Moral Cognition II:
Universal Moral Grammar

UBC COGS300 002
Mar 16 2015
Peter Danielson
Plan

• Continue with descriptive moral psychology
  – Which best accounts for human moral judgements
  – Contrast Mikhail and Greene

• Return to prescriptive moral theory
  – Which should we use to design moral robots?
Quiz 1

Which of the following is NOT one of the main questions of UMG. (Universal Moral Grammar)

A. How is moral knowledge acquired?
B. How is moral knowledge put to use?
C. How is moral knowledge physically realized in the brain?
D. How is moral knowledge different amongst different species?

Richard W
Rate Quiz Question 1

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Quiz 2

Which of the following is a property of the moral grammar?
A) mind contains a complex set of rules, concepts and principles
B) individuals are able to determine the deontic status of any action or omissions
C) mind also has some core attributes which are innate
D) A and B

Anoosh
Rate Quiz Question 2

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Quiz 3

The reading by Mikhail believes the hypothesis of universal moral grammar is ________ to the view of Greene (from Tuesday's reading) because ______

a. inferior; moral intuitions result from social-emotional responses that are inherited from primate ancestors
b. inferior; humans have a uniquely human capacity for sophisticated abstract reasoning that can be applied to any subject matter
c. inferior; the distinction between "personal" and "impersonal" harms are distinctly different
d. superior, human moral intuitions can be predicted in a variety of cases using computational formulas that represent concepts
e. superior, concepts such as battery and side effect can not be broken down into cognitive components

Miya
Rate Quiz Question 3

A. Excellent
B. Very Good
C. Good
D. Acceptable
E. Poor
Quiz 4

There are $X$ main deontic logic concepts found every natural language, but given their logical relationships, only $Y$ of them needs to be taken as a primitive.

a) $X = \text{about 100}; \ Y = 3$
b) $X = 9; \ Y = 3$
c) $X = 3, \ Y = 3$
d) $X = 3, \ Y = 2$
e) $X = 3, \ Y = 1$
Quiz 4

There are X main deontic logic concepts found every natural language, but given their logical relationships, only Y of them needs to be taken as a primitive.

a) X = about 100; Y = 3
b) X = 9; Y = 3
c) X = 3, Y = 3
d) X = 3, Y = 2
e) X = 3, Y = 1
Model 3:

- Perceive event
- Emotion
- Reasoning
- Judgment

Hauser, Figure 4:

Model 4:

- Action Analysis
- Judgment
- Emotion
- Reasoning
Methods similar
Language ~ Moral Psychology

• Widely shared in cross-cultural samples
  – Not predictable by age, sex, race or religion
• Justifications difficult (dumbfounding)
  – Operative vs. Express principles
• Explanation too complex for
  – Learning
  – Neo-Emotivism (Greene)
Language ~ Morality

• “My red good dog slept scantily”
• “Colorless green ideas sleep furiously” ->
  – Grammatical
    • Although never encountered
    • & meaningless
  – Ungrammatical
• Acquisition Models
  – > Linguistic Grammar:
    • English
    • German
• Hank lets 5 die
• Analogue?:
  – Permissible
    • Analogue ?
  – Impermissible

  – > “Moral Grammar”:
    – Moral analogue?
    – Frau Dr. Dr. Mikhail?
Empirical Results

- Cross cultural data from large internet survey

<table>
<thead>
<tr>
<th>Problem</th>
<th>% Yes Mikhail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trolley</td>
<td>94</td>
</tr>
<tr>
<td>Transplant</td>
<td>8</td>
</tr>
<tr>
<td>Bystander (Hank)</td>
<td>90</td>
</tr>
<tr>
<td>Footbridge (Ian)</td>
<td>10</td>
</tr>
<tr>
<td>Loop track (Ned)</td>
<td>48</td>
</tr>
<tr>
<td>Man-in-front (Oscar)</td>
<td>62</td>
</tr>
<tr>
<td>Drop man (Victor)</td>
<td>37</td>
</tr>
<tr>
<td>Collapse Bridge</td>
<td>68</td>
</tr>
</tbody>
</table>
Quiz 5

Tacit knowledge of which two rules does Mikhail posit can explain an indefinitely large class of "cases of necessity" (e.g., the trolley problems)?

a) Consequentialism; the principle of double effect
b) The prohibition of intentional battery; the prohibition of psychological harm
c) The principle of double effect; the prohibition of intentional battery
d) Consequentialism; the prohibition of intentional battery
e) Cases of necessity cannot be explained.
Tacit knowledge of which two rules does Mikhail posit can explain an indefinitely large class of "cases of necessity" (e.g., the trolley problems)?

a) Consequentialism; the principle of double effect
b) The prohibition of intentional battery; the prohibition of psychological harm
c) The principle of double effect; the prohibition of intentional battery
d) Consequentialism; the prohibition of intentional battery
e) Cases of necessity cannot be explained.
2 Legal/Deontic Rules

- **Intentional battery** forbids purposefully or knowingly causing harmful or offensive contact with another individual or otherwise invading another individual’s physical integrity without his or her consent

- **Side Effect**
- Recall Sparrow on rules of war

- **The principle of double* effect**: an otherwise prohibited action, such as battery, that has both good and bad effects may be permissible if the prohibited act itself is
  - not directly intended,
  - the good but not the bad effects are directly intended,
  - the good effects outweigh the bad effects, and
  - no morally preferable alternative is available
Quiz 5

Structurally, the six different trolley problems show a consistent pattern between increasing permissibility and:

A. more acts of battery as a means, less acts of battery as a side effect
B. more acts of battery as a means, more acts of battery as a side effect
C. less acts of battery as a means, less acts of battery as a side effect
D. less acts of battery as a means, more acts of battery as a side effect
Explaining Mikhail’s Data
3 Objections

1. Does UMG explain the Loop track results?
<table>
<thead>
<tr>
<th>Problem</th>
<th>% Yes Mikhail</th>
<th>Greene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trolley</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Transplant</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Bystander (Hank)</td>
<td>90</td>
<td>87</td>
</tr>
<tr>
<td>Footbridge (Ian)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Loop track (Ned)</td>
<td>48</td>
<td>81</td>
</tr>
<tr>
<td>Man-in-front (Oscar)</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Drop man (Victor)</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Collapse Bridge (Walter)</td>
<td>68</td>
<td></td>
</tr>
</tbody>
</table>
Loop Data
Fall ‘14 & Spring ‘14

Our Class N=23

Last Term N = 27

Per cent of group choosing

<table>
<thead>
<tr>
<th></th>
<th>Acceptable</th>
<th>Not</th>
</tr>
</thead>
<tbody>
<tr>
<td>trolley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>loop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>footbridge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Loop Data
Mikhail & Us

Bar charts showing data for different locations such as Loop and Footbridge, with categories like Yes-Mar and No-Mar.
Mikhail’s Structural Descriptions
Bystander/Switch vs. Footbridge

Concluding remarks
Chomsky transformed linguistics and cognitive science by showing that ordinary language is susceptible to precise formal analysis and by rooting principles of UG in the human bioprogram. UMG holds out the prospect of doing the same for aspects of ordinary human moral cognition. The first step in the inquiry is to identify a class of considered judgments and a set of rules or principles from which they can be derived [7]. Initial efforts to explain trolley-problem intuitions within this framework suggest that individuals are intuitive lawyers who are capable of drawing intelligent distinctions between superficially similar cases, although their basis for doing so is often obscure. Future research on moral grammar should begin from this premise (Box 5), moving beyond the limited example of trolley problems and other doctrinally marginal 'dilemmas' to the core concepts of universal fields like torts, contracts and criminal law, which investigate the rules and representations that are implicit in common moral intuitions with unparalleled care and sophistication. Chomsky emphasized that rigorous formulation in linguistics is not merely a pointless technical exercise but an important diagnostic and heuristic tool, because only by pushing a precise but inadequate formulation to an unacceptable conclusion can one gain a better understanding of the relevant data and of the inadequacy of our existing...
Mikhail’s Structural Descriptions
Bystander/Switch vs. Loop

whereas the same is not true (or at least has not yet been shown) of our primate ancestors. The crucial issue is not whether moral intuitions are linked to emotions – clearly they are – but how to characterize the appraisal system that those intuitions presuppose and, in particular, whether that system incorporates elements of a sophisticated jurisprudence.

Concluding remarks

Chomsky transformed linguistics and cognitive science by showing that ordinary language is susceptible to precise formal analysis and by rooting principles of UG in the human bioprogram. UMG holds out the prospect of doing the same for aspects of ordinary human moral cognition.

The first step in the inquiry is to identify a class of considered judgments and a set of rules or principles from which they can be derived [7]. Initial efforts to explain trolley-problem intuitions within this framework suggest that individuals are intuitive lawyers who are capable of drawing intelligent distinctions between superficially similar cases, although their basis for doing so is often obscure. Future research on moral grammar should begin from this premise (Box 5), moving beyond the limited example of trolley problems and other doctrinally marginal 'dilemmas' to the core concepts of universal fields like torts, contracts and criminal law, which investigate the rules and representations that are implicit in common moral intuitions with unparalleled care and sophistication. Chomsky emphasized that rigorous formulation in linguistics is not merely a pointless technical exercise but an important diagnostic and heuristic tool, because only by pushing a precise but inadequate formulation to an unacceptable conclusion can one gain a better understanding of the relevant data and of the inadequacy of our existing...
Greene: Loop is Complex

Figure 9.10: Diagram highlighting the secondary causal chain in the loop case.
Greene: Modular Myopia

First, our brains have a cognitive subsystem, a “module,” that monitors our behavioral plans and sounds an emotional alarm bell when we contemplate harming other people. Second, this alarm system is “myopic” because it is blind to harmful side effects.... (Greene, 2013, 224, 234)
Modular Myopia in Loop Case

But this action-plan inspector is a relatively simple “single-channel” system that doesn’t keep track of multiple causal chains. That is, it can’t keep track of branching action plans. ... it only sees what’s on the primary causal chain.  
(Greene, 2013, 234)
Central Tension Principle

The Central Tension Principle: Characteristically deontological judgments are preferentially supported by automatic emotional responses, while characteristically consequentialist judgments are preferentially supported by conscious reasoning and allied processes of cognitive control.

The name of this principle reflects a more general idea, which is that the central tension in ethics between deontology and consequentialism is a manifestation of the central tension in cognitive design between efficiency and flexibility. (Greene, 2014, p. 699)
3 Objections

1. Does UMG explain the Loop track data?

2. UMG & Dual Process Theory
   - Timing data: evidence for a dual process theory
   - “In Mikhail’s theory, there is no emotion, and no competition between competing systems. Instead ...a single system ...does all the work by emotionlessly representing & analyzing branching action plans...” (Greene, 2013, 230)
3. Universal?
Modelling Moral Diversity

• Recall Haidt’s Dog/Eat case
• Are social value differences like the binary parameters that distinguish, say, English and German verb placement?
  – „Wovon man nicht sprechen kann, darüber muss man schweigen.“
• What other models for cultural disagreement?
  – Simple social values:
    • e.g. food/dogs: where is it OK to bring a dog
  – From game theory: how strict is the social contract? (Binmore on German/English)
Back to Justification

1. Debunking

Does UGM debunk some answers to trolley problems less than Greene’s account?

A. Yes
B. About the same
C. No
Back to Justification

1. UMG as Debunking?

2. Rawls’ original linguistic analogy
   – Social Contract to capture “grammar of justice”
   – Question: which rule would you choose behind veil of ignorance, to deal with trolley problems?
   – Note: evolution & psych debunking; not choice
2. Social Contract & UMG

Robots that must make decisions that involve life and death, such as driverless cars in Goodall’s account, need an ethical decision making framework. Use Rawls’ social contract model to specify the principle(s) to be used for trolley problems.

How does your preferred robot design deal with the Bystander and Footbridge trolley problems.
Behind Veil of Ignorance

Footbridge

Saved
Killed

Util
UMG
References


