

Introduction

Model's comparative statics show how different policies and shocks affect values and behavior.

Encouraging interaction (reducing its cost): makes players care more about conforming.

- ▶ Players more likely to focus on same activities/hold same values.

Increase in peer ability: ambiguous effect on own achievement.

- ▶ If peer ability is low, an increase in peer ability has a positive effect on own achievement. (desire to conform dominates)
- ▶ If peer ability is high, an increase in peer ability has a negative effect on own achievement. (desire to differentiate dominates)

Introduction

Following discussion of the model, will consider three applications:

- ▶ Schools
- ▶ Decline of US Inner Cities
- ▶ Resistance in Organizations

Related Literature

Brings together three forces – (1) flexible values, (2) social comparison, and (3) desire for peer esteem/approval – which have appeared in separate treatments in previous literature.

Cognitive Dissonance Models: Benabou and Tirole (2011), Oxoby (2003, 2004), Rabin (1994), Akerlof and Dickens (1982).

Identity Models: Akerlof and Kranton (2000, 2002).

Models with Social Comparison: Bernheim (1994), Frank (1985).

Cicala, Fryer, Spenkuch (2011): Have suggested Roy model as explanation of positive and negative peer effects.

Contests, especially multi-battlefield: See Kovenock and Roberson (2012) for a review.

Talk outline

1. Model

- ▶ Setup
- ▶ Properties of Equilibria
- ▶ Equilibria and Comparative Statics

2. Applications

3. Conclusion

Model Setup

Two-player, simultaneous-move game.

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Player $i \in \{1, 2\}$ makes 3 choices:

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Player $i \in \{1, 2\}$ makes 3 choices:

- (1) Effort at two activities: $e_{i1}, e_{i2} \geq 0$.

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Player $i \in \{1, 2\}$ makes 3 choices:

- (1) Effort at two activities: $e_{i1}, e_{i2} \geq 0$.
- (2) Whether to value activities: $\theta_{i1}, \theta_{i2} \in \{0, 1\}$.

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Player $i \in \{1, 2\}$ makes 3 choices:

- (1) Effort at two activities: $e_{i1}, e_{i2} \geq 0$.
- (2) Whether to value activities: $\theta_{i1}, \theta_{i2} \in \{0, 1\}$.
- (3) Whether to initiate interaction: $x_i \in \{0, 1\}$.

Model Setup

Two-player, simultaneous-move game.

Focus will be on pure-strategy Nash equilibria.

Player $i \in \{1, 2\}$ makes 3 choices:

- (1) Effort at two activities: $e_{i1}, e_{i2} \geq 0$.
- (2) Whether to value activities: $\theta_{i1}, \theta_{i2} \in \{0, 1\}$.
- (3) Whether to initiate interaction: $x_i \in \{0, 1\}$.
 - ▶ interaction takes place if either player initiates it (if $x_1 = 1$ or $x_2 = 1$).

Model Setup

Activity 1: academics.

Model Setup

Activity 1: academics.

Activity 2: rock music.

Model Setup

Activity 1: academics.

Activity 2: rock music.

Achievement at activities is product of effort and ability:

Model Setup

Activity 1: academics.

Activity 2: rock music.

Achievement at activities is product of effort and ability:

Achievement at academics: $a_{i1} = \alpha_i e_{i1}$.

Model Setup

Activity 1: academics.

Activity 2: rock music.

Achievement at activities is product of effort and ability:

Achievement at academics: $a_{i1} = \alpha_i e_{i1}$.

- ▶ $\alpha_i \geq 0$: player i 's academic ability.

Model Setup

Activity 1: academics.

Activity 2: rock music.

Achievement at activities is product of effort and ability:

Achievement at academics: $a_{i1} = \alpha_i e_{i1}$.

- ▶ $\alpha_i \geq 0$: player i 's academic ability.

Assume players have the same ability at music, which is normalized to 1: $a_{i2} = e_{i2}$.

Model Setup

Players' utility function:

$$U_i = -\frac{1}{2}(e_{i1} + e_{i2})^2 - kx_i + E_i.$$

First two terms: economic.

Last term: esteem.

Model Setup

Sources of esteem utility (E_i):

Model Setup

Sources of esteem utility (E_i):

- (1) Players value self-esteem: E_i^j .

Model Setup

Sources of esteem utility (E_i):

- (1) Players value self-esteem: E_i^i .
- (2) When players interact, they value esteem of other player: E_i^j .

Model Setup

Sources of esteem utility (E_i):

(1) Players value self-esteem: E_i^i .

(2) When players interact, they value esteem of other player: E_i^j .

$$E_i = E_i^i + G(x_1, x_2) \cdot E_i^j.$$

Model Setup

Sources of esteem utility (E_i):

(1) Players value self-esteem: E_i^i .

(2) When players interact, they value esteem of other player: E_i^j .

$$E_i = E_i^i + G(x_1, x_2) \cdot E_i^j.$$

$G(x_1, x_2) = 1$ if the players interact.

Model Setup

Sources of esteem utility (E_i):

(1) Players value self-esteem: E_i^i .

(2) When players interact, they value esteem of other player: E_i^j .

$$E_i = E_i^i + G(x_1, x_2) \cdot E_i^j.$$

$G(x_1, x_2) = 1$ if the players interact.

$G(x_1, x_2) = 0$ if the players do not interact.

Model Setup

Player i grants esteem for achievement relative to others at valued activities.

Model Setup

Player i grants esteem for achievement relative to others at valued activities.

The esteem player i grants player l (l may refer to himself or the other player) is given by:

$$E_l^i = \sum_{s=1}^2 \theta_{is}(a_{ls} - \bar{a}_s).$$

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Players compare themselves to one another; also compare themselves to a background population of $n \geq 0$ agents.

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Players compare themselves to one another; also compare themselves to a background population of $n \geq 0$ agents.

Higher $n \implies$ reduces extent to which players compare themselves to one another.

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Players compare themselves to one another; also compare themselves to a background population of $n \geq 0$ agents.

Higher $n \implies$ reduces extent to which players compare themselves to one another.

Results do not depend critically on assumptions regarding achievement of background population.

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Players compare themselves to one another; also compare themselves to a background population of $n \geq 0$ agents.

Higher $n \implies$ reduces extent to which players compare themselves to one another.

Results do not depend critically on assumptions regarding achievement of background population.

For simplicity, we assume 0 achievement at both activities.

Model Setup

\bar{a}_s : achievement of a comparison group or “reference group.”

Players compare themselves to one another; also compare themselves to a background population of $n \geq 0$ agents.

Higher $n \implies$ reduces extent to which players compare themselves to one another.

Results do not depend critically on assumptions regarding achievement of background population.

For simplicity, we assume 0 achievement at both activities.

Therefore: $\bar{a}_1 = \frac{a_{11}+a_{21}}{n+2}$, $\bar{a}_2 = \frac{a_{12}+a_{22}}{n+2}$.

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

(1) Values

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

(1) Values

(2) Effort

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

- (1) Values
- (2) Effort
- (3) Esteem

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

- (1) Values
- (2) Effort
- (3) Esteem
- (4) Interaction

Properties of Equilibria

I will describe four properties of equilibria, concerning respectively:

- (1) Values
- (2) Effort
- (3) Esteem
- (4) Interaction

Will enable us to succinctly describe the equilibrium set; also yield intuition.

Properties of Equilibria

Values:

Lemma 1

In equilibrium, players value activities ($\theta_{is}^ = 1$) if and only if their achievement is above average ($a_{is}^* - \bar{a}_s^* > 0$).*

Properties of Equilibria

Values:

Lemma 1

In equilibrium, players value activities ($\theta_{is}^ = 1$) if and only if their achievement is above average ($a_{is}^* - \bar{a}_s^* > 0$).*

Furthermore, as we will see presently, players value at most one activity in equilibrium.

Properties of Equilibria

Values:

Lemma 1

In equilibrium, players value activities ($\theta_{is}^ = 1$) if and only if their achievement is above average ($a_{is}^* - \bar{a}_s^* > 0$).*

Furthermore, as we will see presently, players value at most one activity in equilibrium.

We will refer to players who value academics as “scholars” and players who value music as “musicians.”

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

- (1) $M_{i1} \geq M_{i2}$: *player i focuses on academics, does not value music.*

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

- (1) $M_{i1} \geq M_{i2}$: player i focuses on academics, does not value music.

$$e_{i1}^* = M_{i1}, e_{i2}^* = 0, \theta_{i2}^* = 0$$

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

- (1) $M_{i1} \geq M_{i2}$: player i focuses on academics, does not value music.

$$e_{i1}^* = M_{i1}, e_{i2}^* = 0, \theta_{i2}^* = 0$$

- (2) $M_{i1} < M_{i2}$: player i focuses on music, does not value academics.

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

- (1) $M_{i1} \geq M_{i2}$: player i focuses on academics, does not value music.

$$e_{i1}^* = M_{i1}, e_{i2}^* = 0, \theta_{i2}^* = 0$$

- (2) $M_{i1} < M_{i2}$: player i focuses on music, does not value academics.

$$e_{i1}^* = 0, e_{i2}^* = M_{i2}, \theta_{i1}^* = 0$$

Properties of Equilibria

Effort:

Lemma 2

Let M_{i1} and M_{i2} denote the marginal esteem-returns to effort at academics and music respectively. An equilibrium must satisfy:

- (1) $M_{i1} \geq M_{i2}$: player i focuses on academics, does not value music.

$$e_{i1}^* = M_{i1}, e_{i2}^* = 0, \theta_{i2}^* = 0$$

- (2) $M_{i1} < M_{i2}$: player i focuses on music, does not value academics.

$$e_{i1}^* = 0, e_{i2}^* = M_{i2}, \theta_{i1}^* = 0$$

Furthermore:

$$M_{i1} = (\theta_{i1}^* + G(x_1^*, x_2^*) \cdot \theta_{j1}^*) \left(\frac{n+1}{n+2} \alpha_i \right)$$

$$M_{i2} = (\theta_{i2}^* + G(x_1^*, x_2^*) \cdot \theta_{j2}^*) \left(\frac{n+1}{n+2} \right)$$

Properties of Equilibria

Esteem:

Lemma 3

In equilibrium:

Properties of Equilibria

Esteem:

Lemma 3

In equilibrium:

- (1) *Players have positive self-esteem. They have strictly positive self-esteem when they value academics or music.*

Properties of Equilibria

Esteem:

Lemma 3

In equilibrium:

- (1) *Players have positive self-esteem. They have strictly positive self-esteem when they value academics or music.*
- (2) *Players positively esteem one another when they hold the same values. Their esteem judgments also coincide.*

Properties of Equilibria

Esteem:

Lemma 3

In equilibrium:

- (1) *Players have positive self-esteem. They have strictly positive self-esteem when they value academics or music.*
- (2) *Players positively esteem one another when they hold the same values. Their esteem judgments also coincide.*
- (3) *Players negatively esteem one another when they hold different values.*

Properties of Equilibria

Interaction:

Lemma 4

Suppose there is a positive but negligible cost of initiating interaction ($k = 0^+$).

Properties of Equilibria

Interaction:

Lemma 4

Suppose there is a positive but negligible cost of initiating interaction ($k = 0^+$).

- (1) *If both players value academics or both players value music, they will interact in equilibrium.*

Properties of Equilibria

Interaction:

Lemma 4

Suppose there is a positive but negligible cost of initiating interaction ($k = 0^+$).

- (1) If both players value academics or both players value music, they will interact in equilibrium.*
- (2) If one player values academics and the other values music, they will not interact in equilibrium.*

Properties of Equilibria

Interaction:

Lemma 4

Suppose there is a positive but negligible cost of initiating interaction ($k = 0^+$).

- (1) If both players value academics or both players value music, they will interact in equilibrium.*
- (2) If one player values academics and the other values music, they will not interact in equilibrium.*

More generally, there is a tendency for players with the same values to interact (since they positively esteem one another).

Properties of Equilibria

Interaction:

Lemma 4

Suppose there is a positive but negligible cost of initiating interaction ($k = 0^+$).

- (1) If both players value academics or both players value music, they will interact in equilibrium.*
- (2) If one player values academics and the other values music, they will not interact in equilibrium.*

More generally, there is a tendency for players with the same values to interact (since they positively esteem one another).

Whether they interact will also be governed by the cost of interaction (k).

Equilibria and Comparative Statics

Now, we will characterize the equilibrium set and consider comparative statics:

Equilibria and Comparative Statics

Now, we will characterize the equilibrium set and consider comparative statics:

- ▶ First, we will discuss the case where there is a positive but negligible cost of initiating interaction ($k = 0^+$).

Equilibria and Comparative Statics

Now, we will characterize the equilibrium set and consider comparative statics:

- ▶ First, we will discuss the case where there is a positive but negligible cost of initiating interaction ($k = 0^+$).
- ▶ Then, we will examine the more general case in which k may be positive or negative.

Equilibria and Comparative Statics

(1) Negligible cost of interaction ($k = 0^+$).

Equilibria and Comparative Statics

(1) Negligible cost of interaction ($k = 0^+$).

- ▶ Results driven by tension between desires to conform and differentiate.

Equilibria and Comparative Statics

(1) Negligible cost of interaction ($k = 0^+$).

- ▶ Results driven by tension between desires to conform and differentiate.
- ▶ In particular, players are relatively willing to conform when they possess similar ability.

Equilibria and Comparative Statics

(1) Negligible cost of interaction ($k = 0^+$).

- ▶ Results driven by tension between desires to conform and differentiate.
- ▶ In particular, players are relatively willing to conform when they possess similar ability.
- ▶ But, when one player's ability far exceeds the other's, players have a strong temptation to differentiate.

Equilibria and Comparative Statics

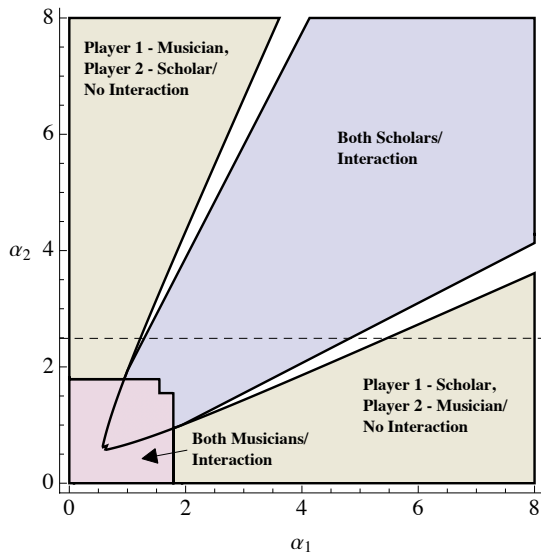


Figure 1

Equilibria and Comparative Statics

Observations

Equilibria and Comparative Statics

Observations

- (1) Equilibria exist in which a player more able at academics becomes a musician, out of a desire to *differentiate* from the other player (who is a scholar).

Equilibria and Comparative Statics

Observations

- (1) Equilibria exist in which a player more able at academics becomes a musician, out of a desire to *differentiate* from the other player (who is a scholar).
- (2) Equilibria arise in which both players are superior at academics, but both become musicians. Each chooses to become a musician to *conform* to the other.

Equilibria and Comparative Statics

Observations

- (1) Equilibria exist in which a player more able at academics becomes a musician, out of a desire to *differentiate* from the other player (who is a scholar).
- (2) Equilibria arise in which both players are superior at academics, but both become musicians. Each chooses to become a musician to *conform* to the other.
- (3) Multiple values can arise. These values almost always differ in the welfare they give to players.

Equilibria and Comparative Statics

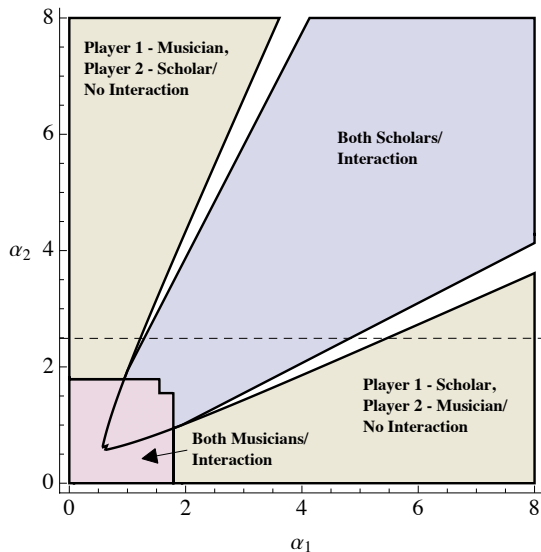


Figure 1

Equilibria and Comparative Statics

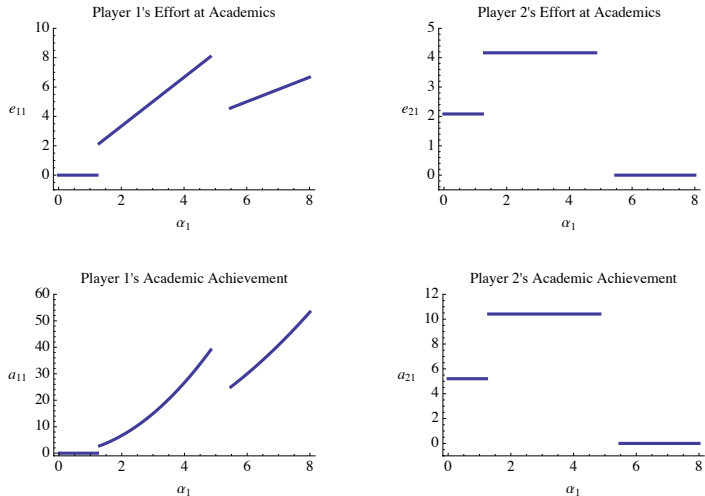


Figure 2

Equilibria and Comparative Statics

Perhaps contrary to intuition, self-esteem is non-monotonic in own ability.

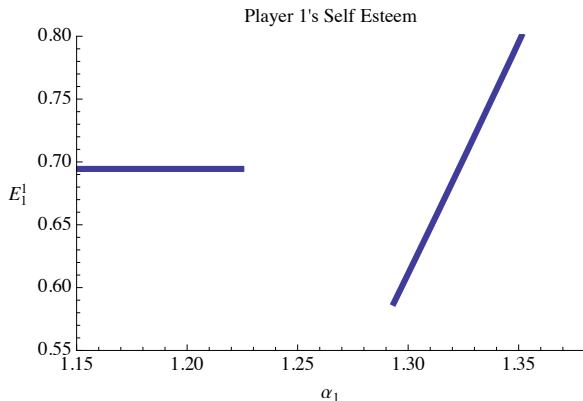


Figure 3

Equilibria and Comparative Statics

(2) Positive or negative cost of initiating interaction (k).

Equilibria and Comparative Statics

(2) Positive or negative cost of initiating interaction (k).

- ▶ Results again driven by competing desires to conform and differentiate.

Equilibria and Comparative Statics

(2) Positive or negative cost of initiating interaction (k).

- ▶ Results again driven by competing desires to conform and differentiate.
- ▶ No interaction: players do not care about obtaining peer esteem, so no desire to conform.

Equilibria and Comparative Statics

(2) Positive or negative cost of initiating interaction (k).

- ▶ Results again driven by competing desires to conform and differentiate.
- ▶ No interaction: players do not care about obtaining peer esteem, so no desire to conform.
- ▶ Interaction: players care more about conforming.

Equilibria and Comparative Statics

(2) Positive or negative cost of initiating interaction (k).

- ▶ Results again driven by competing desires to conform and differentiate.
- ▶ No interaction: players do not care about obtaining peer esteem, so no desire to conform.
- ▶ Interaction: players care more about conforming.
- ▶ Thus, encouraging interaction (decreasing k) makes it more likely players focus on and value same activities.

Equilibria and Comparative Statics

Analysis divided into three cases:

- (i) One of the players has high academic ability.
- (ii) One of the players has low academic ability.
- (iii) Both have intermediate ability.

Equilibria and Comparative Statics

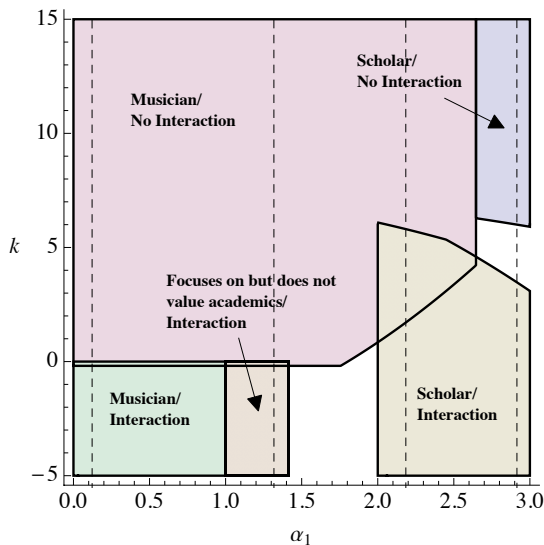


Figure 4: behavior of player 1 when player 2 has high ability ($\alpha_2 > \bar{\alpha}_H$).

Equilibria and Comparative Statics

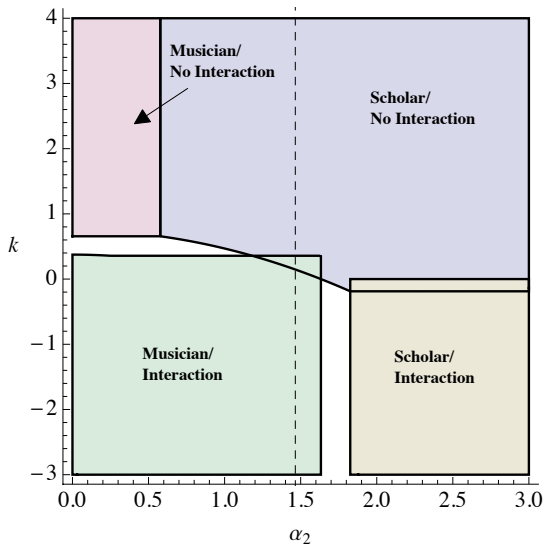


Figure 5: behavior of player 2 when player 1 has low ability ($\alpha_1 < \bar{\alpha}_L$).

Equilibria and Comparative Statics

(iii) Both have intermediate ability ($\bar{\alpha}_L \leq \alpha_1, \alpha_2 \leq \bar{\alpha}_H$)

Equilibria and Comparative Statics

(iii) Both have intermediate ability ($\bar{\alpha}_L \leq \alpha_1, \alpha_2 \leq \bar{\alpha}_H$)

- ▶ Cannot draw a representative picture in two dimensions.

Equilibria and Comparative Statics

(iii) Both have intermediate ability ($\bar{\alpha}_L \leq \alpha_1, \alpha_2 \leq \bar{\alpha}_H$)

- ▶ Cannot draw a representative picture in two dimensions.
- ▶ But, we can still fully characterize the equilibrium set (see paper).

Equilibria and Comparative Statics

(iii) Both have intermediate ability ($\bar{\alpha}_L \leq \alpha_1, \alpha_2 \leq \bar{\alpha}_H$)

- ▶ Cannot draw a representative picture in two dimensions.
- ▶ But, we can still fully characterize the equilibrium set (see paper).
- ▶ As in cases (i) and (ii), encouraging interaction makes it more likely players focus on and value same activities.

Talk outline

1. Model

2. **Applications**

- ▶ Schools
- ▶ Inner City
- ▶ Resistance

3. Conclusion

Schools

James Coleman's *Adolescent Society* demonstrated importance of student culture for academic achievement.

Schools

James Coleman's *Adolescent Society* demonstrated importance of student culture for academic achievement.

Coleman's empirical findings provide strong evidence of a tension between conforming and differentiating.

Schools

James Coleman's *Adolescent Society* demonstrated importance of student culture for academic achievement.

Coleman's empirical findings provide strong evidence of a tension between conforming and differentiating.

The model accounts for seemingly contradictory results on peer effects in schools: such as Hanushek et al. (2003) and Carrell et al. (2013).

Schools

James Coleman's *Adolescent Society* demonstrated importance of student culture for academic achievement.

Coleman's empirical findings provide strong evidence of a tension between conforming and differentiating.

The model accounts for seemingly contradictory results on peer effects in schools: such as Hanushek et al. (2003) and Carrell et al. (2013).

Also explains why attending Catholic school significantly reduces chance of dropout (see Altonji et al. (2005)).

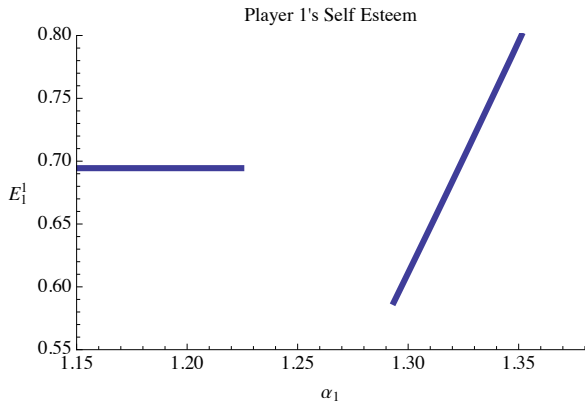


Figure 3

Inner City

William Julius Wilson: role of cultural change in explaining decline of inner city.

- ▶ Two shocks: deindustrialization, middle-class flight.

Inner City

William Julius Wilson: role of cultural change in explaining decline of inner city.

- ▶ Two shocks: deindustrialization, middle-class flight.

The model captures Wilson's story.

Activity 1: working

Activity 2: street-related activity

Inner City

William Julius Wilson: role of cultural change in explaining decline of inner city.

- ▶ Two shocks: deindustrialization, middle-class flight.

The model captures Wilson's story.

Activity 1: working

Activity 2: street-related activity

Model also suggests adoption of street orientation by some residents puts pressure on others.

- ▶ In line with findings of Fordham and Ogbu (1986), Furstenberg et al. (1999), Newman (1999).

Inner City

William Julius Wilson: role of cultural change in explaining decline of inner city.

- ▶ Two shocks: deindustrialization, middle-class flight.

The model captures Wilson's story.

Activity 1: working

Activity 2: street-related activity

Model also suggests adoption of street orientation by some residents puts pressure on others.

- ▶ In line with findings of Fordham and Ogbu (1986), Furstenberg et al. (1999), Newman (1999).

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Robert Ramsay: resistance in merchant marines.

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Robert Ramsay: resistance in merchant marines.

- ▶ Catering staff heaved dirty dishes through open port-holes.

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Robert Ramsay: resistance in merchant marines.

- ▶ Catering staff heaved dirty dishes through open port-holes.
- ▶ Crewmen fouled up tanks while cleaning.

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Robert Ramsay: resistance in merchant marines.

- ▶ Catering staff heaved dirty dishes through open port-holes.
- ▶ Crewmen fouled up tanks while cleaning.
- ▶ Stewards burned shirts with iron “by mistake.”

Resistance

Resistance is a major theme in sociology (see Collinson and Ackroyd (2005), Hodson (1995) for reviews).

Often result of not being accorded due respect ($E_i^j < E_i^i$).

Robert Ramsay: resistance in merchant marines.

- ▶ Catering staff heaved dirty dishes through open port-holes.
- ▶ Crewmen fouled up tanks while cleaning.
- ▶ Stewards burned shirts with iron “by mistake.”
- ▶ Deck crews delighted in painting over water and oil.

Conclusion

Paper: makes progress towards understanding value formation.

Conclusion

Paper: makes progress towards understanding value formation.

Choice of values motivated by economic considerations, but importantly, also by desire for esteem.

Conclusion

Paper: makes progress towards understanding value formation.

Choice of values motivated by economic considerations, but importantly, also by desire for esteem.

Tension between desire to conform (more esteem from peers) and desire to differentiate (potentially more self-esteem).

Conclusion

Paper: makes progress towards understanding value formation.

Choice of values motivated by economic considerations, but importantly, also by desire for esteem.

Tension between desire to conform (more esteem from peers) and desire to differentiate (potentially more self-esteem).

Model explains range of social phenomena. Three illustrations considered in paper (schools, inner cities, resistance).

Conclusion

Paper: makes progress towards understanding value formation.

Choice of values motivated by economic considerations, but importantly, also by desire for esteem.

Tension between desire to conform (more esteem from peers) and desire to differentiate (potentially more self-esteem).

Model explains range of social phenomena. Three illustrations considered in paper (schools, inner cities, resistance).

Suggests directions for future research, many relating to firms. Such as: how can values be shaped/manipulated?

Thank You!