

Essentialism in Analytic Philosophy and Phenomenology

Michael Wallner

Department of Philosophy

University of Graz

michaelwallner1@gmail.com

Modality

What is modality?

- statements/propositions can be

necessarily true/false

possibly true/false

contingently true/false

$\Box p$... necessarily, p (p is necessary)

$\Diamond p$... possibly, p (p is possible)

Modality

Necessity and possibility are interdefinable:

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff

$$\diamond p \leftrightarrow$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff

$$\Box p \leftrightarrow$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff it is not possible that non- p .

$$\Box p \leftrightarrow \neg \diamond \neg p$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff it is not possible that non- p .

$$\Box p \leftrightarrow \neg \diamond \neg p$$

- It is contingent that p iff

Contingently, $p \leftrightarrow$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff it is not possible that non- p .

$$\Box p \leftrightarrow \neg \diamond \neg p$$

- It is contingent that p iff (it is not necessary that non- p and it is not necessary that p).

$$\text{Contingently, } p \leftrightarrow (\neg \Box \neg p \wedge \neg \Box p)$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff it is not possible that non- p .

$$\Box p \leftrightarrow \neg \diamond \neg p$$

- It is contingent that p iff (it is not necessary that non- p and it is not necessary that p).

$$\text{Contingently, } p \leftrightarrow (\neg \Box \neg p \wedge \neg \Box p)$$

- It is impossible that p iff

$$\neg \diamond p \leftrightarrow$$

Modality

Necessity and possibility are interdefinable:

- It is possible that p iff it is not necessary that non- p .

$$\diamond p \leftrightarrow \neg \Box \neg p$$

- It is necessary that p iff it is not possible that non- p .

$$\Box p \leftrightarrow \neg \diamond \neg p$$

- It is contingent that p iff (it is not necessary that non- p and it is not necessary that p).

$$\text{Contingently, } p \leftrightarrow (\neg \Box \neg p \wedge \neg \Box p)$$

- It is impossible that p iff it is necessary that non- p .

$$\neg \diamond p \leftrightarrow \Box \neg p$$

The Development of Modal Logic

Why did logicians develop modal logic? (cf. Preti 2003)

- Dissatisfaction with the logical specification of the conditional
- Is the cond. a truth-functional connective?
- In other words, is the truth of the cond. a function of the truth of its parts?
- The conditional is only false when the antecedent is true & the consequent is false.
- Counterintuitive results: The truth-functional interpretation makes any connection between the antecedent and the consequent irrelevant to the truth of the conditional.
- Further problem: Arguments are conditionals. So, the notion of validity itself depends on a perspicuous interpret. of the cond.

p	q	$p \rightarrow q$
1	1	1
1	0	0
0	1	1
0	0	1

The Development of Modal Logic

C.I. Lewis (1883-1964) felt the need for a different analysis of the cond.

- Some cond. state the connection between the antecedent and the consequent.
- **strict implication** \prec
- It is not possible that both p be true and q be false.

$$(p \prec q) \leftrightarrow \neg \diamond (p \wedge \neg q)$$

$$\neg \diamond (p \wedge \neg q) \leftrightarrow \Box \neg(p \wedge \neg q)$$

(interdefinability of \diamond and \Box)

$$\Box \neg(p \wedge \neg q) \leftrightarrow \Box (p \rightarrow q)$$

(see truth table \rightarrow)

$$(p \prec q) \leftrightarrow \Box (p \rightarrow q)$$

(by transitivity of \leftrightarrow)

Modal Semantic

Is there a truth-functional semantic for modal operators?

p	$\neg p$
1	0
0	1

p	$\diamond p$
1	1
0	?

p	$\square p$
1	?
0	0

Possible World Semantic

$\diamond p$ iff p is true in **at least one** possible world.

$\square p$ iff p is true in **all** possible worlds.

Possible Worlds

What are possible worlds (PWs)?

- D. Lewis (1986)

PWs are concretely existing worlds that are spatio-temporally and causally disconnected from our (actual) world.

- S. Kripke (1980)

PWs are abstract states the actual world could have been in.

Lewisian Possibilism (LP): Possible worlds are *ontologically on a par* with the actual world (AW).

Anti-Lewisian Actualism (ALA): Possible worlds are not *ontologically on a par* with the AW.

Modal Metaphysics

Positions in Modal Metaphysics

- Meinongian Possibilism (MP)

In addition to actually existing things there *are* merely possible things that do not actually exist.

- Anti-Meinongian Actualism (AMA)

Everything there *is* exists actually.

- Lewisian Possibilism (LP)

PWs are *ontologically on a par* with the AW.

- Anti-Lewisian Actualism (ALA)

PWs are *not ontologically on a par* with the AW.

D. Lewis's Modal Realism

One reason why D. Lewis believes in the concrete existence of infinitely many PWs:

- (1) A property P is the set of objects that instantiate P .
- (2) Nothing in our actual world instantiates the property of being a philosophizing cat.
- (3) Nothing in our actual world instantiates the property of being a talking donkey.
- (4) Thus, both, the property of philosophizing cat and the property of being a talking donkey are identical, since the set of objects that instantiate these properties is in both cases empty.
- (5) But these properties are not identical.
- (6) Assuming concretely existing PWs can fix that, since in some of them there are talking donkeys, in some there are phil. cats.

“Flavors” of Modality

- Modality comes in different flavors.
- epistemic vs. non-epistemic modality

Epistemic Modality

p is **epistemically possible** for a subject S iff p is not ruled out by what S knows.

- The body of knowledge to which ep. modality is relative is not necessarily only that of an individual.

E.g.: It is epistemically possible for us all that Goldbach’s Conjecture (GC) is true (or false), since we don’t know the truth-value of (GC).

Goldbach's Conjecture (C. Goldbach 1690-1764)

(GC) Every even number greater than 2 is the sum of two primes.

- $4=2+2$
- $6=3+3$
- $8=3+5$
- ...

There is no proof as to whether (GC) is true or false.

Thus, it's **possible** that (GC) is true and it's **possible** that (GC) is false.

contradiction?
epistemic possibility!

“Flavors” of Modality

Non-Epistemic Modality

- logical modality (narrow sense)

p is logically possible iff p consistent with the laws of logic.

- nomological modality (e.g. physical modality)

p is nomologically possible iff p consistent with a certain body of laws (e.g. the laws of physics).

- metaphysical modality

p is metaphysically possible iff p is true in at least one PW.

Metaphysical modality is considered to be the most substantive and interesting kind of modality.

“Flavors” of Modality

Non-Epistemic Modality

Example	logically	metaph.	physically
“x is red and not red.”	impossible	impossible	impossible
“x is red and not extended.”	possible	impossible	impossible
“x moves faster than the speed of light.”	possible	possible	impossible
“x moves faster than a cheetah.”	possible	possible	possible

De Re and *De Dicto* Modality

What is necessary or possible?

- What are necessity and possibility meant to apply to?
- There is a difference, as to whether we attribute modality to an **object/thing** we are talking about or to a **sentence/propositions** we are uttering.
 - (a) Modality *de re* applies to a thing/object.
 - (b) Modality *de dicto* applies to a sentence/proposition.
- The importance of the difference becomes clear by considering an example.

De Re and *De Dicto* Modality

- Backgammon is a game in which no tie is possible.
- Thus, there has to be a winner in Backgammon.
- Try to formulate this claim by using the following symbols:

Wx ... “x is going to win”

$\exists x$... “there is at least one x, such that...”

\square ... “necessarily, ...”

De Re and De Dicto Modality

- Backgammon is a game in which no tie is possible.
- Thus, there has to be a winner in Backgammon.

(1) Necessity *de re*:

“There is at least one x , such that, necessarily, x is going to win.”

$\exists x \Box Wx$

(2) Necessity *de dicto*:

“Necessarily, there is at least one x , such that x is going to win.”

$\Box \exists x Wx$

- (1) is wrong in this case, since it is possible that either of both players wins. It is necessary that there is a winner; it is not that one player necessarily wins!

De Re and De Dicto Modality

... differ in terms of the scope of the modal operator

	(1) <i>De Re</i> Necessity	(2) <i>De Dicto</i> Necessity
Example:	$\exists x \Box Wx$	$\Box \exists x Wx$
The \Box -operator...	<p>... has narrow scope.</p> <p>... ranges over an object (person), of which the property 'is going to win' is attributed.</p>	<p>... has wide scope.</p> <p>... ranges over the whole quantified proposition.</p>

- According to the *de re* reading of the claim, the person has the property necessarily.
- So, *de re* mod. talks about **necessary (or essential) properties**

W.V.O. Quine's Anti-Essentialism

Quine's critique of (*de re*) modality in *Reference & Modality* (1953)

- (1) 9 is necessarily greater than 7.
 - (2) The number of planets = 9.
 - (3) The number of planets is necessarily greater than 7.
- (1) & (2) are both true. (3) follows from (1) & (2), but is **false!**
 - This shows that the contexts 'Necessarily ...' and 'Possibly ...' are **referentially opaque**. (Quine 1953, 144)
 - This means that "the statement depends not only on the object but on the form of the name". (Quine 1953, 140)
 - Thus, (*de re*) modality should be dismissed.

W.V.O. Quine's Anti-Essentialism

Quine's critique of *de re* modality in *Word and Object* (1960)

“Mathematicians may conceivably be said to be necessarily rational and not necessarily two-legged; and cyclists necessarily two-legged and not necessarily rational. But what of an individual who counts among his eccentricities both mathematics and cycling? Is this concrete individual necessarily rational and contingently twolegged or vice versa? [...] [T]here is no semblance of sense in rating some of his attributes as necessary and others as contingent. Some of his attributes count as important and others as unimportant, yes; some as enduring and others as fleeting; but none as necessary or contingent.” (Quine 1960, 199)

W.V.O. Quine's Anti-Essentialism

Quine: there is no *de re* modality
and thus there are no essential properties.

- Mathematicians are necessarily rational and not necessarily two-legged.
- Cyclists are necessarily two-legged and not necessarily rational.
- Suppose, x is both, a mathematician and a cyclist.
- Is x necessarily rational and not necessarily two-legged or vice versa?
- Taking some of x 's properties as necessary (essential) and others as not necessary (accidental) does not make sense, because it appears as if whether or not a property counts as necessary (essential) depends on how x is described.

S.A. Kripke's Essentialism

Kripke: Quine fails to draw a *distinction between rigid and non-rigid designators*.

	non-rigid designators (NRD)	rigid designators (RD)
<i>Example</i>	'the inventor of bifocals'...	'Benjamin Franklin' ('BF')...
<i>AW</i>	... refers to Benjamin Franklin (BF) in our AW.	... refers to BF in our AW.
<i>PWs</i>	... refers to somebody else in a different PW.	... refers to BF in every PW in which BF exists.

- '9' refers to 9 in all PWs (in which 9 exists), so '9' is a RD.
- 'The number of planets' refers to 9 in the AW but to a different number in a different PW, so 'the number of planets' is a NRD.
- This explains why '9 is necessarily greater than 7' is true but 'the number of planets is necessarily greater than 7' is false.

S.A. Kripke's Essentialism

Kripke: Quine fails to draw a *distinction between rigid and non-rigid designators*.

- (1) 9 is necessarily greater than 7.
 - (2) The number of planets = 9.
 - (3) The number of planets is necessarily greater than 7.
- (2) should allow us to substitute 'the number of planets' for '9' in (1) without changing (1)'s truth-value, but it doesn't.
 - Thus, says Quine, modal contexts are referentially opaque.
 - The problem, however is not with modal contexts but with the fact that the identity statement in (2) does not involve 2 RD. For an identity statement to generate *necessary intersubstitutivity*, it has to be between 2 RD.

S.A. Kripke's Essentialism

Kripke: Quine's critique is unintuitive! (Kripke 1980, 40-42)

- Imagine a conversation between 2 people talking about Nixon, who was the winner of the 1968 presidential election in the US.

A: "Nixon might have lost the election."

B: "Oh no, if you describe him as 'Nixon', then he might have lost; but, of course, describing him as the winner, then it is not true that he might have lost".

- For Kripke, B's position is clearly counter-intuitive, since what A means is that *the object (person)* that is referred to by 'Nixon' 'the winner', ... could have failed to win.
- The thing (number) referred to by 'the number of planets' is necessarily greater than 7 (*de re*). Even though the sentence 'necessarily, the number of planets > 7' (*de dicto*) is false.

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

According to (M), essentiality = *de re* modality.

- What is necessary for an object o is essential to o and vice versa.
- What is merely possible for o is accidental to o and vice versa.

(M₁) P is an **essential property** of an object o iff o has P in all PWs.

P is an **accidental property** of o iff o has P but there is a PW in which o lacks P .

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

A problem for (M₁)

- (1) For an object o to have the property of *being a human*, it is necessary that o **exists**.
- (2) MW exists in the AW and has the property of being a human.
- (3) However, there is a PW (say, W_S) in which MW does not exist.
- (4) In W_S , MW does not have the property of being a human.
- (5) Thus, according to (M₁), MW has this property only accidentally.
- (6) But MW has this property of being a human essentially.
- (7) Contradiction!

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

(M₂) *P* is an **essential property** of an object *o* iff *o* has *P* in all PWs in which *o* exists.

P is an **accidental property** of *o* iff *o* has *P* but there is a PW in which *o* exists, but lacks *P*.

- The problem with (M₂) is, that it **renders all objects into necessary existents**.
- Every object exists necessarily, because, according to (M₂), existence is an essential property for all objects, because no object could lack existence in PWs in which it exists.

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

Problem for (M₂)

- (1) For all object o , o has the property of being existent in all PWs in which o exists.
- (2) Thus, pace (M₂), every object has the prop. of being existent essentially.
- (3) Therefore, every object exists necessarily.
- (4) MW, however, does not exist necessarily.
- (5) Contradiction!

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

- There are **solutions** to both problems, such that (M_1) and (M_2) might be retained.
- Both these solutions involve **treating the property of being existent differently** from any other property.
- For many philosophers (e.g. Kant, Frege, Russell) existence isn't even a property in the first place.
- Van Inwagen & Sullivan (2016) even speak of 2 types of modality *de re* (i.e. 2 types of essentiality): one concerning the **existence** of things, one concerning the **properties** of things.
- Slogan: To make (M) work, we need to treat existence as a special case.

Essential vs. Accidental Properties

The modal characterization of the E/A property distinction (M)

(cf. Robertson & Atkins 2016)

Overview	(M ₁)	(M ₂)
P is an essential property of o iff...	... o has P in all PWs.	... o has P in all PWs in which o exists.
'MW is essentially human' must be understood as:	... 'MW has the essential property of <i>being human</i> , <i>if existent</i> .'	'MW has the essential property of <i>being human</i> .'
'God is essentially existent' must be understood as...	... 'God has the essential property of <i>being existent</i> . (Period.)'	... 'God has the necessary property of <i>being existent</i> ', where a property P is necessary for an object o iff o has P in all PWs. (Period.) So, the property of being existent is the exception to (M ₂).

K. Fine's Neo-Aristotelian Essentialism

Fine's argument against the modal characterization of essences:

- (1) Socrates has the property of being a member of the singleton set {Socrates}.
- (2) Socrates has this property in every PW in which Socrates exists.
- (3) So, Socrates has this property of being a member of the singleton set {Socrates} **necessarily**.
- (4) But the property *being a member of the singleton set containing Socrates* **does not capture the *whatness* of Socrates** and does therefore **not belong to the essence** of Socrates.
- (5) So, it might be necessary for an object *o* to have a specific property *P*, without *P* being an essential property of *o*.

(cf. Fine 1994 and also Vaidya 2010)

K. Fine's Neo-Aristotelian Essentialism

Fine's argument against the modal characterization of essences:

- (1) Socrates has the property of being such that $2+2=4$.
- (2) Socrates has this property in every PW in which Socrates exists.
- (3) So, Socrates has this property of being such that $2+2=4$ **necessarily**.
- (4) But the property *being such that $2+2=4$* does not capture the *whatness* of Socrates and does therefore not belong to the **essence** of Socrates.
- (5) So, it might be necessary for an object o to have a specific property P , without P being an essential property of o .

(cf. Fine 1994)

K. Fine's Neo-Aristotelian Essentialism

- The **essence** of an entity is **what that entity is** or **what it is for this entity to be**.
- Fine is not a “modalist” about essences, since he does not define essential properties in a modal way.
- According to Kripke: modality **grounds** essences.
- According to Fine: essences **ground** modality.
- In other words, Fine rejects the view that modality explains essences and holds instead that essences explain modality.
- Kripke: P is essential to $o \leftrightarrow P$ is necessary for o
- Fine: P is essential to $o \rightarrow P$ is necessary for o
 $\neg (P$ is necessary for $o \rightarrow P$ is essential to $o)$

Metaphysical Grounding

There are 2 kinds of explanations in metaphysics:

- **What-explanations** explain what something is (**essence**)
- **Why-explanations** explain why something is (**ground**)
- 2 kinds of why-explanations: (a) causal and (b) metaphysical
- “Why is there a party?” (a) Because it’s Mary’s birthday.
(b) Because there are people engaged in party-conducting activities.
- If p is grounded in q , then p holds **in virtue of** q .
- This event is a party **in virtue of** the fact that it contains people engaged in party-conducting activities.
- Fine: P is necessary for o **in virtue of** P ’s being essential to o .

K. Fine's Neo-Aristotelian Essentialism

Reductive vs. Non-Reductive Interpretations

- What does Fine's account amount to?
- According to Fine, essences are not grounded in modality, the opposite is the case: modality is grounded in essences.
- Is 'essence' a modal or a non-modal term?
- Essences surely are non-modal for Fine, in as much as we cannot account for essences solely by modal terms.
- So Fine cannot explain essences in modal terms.
- But does he explain modality in modal or non-modal terms?
- Is Neo-Aristotelian Essentialism a **reductive** or a **non-reductive explanation** of modality? (→ Correia 2012 vs. Hale 2013)

Modal Epistemology (ME)

Question: What's the basic source of a subject's (*S*'s) **knowledge** of (or **justified beliefs** about) metaphysical modality?

Here is one way to answer this question that has been proposed:

- **Conceivability:** That *S* can conceive of a scenario *c* serves as justification that *c* is possible.
- The **worry** is that we already must have modal knowledge in order to judge whether something is **conceivable**, i.e. whether something **can** be conceived.
- Essence-based accounts in ME hold that our epistemic access to essences grounds our epistemic access to modality.

Modal Epistemology (ME)

Question: What's the basic source of a subject's (*S*'s) **knowledge** of (or **justified beliefs** about) metaphysical modality?

Here is one way to answer this question that has been proposed:

- **Conceivability:** That *S* can conceive of a scenario *c* serves as justification that *c* is possible.
- The **worry** is that we already must have modal knowledge in order to judge whether something is **conceivable**, i.e. whether something **can** be conceived.
- Essence-based accounts in ME hold that our epistemic access to essences grounds our epistemic access to modality.

E. J. Lowe's essence-based ME

- The essence of o is just **what o is**.
- So, to know the **essence** of o is not to be acquainted with some entity distinct from o , but simply to **understand what o is**.
- Knowledge of essence is simply a product of understanding.
- No “spooky faculty”
- Essences are captured by real definitions of things.
- We acquire knowledge of **modal** propositions through an **inference** from our knowledge of **essential** propositions.
- How does this inference work? (Horvath 2014)

E. Husserl's essence-based ME

- For Husserl (like for Fine and Lowe) **modality is grounded in essences.**
- He also takes our **epistemic access to modality to be grounded in our epistemic access to essences.**
- We get to know essences by “**eidetic variation**”.
- By **varying** properties of a certain object *o* in **imagination** we can judge which properties are **accidental** (the variant ones) and which are **essential** (the invariant ones).
- **Problem: Circularity-Objection:** To acquire knowledge of the essence of a certain object by varying its properties, we have to somehow know in advance which properties allow for variation and which do not. But this amounts to knowing (in advance) which properties are accidental and which are essential! (Vaidya 2010, Mohanty 1991, Kasmier 2010)

4 Characterizations of Essentialism (Robertson & Atkins 2016)

- **Minimal Essentialism (MinE):** For all objects o , only trivial properties of o (like being self-identical) are essential to o .
- **Maximal Essentialism (MaxE):** For all objects o , all of o 's properties are essential to o .

Should (MinE)/(MaxE) count as essentialism?	(MinE)	(MaxE)
1) (At least some) objects have (at least some) essential properties. (cf. Mackie 2006, 1)	yes	yes
2) Some of the attributes of a thing may be essential to the thing, others accidental. (Quine 1953, 173f)	yes	no
3) (At least some) objects have (at least some) non-trivial essential properties. (cf. Della Rocca 1996)	no	yes
4) (At least some) objects have (at least some) non-trivial essential properties and (at least some) objects have (at least some) accidental properties. (cf. Yablo 1998)	no	no

Literature

- Correia, F. (2012): "On the Reduction of Necessity to Essence", in: *Philosophy and Phenomenological Research*, 84 (3), 639-653.
- Della Rocca, M. (1996a): "Essentialism: Part 1", in: *Philosophical Books*, 37, 1-13.
- (1996b): "Essentialism: Part 2", in: *Philosophical Books*, 37, 81-89.
- Fine, K. (1994): "Essence and Modality", in: *Philosophical Perspectives*, 8, 1-16.
- Hale, B. (2013): *Necessary Beings. An Essay on Ontology, Modality, and the Relations Between Them*. Oxford: OUP.
- Horvath, J. (2014): "Lowe on Modal Knowledge", in: *Thought*, 3 (3), 208-217.
- Husserl, E. (1973): *Experience and Judgment. Investigations in a Genealogy of Logic*. Revised and ed. by Ludwig Landgrebe. Transl. by James S. Churchill and Karl Ameriks. London: Routledge & Kegan Paul.
- Kasmier, D. (2010): "A Defense of Husserl's Method of Free Variation", in: Luft, S./Vandavelde, P. (eds.): *Epistemology, Archaeology, Ethics: Current Investigations of Husserl's Corpus*. New York: Continuum, 21-40.
- Kripke, S. (1980): *Naming and Necessity*. Cambridge: Harvard University Press.
- Lewis, D. K. (1986): *On the Plurality of Worlds*. Oxford: Blackwell Press.
- Lowe, E. J. (2008): "Two Notions of Being: Entity and Essence", in: *Royal Institute of Philosophy Supplement*, 62, 23-48.
- (2012): "What is the Source of Our Knowledge of Modal Truths?", in: *Mind*, 121 (484), 919-950.
- Mackie, P. (2006): *How Things Might Have Been: Individuals, Kinds, and Essential Properties*. Oxford: OUP.
- Mohanty, J. N. (1991): "Imaginative Variation in Phenomenology", in: Horowitz, T./Massey, G. J. (eds.): *Thought Experiments in Science and Philosophy*. Lanham: Rowman & Littlefield, 261-272.
- Preti, C. (2003): *On Kripke*. Singapore et al.: Thomson/Wadsworth.
- Quine, W. V. O. (1953): "Reference and Modality", in: Quine, W. V. O.: *From a logical point of view*. Cambridge: Harvard University Press, pp. 139-159.
- (1960): *Word and Object*. Cambridge: M.I.T. Press.
- Robertson, T./Atkins, P. (2016): "Essential vs. Accidental Properties", in: Zalta, E. N. (ed.): *The Stanford Encyclopedia of Philosophy (Summer 2016 Edition)*.
<http://plato.stanford.edu/archives/sum2016/entries/essential-accidental/>, (accessed: 10/06/2016).
- Vaidya, A. (2010): "Understanding and Essence", in: *Philosophia*, 38, 811-833.
- Yablo, S. (1998): "Essentialism", in: Craig, E. (ed.): *The Routledge Encyclopedia of Philosophy*. London: Routledge, 417-422.