

Analytic Metaphysics

Lecture 3

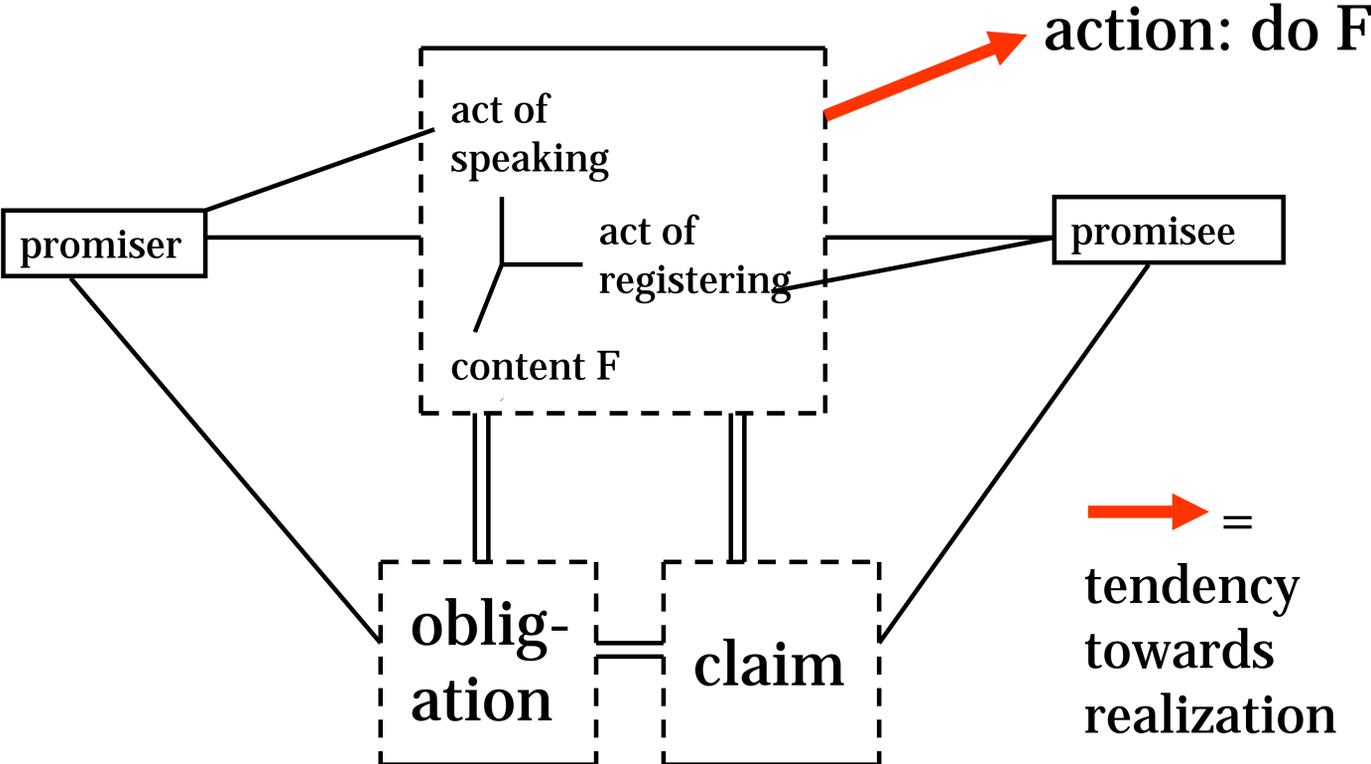
Barry Smith

February 16, 2016

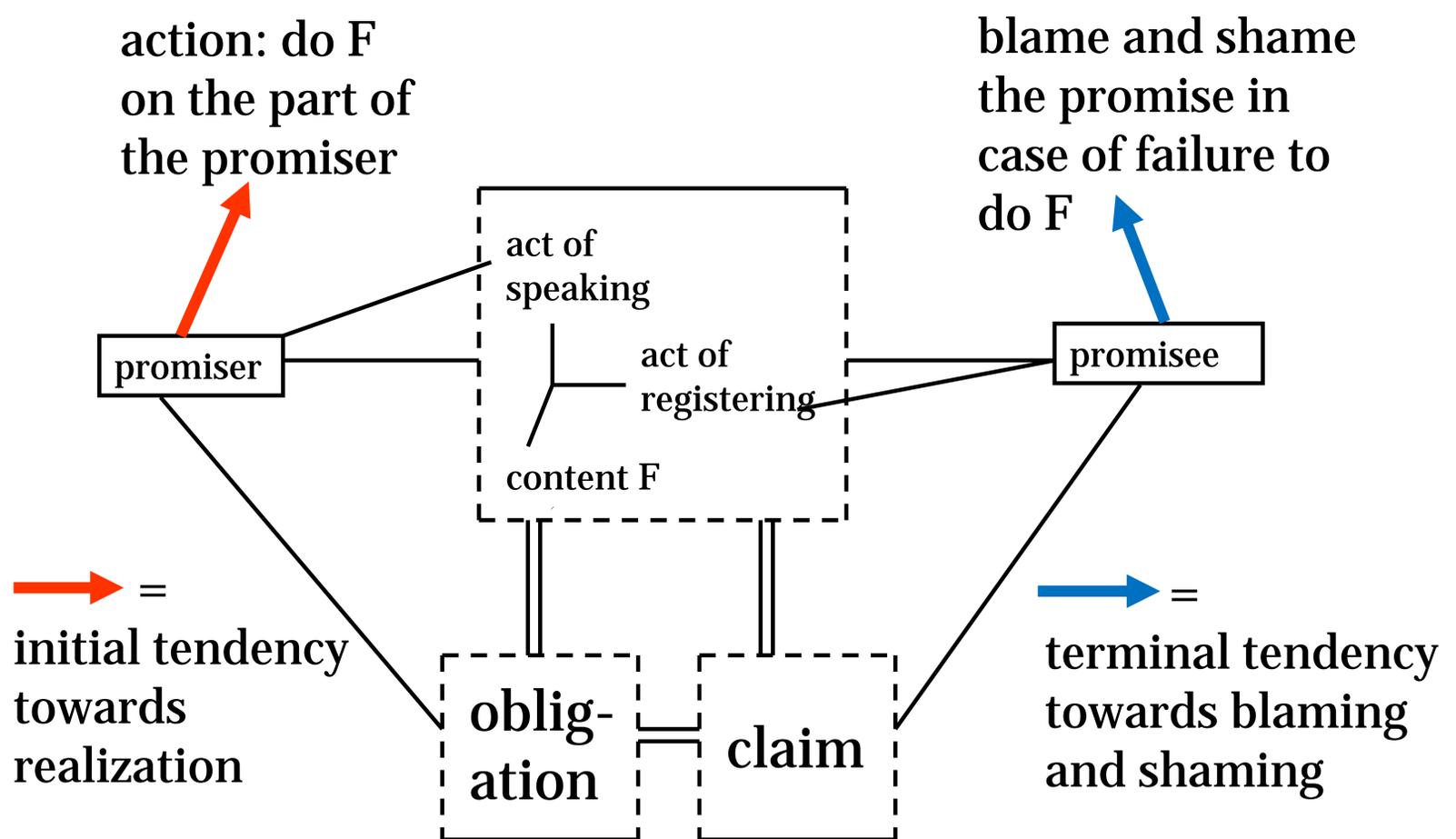
Ontology of Deontic Entities (continued)

February 16, 2016

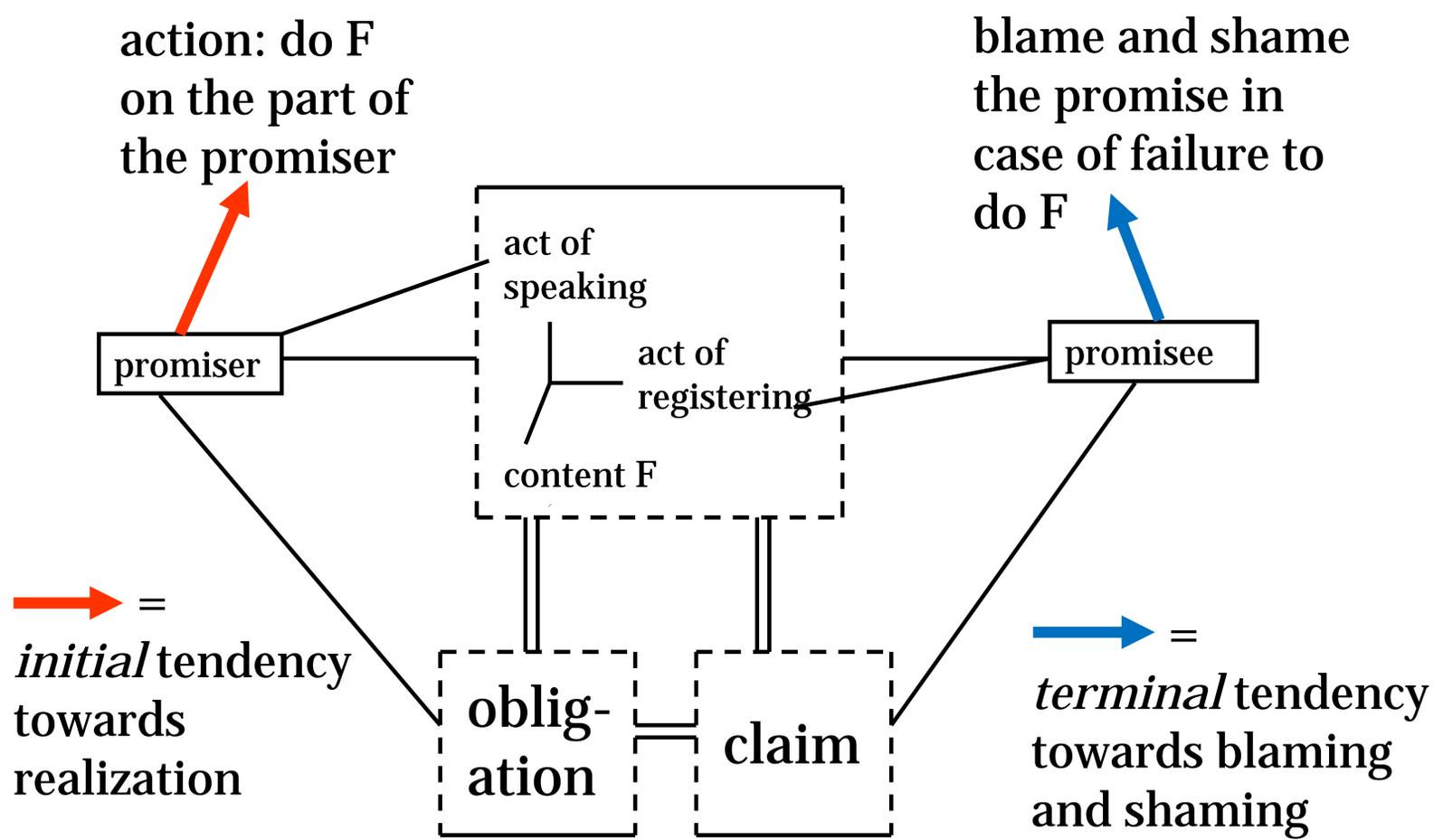
The Structure of the Promise



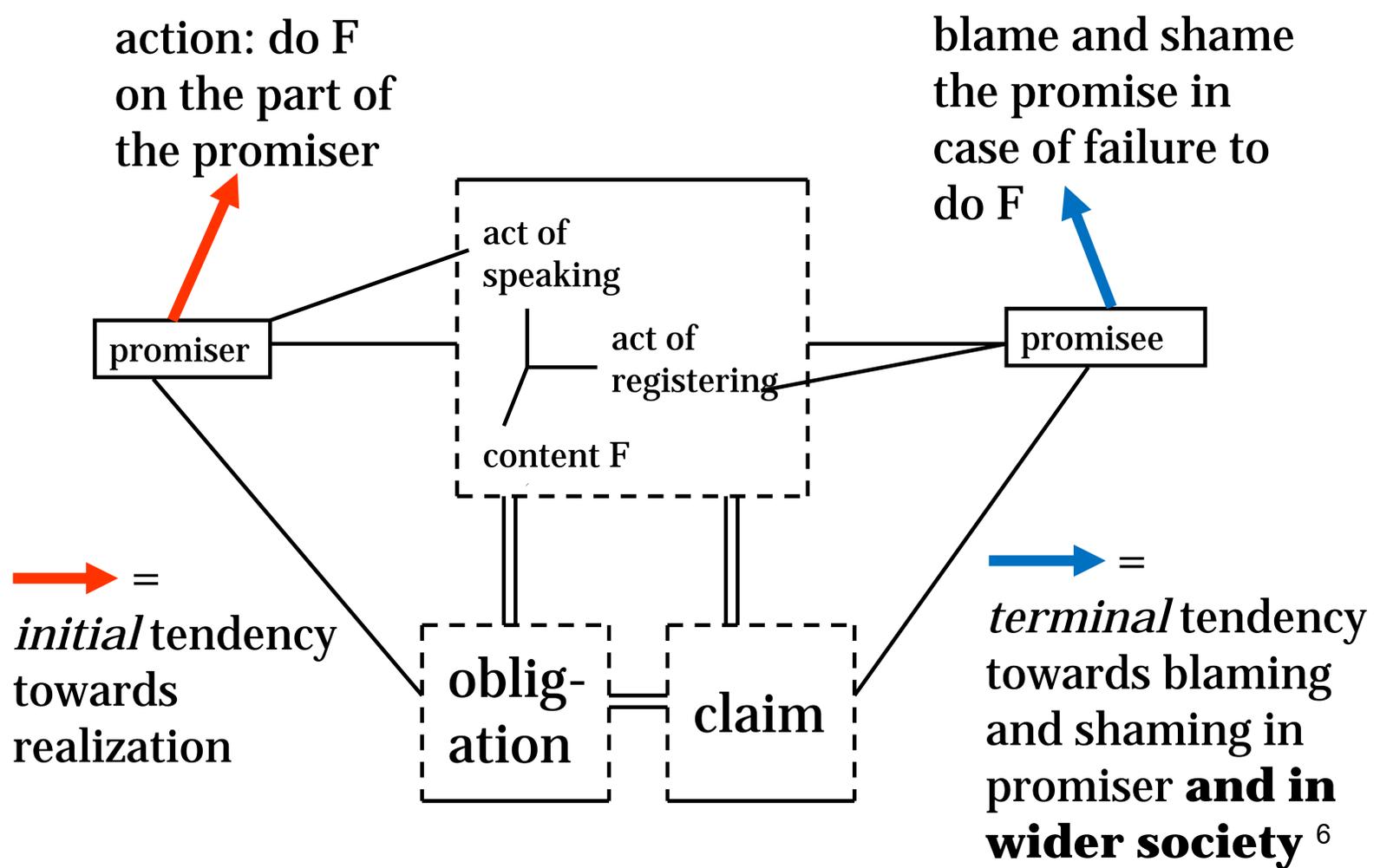
Enhanced view 1



Enhanced view 2



Enhanced view 3



Different kinds of sanction

withdrawal of trust (damage to reputation)

withdrawal of permissions / credentials

on-line review

police

"ought" implies "can"

Chituc V1, *et al*: Blame, not ability, impacts moral "ought" judgments for impossible actions: Toward an empirical refutation of "ought" implies "can". *Cognition*. 2016 Feb 2;150:20-25.

Recently, psychologists have explored moral concepts including obligation, blame, and ability. ... philosophers have widely assumed such a relationship in the principle that "ought" implies "can," ... The cognitive underpinnings of these concepts are tested in the three experiments reported here.

"ought" implies "can"

Experiment 1, most participants judge that an agent ought to keep a promise that he is unable to keep, but only when he is to blame for the inability.

Experiment 2 shows that such "ought" judgments correlate with judgments of blame, rather than with judgments of the agent's ability.

Experiment 3 replicates these findings for moral "ought" judgments and finds that they do not hold for nonmoral "ought" judgments, such as what someone ought to do to fulfill their desires.

"ought" implies "can"

These results together show that folk moral judgments do not conform to a widely assumed philosophical principle that "ought" implies "can." Instead, judgments of blame play a modulatory role in some judgments of obligation.

Necessary conditions for: person x has a (simple promise-type) obligation

1. there is some society [object aggregate] s
2. x member_part_of s
3. there is some obligation-generating practice [a social disposition like our promising] p
4. p inheres in s [p instance of social practice]
5. there is some act a which x performs at time t earlier than t^+
6. a is an instance of p 's ritual obligation-generating act type [in our society: a is a *promise*]

if ***x*** promises ***y*** at ***t*** then

1. *x* performs the 'I promise' speech act before *y* at *t* and *y* registers *x*'s performance
2. there is some society *s* and *x* and *y* are member-parts of *s*
3. from *t*, *x* has a disposition *d* to perform the content of *a* ("do F")
4. *d* specifically_ depends on *a* & *x* knows that *d* exists and that *d* specifically_ depends on *a*

The disposition to perform the content of *a* exists in virtue of changes in the brain of *x*

**if x performs act a [e.g., x promises] at t
then**

5. there is a mutually specifically dependent pair of obligor and obligee roles r_{or} and r_{ee}

6. r_{or} inheres_in x & r_{ee} inheres_in y

These roles exist in virtue of the fact that

y AND/OR members of the society s associated with y

believe that x performed the corresponding obligation-generating act

If all memories of the act a and its attendant obligation cease to exist, then this obligation ceases to exist

if **x performs act *a* at *t* &
x thereby** has an obligation at ***t*⁺**
then

6. at *t*⁺

EITHER *y* OR members of *s* associated with *y*
have a disposition at *t*⁺ to monitor *a*'s
performance of this content & to blame and
shame *x* if *x* fails to perform

This disposition specifically depends on the
belief that *x* has the obligation, thus on his
having the obligor role, at *t*⁺

obligation

x is an obligation-generating-act =def. x is a speech act performed by a member of a society in which ritual declarations take place of the form 'I will do F ' which give rise to dispositions to monitoring and blame in case of failure

y has an obligation at t^+ =def. y performed an obligation-generating act x in society s and members of s , as a result of x , have the disposition to blame y in case of failure

obligor role (how to define it)

x has the obligor role =def. x performed an obligation-generating act & x is believed by members of s to have performed that obligation-generating act

x has the obligor role =def. x has an obligation & x is believed by members of s to have that obligation

obligations are created by plans involving multiple agents

x is in charge of a team y (e.g. x is a conductor)

z is a plan specification (e.g. a musical score)

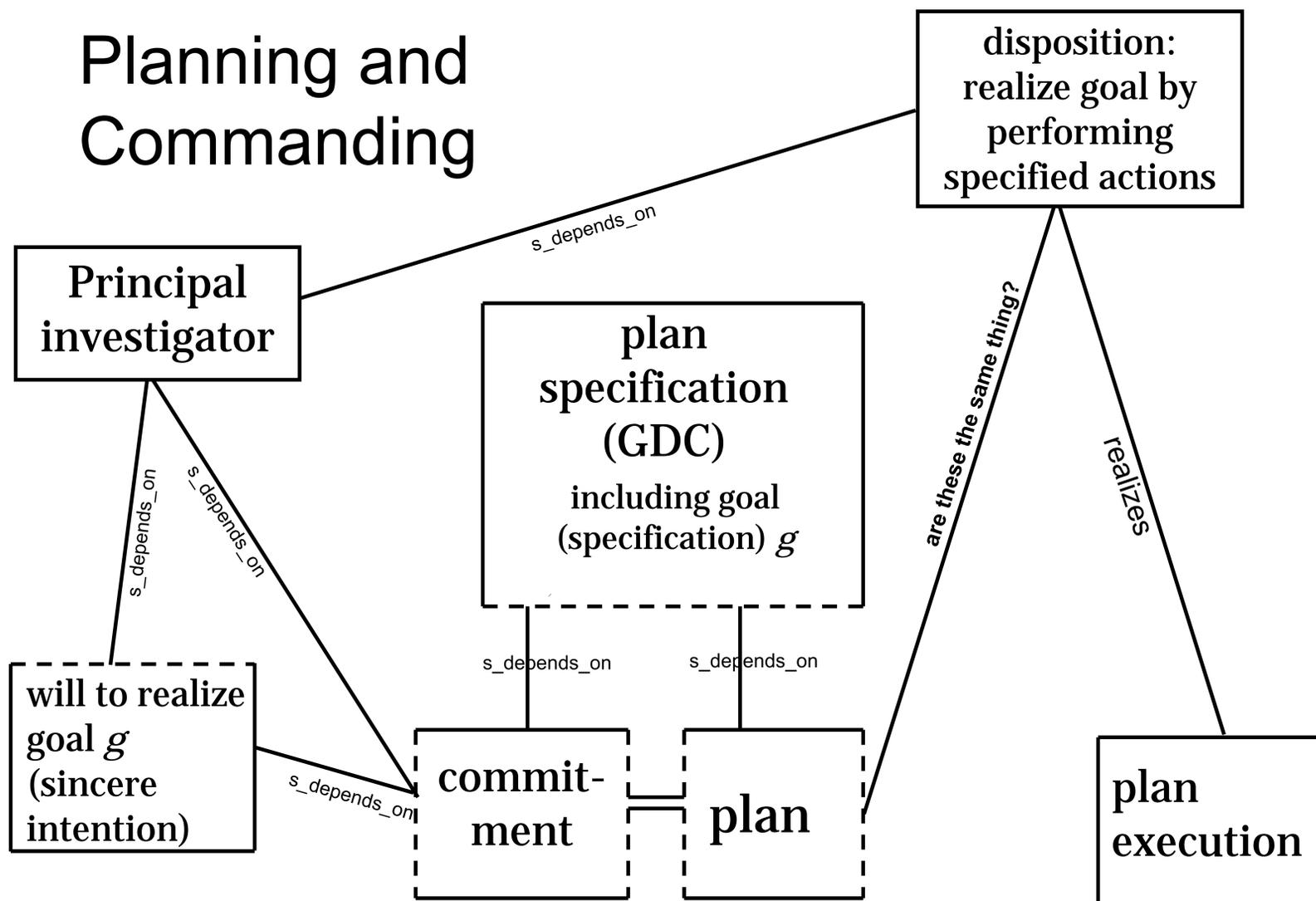
x commits to using y to realize z

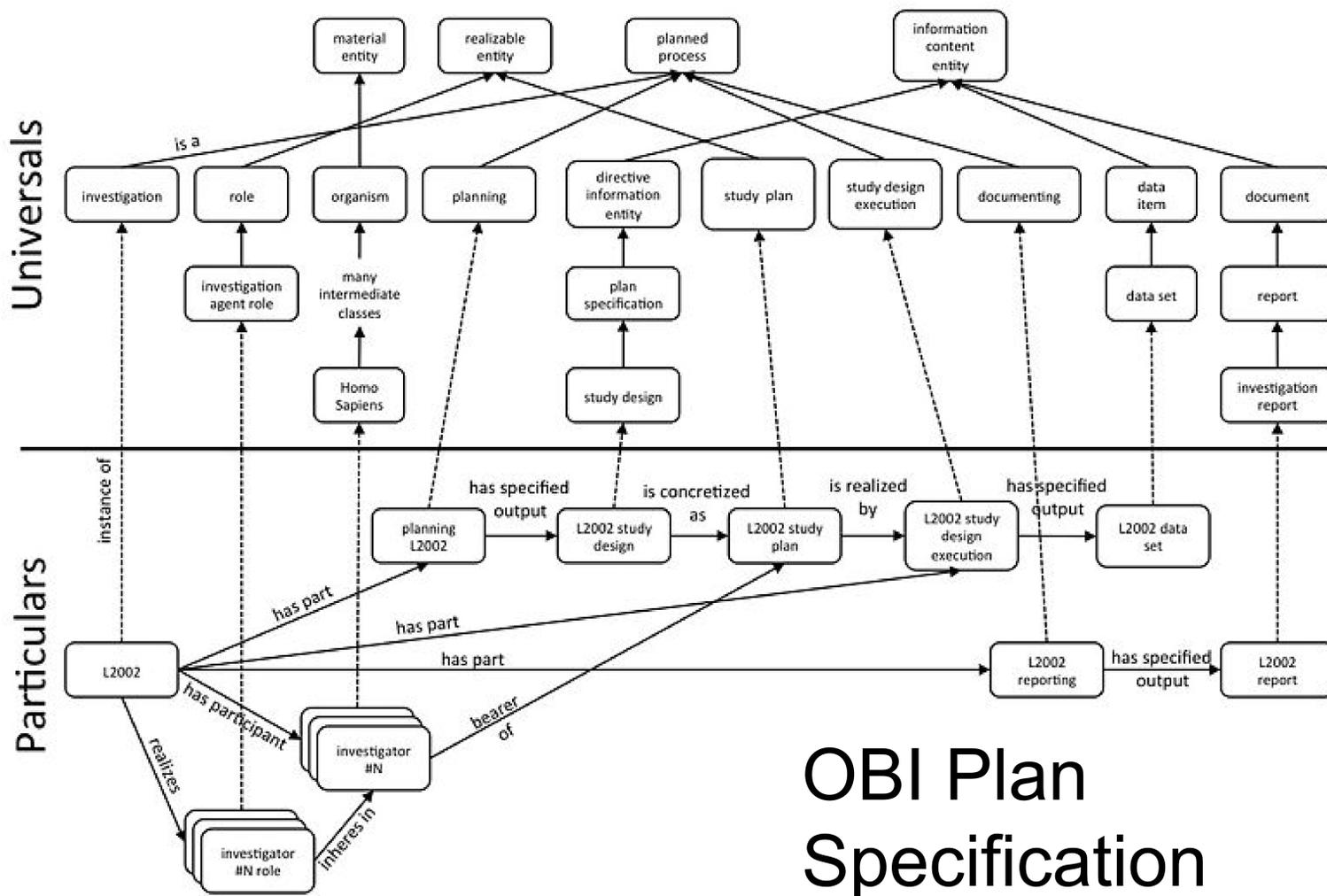
on the basis of the GDC z , x 's plan (something in x 's brain, an intention) – call it z^x – comes into being

x instructs the members of y to do their part as specified in z

all members of y become obliged to realize

Planning and Commanding





OBI Plan Specification

office creates obligations

to be appointed or elected to an office involves

commitment to fulfil the duties of the office

public acceptance of this commitment

obligations following therefrom

again: there are sanctions for failure to perform (= fulfil duties)

offices

is the *office* identical with the *office holder role*?

(if so, the office ceases to exist during interregna between office-holders)

duty

= def. a duty is an obligation the fulfilment of which is required by the member of an organization or by the holder of an office in the organization

are there duties outside organizations / offices?

Reinach:

Basic institutional concepts: *convention, ownership, obligation, uptake, agreement, sincerity, rule, breaking a rule, authority, consent, jurisdiction*

These are primitive = not capable of being defined in terms of more basic notions

Prestige vs. Dominance

Joseph Henrich, Francisco J Gil-White, The evolution of prestige: freely conferred deference as a mechanism for enhancing the benefits of cultural transmission, *Evolution and Human Behavior*, 22, 2001, 165-196

This paper advances an “*information goods*” theory that explains prestige processes as an emergent product of psychological adaptations that evolved to improve the quality of information acquired via cultural transmission. Natural selection favored social learners who could evaluate potential models and copy the most successful among them. In order to improve the fidelity and comprehensiveness of such ranked-biased copying, social learners further evolved dispositions to sycophantically ingratiate themselves with their chosen models, so as to gain close proximity to, and prolonged interaction with, these models. Once common, these dispositions created, at the group level, distributions of deference that new entrants may adaptively exploit to decide who to begin copying. This generated a preference for models who seem generally “popular.” Building on social exchange theories, we argue that a wider range of phenomena associated with prestige processes can more plausibly be explained by this simple theory than by others, and we test its predictions with data from throughout the social sciences. In addition, we distinguish carefully between *dominance* (force or force threat) and *prestige* (freely conferred deference).

E. Francesconi, “A description logic framework for advanced accessing and reasoning over normative provisions”,
Artificial Intelligence and Law 22, 2014

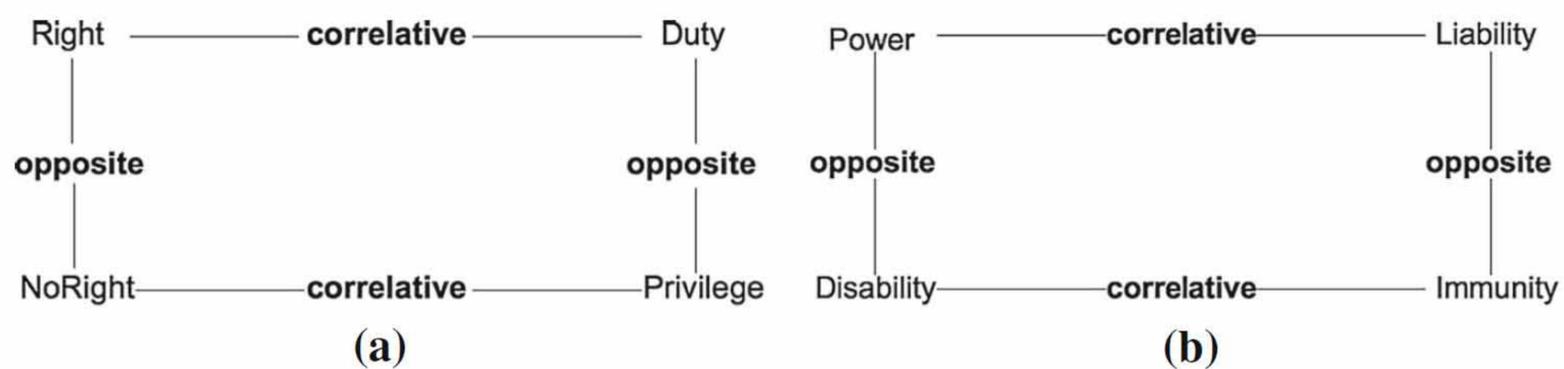


Fig. 3 Hohfeldian relations. **a** Deontic concepts and their relations, **b** potestative (anankastic) concepts and their relations

S. Aubert and J.-P. Müller “Incorporating institutions, norms and territories in a generic model to simulate the management of renewable resources”, *Artificial Intelligence in Law*, (2013) 21:47–78

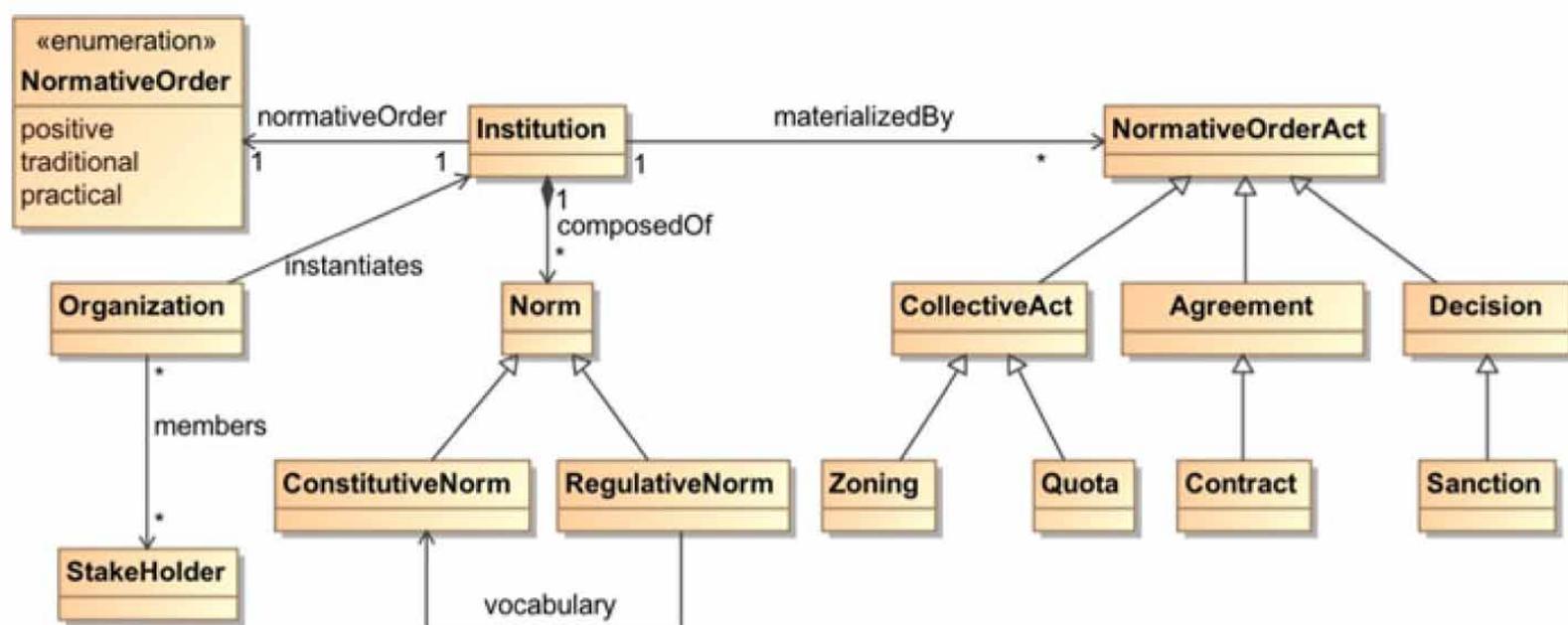


Fig. 3 The definition of an institution

Aubert and Müller

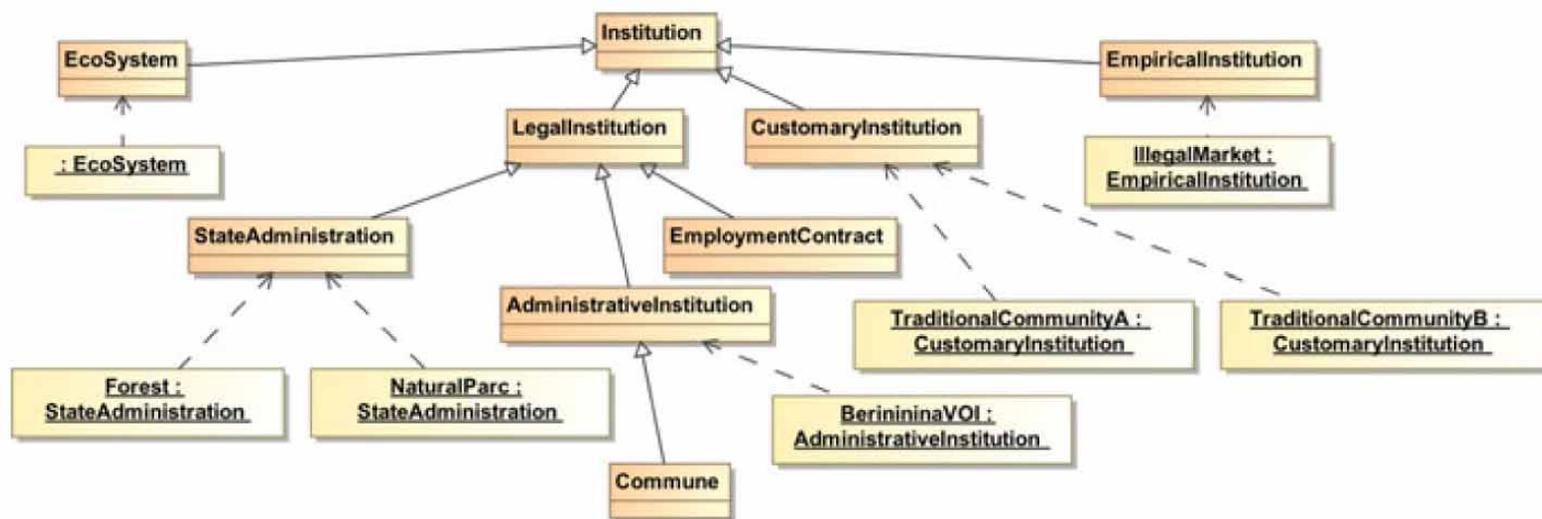
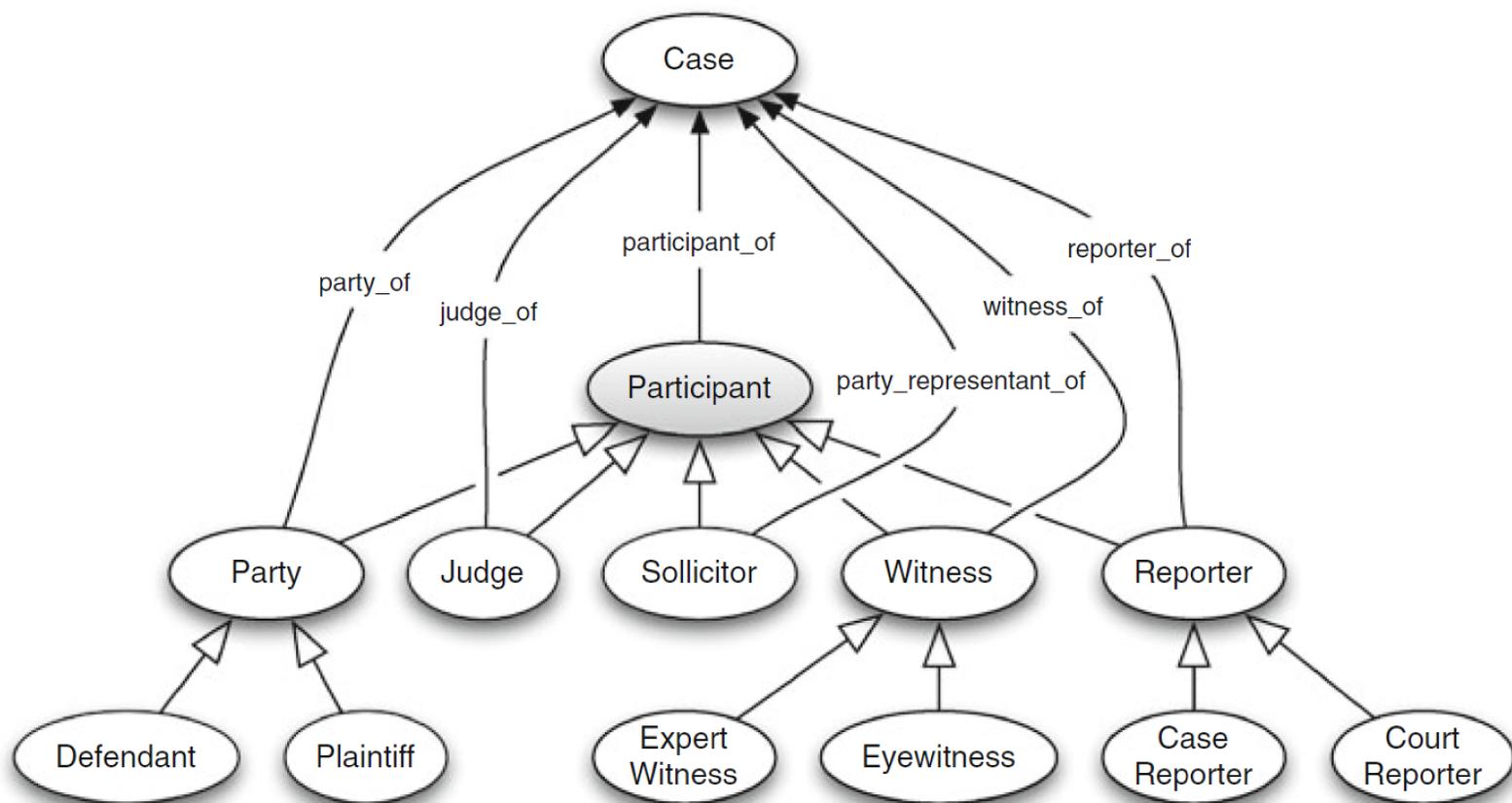


Fig. 5 Some institutions

Adam Wyner and Rinke Hoekstra, "A legal case OWL ontology with an instantiation of Popov v. Hayashi", *Artificial Intelligence in Law* (2012) 20:83–107





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[RinkeHoekstra / lkif-core](#)
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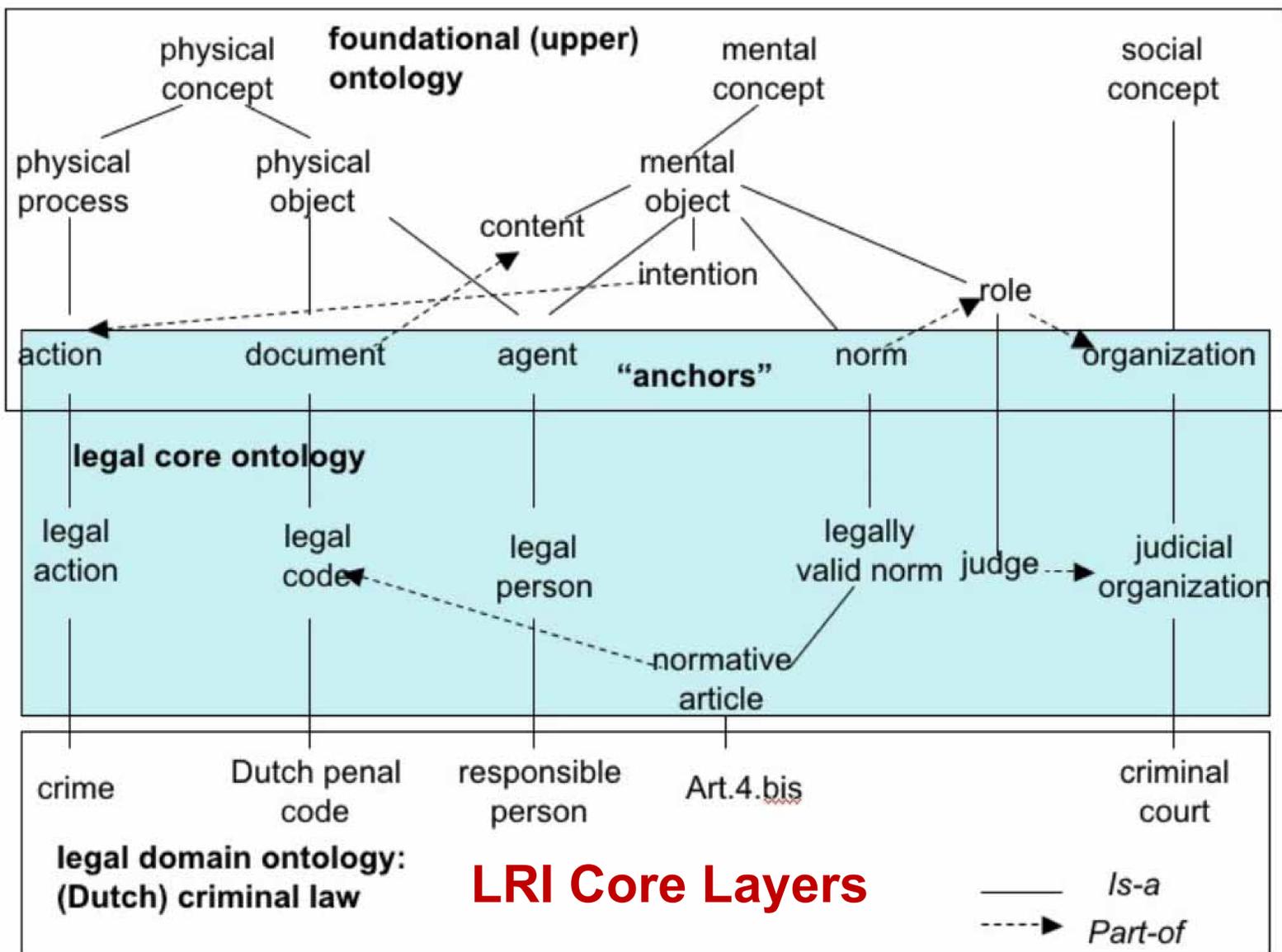
The LKIF Core Ontology of Basic Legal Concepts

90 commits
17 branches
0 releases
1 contributor

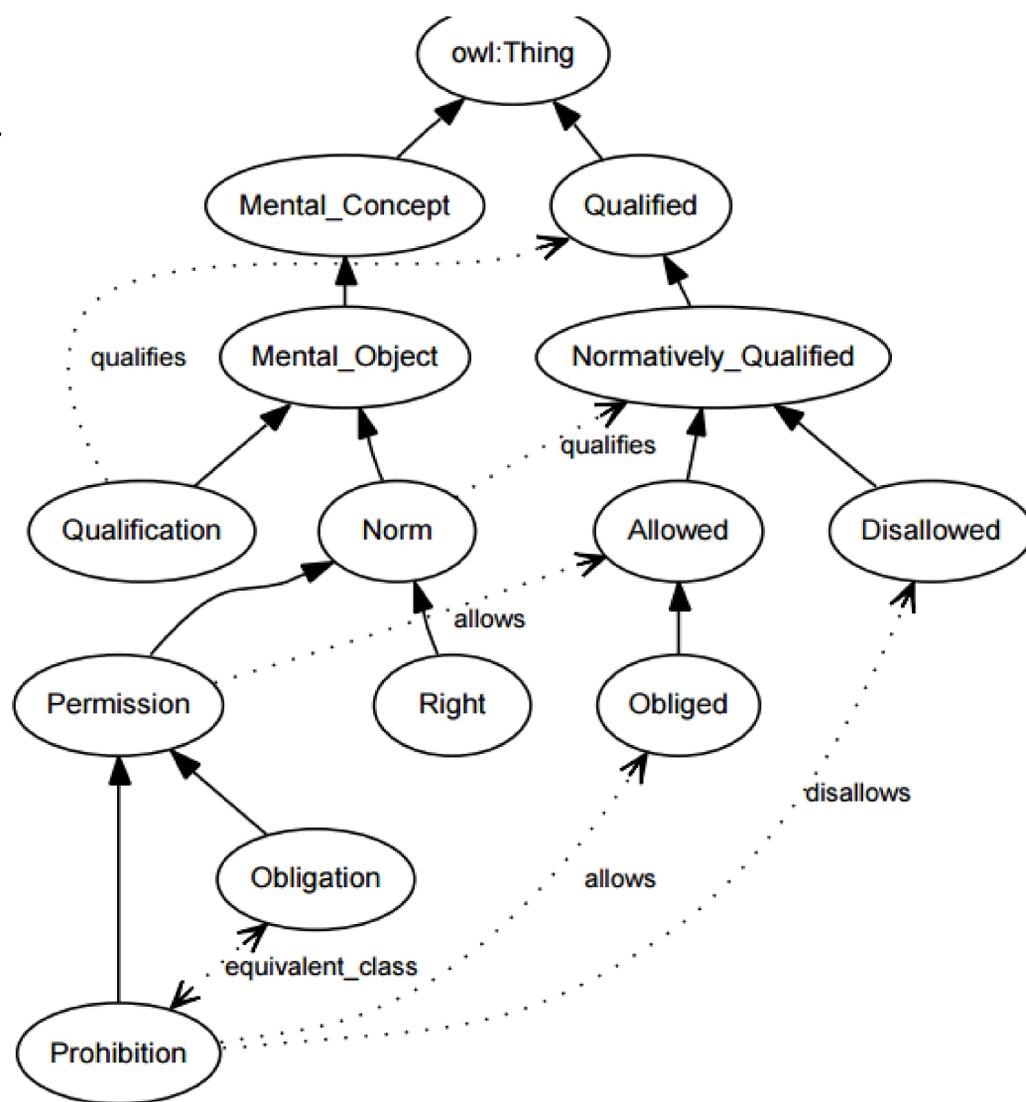
Branch: **master**
[New pull request](#)
[New file](#)
[Find file](#)
[HTTPS](#)
<https://github.com/RinkeH>
[Download ZIP](#)


RinkeHoekstra Added .md extension
 Latest commit 74ce295 on Feb 15, 2013

 perf-tests	Fixes for 1.0.3, moved time-modification.owl and lkif-rules.owl to ne...	8 years ago
 README.md	Added .md extension	3 years ago
 action.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 expression.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 legal-action.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 legal-role.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 lkif-core.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 lkif-extended.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 lkif-rules.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 lkif-top.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 mereology.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago
 norm.owl	Added counts_as/imposed_on, Subjective_Entity, and redefined Role	8 years ago



Rinke Hoekstra, Joost Breuker, Marcello Di Bello, Alexander Boer. "The LKIF Core Ontology of Basic Legal Concepts"



Qualifications and Norms

E. Francesconi, “A description logic framework for advanced accessing and reasoning over normative provisions”,
Artificial Intelligence and Law 22, 2014

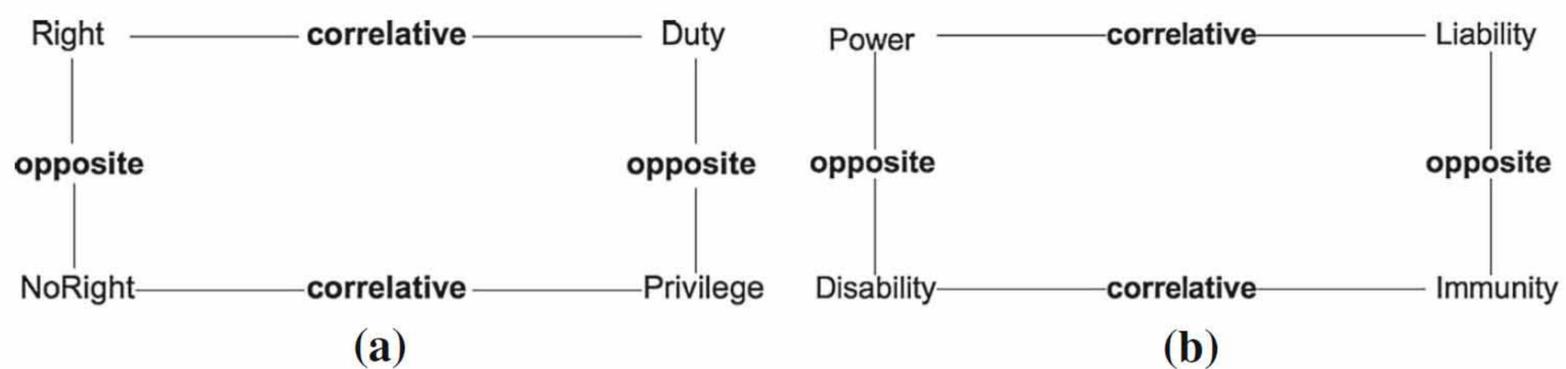


Fig. 3 Hohfeldian relations. **a** Deontic concepts and their relations, **b** potestative (anankastic) concepts and their relations

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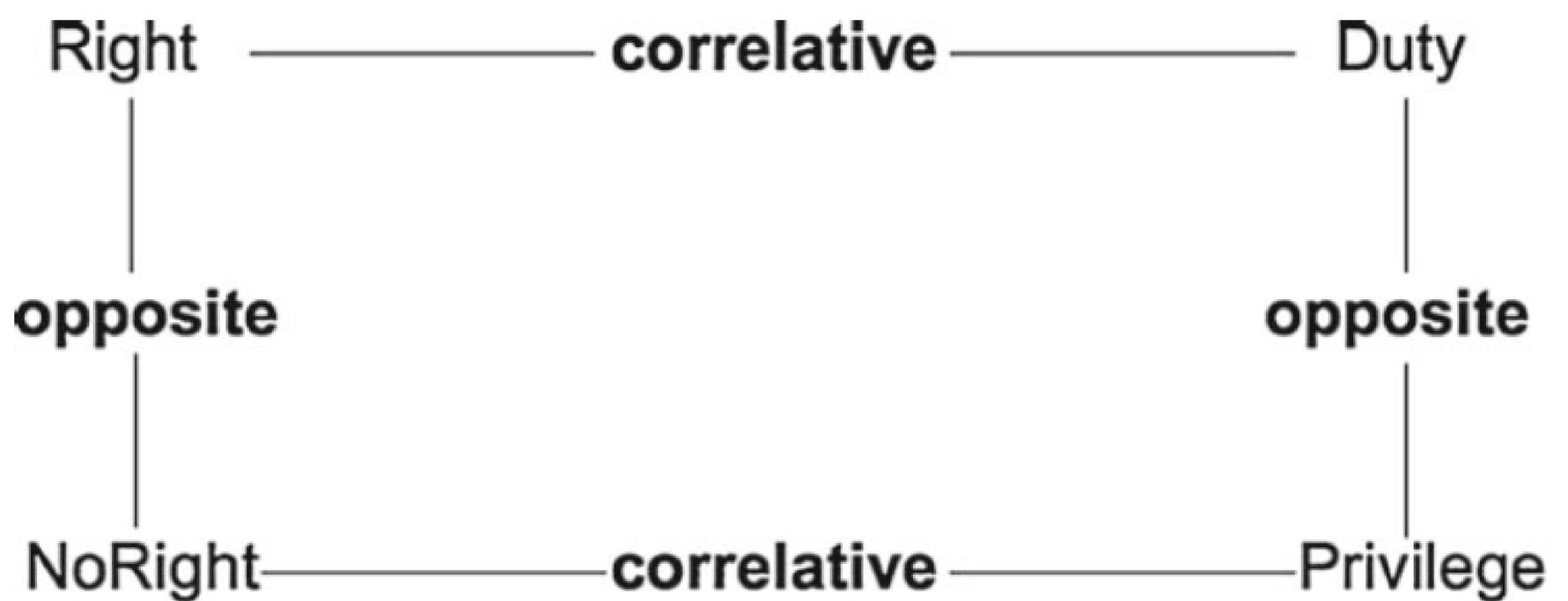
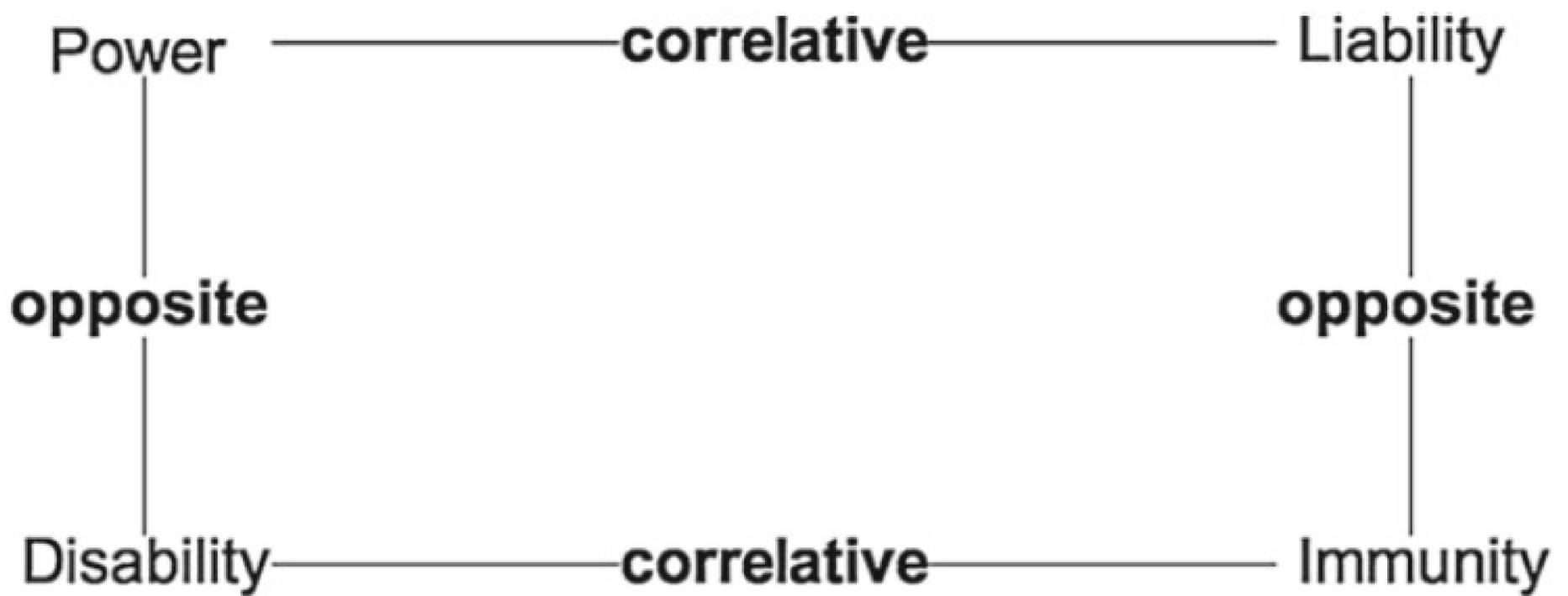


Fig. 3 Hohfeldian relations. a Deontic concepts and their relations

Hohfeldian legal relations

1. X has the RIGHT that Y performs A, iff in case Y does not perform A, X may react with an action R such that Y is negatively affected by R.
2. Y has the DUTY to perform A for X, iff the same condition as the one above holds (i.e., DUTY is the “opposite” of RIGHT, where the roles of the two agents are interchanged).
3. X has NO-RIGHT that Y performs A, iff in case Y does not perform A, X may not react with an action R such that Y is negatively affected by R
4. Y has the PRIVILEGE (is allowed) to perform A with respect to X, iff in case Y does perform A, X may not react with an action R such that Y is negatively affected by R

E. Francesconi, “A description logic framework for advanced accessing and reasoning over normative provisions”,



Hohfeldian legal relations in BFO terms

1. X has the RIGHT that Y performs A = Y acquires the role of obligor wrt performing A when X requests/commands it; AND wider society has the disposition to sanction Y in case of failure to perform;
2. Y has the DUTY to perform A for X = Y acquires the role of obligor wrt performing A when X requests/commands it; AND wider society has the disposition to sanction Y in case of failure to perform

Hohfeldian power relations

1. X has the POWER to bring about that P (where P is some Legal Relation), iff there exists an action A such that, in case X performs A, P is established.
2. X has the INABILITY to bring about that P (where P is some Legal Relation), iff there exists no action A such that in case X performs A, P is established.
3. P has the LIABILITY of being brought about by X iff there exists an action A such that in case X does perform A, P is established.
4. P has the IMMUNITY of being brought about by X iff there exists no action A such that in case X does perform A, P is established.

POWER to bring about legal relations

rests on having AUTHORITY-ROLE (commander, director, team leader ...)

X has immediate AUTHORITY-ROLE =def. the (majority of members of the relevant) wider society accepts that X has AUTHORITY-ROLE

document D specifies AUTHORITY-ROLE r =def. D specifies DUTIES AND POWERS that flow from having r

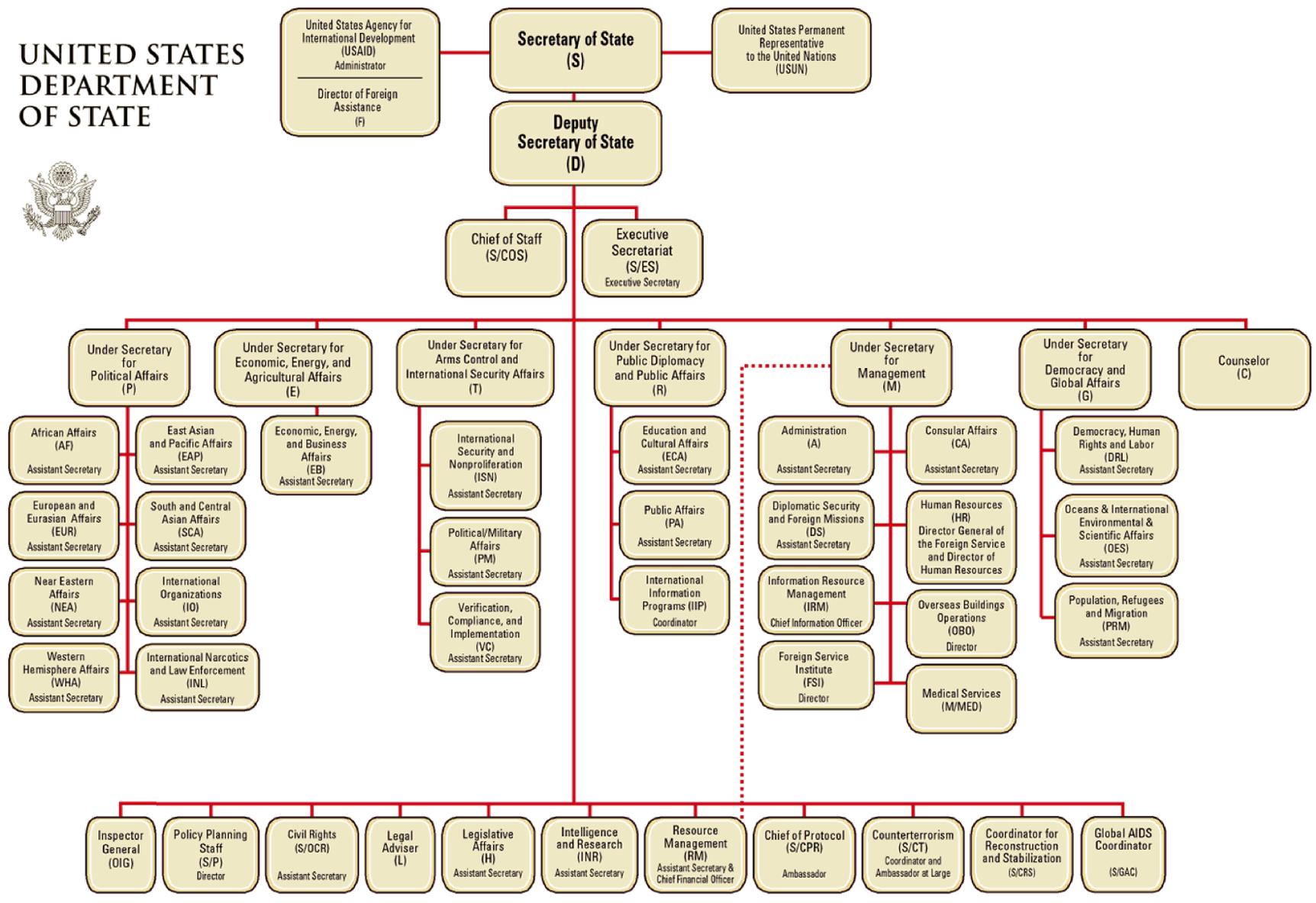
POWER to bring about legal relations

X has D-mediated AUTHORITY-ROLE =def. X has AUTHORITY-ROLE defined in document D AND the members of the relevant society accept that X has AUTHORITY-ROLE

Document-ontological foundations of an Org Chart

X has D1-mediated AUTHORITY-ROLE to appoint/instruct/manage Y with D2-mediated AUTHORITY-ROLE

**UNITED STATES
DEPARTMENT
OF STATE**



November 2007

Hohfeldian power relations in BFO terms

1. X has the POWER to bring about that P (where P is some Legal Relation) = X has the authority-role which is such that, if X performs act A then legal relation P is established AND there is a disposition in the wider society to accept X's authority role AND
2. iff there exists an action A such that, in case X performs A, P is established.
2. X has the INABILITY to bring about that P (where P is some Legal Relation), iff there exists no action A such that in case X performs A, P is established.
- 3..

Kevin W. Saunders, A Formal Analysis of Hohfeldian Relations, 1990

Powers, immunities, liabilities and disabilities involve changes in legal relations. There are various ways in which legal relations may change, but not all of them are the result of an exercise of a power, etc. (A change in rights under a contract may, for example, result from the occurrence of a natural event.)

Powers, immunities, liabilities and disabilities, however, exist in situations in which the potential change in legal relations is dependent on the volitional act of some person. X is said to have a power over Y, if X, by doing some act, can change the legal relations of Y.

Some people can create normative relations in certain sorts of contexts

(Searle: ontological fecundity of language)

In the realization of collaborative plans, the team leader L creates obligations on the part of the team members

But how did L get to be team leader?

And how did L get the POWER (authority) to issue instructions to the team members?

Some people can create normative relations in certain sorts of contexts

We assume: L created the team

But how did L get the POWER (authority) to create the team

(follows complex story about L's employment contract, grant funding documents, ...)

Some people can create normative relations in certain sorts of contexts

1. How did L get the POWER (authority) to issue instructions to the team members?
2. Because each member M, when she joined L's team, **consented** to follow L's instructions relating to the performance of the team
3. Each team member X has the POWER to bring about that L has the POWER to issue such instructions

Hospital consent form

About Kaleida Health

Kaleida Health is the largest healthcare provider in Western New York, serving the area's eight counties with state-of-the-art technology and comprehensive healthcare services. Its expert, compassionate healthcare professionals are committed to providing the best possible outcomes and experience for patients and visitors.

More than one million sick or injured patients choose a Kaleida Health facility annually, including [Buffalo General Medical Center/Gates Vascular Institute](#), [DeGraff Memorial Hospital](#), [Millard Fillmore Suburban Hospital](#), and [Women & Children's Hospital of Buffalo](#).

[Accredited by Det Norske Veritas \(DNV\) Healthcare, Inc.](#), Kaleida Health also provides important services through two long-term care facilities, over 80 outpatient clinics, including school-based health centers, and home health care through the [Visiting Nursing Association of WNY, Inc.](#) In addition, Kaleida Health's hospitals support residency training programs of the University at Buffalo School of Medicine and Biomedical Sciences, training more than 700 residents each year.

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**NYS Department of State
Division of Corporations
Entity Information**

The information contained in this database is current through February 12, 2016.

Selected Entity Name: KALEIDA HEALTH

Selected Entity Status Information

Current Entity Name: KALEIDA HEALTH

DOS ID #: 2090748

Initial DOS Filing Date: DECEMBER 06, 1996

County: ERIE

Jurisdiction: NEW YORK

Entity Type: DOMESTIC NOT-FOR-PROFIT CORPORATION

Current Entity Status: ACTIVE

Selected Entity Address Information

DOS Process (Address to which DOS will mail process if accepted on behalf of the entity)

KALEIDA HEALTH
GENERAL COUNSEL
726 EXCHANGE STREET
BUFFALO, NEW YORK, 14210

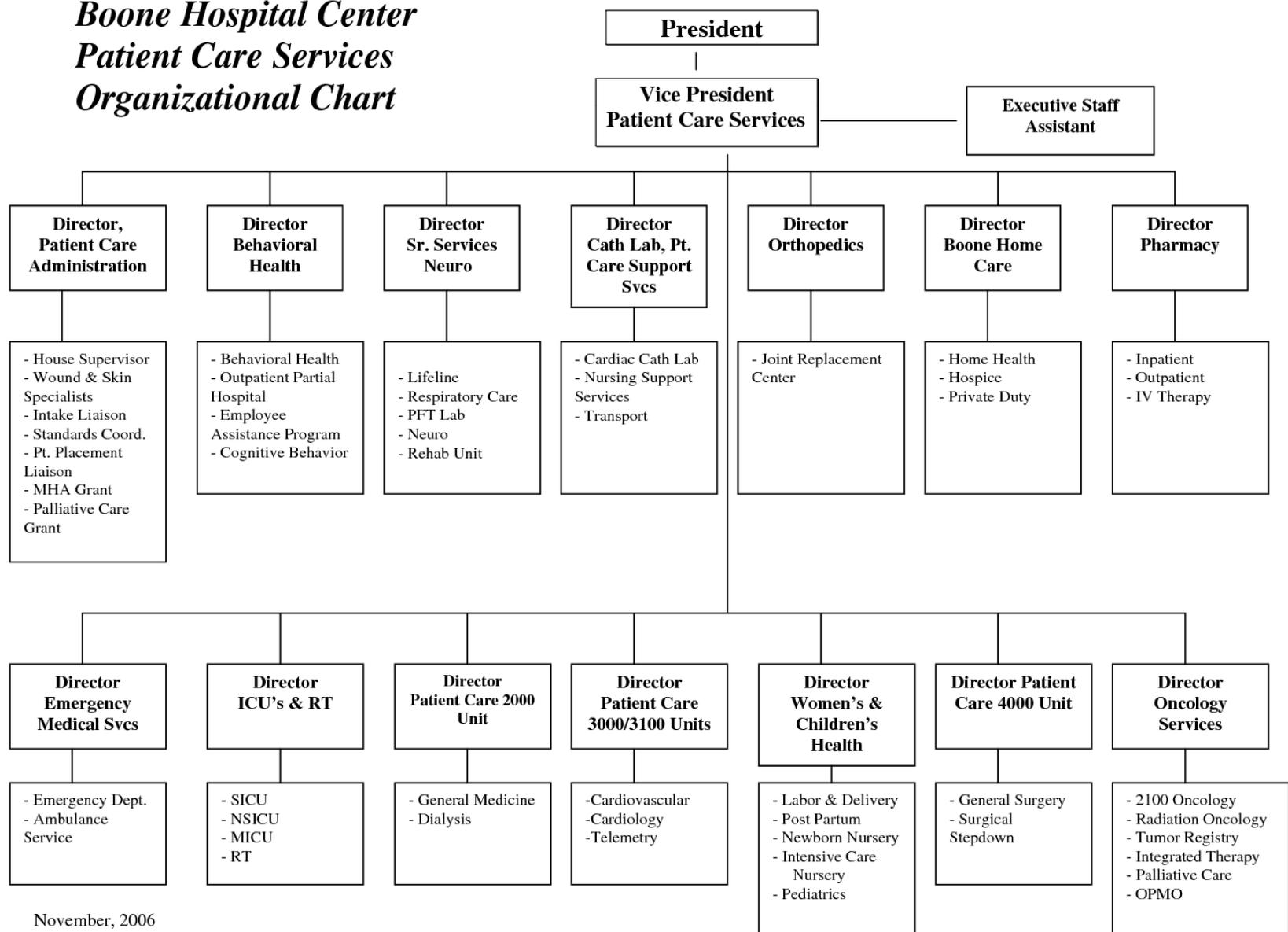
Registered Agent

NONE

1. Group of persons g_1 submits documents d_1 : application for incorporation, and d_2 : (proposed) articles of incorporation, to the organization $o_1 =$ New York State Division of Corporations: g_1 have POWERS
2. Another group of persons g_2 , members of o_1 , following specific procedures documented in d_2 , approves the application. g_1 exercises its POWERS
3. The corporation o_2 comes into existence: o_2 is an aggregate (initially) of the persons in g_2 in which different persons now have different, specified roles, President, Board Member, CEO, Director of Oncology ... as specified in d_2 ($o_2 = g_2 + \text{roles}$)

4. Director of Oncology has POWER to assign doctor X to treat patient Y
5. Doctor X diagnoses patient Y, and decides patient Y needs treatment Z
6. State ethics laws (?) declare that patient consent is required for treatment Z
7. Y has P has the LIABILITY of being brought about by X iff there exists an action A such that in case X does perform A, P is established

**Boone Hospital Center
Patient Care Services
Organizational Chart**



November, 2006

Military Doctrine feeds into Military Planning

- Doctrine provides an authoritative body of consistent* statements on
 - how military forces conduct (joint) operations
 - how military plans are to be constructed
- provides a **common lexicon**
 - which must be used by military planners and leaders
 - which will be what those charged with execution of military plans will anticipate and understand
 - will allow ingestion and consistent aggregation of data concerning lessons learned

*ideally

Duties vs. specifications of duties

- Legal codes, ethics codes, corporation laws, doctrinal publications
- Contracts (of employment, ...)
- Charters (of a city, a university, a hospital, ...)
- Plan specifications, work orders, ...
 - provide the frameworks within which duties are acquired by participants in complex human actions

Plan specifications are information artifacts

To understand what plans are we need to incorporate the factor of oughtness:

The commander has made a plan (selected from alternative plan specifications)

= is committed to the plan

some parts of the plan are compulsory, other parts are optional

he has authority to command others to realize the plan ...

they become obliged to perform certain actions

these actions can be more or less in conformity with the plan

they can be rewarded and punished in light of their conformance

Plan specification vs. Plan

- Recipe in a book vs. Recipe in your head when you start to cook

Elements of the planning process

Information artifact elements

Plan development *has_output* plan specification

Commander *performs* review of alternative plan specifications

Commander *commits_to* plan specification #1

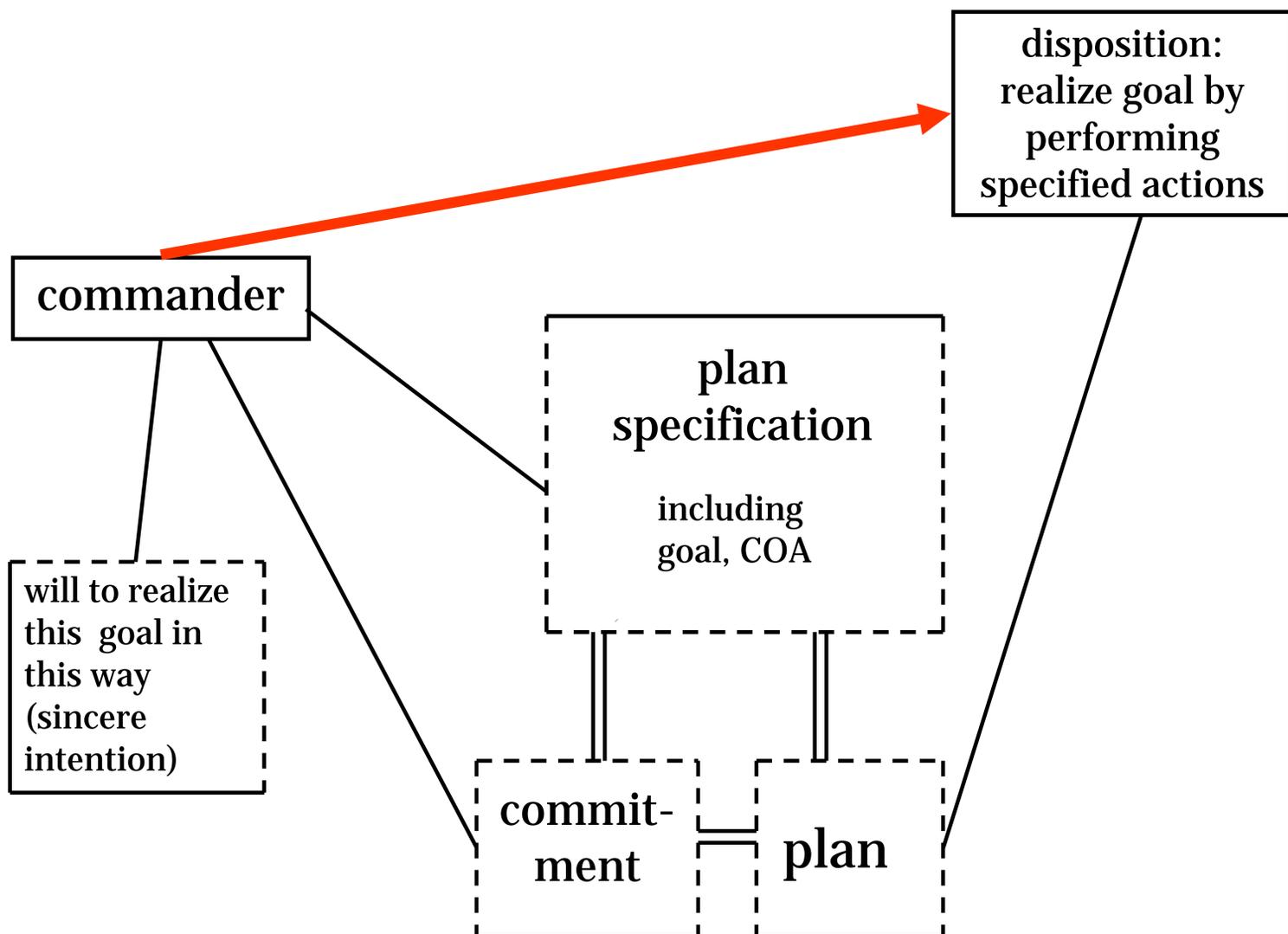
Commander's act of commitment *has_output* plan #1

Commander *has_commitment* to realize plan #1 by following the actions specified in the plan specification

Plan *is_a* disposition

Plan *realized_in* plan execution

Plan *has_goal*: future world-state F



Language

**There is a language creation and maintenance system
(schools, dictionaries, ...)**

The English language = competences to produce and to
process utterances + written linguistic outputs

Maintained in existence by activities of persons in writing
and speaking, by documents which serve as standards,
by mothers, teachers ... with special competences and
POWERS

Compare

Price maintenance and creation system

Prices

(of 1 Euro, of a beer in a Paris bar ...)

Individual acts of exchange

Compare

The law creation and maintenance system (the legislature, local courts...)

The body of law

Individual legal and police actions

Compare

The healthcare creation and maintenance system (legal bodies, standards bodies, medical schools, hospitals...)

The body of regulations, medical best practice guidelines, ...

Individual actions of doctors, patients, ...

Main thesis:
the meshing of complex actions of large
numbers of people is made possible
through

1. modularization

2. hierarchically organized authorities

both resting essentially on

3. the meshing of documents

4. the associated meshing of roles and
POWERS

Piccolo
Flute
Oboe
Clarinet
Bassoon
Horn in F
Trumpets
Trombones
Tuba
Timpani
Percussion
Harp
Violin 1
Violin 2
Viola
Violoncello
Double Bass

The image shows a page from an orchestral score. It features 17 staves, each labeled with an instrument. The instruments listed are Piccolo, Flute, Oboe, Clarinet, Bassoon, Horn in F, Trumpets, Trombones, Tuba, Timpani, Percussion, Harp, Violin 1, Violin 2, Viola, Violoncello, and Double Bass. The score is written in a common time signature (C) and a key signature of one sharp (F#). The music is primarily composed of whole and half notes, with some rests. Dynamics markings such as *mf* (mezzo-forte) and *p* (piano) are present. A rehearsal mark 'II' is visible above the Horn in F staff. The staves are grouped with brackets on the left side.

Orchestral score with staves

The actions of the players in an orchestral performance

- are intermeshed through the sets of intermeshed documents we call orchestral scores

These documents are plan specifications (sets of instructions for playing instruments)

The conductor provides the authority

- to initiate commitment, thus to create a plan from a mere plan specification
- to resolve disputes which arise along the way, for example as to interpretation, tempo, ...

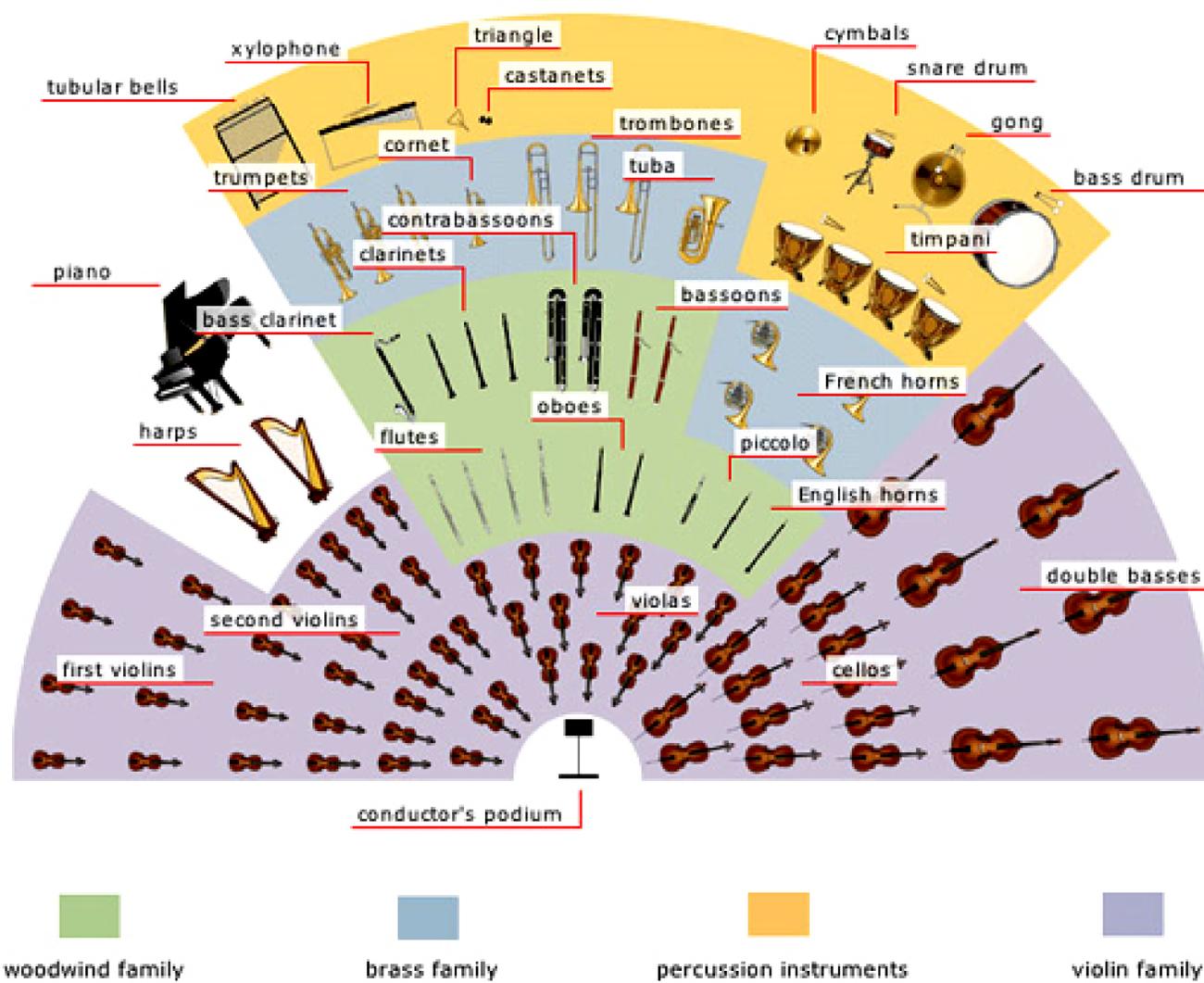
Scores bring it about that specific obligation series are distributed in coordinated fashion across large groups



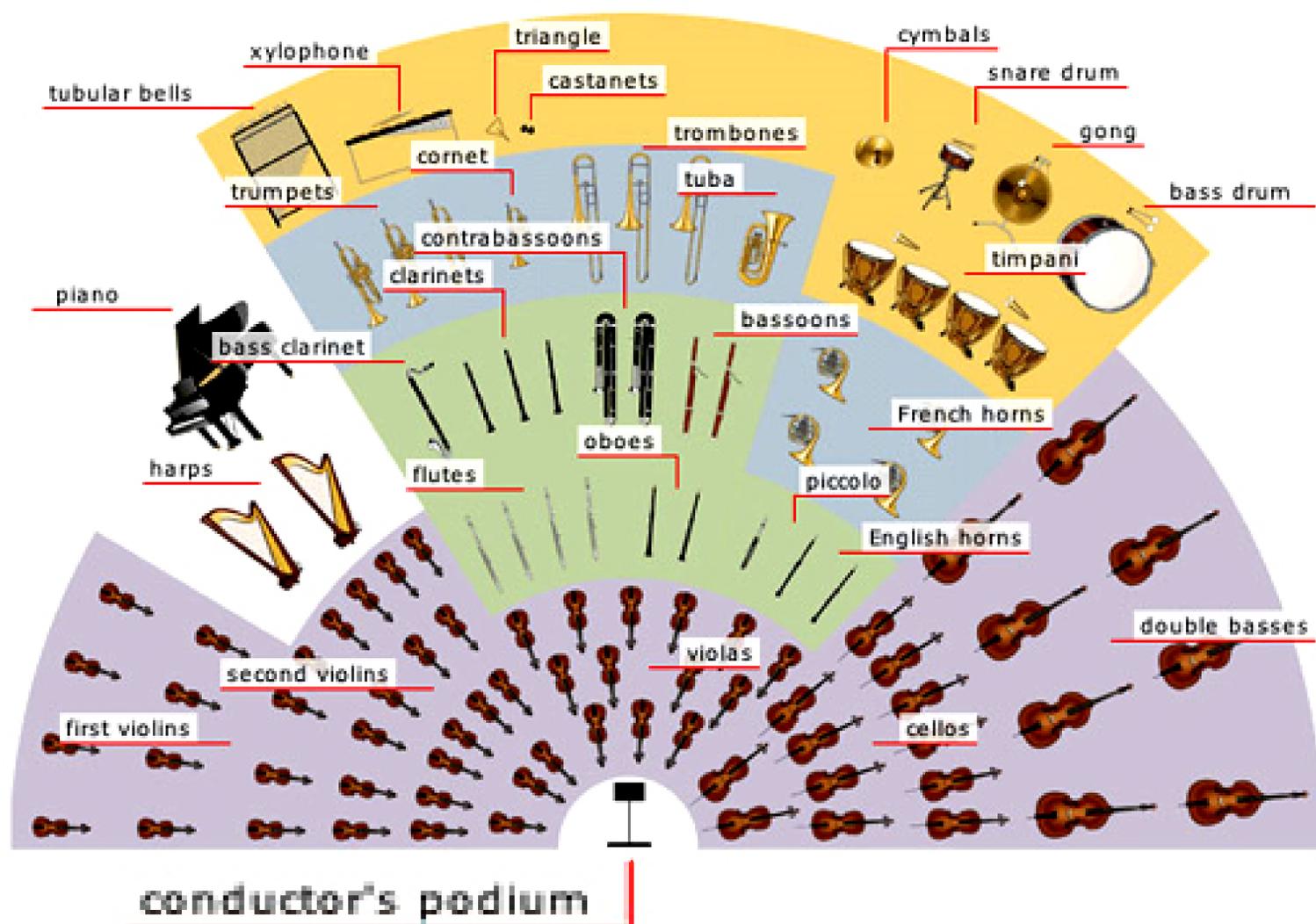
players actions are coordinated and steered
through time through conductor's actions
combined with intermeshed sets of instructions



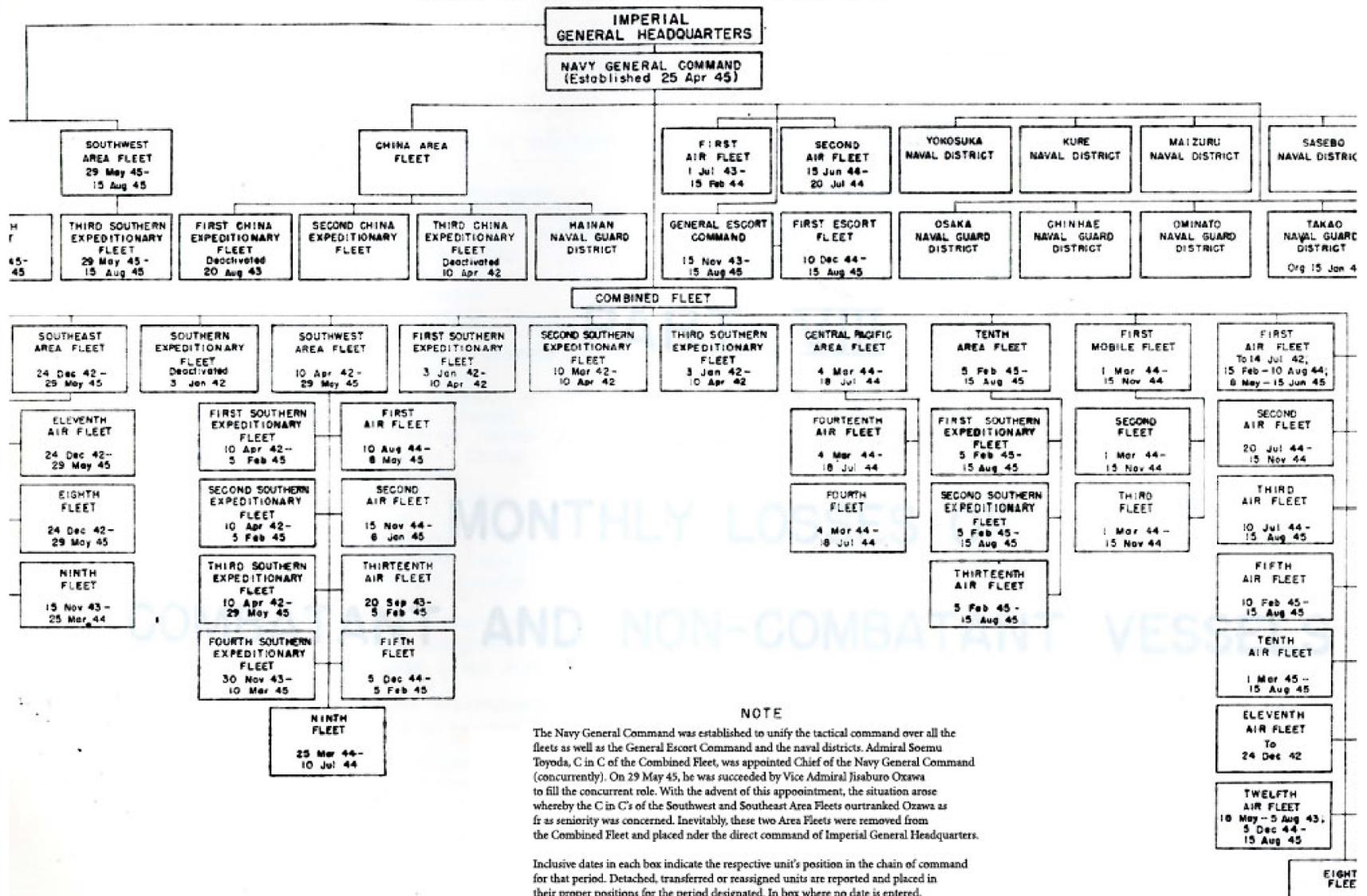
Massive shared agency presupposes modularity



reflects modularity of orchestra



**CHAIN OF COMMAND OF THE IMPERIAL JAPANESE NAVY
(From 8 December 1941 to 15 August 1945)**



NOTE

The Navy General Command was established to unify the tactical command over all the fleets as well as the General Escort Command and the naval districts. Admiral Soemu Toyoda, C in C of the Combined Fleet, was appointed Chief of the Navy General Command (concurrently). On 29 May 45, he was succeeded by Vice Admiral Jisaburo Ozawa to fill the concurrent role. With the advent of this appointment, the situation arose whereby the C in C's of the Southwest and Southeast Area Fleets outranked Ozawa as far as seniority was concerned. Inevitably, these two Area Fleets were removed from the Combined Fleet and placed under the direct command of Imperial General Headquarters.

Inclusive dates in each box indicate the respective unit's position in the chain of command for that period. Detached, transferred or reassigned units are reported and placed in their proper positions for the period designated. In box where no date is entered,

EIGHT FLEET

Authorities involved in maintaining the division of orchestral deontic labor that is involved in a symphony concert:

Conductor

Orchestral section leaders (First violin ...)

Rehearsal (drill) manager

Orchestra manager

Concert hall manager

~ Composer

– exerts authority only as mediated through the score

Documents involved in maintaining the division of orchestral deontic labor

scores, sub-scores

contracts

between { orchestra manager and conductor
orchestra manager and players
concert hall manager and orchestra manager
concert hall manager and audience members
(tickets) }

laws, including

copyright law

laws governing public assembly

laws governing employment contracts

laws governing sale of tickets

documents hold together the executions
of horizontally and vertically meshed
subplans

through *drill*
drill, too, is modularized
based on individual and small group
practice all the way up to full orchestra
rehearsal

How to do things with scores

1. the author authors the **score**, thereby creates a **possibility of performance**, and thereby creates the **work**
2. conductor and orchestra **use the score** as the specification of a **plan** (with subplans) and **commit** themselves to its **execution**,
3. the orchestra members committing themselves to accept the **authority** of the conductor
4. they use the score in to rehearsing the execution of their plan (develop **score-coordinated expertise** through drill)
5. they schedule a concert, thereby making a **commitment** to **each other**, to their **employer**, and to a **prospective audience** to perform that work
6. they perform the work

Scott J. Shapiro, “Massively Shared Agency”, 2013

[Bratman, Searle ...] ‘are unable to account for the existence of massively shared agency.

they ‘have largely concentrated on analyzing shared activities among highly committed participants. The working assumption has been that those who sing duets or paint houses together are all committed to the success of the activity.’

Shapiro: To adapt standard theory of collective agency to deal with massively shared actions we need to add **authority**

Authorities are ... “mesh creating” mechanisms. When disputes between participants break out with respect to the proper way to proceed, authorities can create a mesh between the subplans of the participants by demanding that both sides accept a certain solution.

Basis for Shapiro’s theory of the nature of law

Searle: Directions of fit

- **world-to-mind:** a plan is formulated to change the world (to make it conform to the mind of the planner ...)
- **mind-to-world:** an assertion is about something in the world
- **automatic mind-to-world-and-world-to-mind:** I say “I promise to pay you \$100 dollars” and thereby make it true that *I promise to pay you \$100 dollars*

planning directions of fit

- **world-to-plan:** the plan tells the world how to shape itself to create actions that are in conformance with the plan and thereby achieve the plan objective
- **plan-to-world:** the plan specification, when the execution is completed successfully, serves as a record of this execution
- **automatic plan-to-world-and-world-to-plan:** the commander commits to a given plan specification and thereby brings into being a plan that is precisely in conformance to this specification

A. N. Whitehead

It is a profoundly erroneous truism, repeated by all copy-books and by eminent people when they are making speeches, that we should cultivate the habit of thinking what we are doing. The precise opposite is the case. **Civilization advances by extending the number of important operations which we can perform without thinking about them.**

directions of fit for documents

- **world-to-mind:** a plan is formulated to change the world (to make it conform to the mind of the planner ...)
- **mind-to-world:** a report is published evaluating the success of the execution of the plan
- **automatic mind-to-world-and-world-to-mind:** Act of Parliament is published declaring that such-and-such is the law and such-and-such is the law

Living Blueprint



what begins as a
plan

ends as a record

- of process
- of product

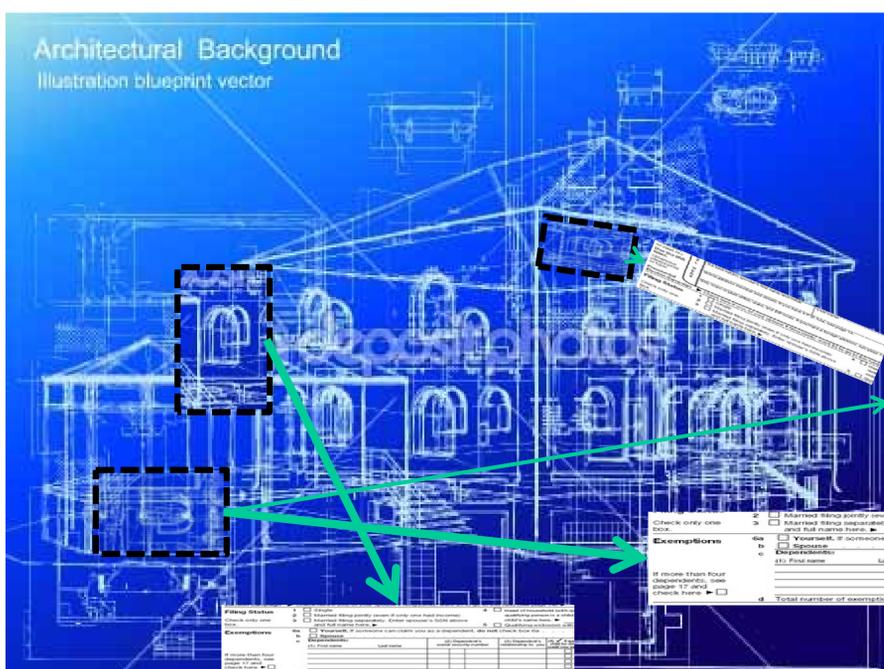
Blueprint associated with multiple series of documents with deontic powers



chain of commitments

- from order
- to blueprint creation
- to acceptance of blueprint
- to process of building in accordance with blueprint
- to acceptance of finished building

Plans will be modified along the way



physical changes to the building to meet building codes
changes in materials/suppliers
changes in allowed physical processes
changes in administrative (approval) processes

Documents with different directions of fit become intermeshed through being stapled together over time



Second main thesis:
there is a division of deontic labor
effectuated through the medium of
intermeshed documents, which allow the
deontic effects of episodic acts to be
extended through time



Drill

Planning system works only by building on routine action which those who will be charged with executing the plan can be relied on to perform automatically

Planning goes hand in hand with training

scores and subscores / plans and subplans
also allow training (rehearsal = *pretend* realization
of a plan in advance of actual realization)



it takes practice also to understand how to interpret and follow the instructions of the conductor



we need training (drill) in order to learn how to execute diagrams

Violoncello. Hector Berlioz Op. 21.

Allegro assai. (♩ = 162)

pizz. arco

Adagio sostenuto. (♩ = 94)

arco

Tempo I. Allegro assai.

How to do things with documents

- An orchestral work (as something that can be rehearsed, performed and re-performed)
 - could not exist without a score
 - could not be rehearsed without scores and subscores
 - could not be performed without (either) scores or rehearsal

Deontic Entities

Two examples from the biomedical domain

- Licenses
- Consents

Informational Entity

license

provides information

act of granting license

establishes rights

establishes obligations

establishes punishments for

infringement of terms of license

establishes expectations that these

punishments will be incurred in case

of failure to respect these terms

Open Source Licenses

Open source licenses define the privileges and restrictions a licensor must follow in order to use, modify or redistribute the open source software.

Examples include [Apache License](#), [BSD license](#), [GNU General Public License](#), ...

The proliferation of open source licenses is one of the few negative aspects of the open source movement because it is often difficult to understand the legal implications of the differences between licenses.
(Wikipedia)

How to create a common representation of the entities in the domain of contracts and licensing?

By following the strategy of the Gene Ontology

Examine the instances in reality – laptops, labels, actions of signing contracts – and their interrelations

For example distinguish license *template* from *license* (correctly filled-in, approved, registered, ...)

Basic rule of evidence-based ontology

All terms in an ontology must have instances in reality

Ontologies must be anchored to reality through these instances

We anchor the ontology of information entities through human acts of using language, through documents, through acts of entering data into a registry ...

Open Source Licenses

Open source license is a generically dependent continuant (compare: protocol in *Nature Protocols*)

The license signed by John and Jim, a specifically dependent continuant whose bearer is (say) a specific piece of paper

The signed piece of paper is a concretization of the (generically dependent) license

- Some obligations are GDCs because (writing allows) you to pass on your obligation to someone else

requirement concepts

[Information Systems Frontiers](#)

pp 1-26

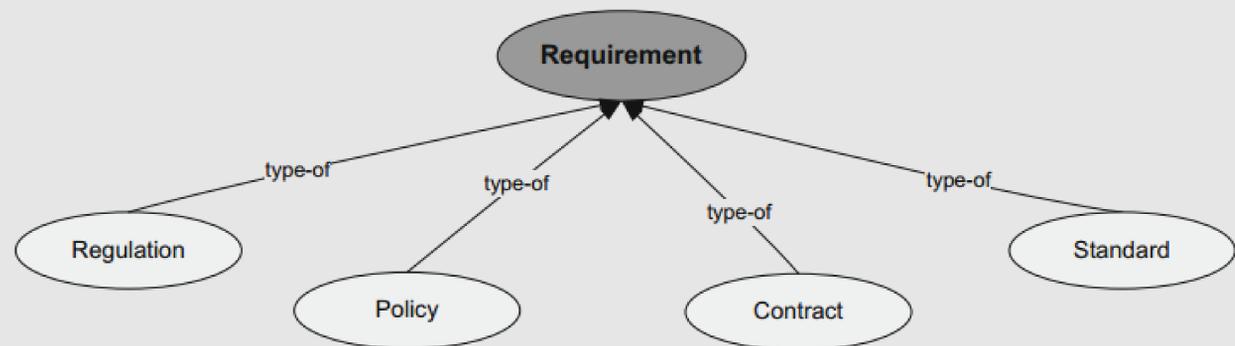
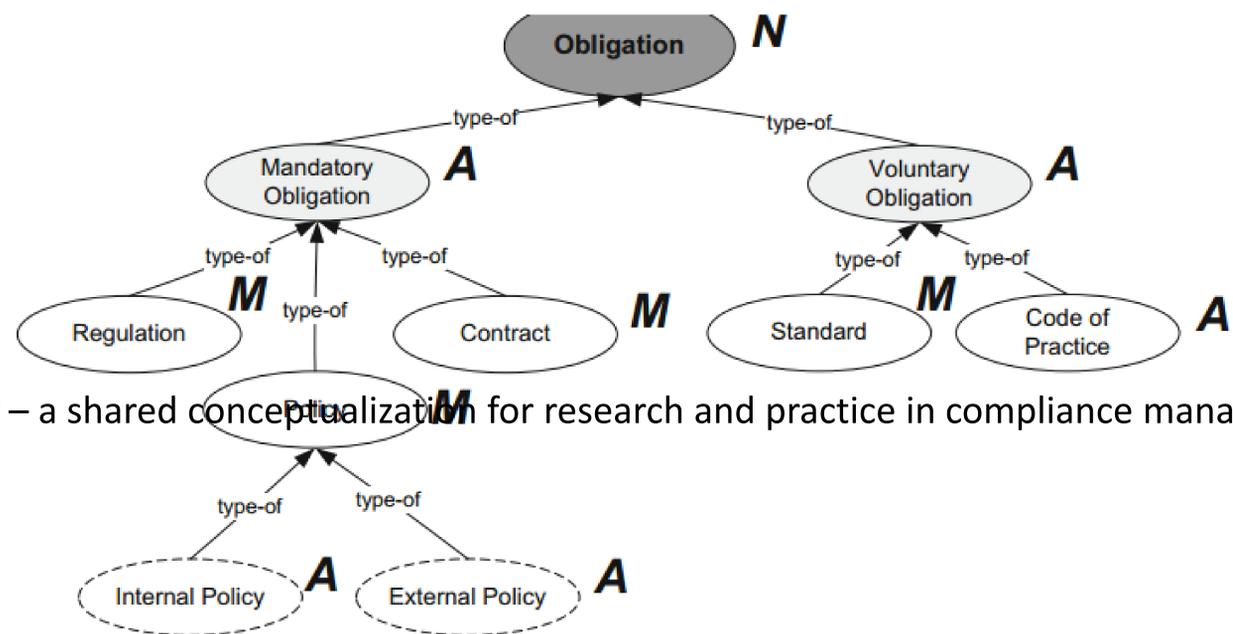
First online: 03 February 2016

Compliance management ontology – a shared conceptualization for research and practice in compliance management

Norris Syed Abdullah

, Marta Indulska

, Shazia Sadiq



M - moved **A** - Added **X** - removed **N** - renamed

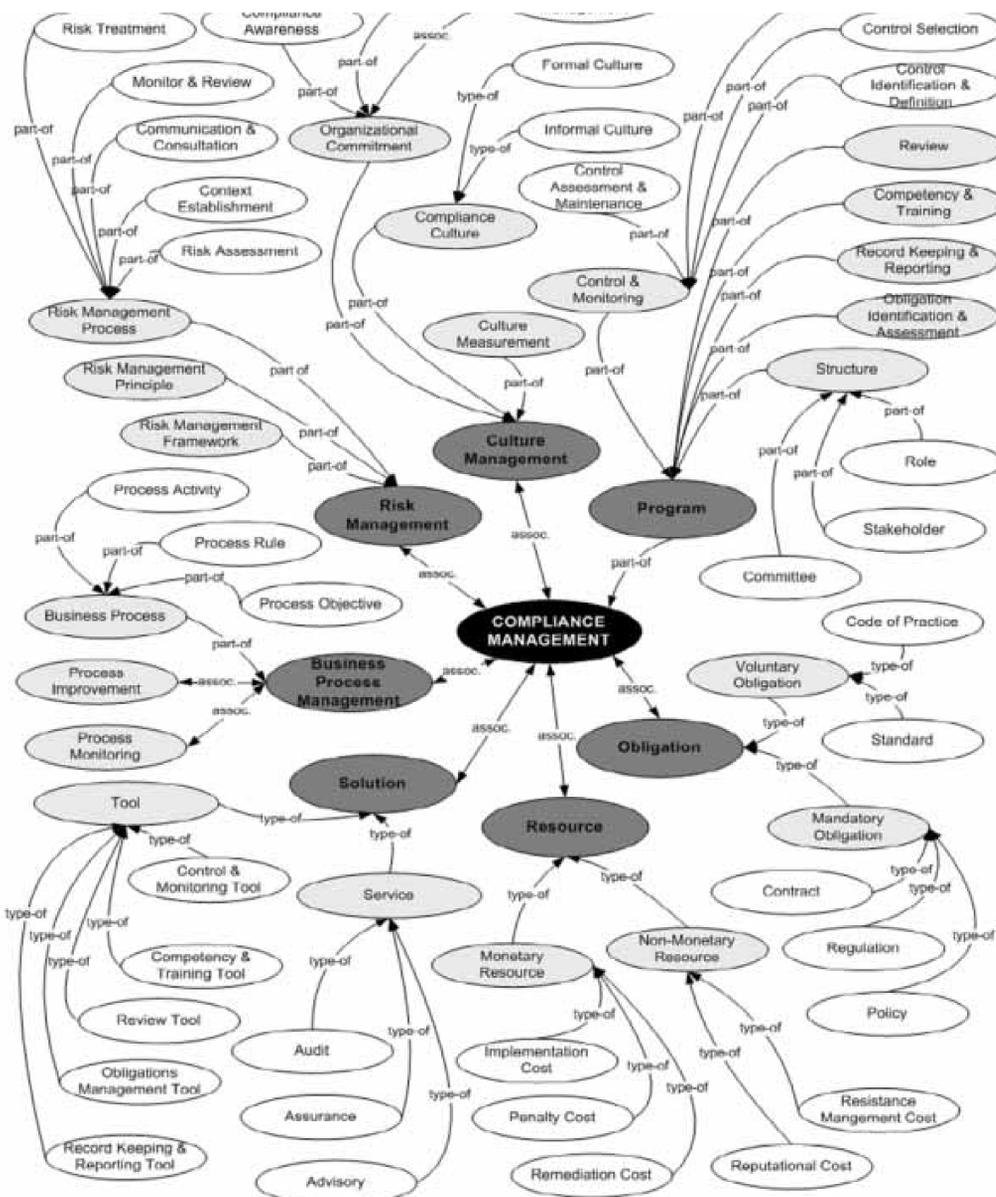


Fig. 6 CoMoN, showing first, second and third tier constructs

Definitions

agement

A holistic management approach focused on aligning all aspects with the wants and needs of clients. It promotes business effectiveness and efficiency while striving for innovation, flexibility, and integration.

A set of coordinated activities designed to accomplish a particular objective.

Measurable result or state a particular process is intended/required to achieve.

A single logical step in a business process.

Constraints and conditions imposed on a particular process.

Continual checking, supervising, critically observing or determining the progress of the process in order to identify the occurrence of changes, errors, inefficiencies and bottlenecks.

A systematic approach to help an organization optimize its understanding of its business to achieve more efficient business outcomes.

The way the organization cultivates compliance culture.

The values, ethics and beliefs that exist throughout an organization.

DEFINITIONS

The obligations, either in form of a standard or a code of practice adopted or accepted by a particular organization or industry.

Documented codes of ethics, codes of conduct, good practices and other policies that an organization has adopted for its operations.

A statement of recommended practice developed internally by an organization or by an international, national or industry body or other organization.

A series of activities that, when combined, are intended to achieve a specific level of compliance.

on & assessment

The systematic way of identifying organizational compliance obligations and the way in which they impact on its activities, products and services, and the maintenance and prioritization of compliance obligations.

ing

Activities planned to ensure that all employees are competent to perform their duties in a manner that is consistent with the organization's compliance obligations and its commitment to compliance.

The observation mechanisms set up and performed by an organization to monitor compliance.

Definitions

Services refer to assistance provided to the regulated organisation either internally or externally in ensuring the organization fulfill their obligations. Services include compliance related services namely assurance and advisory.

Services undertaken to assess a regulated organisation's adherence to its compliance obligations.

Services undertaken by organisational auditors to assess a regulated organisation's adherence to its compliance obligations.

Services undertaken by third party or independent auditors to assess a regulated organisation's adherence to its compliance obligations.

Guidance provided to facilitate an entity in deciding and implementing a compliance program (initiative). Advisory services may come from the organisation (internally acquired) or may be provided by advisory service providers.

Sets of guidelines and support provided by compliance experts in order to ensure proper learning and training for a compliance program.