Analytic Metaphysics

Barry Smith

Lecture 2

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Towards an Ontology of Deontic Entities
Continuants vs occurrents

In preparing an inventory of reality, we keep track of these two different kinds of entities in two different ways.
Two orthogonal, complementary perspectives (continuants vs. occurrents)

stocks and flows
commodities and services
products and processes
anatomy and physiology
musical score and performance
continuants continue to exist

Note that, while, the *views* are instantaneous, the *objects viewed* endure
Continuant entities
- have continuous existence in time
- preserve their identity through change
- exist in toto if they exist at all

Occurrent entities
- have temporal parts
- unfold themselves phase by phase
- exist only in their phases/stages
You are a substance
Your *life* is a process

You are 3-dimensional
Your *life* is 4-dimensional
The (Aristotelian) Ontological Sextet

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<tr>
<th></th>
<th>Substances</th>
<th>Quality entities</th>
<th>Processes</th>
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<tr>
<td><strong>Universals</strong></td>
<td>Substance-universals</td>
<td>Quality-universals</td>
<td>Process-universals</td>
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<tr>
<td><strong>Particulars</strong></td>
<td>Individual Substances</td>
<td>Quality-instances (Tropes...)</td>
<td>Process-instances</td>
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BFO: the very top

Occurrent (always dependent on one or more independent continuants)

Independent Continuant
Dependent Continuant
BFO: the very top

Continuant

- Independent Continuant
- Dependent Continuant

Occurrent (always dependent on one or more independent continuants)

Universals

Instances
## The Ontological Sextet

<table>
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<tr>
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<th>Substances</th>
<th>Qualities, Roles, Functions, ….</th>
<th>Processes</th>
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<tr>
<td><strong>Universals</strong></td>
<td><strong>Object-universals</strong></td>
<td>Dependent Continuant-universals,</td>
<td><strong>Process-universals</strong></td>
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<td><strong>Particulars</strong></td>
<td><strong>Object-instances</strong></td>
<td>Dependent Continuant-instances</td>
<td><strong>Process-instances</strong></td>
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</table>
depends on

Continuant

Independent Continuant
thing

Dependent Continuant
quality

Occurrent
process, event

quality depends on bearer
depends_on

Continuant

Independent Continuant
thing

Dependent Continuant
quality, ...

Occurrent

process, event

process depends on participant
instance_of

universals

Continuant

Independent Continuant
thing

Dependent Continuant
quality

Occurrent
process, event

instances
specifically_depends_on

Continuant

Independent Continuant
thing

Dependent Continuant
quality

Occurrent

process, event

temperature depends on specific bearer
Realizable dependent continuants

Role: nurse role, pathogen role, food role
Disposition: fragility, virulence, loyalty, honesty
Function: to unlock (of a key), to create a binding agreement

– all in need of realizations
– qualities are not in need of realizations
realization specifically_depending_on realizable

```
Continuant

Independent Continuant
bearer

Specifically Dependent Continuant
disposition

Occurrent

Process of realization
```

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Realization (the rough idea)

execution of a plan
expression of an emotion
exercise of a role
realization of a disposition
performance of a symphony
projection of a film
utterance of a sentence
application of a therapy
course of a disease
Realizable dependent entities

\[ \text{continuants} \]

- role
- disposition
- function
Their realizations

- execution
- expression
- exercise
- application
- course

occurrences
Role (Externally-Grounded Realizable Entity)

role = def. a realizable entity

• which exists because the bearer is in some special physical, social, or institutional set of circumstances in which the bearer does not have to be, and

• is not such that, if it ceases to exist, then the physical make-up of the bearer is thereby changed
How deal with phase sortals?

John instance_of nurse at $t = \text{Def.}$

John instance_of human being at $t$
& for some $x$, $x$ instance_of nurse role
& $x$ inheres_in John at $t$
Disposition (Internally-Grounded Realizable Entity, Power, Potential)

disposition =def.

a realizable entity which is such that, if it ceases to exist, then its bearer is physically changed, and whose realization occurs when this bearer is in some special physical circumstances, in virtue of the bearer’s physical make-up
Hypothesis

Social entities involve combinations of roles and dispositions on the part of (a) individuals, (b) the communities in which they grow up and live

Example: a language, needs competence (*disposition*) on the part of an individual, but also a *disposition* in the wider society to school in correct use (where some people have the *role* of teachers)
Background presuppositions

Three stages in the development of culture:
1. without language,
2. with language but confined to speech,
3. with writing / printing / CPUs

With 1. and 2. culture is stored in human brains;
with 3. culture is stored also in external memory
(cave paintings, servers, dictionaries)
What’s special about humans

Richersen and Boyd, *Not by Genes Alone*, Chicago, 2005

only humans show much evidence of *cumulative* cultural evolution (p. 107)

as language evolves by small steps, so culture evolves by small steps (p. 36)
Is culture a matter of information?

Culture is information capable of affecting individuals’ behavior that they acquire from other members of their species through teaching, imitation and other forms of social transmission. (Peter J. Richersen and Robert Boyd, Not by Genes Alone, Chicago, 2005, p. 5)
Document Engineering

Bob Glushko: “A document is a purposeful and self-contained collection of information.”

• focuses on information content, not on the physical container

• sees business collaborations – e.g. between on-line customer credit card authorization service when the latter verifies and charges the customer’s account – as ‘Internet information exchanges’

• but there is more than information here

1. there is the dimension of sanction

2. there is the dimension of bodily skill
sanction / punishment

Because mutually beneficial cooperation may unravel unless most members of a group contribute, people often gang up on free-riders, punishing them when this is cost-effective in sustaining cooperation. … we present a model of coordinated punishment that is calibrated for ancestral human conditions [in which] The total cost of punishing a free-rider declines as the number of punishers increases. We show that punishment can proliferate when rare, and when it does, it enhances group-average payoffs.
Humans, Machines, and the Structure of Knowledge

Harry M. Collins
SEHR, 4: 2 (1995)

against the idea of knowledge-down-a-wire
against the idea of knowledge-down-a-wire

Imagine a 5-stone weakling having his brain loaded with the knowledge of a champion tennis player.
He goes to serve in his first match
-- Wham! --
his arm falls off.

He just doesn’t have the bone structure or muscular development to serve that hard.
A. Clark, *Being There*

we can rely not merely on information in our brains and on messages (speech, emails …) but also on

external scaffolding = maps, models, tools, books, culture, google

we act so as to simplify cognitive tasks by "leaning on" the structures in our environment.
Types of knowledge/ability/skill

1. those that can be transferred simply by passing signals from one brain/computer to another.

2. those that can’t:
   -- here the "hardware" is important; abilities/skills/attractors/pipelines contained
   (a) in the body
   (b) in the world
Hypothesis

To understand cooperation we need to understand obligations, claims, duties, permissions, consents, and other basic deontic entities

where do these sorts of entities belong in BFO?
Continuant

Independent Continuant
Specifically Dependent Continuant

Non-realizable Dependent Continuant (quality)
Realizable Dependent Continuant (function, role, disposition)
Mutual dependence

the disposition of this key (to open this lock) is mutually dependent on the disposition of this lock to be opened by this key

husband / wife
doctor / patient
host / pathogen
Mutual dependence

the **disposition of this key** (to open this lock) is mutually dependent on the **disposition of this lock** to be opened by this key

John signs a contract with Mary

- He thereby acquires an obligation to do X
- Mary acquires a claim on John that he do X

Claim and obligation are mutually dependent continuants
Mutual dependence

the **disposition of this key** (to open this lock) is mutually dependent on the **disposition of this lock** to be opened by this key

the key can open multiple locks; the lock can open multiple keys

Mutual generic dependence
Generic Dependence

specific dependence:
• my headache depends specifically upon my head
• my temperature depends specifically upon my body

generic dependence:
• this gene sequence depends for its existence on some molecule with a certain structure
• this pdf file depends for its existence on some memory store with a certain structure
Continuant

Independent Continuant

Specifically Dependent Continuant (SDC)

Realizable SDC

Disposition
Role

Generically Dependent Continuant (GDC)

Information Content Entity
where do claims and obligations belong in BFO?

- Independent Continuant
- Specifically Dependent Continuant (SDC)
- Generically Dependent Continuant (GDC)

Realizable SDC
- Disposition
- Role

Information Artifact
Continuant

Independent Continuant (John, Mary)

Specifically Dependent Continuant (SDC)

Generically Dependent Continuant (GDC)

Realizable SDC

Disposition

Obligor Role (of John)

Role

Obligee Role (of Mary)

Information Artifact (the contract)
Continuant

- Independent Continuant
  - *(John, Mary)*

- Specifically Dependent Continuant (SDC)

- Generically Dependent Continuant (GDC)

  - Realizable SDC
    - Disposition
      - Disposition: to perform *(of John)*
    - Role
      - Disposition: to monitor, to claim ... *(of Mary)*

- Information Artifact
  - *(the contract)*
but where is the obligation?

- Independent Continuant
  - (John, Mary)

- Specifically Dependent Continuant (SDC)

- Generically Dependent Continuant (GDC)
  - Information Artifact
    - (the contract)

- Realizable SDC
  - Disposition
    - Disposition: to perform
      - (of John)
    - Disposition: to monitor, to claim ...
      - (of Mary)
  - Role
    - Obligor Role
      - (of John)
    - Obligee Role
      - (of Mary)
Continuant

Independent Continuant (John, Mary)

Specifically Dependent Continuant (SDC)

Generically Dependent Continuant (GDC)

Realizable SDC

Disposition

Disposition: to perform (of John)

Disposition: to monitor, to claim ... (of Mary)

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Disposition

Role

Disposition: to perform (of John)

Disposition: to monitor, to claim ... (of Mary)

Obligor Role (of John)

Obligee Role (of Mary)

Information Artifact (the contract)
Are *claim* and *obligation*

1. universals from a material (=domain specific) ontology?
2. universals from a formal (= domain-neutral) ontology extending BFO?

Trivially: 1.

Does the proper treatment of *claim* and *obligation* require one or more new universals to be added to the BFO framework?

Less trivially: no.
Compare *language*

Each person’s linguistic competence is a disposition

A language itself is (something like) the sum total of the linguistic competences of all its users

• Con: The definition seems circular
• Con: Works only for natural living languages
• Pro: There is no better account
• Pro: Gives exactly the right account of how languages relate to each other and to dialects (the vagueness of the boundaries of any given language)
• Pro: Accounts for the role of dictionaries, and of the *Académie française*
Would you say "Are you coming with?" as a full sentence, to mean "Are you coming with us?"
What do you call the miniature lobster that one finds in lakes and streams for example (a crustacean of the family Astacidae)?

- crawfish
- crayfish
- crawdad
- I have no word for this critter

Joshua Katz, Department of Statistics, NC State University
Multiple kinds of linguistic dispositions

Communicative competence
Persuasive competence
Dispositions to use language in solitary thinking
Dispositions to exchange information, gossip, in two-person exchange
Dispositions spread across the entire linguistic community
Dispositions to use language to bring about changes in the world
Language is more than just a matter of information

• More than just collections of (written and spoken) words
• More than just rules governing written and spoken words
Thomas Reid (1785)

John promises to Mary that he will do X creates a miniature ‘civil society’
Reid’s theory of ‘social operations’

‘social acts’ vs. ‘solitary acts’

A social act … must be directed to some other person

Before Reid no recognition of this distinction
John promises to Mary that he will do X

- **Specifically Dependent Continuant (SDC)**
  - Realizable SDC
  - Disposition
  - Role

**Disposition to do X (of John)**

**Initial dispositions**
- to monitor
- to evoke a claim ...

**Dispositions in case of failure to perform**
- to blame
- to shame
- to punish ...

*(of Mary towards John)*
John promises to Mary that he will do X

- **Specifically Dependent Continuant (SDC)**
  - **Realizable SDC**
    - **Disposition**
    - **Role**
      - **Promiser role**

  - **Disposition to do X (of John)**
    - **Initial dispositions**
      - to monitor
      - to evoke a claim ...
    - Dispositions *in case of failure to perform*
      - to blame
      - to shame
      - to punish ...

(of Mary towards John, **plus:**
*of the wider society towards bearers of the promiser role who fail to perform*)
Hypotheses

1. any society with no widespread disposition to sanction in cases of failure to perform also has no obligations

2. the core structure described on the previous slide is an attractor – there will be a tendency for deviations from this structure – for instance on the part of Fake Online Locksmiths – to be eliminated through the workings of social and market forces

<table>
<thead>
<tr>
<th>Normative Force</th>
<th>Punishment</th>
</tr>
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<tbody>
<tr>
<td>Authority</td>
<td>Reprimand</td>
</tr>
<tr>
<td>Honour</td>
<td>Rebuff (Disappointment)</td>
</tr>
<tr>
<td>Promise</td>
<td>Restitution</td>
</tr>
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</table>

Table 7.1: Punitive actions available to the promisee.

What other kinds of sanction do we need to identify?
Reid on natural (gesture) language

The elements of the “natural language of mankind” are “modulations of the voice, gestures, and features”

“Where speech is natural, it will be an exercise, not of the voice and lungs only, but of all the muscles of the body; like that of dumb people and savages”.

Sanction upon failure to perform may involve gestural language – gossip, sneering, raising of eyebrow, losing face, importance of reputation, credentials, trust, …
Adolf Reinach
Adolf Reinach’s theory of social acts (1913)

part of a wider ontology of legal phenomena such as contract and legislation

a ‘contribution to the general ontology of social interaction’
Social Acts (Adolf Reinach)

The A Priori Foundations of the Civil Law –
1913

A study of the ontology of the promise and related social phenomena

Part of a wider ontology of legal phenomena such as contract and legislation

A ‘contribution to the general ontology of social interaction’
Speech Acts (Austin, Searle)

Examples: requesting, questioning, answering, ordering, imparting information, promising, commanding, baptising

• “‘acts of the mind’ which do not have in words and the like their accidental additional expression”

• Social acts which “are performed in the very act of speaking”
Reinach’s typology of acts

spontaneous acts
= acts which consist in a subject’s bringing something about within his own psychic sphere,
as contrasted with passive experiences of feeling a pain or hearing a noise
Spontaneous acts and language

internal vs. external

internal = the act’s being brought to expression is non-essential

external = the act only exists in its being brought to expression (moaning with pain? cursing?)
Self-directability of acts

self-directable vs. non-self-directable

self-directable: love, hate, fear

non-self-directable: commanding, requesting, promising
Social acts = non-self-directable external spontaneous acts

which are IN NEED OF UPTAKE:

the issuer of a command must not merely utter the command in public;

she must direct this utterance to its addressees in such a way that it is received and understood by them in an appropriate way.
Reinach on commanding

Commanding is an experience all its own, a doing of the subject to which in addition to its spontaneity, its intentionality and its other-directedness, the need to be grasped is also essential.

Commanding, requesting, warning … are all social acts, which by the one who performs them and in the performance itself, are cast towards another person in order to fasten themselves in his soul.
social acts have an inner and an outer side

‘If I say “I am afraid” or “I do not want to do that”, this is an utterance referring to experiences which would have occurred even without any such utterance.

‘But a social act, as it is performed between persons, does not divide into an independent performance of an act and an accidental statement about it;

‘it rather forms an inner unity of voluntary act and voluntary utterance.’ (mutual dependence, fusion)
The Parts of Social Acts: Linguistic Component

Reinach: The same words, ‘I want to do this for you’, can ... function both as the expression of a promise and as the informative expression of an intention.
# The Parts of Social Acts: Underlying Mental Basis

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<tr>
<th>Social Act</th>
<th>Experience</th>
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<tbody>
<tr>
<td>informing</td>
<td>conviction</td>
</tr>
<tr>
<td>asking a question</td>
<td>uncertainty</td>
</tr>
<tr>
<td>requesting</td>
<td>wish</td>
</tr>
<tr>
<td>commanding</td>
<td>will</td>
</tr>
<tr>
<td>promising</td>
<td>will</td>
</tr>
<tr>
<td>enactment</td>
<td>will</td>
</tr>
</tbody>
</table>
Social acts depend on uptake

(contrast: envy, forgiveness)

social acts must be both
addressed to other people
and
registered by their addressees
Enactments

BGB §1: “The ability of a person to be a subject of rights/law begins with the completion of birth”

This is ‘not any sort of judgement’

Valid laws shape/create environments:

‘If a state of affairs stands for a group of subjects as objectively required in virtue of an enactment, then action realizing the state of affairs is consequently required of these subjects.’
Rechtsfähigkeit

the ability to be a subject of rights/law

is created by the speech act/document act which is the enactment of a law

Ontological magic
Ontological Fertility

Assertion gives rise to CONVICTION as its successor state (John sees *that* Mary is swimming)

Promising gives rise to CLAIM and OBLIGATION

Commitment to a plan gives rise to DISPOSITION to realize the plan
 Assertion

1-sided dependence
- subject
- act of apprehension
- presentation

mutual dependence
- conviction
- state of affairs

single lines = 1-sided dependence
double lines = mutual dependence

the world
The Structure of the Promise

relations of one-sided dependence
The Structure of the Promise

- **promiser**
  - act of speaking
  - act of registering
  - content

- **promisee**

three-sided mutual dependence
The Structure of the Promise

- act of speaking
- act of registering
- content

- promiser
- promisee

- obligation
- claim

two-sided mutual dependence
Structure of the Mental Act of Plan Commitment

- **commander**
  - mental act of deciding to realize plan specified in plan specification #1
  - commitment to realize plan #1

- action: realize plan #1
  - tendency towards realization
  - BUT NO OBLIGATION
Structure of the Speech Act of Plan Commitment

- Act of speaking
- Act of registering
- Content of plan specification #1
- Commitment to realize plan #1
- Obligation to realize plan #1
- Action: realize plan #1
- Tendency towards realization
Modifications of Social Acts
(Searle: felicity conditions)

Sham promises; lies as sham assertions (cf. a forged signature); rhetorical questions

Social acts performed in someone else’s name (representation, delegation)

Social acts with multiple addresses

Conditional social acts

Collective social acts
Collective social acts

Singing in a choir
Conversation
Dancing
Arguing
Religious rituals
Military planning
Social media ≠ social acts

Someone might use Facebook simply as a diary / personal scrapbook.

Someone might use Youtube simply as a videodiary.
J. L. Austin
Austin (1955)

‘promising is not something superior, in the same scale as hoping and intending’

Rather, when I say ‘I promise’
I have not merely announced my intention, but, by using this formula (performing this ritual), I have bound myself to others, and staked my reputation, in a new way.
Austin: the speech act of guaranteeing

someone who guarantees and turns out to be wrong is “liable to be rounded on by others”
John R. Searle
Searle:

Speech acts are acts performed by uttering expressions in accordance with certain constitutive rules.
When you perform a speech act then you create certain institutional facts.
Institutional facts

exist because we are able to treat the world and each other in certain, very special (cognitive) ways

Examples of institutions:
  money
  property
  marriage
  government

Institutional facts exist because of language use, law and psychology
Languages are tied to obligations

Core speakers of a language (mothers, school-teachers, dictionary compilers, terminologists ...) have

- Dispositions to monitor
- to evoke a claim ...
- Dispositions in case of failure to perform
  - to blame
  - to shame
  - to punish ...

their fellow language users for incorrect uses of language (incorrect dialect, incorrect word choice, inappropriate utterance ...
The competences of which language is comprised

1. Intra-Linguistic Dispositions
   • to speak,
   • to write,
   • to register (hear/read and understand) the content of what is spoken, written
   • to respond (in conversations, in response to questions, in response to requests for information)
   • to monitor, blame, etc. (see above)
The competences of which language is comprised

2. Dispositions to use language to achieve extra-linguistic benefits

2a. for oneself
• to request, beg, command, plead, entreat, claim ...

2b. for another
• to promise, oblige oneself, contract, waive a claim ...
Extra-linguistic realizables whose existence is triggered by uses of language

1. as when an act of promising triggers the beginning to exist of
   – the disposition on the side of the promissor to act in such a way as to fulfil the content of the promise
   – the obligation to fulfil the content of the promise
   – the disposition on the side of the promissee to monitor fulfilment (and subsequently to blame, shame, malign, sue, etc.)

2. as when an act of waiving a claim triggers the ceasing to exist of
   – the disposition to realize the corresponding obligation
   – this obligation itself
How is this possible? How can mere speaking create dispositions?

Because language is a set of dispositions inhering in a society (a linguistic community).

The institutions of promising, contracting, blaming, suing, etc. are themselves dispositions inhering in a society.

A large and representative fraction of members of the society bears dispositions to (for instance) monitor, and to blame and shame those who do not keep their promises, to expect and respect such blaming and shaming, to expect and respect that others will expect and respect such blaming and shaming.
Ontology needs to take care of deontic entities

Ontological approach via social dispositions (customs, languages, practices, institutions, ...)

• Ontology of acts
  – mental acts
  – physical acts
  • Ontology of social acts
  • Ontology of speech acts
  • Ontology of document acts
What is an obligation?

• Ontology of acts
  – mental acts
  – physical acts
  • Ontology of social acts
  • Ontology of speech acts
  • Ontology of document acts
Towards obligation

promiser -- the promise -- promisee

relations of one-sided dependence
The Structure of the Promise

The diagram illustrates the structure of a promise, showing three main components:

- **Promiser**: The entity who makes the promise.
- **Promisee**: The entity to whom the promise is directed.
- **Content**: The content of the promise, which involves an act of speaking and an act of registering.

There is a three-sided mutual dependence, indicated by the relationships between these components.
The semi-ritualized event of speaking we call a promise gives rise to mutually correlated (states of) claim and obligation.
The Structure of the Promise

action: do F

promiser

act of speaking

act of registering

content F

promisee

obligation

claim

tendency towards realization
Enhanced view 1

action: do F on the part of the promiser

act of speaking

act of registering

content F

promiser

claim

obligation

promisee

blame and shame the promise in case of failure to do F

= initial tendency towards realization

= terminal tendency towards blaming and shaming
Enhanced view 2

action: do F on the part of the promiser

promiser

act of speaking

act of registering

content F

obligation

claim

promisee

blame and shame the promise in case of failure to do F

= initial tendency towards realization

= terminal tendency towards blaming and shaming
Enhanced view 3

action: do F on the part of the promiser

promiser

act of speaking

act of registering

content F

obligation

claim

promisee

blame and shame the promise in case of failure to do F

= initial tendency towards realization

= terminal tendency towards blaming and shaming in promiser and in wider society

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