Formal Methods in Ethics
Exemplified in Democratized Morality

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Project Information

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- Feldbacher-Escamilla, Christian J. (2010). "Ancient and Modern Ethics Combined". In: *Athens Dialogues E-Journal*. URL: http://athensdialogues.chs.harvard.edu/cgi-bin/WebObjects/athensdialogues.woa/wa/dist?dis=104.

Talk(s):

- Feldbacher-Escamilla, Christian J. (2011-03-02/2011-03-03). *Formal Methods in Ethics – Exemplified in Democratized Morality*. Conference. Presentation (contributed). 8th The Character of the Current Philosophy and its Methods. Slovak Academy of Sciences: Slovak Academy of Sciences.

Introduction

This presentation has two main aims:

- Weak: Thesis of democratization of morality
- Strong: Handling of such a democratization

Contents

Democratized Morality

Example 1

In European countries nationality has decreasingly impact on legal permissions, prohibitions and duties.

This fact is perceived differently, because media in different countries focus on different problems:

- Austria: Water
- Germany: Labour market
- Hungary and Poland: Land
- Slovakia: Energy

But there is also decreasingly impact of nationality on issues of ethics, e.g. animal ethics. In general such moral systems were set by democratic decision.

Example 2

Some technical changes give rise to demands of new moral norms.

E.g. new methods in medical research and technology led to many moral debates on values of human life, permission of stem cell research, etc.:

- England: production allowed; research allowed
- Austria: production forbidden; research allowed
- Slovakia: production forbidden; research forbidden?

Example 3

Some economic changes give rise to demands of new moral norms.

E.g. the last financial crisis led to many moral debates on legal and economic topics. Intereconomic debates:

- Strong liberalism: There is no need of legal or moral rules for regulation of the market.
- Social market economy: At least some legal and moral rules for regulation of the market are needed.

A common ground

Example 1–3 have two common grounds:

- They concern debates of moral norms: norms in animal ethics, medical ethics and ethic of economics; and:
- The enforcement of the norms was not determined by authoritarian, but by democratic process.

Of course 'determining' is quite vague. So one may rise the following question:

Isn't it trivial?

1. Those who dominate a society are determining the moral system of the society.
2. Until western societies were democratic, authorities dominated the societies.
3. Hence, until then authorities determined the moral system of the societies.
4. Hence, since then all members of the society determine the moral system of the society in a democratic way.

Reply

Isn't it trivial? It seems not.

Because democratization of morality doesn't coincide with democratization of societies (vs. premise 1):

Although western societies were already democratized, some authorities determined the moral systems of the societies: church, lobbies and patronage.

The increasing amount of plebiscites and referenda on moral issues seems to support the claim of increasing democratization of morality.

Theory of moral decissions

How to form moral decissions?

Once democratization of morality is accepted, one should answer the question of how to deal with different opinions.

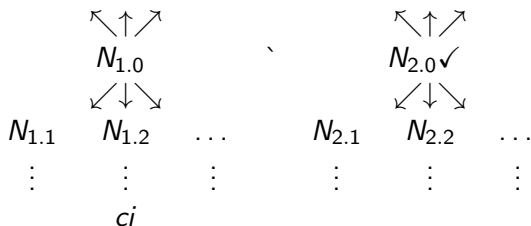Of course stating simple majority rules seems not to be a good answer.

Much better seem to be orthodox and unorthodox answers:

1. Orthodox: There are principles that are acceptable for all; the group should search for this principles!
2. Unorthodox (Karl Menger): Just partition the group into communities of interest!

An orthodox method

What is an orthodox way of solving norm conflicts (different opinions)?

A simple method is this: Try to show that justification of exactly one of the norms by other norms ends in counterintuitive principles. Of course ci-consequences also do the job.

$$
\begin{array}{ccccccc}
\nwarrow\uparrow\nearrow & & & & \nwarrow\uparrow\nearrow & & \\
N_{1.0} & & \grave{} & & N_{2.0}\checkmark & & \\
\swarrow\downarrow\searrow & & & & \swarrow\downarrow\searrow & & \\
N_{1.1} \quad N_{1.2} & \ldots & & N_{2.1} & N_{2.2} & \ldots & \\
\vdots \qquad \vdots \qquad \vdots & & & \vdots & \vdots & \vdots & \\
ci & & & & & &
\end{array}
$$

An unorthodox method

In the spirit of Menger there is another method: Regardless of universal principles look at your own moral attitudes!

And if everyones moral attitudes are known, then form groups of interest!

Modal semantics: theory

Definition

$\langle W, N, [] \rangle$ is a Menger*-model of language L iff it holds that:

1. W is a nonempty set of sets of formulas of L, and:

2. N is a mapping from W into $\wp(\wp(W)) \setminus \emptyset$, and:

3. $[]$ is a mapping from the set of formulas of L into $\wp(W)$, which fulfills the following conditions:

   1. For every formula A of L it holds that: $[\neg A] = W \setminus [A]$, and:
   2. For every formula A and B of L it holds that: $[A \wedge B] = [A] \cap [B]$, and:
   3. For every formula A of L and for all $w \in W$ it holds that: $w \in [OA]$ iff for all $X \in N(w)$ it holds that: $X \subseteq [A]$, and:
   4. For every formula A of L it holds that: $[PA] = [\neg O \neg A]$

Modal semantics: theory

Definition

A formula A of language L is deontic valid iff for all Menger*-models $M = \langle W, N, [] \rangle$ of L it holds that: $[A] = W$.

Theorem (Leitgeb)

A formula A of language L is deontic valid iff A is derivable in system D (where the axioms of the system are in the language of L).
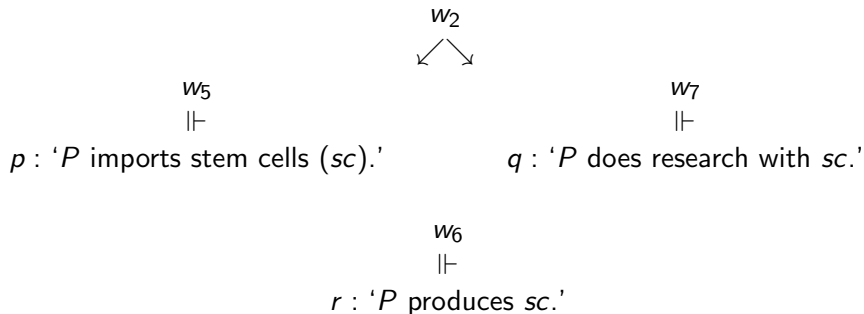
Modal semantics: practice

Let w_1 be assigned to Person P_1, ..., w_3 be assigned to P_3.

Then $N(w_1)$ is the set of moral systems accepted by P_1, ...

E.g.: $N(w_1) = \{\{w_5\}, \{w_6\}, \{w_5, w_7\}, \{w_6, w_7\}\}$,
$N(w_2) = \{\{w_5\}, \{w_7\}, \{w_5, w_7\}\}$, $N(w_3) = \{\{w_6\}, \{w_7\}, \{w_6, w_7\}\}$

That is, e.g.:

$$w_2$$
$$\swarrow \searrow$$

w_5 w_7
$\Vdash$ $\Vdash$

p : 'P imports stem cells (sc).' q : 'P does research with sc.'

$$w_6$$
$$\Vdash$$
r : 'P produces sc.'

Democratized morality: A problem

Recall: $N(w_1) = \{\{w_5\}, \{w_6\}, \{w_5, w_7\}, \{w_6, w_7\}\}$,
$N(w_2) = \{\{w_5\}, \{w_7\}, \{w_5, w_7\}\}$, $N(w_3) = \{\{w_6\}, \{w_7\}, \{w_6, w_7\}\}$

So P_2 allowes w.r.t. *sc* import and research, but not production (Austria, Germany etc.).

And P_3 allowes w.r.t. *sc* production and research, but not import (Virtual); P_1 (Special) . . .

There is a problem within the group P_1–P_3 (Goodman):

- P_1 and P_2 agree: $N(w_1) \cap N(w_2) = \{\{w_5\}\}$
- P_2 and P_3 agree: $N(w_2) \cap N(w_3) = \{\{w_7\}\}$
- P_3 and P_1 agree: $N(w_3) \cap N(w_1) = \{\{w_6\}\}$
- P_1, P_2 and P_3 don't agree: $N(w_1) \cap N(w_2) \cap N(w_3) = \emptyset$

Democratized morality: A problem

So the problem is that although each Person – Austria, Germany, Virtual and Special – agree with one another in at least one moral system, they altogether don't agree.

So, is the unorthodox account inadequate?

Anne Siegetsleitner and Hannes Leitgeb have shown: No, you just have to be rational!

Criteria of rationality

Definition (Menger)

N is rational iff for every w it holds that:

- **Principle of Intermediacy.** If $X \in N(w)$ and $Z \in N(w)$ and $X \subseteq Y \subseteq Z$, then $Y \in N(w)$.
- **Restricted Principle of Conjunction.** If $X \in N(w)$ and $Y \in N(w)$, then $X \cap Y \in N(w)$ (provided $|X \cap Y| > 0$).
- **Principle of Adjunction.** If $X \in N(w)$ and $Y \in N(w)$, then $X \cup Y \in N(w)$.

In the following we also say that specific acceptances ($N(w)$) are rational, if they satisfy the conditions.

Adequacy of the criteria

Theorem (Menger)

N is rational iff for all w it holds that N(w) contains only permissions, prohibitions, oughts, etc.

Democratized morality: A solution

Theorem (Leitgeb)

For all Menger*-models $M = \langle W, N, [] \rangle$ and all groups $W' \subseteq W$ it holds that if N is rational, then:

- *If each member of W' agrees with the others in at least one moral system (that is: for every $w \in W', w' \in W'$ it holds that: $N(w) \cap N(w') \neq \emptyset$), then it holds that:*
- *There is a moral system acceptable for the group altogether (that is: there is a $X \subseteq W$ such that $X \in \bigcap_{w \in W'} N(w)$).*

If bilateral talks succeed and all members of the group have rational attitudes, then there will also be an overall consensus.

Democratized morality: An extension

Corollary (By us)

For all Menger*-models $M_1 = \langle W, N_1, [] \rangle$ and $M_2 = \langle W, N_2, [] \rangle$ and all groups $W' \subseteq W$ it holds that: If N_1 and N_2 are rational and:

- *Each member of W' agrees with the others in at least one moral system – that is: for every w and w', both elements of W', it holds that: $N_1(w) \cap N_1(w') \neq \emptyset$ and $N_2(w) \cap N_2(w') \neq \emptyset$, and:*
- *N_2 is more tolerant than N_1 – that is: for every w and w', both elements of W', it holds that: $N_1(w) \cap N_1(w') \subseteq N_2(w) \cap N_2(w')$,*

then a fully acceptable moral system based on N_2 is also more tolerant than a fully acceptable moral system based on N_1.

Democratized morality: Exemplified

Recall again: $N(w_1) = \{\{w_5\}, \{w_6\}, \{w_5, w_7\}, \{w_6, w_7\}\}$, $N(w_2) = \{\{w_5\}, \{w_7\}, \{w_5, w_7\}\}$, $N(w_3) = \{\{w_6\}, \{w_7\}, \{w_6, w_7\}\}$

It is easy to see that $N(w_2)$ (Austria, Germany, etc.) and $N(w_3)$ (Virtual) are rational, but $N(w_1)$ (Special) isn't.

A rationalized version of $N(w_1)$ would be $N(w_{1'}) = N(w_1) \cup \{\{w_7\}, \dots\}$.

So $P_{1'}$ allowes w.r.t. sc import, production and research – e.g. England is such a legal person.

And the group Austria, England, Germany, Virtual accepts as common morality $\{w_7\}$ – that is research with the help of sc. So this group is a community of interest w.r.t. sc.

Summary

Summary

Let us concentrate on the handling of democratized morality:

Unorthodox method: Partition groups!

Problem: Difficulty of imperfect community (bilateral discussions succeed, discussions of the whole fail)

Solution: Criteria of rationality

Support of the solution: Typical moral attitudes (Menger) and ascending of tolerance.

References I

Feldbacher-Escamilla, Christian J. (2010). "Ancient and Modern Ethics Combined". In: *Athens Dialogues E-Journal*. URL: http://athensdialogues.chs.harvard.edu/cgi-bin/WebObjects/athensdialogues.woa/wa/dist?dis=104.

Goodman, Nelson (1951). *The Structure of Appearance*. Harvard: Harvard University Press.

Menger, Karl (1998). *Ergebnisse eines Mathematischen Kolloquiums*. Ed. by Dierker, Egbert and Sigmund, Karl. Wien: Springer.

Siegetsleitner, Anne and Leitgeb, Hannes (2010). "Mengers Logik für Ethik und Moral: Nichts von Sollen, nichts von Güte, nichts von Sinnlosigkeit". In: *Logischer Empirismus, Werte und Moral. Eine Neubewertung*. Ed. by Siegetsleitner, Anne. Wien: Springer, pp. 199–218.