Patience, Turnout, and Political Opportunity Structure

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Definition of patience

- How people weigh different outcomes happening at different times.
- Intertemporal choice, time preference, temporal discounting, future orientation, self-control, self-regulation...
- Correlates with drug use (-), BMI (-), risk driving (-), unsafe sex (-), cheating (-), crime (-), SAT (+), academic performance (+), choosing insurance plan, buying luxuries...
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Why is patience important to political scientists?

- Patience is widely discussed by democratic theorists.
- Discounting factor $\delta$ in formal models

- As a neuro-based personal trait (Amygdaloid), stable and measurable
- As a skill, can be trained and can be manipulated

$\rightarrow$ Policy implication for improving political participations.
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$\rightarrow$ Policy implication for improving political participations.
Correlation: Positive correlation between patience and turnout (Fowler and Kim, 2006; Schafer 2016; Hill 2016)

Long-term treatment: Childhood skill development and adult political participation (Holbein, APSR, forthcoming)

Argument:
- Cost of voting is immediate (finding the booth, driving, waiting...)
- The loved/hated policy outcomes (carried by the candidates) will not be realized in near future (propose, negotiate, implement)
Correlation: Positive correlation between patience and turnout (Fowler and Kim, 2006; Schafer 2016; Hill 2016)

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Argument:
1. Cost of voting is immediate (finding the booth, driving, waiting...)
2. The loved/hated policy outcomes (carried by the candidates) will not be realized in near future (propose, negotiate, implement).
But political opportunity structure matters
Linkage of patience and turnout should be moderated by the perceived political opportunity structure (e.g. the ideological difference between the candidates)

Hypothesis:

\( H_1 \): If the perceived ideological difference between the candidates is high, high-patience people are much likely to vote

\( H_2 \): If the perceived ideological difference between the candidates is low, high-patience people are less likely to vote
Linkage of patience and turnout should be moderated by the perceived political opportunity structure (e.g., the ideological difference between the candidates).

Hypothesis:

$H_1$: If the perceived ideological difference between the candidates is high, high-patience people are much more likely to vote.

$H_2$: If the perceived ideological difference between the candidates is low, high-patience people are less likely to vote.
Comparative Congressional Election Study 2014, \( n = 1000 \)

DV: Voted in the 2014 election (0 and 1)

IV1 - *Patience*

1. $10$ today or $20$ after 6 mos; $1000$ today or $2000$ after 1 yr.
2. Patience = 0 for choosing small option in both items, and 1 for choosing the larger options

IV2 - *Oppo* Ideological difference between the two House candidates

1. Abstract difference between the candidate’s ideology (1 to 7)
2. Dealing with "don’t know" - dropped or median point (\(Oppo_{All}\))

Interaction: IV1 \( \times \) IV2

Controls: age, gender, education, race, PID
**Table:** Patience, Political Opportunity Structure, and Turnout in CCES2014

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
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<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
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</thead>
<tbody>
<tr>
<td>Dependent variable:</td>
<td>Turnout in 2014 Midterm Election</td>
<td>Turnout in 2014 Midterm Election</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Patience</strong></td>
<td>0.515*** (0.164)</td>
<td>0.838 (0.531)</td>
<td>0.757 (0.572)</td>
<td>0.448** (0.226)</td>
<td>0.244 (0.244)</td>
<td></td>
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</tr>
<tr>
<td><strong>Oppo</strong></td>
<td>0.378*** (0.106)</td>
<td>0.119 (0.159)</td>
<td>−0.063 (0.176)</td>
<td></td>
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</tr>
<tr>
<td><strong>Oppo × Patience</strong></td>
<td>0.586** (0.275)</td>
<td>0.583** (0.286)</td>
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</tr>
<tr>
<td><strong>Oppo All</strong></td>
<td>0.697*** (0.071)</td>
<td>0.570*** (0.108)</td>
<td>0.392*** (0.115)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oppo All × Patience</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.295* (0.170)</td>
<td>0.306* (0.175)</td>
<td></td>
</tr>
<tr>
<td>Age, Gender, Edu, Race, Party ID</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>768</td>
<td>336</td>
<td>262</td>
<td>262</td>
<td>895</td>
<td>691</td>
<td>691</td>
</tr>
<tr>
<td>Log Likelihood</td>
<td>−447.5</td>
<td>−109.4</td>
<td>−75.1</td>
<td>−65.2</td>
<td>−468.9</td>
<td>−349.6</td>
<td>−314.0</td>
</tr>
<tr>
<td>VIFMAX</td>
<td>2.145</td>
<td>2.208</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.133</td>
</tr>
</tbody>
</table>

**Note:** *p < 0.1, **p < 0.05, ***p < 0.01
Evidence - Observational, CCES2014

Figure: Patience, Political Opportunity Structure, and Turnout - A simulation
Evidence - Experimental

- In-/decreasing voting intention by in-/decreasing patience.
- Moderation: the treatment effect moderates by _Oppo_.
- Data
  1. Amazon Mturk $n = 471$
  3. "How people make decisions in everyday life" survey
  4. 30 items, received $1.25 for completion
  5. U.S. IP, 95% approval rate, 18 years up.
  6. Sponsored by DIPE.
Two treatments: "Live-to" and "Die-at"

1. Payne et al (2013) for manipulating life expectancy
2. Manipulating patience by the future-self connectedness (Bartels and Rips 2010; Hershfield et al 2011)

Figure: The "Live-to" and "Die-at" treatment (Payne et al 2013)
Evidence - Experimental

Experimental Design

1. Regular information consumption item
2. Place self and the two major parties on the 0-100 ideology scale
3. Randomly assigned to none, "Live-to" and "Die-at"
4. Report voting intention in the 2016 presidential election

Randomization check: no demographical difference among groups
Replication check: replicated Payne’s life expectancy difference
Manipulation check: respondent’s patience changed ($p < 0.1$)

Figure: Distribution of the respondents’ discounting factor in different groups
(Weird) Evidence - Experimental

Figure: MTurkers’ voting intention in the control and two treatment groups

- Both increasing and decreasing patience decreased voting intention ($p < 0.05$)
Figure: Treatment effect is conditioned on the political opportunity structure

- When MTurkers are treated to increase the patience, indifferent voters will decrease the voting intention, while those who perceived huge difference will increase the voting intention ($p < 0.1$).
Takeaway and Future work

- Patience is a political virtue not because it increases turnout, but it makes people more responsive to the political opportunity structure.
- Patience is a coefficient, not the outcome itself.
  - Increasing the patience of voters can motivate politicians to diversify their policy positions and ideological stance.
  - An easy-to-implement treatment to manipulate the level of patience in two directions.
- Replication and better treatment (Stroop test before the election?)
- Integrating patience, closeness in the district, and habit into the turnout decision model.
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Other possible treatments

- Stroop test (or unsolvable algebra test)
  1. Takes 20 minutes
  2. Widely used in psychology
  3. Can only decrease patience

- Photo morphing procedure (Hershfield et al. 2011)
  1. Need to upload photo first (lab experiment)
  2. Can only increase patience (through future-self connectedness)

- Storytelling and emotion (Lerner et al. 2015, 2016, 2017)
  1. Takes 20 minutes, can it work online?
  2. Content analysis matters

- National identity, flag, racial identity, thinking of family...all failed.
Patience correlates with risk attitude.
Future risk decreases future self connectedness and marginal utility, and increase uncertainty toward the future.

But people still discount the future reward even the reward is certain (2 Marshmallow after 20 minutes)
Physiological mechanism: "Ability" of self-control

Risk may from other source rather than the future (Lottery).
Existing studies mentioning Patience in PS

- Theoretical:
  Redistribution and Social Insurance (+) (Moene 2001)
  Join revolution/protest to punish the authority or to democratization(+)
  Election makes people and government myopic (-)

- Empirical:
  Support public debt (-) (Hayo 2014)
  Less support redistribution ((Beraldo 2014)
  No influence on the timing of policy (Jacobs 2012)
  Choose One-time pension (Brown 2011)
  Sociotropic Voting (Wang, *Electoral Studies*, forthcoming)
  Redistributive preference (Wang, under review)
  Protest (Wang, drafting...)
Validity of DR measure

- One-year temporal stability 0.71 (Kirby 2009), one-month stability 0.8 (Arfer and Luhmann 2017)
- In CCES 2014, 2-item DR correlates with:
  1. educational level ($r = 0.28, p < 0.01$) (Duckworth 2005)
  2. family income ($r = 0.28, p < 0.01$) (Harrison et al 2002)
  3. regulating CO2 emission ($r = 0.07, p = 0.05$)
  4. not linearly correlates with age ($r = 0.02, p = 0.51$) (Chao 2009)
### Table 3: Patience manipulation, Perceived Ideological Difference, and Voting Intention

<table>
<thead>
<tr>
<th>Dependent variable: Likely to vote -2 to +2</th>
<th>vote_int</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>&quot;Die-at&quot; Group</td>
<td>-0.292*</td>
<td>-0.319**</td>
<td>-0.317**</td>
<td>-0.307**</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.145)</td>
<td>(0.144)</td>
<td>(0.144)</td>
</tr>
<tr>
<td>&quot;Live-to&quot; Group</td>
<td>-0.292*</td>
<td>-0.290**</td>
<td>-0.312**</td>
<td>-0.299**</td>
</tr>
<tr>
<td></td>
<td>(0.152)</td>
<td>(0.145)</td>
<td>(0.144)</td>
<td>(0.144)</td>
</tr>
<tr>
<td>Pcvd. Diff.</td>
<td>0.014***</td>
<td>0.013***</td>
<td>0.009**</td>
<td>(0.004)</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
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<td></td>
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<tr>
<td>&quot;Die-at&quot; * Pcvd. Diff.</td>
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<td></td>
<td></td>
<td>0.003</td>
</tr>
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<td></td>
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<td>(0.005)</td>
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<tr>
<td>Observations</td>
<td>455</td>
<td>450</td>
<td>446</td>
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<tr>
<td>R²</td>
<td>0.011</td>
<td>0.089</td>
<td>0.137</td>
<td>0.143</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.006</td>
<td>0.083</td>
<td>0.121</td>
<td>0.124</td>
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<tr>
<td>F Statistic</td>
<td>2.475*</td>
<td>14.611***</td>
<td>8.653***</td>
<td>7.279***</td>
</tr>
</tbody>
</table>

*Note: p<0.1; **p<0.05; ***p<0.01

Figure:
Stratman et al. (1994) Consideration of Future Consequence Scale
12 items like "I only act to satisfy immediate concerns, figuring the future will take care of itself."

Zimbardo and Boyd (2008) Time Preference Index, similar description, 52 items