Poverty, Aspirations and the Economics of Hope

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What does my Danish blood have to do with this talk?

“Ancestral Roots of Locus of Control” (Phillip Ross 2018)
‘Economics of Hope’...really?

“Economics achieved coherence as a science by amputating most of human nature. Now economists are starting with those parts of emotional life that they can count and model... They’ll surely find that the processes that make up the inner life are not amenable to the methodologies of social science. The moral and social yearnings of fully realized human beings are not reducible to universal laws and cannot be studied like physics.”

- David Brooks (NY Times 2010)

Should economists dabble in matters of the soul?

Are there ways for us to study hope that neither amputate deeper dimensions of hope nor abandon methodological rigor?
Overview

1. Hope and psychology
2. Hope, poverty and economics
3. An economic model of hope
4. Hope and microfinance
   The Oaxaca Hope RCT and results
5. Conclusion and reflections

Perceived Self-Efficacy, Poverty, and Economic Development

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Poverty, Aspirations, and the Economics of Hope

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I. Introduction
In recent years, development economics has increasingly ventured into domains that were previously reserved for psychology and other fields. Theoretical, empirical, and experimental work in behavioral development economics
1. Hope and Psychology

• Hope is more and deeper than optimism
• Hope is forward-looking, entails uncertainty, requires imagination
• Hope is more about *eudaimonia* (happiness as meaning) than *hedonia* (happiness as pleasure)
• Hope reflects past experiences and is therefore dynamic
• Hope is context-specific and easier to pin down when confined to purely material realms

Hope “is the elevating feeling we experience when we see – in our mind’s eye – a path to better future” (Groopmans 2003)
A Typology of Hope & Hopelessness

\[ Y = \pi e + \pi_v \nu \]
\[ \nu \sim N(0, \sigma^2) \]

Perceptions about Future \([\pi_v E(\nu)]\)

<table>
<thead>
<tr>
<th>Low Agency over Future</th>
<th>High Agency over Future</th>
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<tbody>
<tr>
<td>Pessimism</td>
<td>Optimism</td>
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<td>Victimization</td>
<td>Wishful Hope</td>
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<td>Grit</td>
<td>Aspirational Hope</td>
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Self-Determination
The Psychology of Hope

“... are we not now duty bound to speak up as scientists...about this ancient but rediscovered truth, the validity of Hope in human development – Hope alongside its immortal sisters, Faith and Love?”

(1959)

Viktor E. Frankl

“Everything can be taken from a man but one thing: the last of the human freedoms—to choose one’s attitude in any given set of circumstances, to choose one’s own way.”

Karl Menninger, M.D.
Positive Psychology & Hope-Related Work in Psychology

Locus of control, self-efficacy and learned helplessness theory

Snyder’s Hope Theory:

• Hope as a way of thinking – not purely emotion
• A ‘high hope’ individual has a goal, sees a viable pathway to that goal and believes she has the agency to progress along this path
• High hope individuals remain open to “alternative pathways that reframe challenges in new ways”

“Two little mice fell in a bucket of cream. The first mouse quickly gave up and drowned. The second mouse, wouldn’t quit. He struggled so hard that eventually he churned that cream into butter and crawled out.”

Catch Me If You Can (2002)
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2. Hope, Poverty and Economics

“Voices of the Poor” on Hope
2. Hope, Poverty and Economics

• Bandan’s intervention in West Bengal offered the ultra-poor assets, a small stipend and weekly training sessions
• 18 months later the effects were so big and so persistent that the direct impact of the intervention could not fully explain them (Banerjee et al. 2013)

Where did these massive effects come from?
2. Hope, Poverty and Economics
International Child Sponsorship

- Wydick et al (2013) measure adult outcomes of sponsored children and their unsponsored siblings in six countries
- Sponsorship as a child leads to dramatic improvements
  Years of schooling and completion rates, including tertiary school
  Probability and quality of employment
  Leadership and civic engagement

What’s driving these impressive effects?
What’s Driving Big Sponsorship Effects?

Using psychometric indices, child sponsorship causes
- Much higher levels of hope ($0.66\sigma$)
- Higher levels of happiness ($0.42\sigma$)
- More self-efficacy ($0.29\sigma$)
Hope and ‘Positive Deviance’

- Mini-documentaries in Ethiopia change aspirations and investments (Bernard et al. 2014)
- *Queen of Katwe* in Kampala improved test scores of secondary students (Emma Riley 2018)
- Showcasing success in such ways may shape goals, agency and/or pathways

Is showcasing positive deviance statistically reckless? Depends on your view of outliers

*Random noise?*

*Unobservable factors that may be malleable?*
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3. An Economic Model of Hope

We build directly on Hope Theory and model hope as

1. **Aspirations** (goals) $\rightarrow$ aspiration-dependent utility function
2. **Agency** $\rightarrow$ marginal productivity of effort (e.g., self-efficacy)
3. **Pathways** $\rightarrow$ production function constraint

$$\max_{e_t} U_{t+1} = E[u_{t+1}] - c(e_t)$$

subject to

$$u = A \left( \frac{Y}{A} \right)^{(1/1-\alpha)} \cdot 1(Y < A) + A \left( \frac{Y}{A} \right)^{(1-\alpha)} \cdot 1(Y \geq A)$$

$$Y_{t+1} = \pi e_t + \pi v u_{t+1}$$

$$E[Y_{t+1}] = \begin{cases} \pi e_t & \text{if } e_t < \bar{e} \\ \bar{Y} & \text{if } e_t \geq \bar{e} \end{cases}$$

$$c'(e_t) > 0, c''(e_t) > 0, c(0) = 0$$
Aspiration-dependent Utility Function

\[ u = A \left( \frac{Y}{A} \right)^{\frac{1}{1-\alpha}} \cdot 1(Y < A) + A \left( \frac{Y}{A} \right)^{1-\alpha} \cdot 1(Y \geq A) \]
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4. Hope and Microfinance

“...there is scant evidence on how behavioral tendencies actually mediate credit impacts, and in any case, the presence of behavioral deviations from rationality may in some cases strengthen the case for microcredit rather than weaken it.”

- Banerjee et al. 2015, p.20

Fuentes Libres, a microfinance bank in Oaxaca, Mexico, puzzled over these behavioral tendencies as well...

Can hope elevate microfinance?
4. Hope and Microfinance
The Oaxaca Hope RCT

• Joint research with Bruce Wydick (USF), Irvin Rojas (CIDE), Bob Dowd (Notre Dame)

• Christian NGO Partner: Fuentes Libres with 52 community banks in Oaxaca, Mexico
Matched Cluster Randomization

Matched groups hierarchically
1. Same Loan Officer
2. Size of group
3. Experience of Group
4. Age of Members
5. Similarity of Microenterprises

• 52 Community Banks (Female): 26 treatment, 26 control
• 601 Microfinance Borrowers: 326 treatment, 275 control
The Hope Intervention

Objective: Increase aspirational hope among female micro-entrepreneurs in the randomly selected community banks through a three-pronged intervention

1. Creation and Screening of a Documentary Film showcasing inspiring borrowers within the organization.

2. Hope → Goal Exercise with refrigerator magnets

3. Hope Curriculum, intensive in first month but carried out continually for 12 months. Focus on development of “Los Tres A’s”: aspiraciones, habilidades, avenidas.
Positive Deviance Documentary

- Hope dies last.

- My goal this year is to build a room in my house for my daughter.

- My father was an alcoholic. Sometimes we didn’t have enough food to eat at home.

- It doesn’t matter if we don’t have an academic degree. There is always a way to move on.

https://goo.gl/ZzgbLY
Project Timeline

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<thead>
<tr>
<th>Survey</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>May</td>
<td>Jun</td>
<td>July</td>
</tr>
<tr>
<td>Survey</td>
<td>Baseline</td>
<td>One-month follow up</td>
</tr>
<tr>
<td>Oct</td>
<td>Nov</td>
<td>Dec</td>
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<td>Administrative data on savings and loan transactions</td>
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<td>Jan</td>
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<td>Apr</td>
<td>May</td>
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<td>Documentary &amp; goals</td>
<td>Hope curriculum</td>
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Weekly SCG meetings, 16 week cycles
Data

**Survey at Baseline, 1 month, and 12 months**
- 5 questions used to create Aspirations Index
- 5 questions used to create Pathways Index
- 5 questions used to create Agency Index
- Other indexes: happiness, optimism, future-mindedness, risk-aversion, religiosity
- Hope 3: Aspiration, pathways, agency
- Hope 8: Hope 3 plus five related indexes
- Gross enterprise revenue, net profits, employees in enterprise, enterprise plans, business performance index

**Fuentes Libres administrative data (aggregated by group)**
- Savings (weekly)
- Internal loan demand (weekly)
- Group survival (cycle-level)
- Fuentes loan demand (cycle-level – 95% of total loan value)

No significant differences between treatment and control at baseline
Confirmatory vs Exploratory Results

Based on our pre-analysis plan:

Confirmatory (pre-specified)
- Self-reported outcomes
  - Hope and related measures
  - Microenterprise inputs and outcomes
- Administrative outcomes
  - Savings
  - Loan demand

Exploratory (non-pre-specified)
- Mediation tests
- Group survival to next loan cycle as an outcome
- Heterogeneous effects by Catholic v Evangelical
Analysis of Survey Data

We use an ANCOVA specification that controls for baseline outcome variables

\[ y_{ijt} = \alpha + \tau Treat_j + \theta y_{ijt-1} + X_i' \beta + \epsilon_{it} \]

- Outcome variables from the survey (@ 1 mo, 12 mo)
  Hope and hope components, other future and risk preferences, and self-reported business performance and investment
- Controls include age, education, religion, number and age of children, and matched-pair fixed effects
- Standard errors clustered at the group level
- Randomization Inference confirms statistical precision
Results: Treatment Effects

[Graph showing psychological impacts of treatment over 1-month and 12-month follow-ups, with indicators for various measures such as happiness, optimism, and aspirations, with confidence intervals for 99%, 95%, and 90% levels.]
Results: Treatment Effects

Economic impacts

- Business hrs.
- Sales
- Profits
- Savings
- Employees
- Plans for employees
- **Business perf.**

Treatment x 1-month follow up

Treatment x 12-months follow up

Impact (s.d.)

CI levels: 99%, 95%, 90%
Analysis of Administrative Data

- Three treatment outcomes from the administrative data
  1. Survival of lending group to subsequent lending cycles
  2. Savings (weekly average by group)
  3. Loan demand (cycle average by group)
- Group composition can change within and between 16 week lending cycles, so we estimate
  \[ \log(savings_{jt}) = \alpha + \tau Treat_j + Z_{jt}' \beta + \varepsilon_{jt} \]
- Controls include ‘week in loan cycle’, month fixed effects, and matched-pair fixed effects
- Standard errors clustered at the community bank level

Treatment increased savings and internal loan demand with persistent effects across year
Risk of ‘failure’ decreases significantly as a result of the treatment.
Summary of Results

- The ‘Hope’ intervention raised all three components of hope – but at different paces
  - Aspirations increased, but later receded back to baseline
  - Agency/pathways responded slowly but increased significantly by 12mo
  - ‘Catholic effect’ prominent at 1mo, but fades at 12mo
- It increased future orientation and optimism
- It increased plans to increase employees and overall business performance, but not self-reported sales and profit
  - Eight women in treatment added employees; zero in control
- It increased group survival, savings rates and internal loan demand
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Earned Hope vs Borrowed Hope?

- Aspirations can be ‘cheap talk’ and easy to move, but agency and pathways only expand with struggle (grit) and experience
- Baseline hope predicts endline sales/profits
- Endline hope strongly correlates w/endline sales/profits
- But causal effects are weaker

*Is hope born of experience (endogenous) more potent than hope induced by treatment (exogenous)?*

- Believing alone doesn’t make it so, but correcting misperceptions may trigger dynamic self-discovery and learning that look like it does
- Prior belief that additional effort is futile can be self-reinforcing as it stifles experimentation with higher effort levels and new pathways
How might economists contribute?

• Measuring hope: modifying psychologists toolkit for new contexts
  Economists have tended to restrict their focus to material aspirations, but most people experience hope in deeper and richer ways than this.

• Hope, poverty and welfare dynamics
  Could dynamic empirical methods shed light on the mechanics of hope and be a comparative advantage for economists?

• Intervention design and policy agendas
  Economists may be late on the scene, but may be better placed to shape policy and program design (e.g., HDR 2015)
  Is there really a need for ‘hope policy’? Or should this work focus on illuminating heterogeneous/multiplier effects of relaxing external constraints?
How well do we understand those we study?

“Development professionals may assume that poor individuals may be less autonomous, less responsible, less hopeful, and less knowledgeable than they in fact are.” (WDR 2015)

- With hope as with other human experiences, there is often more than meets the eye
- Our Western concept of ‘hope’ may be overly individualistic

*E.g., Ubuntu* on hope
Thank you