

THE FOURTH WORLD CONGRESS ON ANALOGY

Crete, Greece, August 29-31, 2025



HANDBOOK

Edited by

Katarzyna Gan-Krzywoszyńska
Przemysław Krzywoszyński
Aleksandra Walas



HANDBOOK OF THE FOURTH WORLD CONGRESS ON ANALOGY



Crete, Greece
August 29-31, 2025
www.analogycongress.com

Handbook of the Fourth World Congress on Analogy

Crete, Greece, August 29-31, 2025

EDITED BY

Katarzyna Gan-Krzywoszyńska, Przemysław Krzywoszyński, Aleksandra Walas

COPYRIGHT BY

© Katarzyna Gan-Krzywoszyńska, Przemysław Krzywoszyński, Aleksandra Walas
Publishing House KONTEKST, Poland, 2025

REVIEWER

Andrzej Indrzejczak, University of Łódź, Poland

PROOFREADING

Benilda Siłkowska-Mąsior

COVER PHOTOS BY

Katarzyna Gan-Krzywoszyńska, Przemysław Krzywoszyński, Aleksandra Walas

www.analogycongress.com

ISBN 978-83-68332-10-0

PRINTED IN POLAND

Printing Plant Moś & Łuczak

 **Kontekst**
Publishing House

SCIENTIFIC PUBLISHER

POZNAŃ – POLAND
kontekst2@o2.pl
www.wkn.com.pl

Contents

1. About the Congress: 10 Years of the Project	7
2. Juan Manuel Campos Benítez <i>In Memoriam</i>	9
Katarzyna GAN-KRZYWOSZYŃSKA, Przemysław KRZYWO- SZYŃSKI, Piotr LEŚNIEWSKI – <i>Juan Manuel Campos</i> <i>Benítez: In Memoriam</i>	10
Gabriela JIMÉNEZ BANDALA – <i>Reflections on the Legacy</i> <i>of Juan Manuel Campos Benítez: Logic, Pedagogy, and</i> <i>Humanity</i>	13
3. Organizing Committee	21
4. Abstracts of Keynote Talks	23
Jean-Yves BEZIAU – <i>What is Analogy?</i>	23
Tatiana DENISOVA – <i>Hermeneutic Pitfalls of Analogy</i>	25
Marcin GMYS – <i>From Structural Analogy to Metaphor.</i> <i>A Musical Perspective</i>	26

Dénes NAGY – <i>The role of λόγος, ἀναλογία, and συμμετρία at the Birth of Abstract Mathematics and Aesthetics: In Memoriam Władysław Tatarkiewicz (1886-1980), Stanisław Jaśkowski (1906-1965), and Árpád Szabó (1913-2001)</i>	28
Marcin J. SCHROEDER – <i>Reincarnations and Consequences of the Distinction Between Analog and Digital Information</i>	31
Ioannis VANDOULAKIS – <i>Ratio, Proportionality and Similarity in Greek Mathematics and Philosophy</i>	35
5. Abstracts of Contributed Talks	37
Luca BIANCHINI, Anna TROMBETTA – <i>Hidden Messages and Cultural Resistance: Political Analogies in Italian Music and Literature under Foreign Rule</i>	37
Dorota BRZOZOWSKA – <i>Analog(ical) vs Digital in Sports ...</i>	41
Cyprien CARRAUD – <i>Aristotle's Analogy: Acknowledging the Mathematical Legacy, and Overcoming it</i>	43
Maira DE CINQUE – <i>Between Resemblance and Free Association: Is Any Analogy False?</i>	46
Katarzyna GAN-KRZYWOSZYŃSKA – <i>Baroque and Analogy</i>	47
José David GARCÍA-CRUZ – <i>Two Analogies of Time in the Film “The Endless” by Justin Benson and Aaron Moorhead</i>	49
Zofia HAŁĘZA – <i>History of Analogy in Polish Philosophy ...</i>	51
CP HERTOGH – <i>Analogy as the Core of Consciousness (What It Is Like e.g. Nagel 1974)</i>	52
Betül Fatma KARAL – <i>Distinction and Difference in Dialogue</i>	53

Przemysław KRZYWOSZYŃSKI – <i>Republic as an Analogical Concept</i>	55
Juan MARQUEZ – <i>Hanging on by a Thread over Thin Ice: Hermeneutical Analogies in Cross-Cultural Philosophy</i>	57
Alex MCQUIBBAN – <i>Only the Same is Truly Similar: On Identity, the Importance of Analogy and Fragility of Conceptual Webs</i>	59
Jorge MEDINA – <i>Peculiarities of the Nomination of God as a Non-univocal Agent according to Aquinas</i>	62
Ricardo Arturo NICOLÁS FRANCISCO – <i>Similarities and Differences between “logica docens” and “logica utens” according to Juan Manuel Campos Benítez</i>	66
Fernando SANTORO, Caroline PIRES TING – <i>Diagrammatic Thought and the Aesthetics of Renewal: Translating Wényánwén across Worlds</i>	68
Vida Mia S. VALVERDE – <i>Vinyl Realism: Analogy, Authenticity, and Metaphysical Commitment in the Evolution of DJ Technology</i>	70
Miroslava TRAJKOVSKI – <i>The Semiotic Nature of Analogy</i> ..	72
Maurício VIEIRA KRITZ – <i>Wired-non-Wired Analogies</i>	74
Aleksandra WALAS – <i>Biophilia as an Analogical Concept: Philosophy, Biology and Art</i>	77
6. Notes	79

1. About the Congress: 10 Years of the Project

This year, with the Fourth World Congress on Analogy, we celebrate the project's tenth year. We began in 2015 in Puebla, Mexico (see the handbook of The First World Congress on Analogy), continued in 2017 in Poznań (see the website of The Second World Congress on Analogy), and, after the pandemic, resumed in 2023 in Puebla (see the website of The Third World Congress on Analogy). Meanwhile, during the 7th World Congress and School on Universal Logic (UNILOG 2022), we organised a Tutorial and a Workshop.

The logo of this edition of the congress is the gorgeous Cretan iris (*Iris cretensis*), a flower rich in beautiful symbolism that reflects the fundamental role of analogy in dialogue and communication. The Greek goddess Iris was a messenger between the gods, as well as between gods and people.

This golden-winged goddess, on the one hand, is not a main character in mythology; on the other hand, she plays a very important role in many stories and was given many difficult tasks. What is particularly interesting in the context of analogy is that she delivered both good and bad messages. We believe it is always beneficial to face the truth and understand both positive and negative similarities and differences. The gorgeous Iris also reminds us of respect for the herald.

This goddess is always represented in shining (also “iridescent”) colours. Iris in Greek (Ἥρις) means “rainbow” – joining heaven and earth. The Spanish word for rainbow is arcoíris. Moreover, in English, iris is the colourful part of the eye of all mammals and birds, unique to each individual, and may provide insights into health and emotions.

During this jubilee edition of the Congress we also want to celebrate slow (in the sense of “slow movement”) and analogue (as opposed to digital) communication.

So let’s take our time to celebrate analogies – i.e. shining, colourful bridges – as a basis for dialogue in three spheres (following Martin Buber): in our life with nature, with people, and with intelligible forms.

Acknowledgements

We want to express our profound gratitude to the Orthodox Academy of Crete for making this beautiful meeting possible. We also thank the Dean of the Faculty of Law and Administration (Adam Mickiewicz University, Poznań, Poland) Professor Tomasz Nieborak for sponsoring our gorgeous congress materials. Last but not least, we are truly grateful to Mr. Tomasz Magowski from the Kontekst Publishing House for steadily supporting our analogy project from the very beginning.

2. Juan Manuel Campos Benítez

In Memoriam

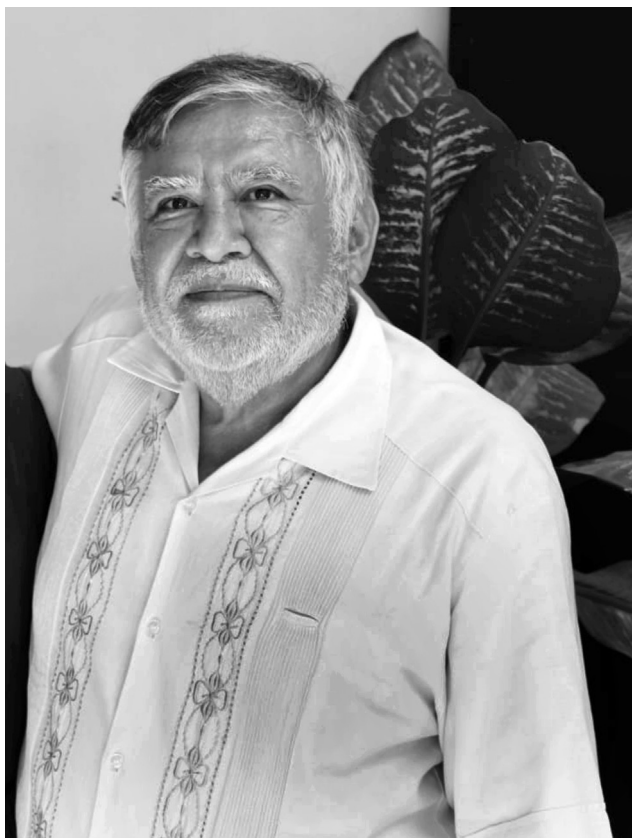


Photo by Sylwia Pawłowska

Juan Manuel Campos Benítez: In Memoriam

Katarzyna Gan-Krzywoszyńska, Przemysław
Krzywoszyński, Piotr Leśniewski

Adam Mickiewicz University, Poznań, Poland

On the 5th of April 2025 we have lost our dearest friend, renowned scholar and researcher and foundational figure for the Analogy Congress project: Professor Juan Manuel Campos Benítez.

A Mexican philosopher and specialist in modal logic from the medieval and New Spain periods, he was a full time professor at the Meritorious Autonomous University of Puebla, Mexico (Benemérita Universidad Autónoma de Puebla, BUAP) where he earned his Bachelor of Arts in Philosophy under the supervision of Walter Redmond. He held a Master of Arts from the State University of New York and a PhD in Philosophy from the National Autonomous University of Mexico (Universidad Autónoma Nacional de México) under the supervision of Mauricio Beuchot. His academic interests included among others modal logic, medieval and New Spain logic, literature, and the semantics of possible worlds. He worked at the Autonomous Universities of Tlaxcala, Sinaloa, and Zacatecas and contributed as a columnist, frequently on the topic of cinema, to various newspapers in Mexico.

He published several articles on modal and medieval logic that were read at UNILOG and at World Congresses on Square of Opposition. He was an author of three books written in Spanish, one on New Spain logic *Ensayos de filosofía y lógica novohispana del siglo XVI* (2014, with the Preface by Walter Redmond), another on reading and writing techniques for beginners *La traición de la abuela* (2015), and the third book devoted to essays on history and teaching of logic *Hermanas y enemigas. Ensayos sobre los*

conflictos entre dos aspectos de la lógica ayer y hoy (2022). On the one hand, his papers in the domain of logic were a model for clarity, on the other hand he was a master of the essay, super easy and enjoyable to read. Much like one of his favorite writers Jorge Luis Borges, he was prouder of what he read than what he wrote. But all of us profoundly enjoyed his many talents.

He was also an exquisite teacher, a master in the sense of George Pólya: he applied rules with natural ease, with judgment, noticing the cases where they fit, and without ever letting the words of the rule obscure the purpose of the action or the opportunities of the situation (Pólya 1957: 148). That is why Professor Juan Manuel Campos Benítez instilled an incomparable intellectual legacy in his students.

Thanks to him, through his work and engagement, his resilience and sincerely friendly personality, we have come to organize the very First and subsequent World Congresses on Analogy and following publications, beautiful meetings and exchanges. His expertise, patience, humility, and erudition have made these experiences truly beautiful, dynamic and enriching, but most of all free from unnecessary bureaucracy and stress.

Prof. Campos Benítez was the core of the analogy project, he was like a central analogy, i.e. he united so many people without fuss, organically built a diverse community of professors, former students, and friends, always open to anyone who wanted to seriously study and work, and his guidance, perspective, and wisdom were unmatched. We are connected by his loss.

Thanks to him in our analogical project, we were honored to have talks and contributions from such a remarkable people as Walter Redmond, Mauricio Beuchot, Enrique Dussel. Prof. Campos Benítez greatly assisted many students, encouraged beginners from Mexico, Poland and other countries. He truly enjoyed helping others.

During the congresses he was not only the main organizer, but also took care of every aspect, created a beautiful, welcoming atmosphere, personally looked after the participants, by showing them Teotihuacan in his car or the best places to eat in Puebla. He never expected anything in return, he was sincerely happy for

anyone's success or achievement. We loved to share a good news with him because he was always so happy for us and more proud than we were.

To honor our friend we will inaugurate at the beginning of the congress "Juan Manuel Campos Benítez Analogy Research Group". This will be an international, interdisciplinary group dedicated to the study of an analogy. We have already more than 40 participants from all over the world, of whom the great majority knew Prof. Campos Benitez personally and appreciated him immensely. We will have a website, connected with the congress' website. We will upload materials and organize occasional webinars and meetings. We hope it will help both congresses and other events.

Grief is a love that has nowhere to go. Let's put some of our love for him to this project and work together in shared delight and his warm spirit and brilliant, playful sense of humor. We want to continue his work, and he will remain our guide. As a sound analogy, he was concerned only with the most important things, always authentic, sincere, with a priceless fresh perspective and always very cordial, human and warm.

Let us also point out, that in Puebla there is already a series of conferences on History and Philosophy of Logic named after "Juan Manuel Campos Benítez". Similarly, they are not exclusively studying the works of our dear friend, but keeping his legacy alive. The Second Congress of History and Philosophy of Logic "Juan Manuel Campos Benítez" (Segundo Congreso de Historia y Filosofía de la Lógica "Juan Manuel Campos Benítez")¹ took place on 19-20 May 2025 in the hybrid form. We are very grateful to Dr. Gabriela Jiménez Bandala whose very touching text we present below (in her English translation) who was one of the organizers and speakers of the Congress.

¹ This is the website of the event: <https://sites.google.com/view/chfl2025?pli=1>

Reflections on the Legacy of Juan Manuel Campos Benítez: Logic, Pedagogy, and Humanity

Gabriela JIMÉNEZ BANDALA

Benemérita Universidad Autónoma de Puebla, Mexico

gabriela.jimenezb@correo.buap.mx

Introduction

Nic dwa razy się nie zdarza
i nie zdarzy. Z tej przyczyny
zrodził się bez wprawy
i pomrzemy bez rutyny.

Wczoraj – kiedy ktoś głośno
wymówił twoje imię przy mnie –
zdawało mi się, że róża
spadła przez otwarte okno.

Wisława Szymborska

With this paper, I would like to honor the memory of Dr. Juan Manuel Campos Benítez, a philosopher and professor whose influence endures in logic, in the teaching of this discipline, and within us, his students. This biographical tribute is structured in three acts that highlight his legacy, as if life itself were a Play.

The First Act offers a narrative of his life and underscores the main lines of research explored in his articles and most important books.

In the Second Act, the usefulness of logic as an introduction to philosophy is emphasized. Although logic faces fundamental problems –such as questions of meaning and semantics, the metaphysical status of possible worlds, and the construction of formal logical systems– it also serves as a methodological tool to develop cognitive skills ranging from the creativity needed to build and support arguments both orally and in writing, to the abstraction of reality into concepts or formulas.

Finally, the Third Act presents Juan Campos's personal profile through the testimony of his students: his willingness to listen, his eagerness to encourage debate, and his cordial demeanor in everyday life. It is both a farewell and a tribute of gratitude.

(Places, please! Final call... let's begin!)

First Act. Campos's Studies on the Philosophy of Logic

(Curtain rises. Life appears an endless river, yet it is not.)

Amid the twilight, memory always sparks flashes: images, voices, classrooms, books, laughter, silences. And at the heart of this whirlwind, the serene face of Juan Campos, with his curious gaze and steady tone, always ready to teach, to listen, to reflect.

(This play begins with a voice thinking aloud.)

We are in Puebla, in the year 1957. A Mexican boy, not yet aware, will grow up to ask questions that few dare to pose. He will grow to teach others how to find, amid complexity, the clarity of thought. We see him navigate academic spaces: first at the Universidad Autónoma de Puebla, where he will train as a philosopher; then, we see him study at a prestigious place within the Facultad de Filosofía y Letras of UNAM; and later, already holding a Ph.D.

(Curtain rises on a university classroom.)

Juan stands before the blackboard, about to begin Advanced Logic class. There is something unique in his way of explaining logic: the structures and formal rules that allow philosophical problems to be seen from different perspectives, but also an invitation to the rigor of thought, the elegance of language, and the power of argument. We see him travel through Puebla, Tlaxcala, Sinaloa, and Zacatecas. He carries Walter Redmond's yellow book –the one we all know– we hear his measured voice uttering phrases in Latin, we encounter his warm greeting. For more than three decades, his method became a school of thought, and here at the Colegio de Filosofía, it is hard to imagine logic without him. I believe his way of teaching writing and argumentation left a profound mark on generations of students.

We see him at conferences, in Mexico and around the world. We see him present his research on philosophy and logic, as well as on Novohispanic Thought, the square of opposition, and medieval logic. We see him open new paths and spark discussions that continue to this day and will live on forever in fifty articles in specialized journals and three books: *Ensayos de Filosofía y Lógica Novohispana del siglo XVI*, *La Traición de la Abuela*, and *Hermanas y enemigas*.

(A soft light falls on the protagonist. What follows is a personal memory.)

We see him smile. It's 2003. We see him listening to a nervous student –me. We hear him say “no pasa nada” with patience, but also insist firmly that rigor is inherent to philosophy; otherwise, it is not philosophy. Juan Campos was a senior academic with a deeply humane presence. Kind, though sometimes ironic. He could sustain a philosophical discussion with calm– or share a silence.

(The stage darkens.)

Narrator (voice-over):

Personally, I am especially fond of two of his articles. The first is *El octágono medieval de oposición y equivalencia*, published

in 2013. It discusses the applications of the 14th-century medieval opposition octagon developed by Jean Buridan, and its significant impact on 20th-century quantified modal logic. The second is *Libertad y contingencia: un enfoque modal* (2010), whose central thesis holds that human freedom is possible because of contingency, but that freedom itself is not contingent – it is necessary. Together with my Elementary Logic students, we read the latter during the final sessions of this academic year.

Regarding the books he wrote, I will briefly talk about two. *La Traición de la Abuela* (año), notable for its polished prose, is a text in which Campos invites us to reflect on two essential pillars of knowledge: reading and writing. “Learning to read is achieved through disciplined reading [...] Learning to read is an art; it has its technique, its principles, its discipline. Just as the artist devotes themselves to their work, the reader must also devote themselves to the text.”

Regarding the last part of his legacy, *Hermanas y enemigas, ensayos sobre los conflictos entre dos aspectos de la lógica hoy* (año). The book is divided into two sections: the first deals with the teaching of logic and the difficulties related to its educational practice. The second section focuses on the history of logic, specifically the controversy between *logica utens* and *logica docens*, hence the sisterly and antagonistic relationships alluded to in the book’s title.

(Curtain closes temporarily.)

Second Act. Campos’s Pedagogical Method for Teaching Logic, Writing, and Argumentation

(Curtain rises again. A single spotlight shines on a character –who could be one of his students– delivering a monologue, reflecting on stage and looking at the audience.)

Campos’s pedagogical legacy is meticulous, structured, and accessible. He considered logic as a critical thinking tool applicable

to philosophical research. Around 2004, he taught a course called Research Methodology at the Benemérita Universidad Autónoma de Puebla; the course focused on the importance of writing coherently and constructing consistent arguments. As part of my professional experience, I often encountered job offers related to argumentation, language use, and writing, which made me frequently revisit his advice and strategies for writing. Logic is like a diving suit that allows you to navigate clearly the deep ocean of words and communication.

A widespread problem among students is the belief that writing is easy; however, it is not. Writing is an activity based primarily on knowledge of grammatical rules and a great deal of discipline. Thought tends to overflow, so an argumentative model is necessary to allow the flow of words to occur in a harmonious and beautiful way. Campos emphasized that this does not happen on the first attempt; trial and error are necessary, and therefore, a great deal of patience.

Based on the two articles mentioned in the First Act of this text, I have undertaken an exercise aimed at highlighting the most remarkable features of Juan Campos's writing style. As previously noted, his writing is impeccable: short sentences with simple verb tenses; explicit subjects rather than implicit ones; paragraphs that contain a single argument and its demonstration, usually no longer than eight lines and balanced in structure. I recall that, in one class, he taught us how to prune the text –that is, to remove irrelevant propositions that do not contribute to proving the conclusion. It often happened that from a full page –three or four paragraphs– the central argument amounted to only one paragraph; the rest could be there or not, given its relevance.

Let us now delve deeper into the argumentative model that Campos followed when writing an academic article. He combined formal logic with explanations in natural language – his goal was to make complex ideas accessible even to those unfamiliar with symbolic notation. Each logical formula was accompanied by clarifying examples: sometimes highly didactic, other times more philosophically nuanced. One crucial aspect was that the logical

analysis of a problem always ran parallel to its historical and philosophical contextualization.

The structure of his articles is clearly modular: he organizes the analysis into numbered sections, each one signaling in advance what it will address. This guides the reader and takes them step by step through the argument. In the articles I have examined, Campos proceeds deductively –from the general to the particular– and concludes each section with a synthesis that reinforces the central thesis. The dominant tone is formal and technical: he favors impersonal constructions and the active voice. Finally, he uses elegant rhetorical transitions –in effect, therefore, put simply, this means– which lend fluency and cohesion to the discourse without sacrificing rigor.

There is also a paragraph-linking strategy that, although Campos never explicitly named, I have come to recognize through close reading of his work: it is known as chained progression. When a paragraph introduces an important idea (for example, a concept), the next begins precisely with that idea to explore it further. Then, in the following paragraph, something mentioned at the end of the previous one is picked up and expanded upon. This creates a well-articulated, coherent text.

(She pauses briefly. Looks into the distance, as if sensing something beyond the classroom. A shadow of melancholy crosses her face.)

Sometimes I think that everything happening now –even this moment– is being slowly gnawed away by the relentless teeth of time.

(The light fades out. Total darkness.)

Third Act. Juan Campos as a Person

(The curtain rises one last time. The stage is bathed in warm light, as if it were a May morning in the year 2025. The voice that speaks is not only that of a former student – it carries the echoes of many students and colleagues who remember him with affection.)

What I am about to read is not a personal statement; each word that follows carries the heartbeat of those who, because of distance or time, could not be here today. We are from different generations, yet we share the same debt of gratitude.

To speak of Juan Campos as a professor is easy; to describe him as a person feels even more essential.

Thank you for reading our drafts without haste.

Thank you for your critiques and objections to things and situations that once seemed so normal.

Thank you for teaching us to disagree, even with you and your perspectives.

We still owe ourselves that gathering with Aline, Karlita, Eleazar, and other fellow philosophers to talk about logic and how time has gone by.

All those everyday moments become infinite when we look back.

Today, when we say the name Juan Campos, we're not only naming the PhDr., the researcher, or the logic professor. We are naming the friend who shared a coffee, a hallway conversation in our College, or a kind greeting in the Academic Coordination office.

That –his quiet humanity– is what endures the most.

And so we say, in the plural and without hesitation:

Thank you, Juan. We will continue to learn from the way you were in the world.

(Curtain of life falls. Everything goes dark. We will always remember you, Doc.)

Żaden dzień się nie powtórzy,
nie ma dwóch podobnych nocy,
dwóch tych samych pocałunków,
dwóch jednakich spojrzeń w oczy.

3. Organizing Committee

Chair:

Katarzyna GAN-KRZYWOSZYŃSKA (Adam Mickiewicz University, Poznań, Poland)

Co-Chair:

Antonios KALOGERAKIS (Orthodox Academy of Crete, Greece)

Dorota BRZOZOWSKA (Poznań University of Physical Education, Poznań, Poland)

Estelle CARCIOFI (National Center for Scientific Research (CNRS), Paris, France)

Betül Fatma AYDIN (Anadolu University, Eskisehir, Turkey)

Przemysław KRZYWOSZYŃSKI (Adam Mickiewicz University, Poznań, Poland)

Sylvia PAWŁOWSKA (photography and website design, Manchester, England)

Caroline PIRES TING (Federal University of Rio de Janeiro, Brazil)

Benilda SIŁKOWSKA-MAŚIOR (Toronto, Canada)

Aleksandra WALAS (Adam Mickiewicz University, Poznań, Poland)

4. Abstracts of Keynote Talks ---

What is Analogy?

Jean-Yves BEZIAU

The University of Brazil, Rio de Janeiro, Brazil

Analogy is a fascinating notion that has yet to be explored, investigated, understood, in a philosophical sense, unveiling its true nature, if any.

Like for whatever notion N , to answer the question What is N ?, one may balance between a chaotic enumeration of examples and overly prescriptive or abstract definitions. One way to escape these two extremes is to classify analogies into a small group of categories, each illustrated by a typical example of this kind of analogy.

And for understanding analogy, following the structuralist approach, it is important to relate it to other notions. On the one

hand, we will present and describe notions close yet different from analogy, such as metaphor, similarity, and equivalence. On the other hand, we will examine opposite notions such as difference, identity, and logic.

References:

Beziau J-Y., “An Analogical Hexagon”, *International Journal of Approximate Reasoning*, Volume 94, March 2018, pp. 1–17.

Beziau J-Y., “Qu’est-ce que c’est?”, Lecture presented at the 25th World Congress of Philosophy, Rome, August 1-8, 2024.

Hermeneutic Pitfalls of Analogy

Tatiana DENISOVA

The University of the Aegean, Athens, Greece

Analogy and analogical reasoning are fundamental modes of human thinking and communication. Since Aristotle's time, the study of analogy, its essence, purpose, scope, methods of use and epistemological limitations have been examined within various sciences from various standpoints. In hermeneutics, analogy is central to understanding, interpretation and explanation.

Despite the cognitive and didactic effectiveness of analogy in transferring structural information from one system to another, hermeneutic pitfalls are very probable. Hermeneutic pitfalls are communicative situations that intentionally or unintentionally involve ambiguity and might lead to misunderstanding and misinterpretation.

The article examines cases of grammatical and psychological pitfalls and their synthetic models and analyses their causes. Particular attention is paid to the analysis of the specific features of semantic transfer in the pairs "concept to concept," "image to image," "concept to image," and "image to concept." We will also examine the case of deliberate pitfall underlying the mechanism of using analogy in manipulative practices in commercial advertising and political technologies.

From Structural Analogy to Metaphor. A Musical Perspective

Marcin GMYS

Adam Mickiewicz University, Poznań, Poland

marcin.gmys@amu.edu.pl

The process of creating a structural analogy, which may not seem so obvious at first glance, is one of the most important compositional strategies in the history of music. Already, after all, the counterpoint technique, which is based on carrying out the initial theme (*dux*) in close or free imitation (*comes*), is in fact, if one may put it that way, a structural analogy in musical action. The first part of this text will discuss instances of the more interesting structural analogies in musical masterpieces from the 19th to the 21st century. One of the most difficult structural analogies to decipher in the history of music turned out to be Beethoven's strategy employed by him in the *String Quartet in C sharp minor*, Op. 131 (1826), which waited 140 years before it was deciphered (it was only identified by Joseph Kerman in his 1967 monograph *The Beethoven Quartets*). Furthermore, echoes of the structural analogy of this quartet in the novel *Immortality* (1988) by Milan Kundera and in the *String Quartet "Arcadiana"* (1994) by Thomas Adès will be discussed. Here, too, the question of structural analogy in symphonies and chamber music written according to the scheme of *per aspera ad astra* dramaturgy will be addressed. In the second part of the text, situations will be presented in which structural analogies become components of the metaphorization processes that form the semantic core of musical compositions. Two masterpieces will

be chosen as examples – Gustav Mahler’s *Symphony No. 7* (1904-1905) and Ferruccio Busoni’s opera *Doktor Faust* (1918-1924). Each of these scores in a completely different way (the media used by both composers are distinct), but each time through a structural analogy becomes a metaphor for the idea of return outlined by Friedrich Nietzsche in his book *Thus Spoke Zarathustra*.

The role of λόγος, ἀναλογία, and συμμετρία at the Birth of Abstract Mathematics and Aesthetics:

*In Memoriam Władysław Tatarkiewicz
(1886-1980), Stanisław Jaśkowski
(1906-1965), and Árpád Szabó (1913-2001)*

Dénes NAGY

International Society for the Interdisciplinary Study of Symmetry (SIS)

Budapest, Hungary and Melbourne, Australia

denes.nagy@symmetry-hu.com

The ancient Greek expression λόγος (*logos*), from the verb λέγω (*say*), means *saying, word, reason, knowledge*. It gained an additional meaning as *ratio* (a/b), when the Pythagoreans studied the musical harmonies using the monochord instrument. They found that the good consonances could be characterized by simple ratios. They also needed a term for the sameness of the ratios, and coined the expression ἀναλογία (*ana + logos*), meaning proportion ($a/b = c/d$). Using numbers to characterize the harmonies or consonances was very successful. Even today, musicologist use mathematics-related expressions, such as the perfect octave (1:2), the perfect fifth (2:3), the perfect fourths (3:4), the major third (4:5), and the minor third (5:6 or 6:7). The Pythagorean methodology also proved useful in other fields. For example, the sculptor Polykleitos (Πολύκλειτος) studied the proportions of the human body and established a canon. We will survey Vitruvius' later

approach to human proportions and Leonardo's related studies in the Renaissance.

On the other hand, the Pythagorean approach had some limitations. In the case of a square or the regular pentagon they were not able to express the ratio of the diagonal to the side as a ratio of two integers. Some sources claim that the symbol of the Pythagoreans was the pentagram. Thus is it reasonable to believe that they studied the ratios there. On the other hand, all of the surviving early sources discuss this problem in connection with the square. Here we see a very important step in the history of ideas (see Árpád Szabó's monograph on the beginnings of Greek mathematics, which was written in German, but later it was translated into English, French, Greek, and Japanese). The fact that they did not find the corresponding ratio, does not mean that it is impossible. After they failed to find such a ratio, they invented a very interesting proof that the corresponding ratio does not exist. They supposed that the ratio of the diagonal and the side can be expressed as a/b , where a and b are integers, but it led to a contradiction. This method is called *reductio ad absurdum*. Geometrically speaking, the diagonal and the side of a square is ἀσύμμετρον (*asymmetron* i.e., incommensurable). The expression συμμετρία (*symmetria*) became a central concept in Greek aesthetics, as it was demonstrated by Władysław Tatarkiewicz in his comprehensive work on the history of aesthetics.

In Latin there was an interesting "doubling" of the related Greek terminology: they adopted the two expressions as *analogia* and *symmetria* and also translated them as *proportio* (Cicero) and *commensura* (Vitruvius). Later the adopted terms were available for using these in more general sense, see the importance of *analogy* in grammar, logic, and every day practice, as well as *symmetry* in geometry, crystallography, physics, etc.

In 1952, Hermann Weyl published an important book on symmetry, which was translated into more than ten languages. In the same year, Stanisław Jaśkowski published a book, in which he brilliantly discussed some analogies between mathematics and

decorative arts. Later he also published a popular book. Sadly, his works are not widely known.

Personal note: I was fortunate to know personally both Árpád Szabó (we had various discussions) and Władysław Tatarkiewicz (we had two brief discussions after his lectures at the Pałac Staszica, the headquarters of the Polish Academy of Sciences).

References:

Jaśkowski, S. *O symetrii w zdobnictwie i przyrodzie: Matematyczna teoria ornamentów*, [About Symmetry in the Decorative Art and Nature: Mathematical Theory of Ornaments, in Polish], Warszawa: PWS, 1952.

Jaśkowski, S. *Matematyka ornamentu*, [Mathematics of Ornament, in Polish], Biblioteka Problemów, Warszawa: PWN, 1957.

Tatarkiewicz, W. *Historia estetyki*, I–III, Wrocław: Ossolineum, 1960–1967; English trans. *History of Aesthetics*, Vols. I–III, The Hague: Mouton and Warszawa: PWN, 1970–1974.

Szabó, Á. *The Beginnings of Greek Mathematics*, Dordrecht: Reidel and Budapest: Akadémia, 1978.

Reincarnations and Consequences of the Distinction Between Analog and Digital Information

Marcin J. Schroeder

Akita International University, Akita, Japan

mjs@gl.aiu.ac.jp

The distinction between analog and digital information has entered the vernacular vocabulary and may seem as obvious as the meaning of the word data. Whatever is obvious, as a rule, hides an unpenetrable depth of the foundations of our thinking. The terms “analog” (proportion) and “digit” (finger or toe) are very old, and both acquired very early on some association with numbers or measuring. However, their opposition is relatively new, and most likely it was introduced or at least popularized by John von Neumann (1963) in the late 1940s in the context of computing automata. He considered the opposition of the Analogy Principle and the Digital Principle, where in the former numbers are represented by physical magnitudes and in the latter by “aggregates of digits”. In his explanation, he focused on the difference in the process of calculation (operations on numbers), in which analog machines involve physical interactions, and digital machines involve the manipulation of digits. Also, he observed that in analog machines, we can never get exact outcomes of calculation due to unavoidable errors in the transition between the state of the machine and the reading of the result, but the results of digital calculations are exact. Both types of machines existed in those days, but the main direction of computing technology was in the type of digital machines, mainly

as a result of Alan Turing's invention of universal computing machines whose operation can be programmed by providing appropriate information to the machine instead of restructuring its design.

The development of electronic technology has brought forth different manifestations of this distinction, for instance, in the way sound or music was recorded, transmitted, and reproduced. Already in von Neumann's original writings, the focus was on the distinction between the continuous characteristic of the operation of analog machines and the discrete nature of digital ones. This distinction has important consequences for the theoretical description of computation and the subsequent development of information technology. With the extraordinary importance of this technology, in the popular view, the distinction of analog-digital is identified with the opposition continuous-discrete. In reality, all digital computers are actually analog in the sense that at the level of machinery, they operate in a continuous way, and the process of discretization is conventional to implement the computation in terms of digits (Papayannopoulos *et al.*, 2022).

Thus, what exactly is the analog-digital opposition in the context of information, if not as usually assumed, the work of computing machines that are all analog in their operation? In my recent publications (Schroeder, 2025), I presented the view that the difference between analog and digital information is similar (i.e., analogous) to the difference between the concepts of physics characterizing physical systems by physical states (analog) and observables (digital). This distinction in physics acquired recognition and fundamental importance with the rise of quantum mechanics, but was already present earlier, although only indirectly. We can trace it all the way to the invention of the earliest forms of writing, and in particular, its alphabetic form. This way of understanding the analog-digital distinction was not explicitly formulated by von Neumann but can be identified in his explanation of the two types of machines. Analog information is encoded in an object or alternatively can be identified with its state, while digital information is the result of observation or measurement of this object. In the

context of computation, the calculation by an analog machine operates on the states of the computing machine, while in digital computing, the operation involves measurement (e.g., reading of the tape of the Turing machine).

The distinction between analog and digital information has been obscured by confusing terminology, especially by the use of the deceiving term “data”. Its Latin meaning, the plural form of “given”, suggests the direct accessibility of information, ignoring the stage of the transition from the encoding of information within an object (understood usually as what information is about) to the encoding of information in the specific format (frequently, but not always, of the numerical type). The transition is the process of observation or measurement. Naturally, this stage of the transformation of information was outside the interest of those who were searching for the abstract mathematical process of calculation and was left outside the description of information processing. The transformed information was simply “given”, but actually it was “taken” from the object by an observer, as it is reflected in the English expression for photographing as “taking a picture of something”. What was “given” by the object was considered identical to what was “taken” by the observer, which, with the advent of quantum mechanics, became unwarranted. Thus, what is commonly called “data” (given) should be called using the Latin “capta” (taken). Data are most frequently inaccessible.

The distinction between a state and an observable has many precedents in philosophy. Probably the best-known analogy can be found in Immanuel Kant’s distinction of the thing as it is (state of the thing) and our human perception involving the synthetic a priori apparatus of knowing (observable). In a much more practical context, von Neumann’s concern about the errors involved in analog computing is similar. However, the analog-digital distinction, upon careful reflection, rises from a marginal technical issue to the role of one of the most fundamental principles of the study of information and knowledge.

References:

von Neumann, J. (1963). The General and Logical Theory of Automata. Ed. Taub, A. H., *John von Neumann, Collected Works, Vol. V*, Pergamon Press, Oxford, UK, 1963, pp. 288–326.

Papayannopoulos, P., Nir Fresco, N., and Shagrir, O. (2022). On Two Different Kinds of Computational Indeterminacy. *The Monist* 105: 229-246.

Schroeder, M.J. (2025). Theoretical Unification of the Fractured Aspects of Information. In Schroeder, M.J. & Hofkirchner, W. Eds. *Understanding Information and Its Role as a Tool: In Memory of Mark Burgin*. World Scientific, Singapore, pp. 131-185.

Ratio, Proportionality and Similarity in Greek Mathematics and Philosophy

Ioannis VANDOULAKIS

“Semiotics of Logic and Reasoning” Research Group, Endicott College, USA

International Society for the Interdisciplinary Study of Symmetry (SIS),
Melbourne, Australia and Budapest, Hungary

In Greek mathematics and philosophy, a cluster of terms related to analogy is used in specific contexts. The Greek term “*analogia*” derives from the suffix ‘*ana-*’ and ‘*logos*’ which is rendered as “in ratio”. This expression is used in Euclid’s arithmetic Books (VII–IX), where it appears as a four-place predicate over natural numbers in defining when four numbers are in ratio (Def. 20). In Book V, where Euclid exposes Eudoxus’s general theory of proportions, the expression is used to denote a four-place predicate over magnitudes. Magnitudes capable of having a ratio to one another are homogeneous. The similarity of geometric figures is examined in Book VI of Euclid’s *Elements*, where a law of composition of ratios is introduced.

In a broader sense, analogy expresses the idea of similarity, which presupposes the existence of a common feature (an idea, a pattern, a regularity, or an attribute) between the compared entities. Using this concept, Plato discovered in *Parmenides* the logical problems it might involve: the possibility of infinite similarity regress caused by self-reference. This was remedied by a sound definition of similarity that delineates types of homogeneous entities, the confusion between which is *ad hoc* precluded to prevent self-reference paradoxes.

5. Abstracts of Contributed Talks ---

Hidden Messages and Cultural Resistance: Political Analogies in Italian Music and Literature under Foreign Rule

Luca BIANCHINI

Doctor of Musicology, University of Pavia, Pavia, Italy

luca.bianchini@italianopera.org

Anna TROMBETTA

Doctor of Musicology, University of Pavia, Pavia, Italy

anna.trombetta@italianopera.org

Throughout the eighteenth and nineteenth centuries, Italian music and literature served as vehicles for subversive messages and coded forms of resistance against foreign domination and political censorship. This paper explores the sophisticated system of analogies, symbolic codes, and intertextual references deployed by composers and writers to circumvent repression

and communicate ideals of liberty, national identity, and cultural emancipation.

Our interdisciplinary approach combines musicology, philology, and cultural history to analyze how operatic works – often dismissed as purely entertaining or even complicit with authority – were in fact saturated with hidden meanings, frequently structured through analogy. The use of musical quotations, mythological allusions, dramaturgical parallels, and especially analogic strategies enabled artists such as Johann Simon Mayr, Gioachino Rossini, Gaetano Donizetti, and Vincenzo Bellini to create a double-layered narrative: one apparent and sanctioned, the other accessible only through analogical interpretation by informed or initiated audiences.

Among the works examined in detail in this study are Johann Simon Mayr's *Lamentazioni Sacre*, *Sisara*, *Atalia*, *San Luigi Gonzaga* (the satirical oratorio), *Verter*, *Le Danaïdi*, *Medea in Corinto*, *ATAR*, *ossia il Serraglio d'Ormus*, *Le due Duchesse*, and *La rosa bianca e la rosa rossa*, all composed between the late eighteenth and early nineteenth centuries. These works are particularly rich in Masonic and esoteric analogies, often using mythological and biblical figures as veiled references to contemporary political conditions and revolutionary ideals. In *San Luigi Gonzaga* and *La rosa bianca e la rosa rossa*, for example, Mayr encodes messages of fraternity and resistance, drawing on the language of secret societies and embedding allusions to the Carboneria and the wider network of political brotherhoods, as explored extensively in the present paper.

Turning to Gioachino Rossini, the analysis covers a wide chronological spectrum, from his early works such as *L'equivoco stravagante* – a sharp parody with anti-clerical and anti-monarchical undertones – through *La cambiale di matrimonio*, *L'inganno felice*, *Ciro in Babilonia*, *Demetrio e Polibio*, and *La pietra del paragone*, to masterpieces like *La gazza ladra*, which stands as a brilliant example of social analogy and political allegory. Later operas such as *Maometto secondo*, where musical borrowings function as coded signals, and *Semiramide* further demonstrate

Rossini's reliance on analogical strategies to subvert censorship. Above all, *Guillaume Tell* emerges as a direct call to political emancipation and an analogic celebration of national liberation – its revolutionary message hidden beneath layers of myth and symbol, as the detailed analysis of its libretto and score reveals.

The study also explores the profound relationship and stylistic continuity between Gaetano Donizetti and Mayr, focusing on the analogical transmission of coded language and the central role of allegory and analogy within Donizetti's operas. Works such as *Pigmalione* and *Marin Faliero* exemplify the way in which political themes and analogical devices are woven into the fabric of Donizetti's music and dramaturgy, as well as in the subtexts of his librettos – echoing the strategies of his teacher Mayr and reinforcing the clandestine dialogue among artists engaged in cultural resistance.

Finally, particular attention is given to Vincenzo Bellini's *I puritani*, viewed as the “swan song” of patriotic opera – simultaneously expressing melancholy and hope for national resurgence – and to Bellini's connections with political librettists like Carlo Pepoli. These collaborations are interpreted through the lens of analogy, as both music and text are crafted to sustain a hidden discourse on freedom and national identity, accessible only to those attuned to their deeper, symbolic meanings.

A crucial and often overlooked aspect is the political risk that artists like Rossini faced. Contrary to the cliché of the lazy or exhausted composer, Rossini's withdrawal from composition after *Guillaume Tell* was not due to lack of creativity, but to the mounting dangers of political censorship and surveillance.

His so-called “laziness” was, in fact, a prudent silence in response to a system that punished any subversive message – no matter how cleverly disguised in analogical or symbolic form. This argument is demonstrated by a detailed analysis of the librettos and the music of Rossini's operas themselves, where the use of analogy, coded references, and symbolic allusions reveals the real risks faced by the composer. The strategies of quotation, self-

borrowing, and coded messaging were not mere stylistic choices but essential survival tactics, relying heavily on analogy, in an era of dictatorships and omnipresent censors. Special attention is also devoted to the pervasive influence of the Carboneria and other secret societies, whose coded rituals, allegorical language, and clandestine networks shaped both the content and the analogical form of these works. In this context, the frequent references to “initiates,” “brotherhood,” and “sacred daggers” in librettos, the recurring presence of Masonic symbols, and the transformation of romantic plots into encrypted analogies of revolutionary struggle, are all decoded as part of a wider system of political communication. Opera theaters themselves became spaces of resistance, where musical and literary analogies could be shared safely among the “buoni cugini” (“good cousins”) and “fratelli illuminati” (“Illuminati brothers”), while escaping the literal-mindedness of official censorship.

The analysis is extended to the literary context, with attention to the analogical double meanings in librettos, the use of allegorical figures inspired by Dante, Ariosto, and Metastasio, and the role of the theater as a forum for civil education and veiled dissent – again, all made possible by the powerful device of analogy.

This paper also investigates the broader semiotic strategies of quotation and stylistic mimicry: how Mayr, for example, incorporated themes from Mozart, Haydn, or Beethoven not as plagiarism, but as analogical commentary – transforming familiar motifs into revolutionary signals. Likewise, Rossini’s adoption of archaic or popular idioms, or even satirical references in sacred works, subverts the expectations of both public and censors, often through analogy.

Ultimately, we argue that analogy functioned as a survival tool – a way to sustain and transmit collective values and political ideals in hostile environments. In periods where free speech was suppressed, the arts became a clandestine means of communication and hope. These analogies, far from being mere rhetorical devices, were the hidden lifeblood of a cultural resistance that contributed to the shaping of modern European identity.

Analog(ical) vs Digital in Sports

Dorota Brzozowska

University of Physical Education in Poznań, Poland

d.k.brzozowska@gmail.com

Does a falling tree make a sound when there is no one to hear it? Does activity happen when no one is there to witness it? Did it happen when our GPS watch died mid-run? And most importantly: did it really happen if it is not on Strava?

The purpose of this article is to analyze modern sport, focusing on its analog and digital dimensions through analogical and dialogical tools.

Firstly, I present the principles of modern sport, with its fixation on numbers, results, and measurable performance indicators. Athletes—both amateur and professional—often feel the need to control and record their training sessions and health data, such as sleep performance or heart rate. I will use Mark Greif's essay "Against Exercise" to highlight some potentially harmful aspects of contemporary sport practices.

Secondly, I propose a concept of dialogical physical culture as a new way of thinking about sport as a cultural phenomenon. I argue that new technologies cannot be easily dismissed as merely panopticon-like tools of self-control. To support this claim, I draw on Enrique Dussel's concept of polysemy as a fundamental principle of dialogue.

References:

Buber, M. (1958). *I and Thou*. New York: Charles Scribner's Sons.

- Dussel, E. (2019). Analogy and communication. *Philosophies*, 4 (2), 31. <https://doi.org/10.3390/philosophies4020031>
- Freire, P. (2005). *Pedagogy of the Oppressed*. New York: Continuum.
- Greif, M. (2017). *Against Everything: Essays*. New York: Vintage.
- Mechikoff, R. A. (2020). *A History and Philosophy of Sport and Physical Education: From Ancient Civilizations to the Modern World*. New York: McGraw-Hill Education.
- Vincent, C., Hill, D., Coker-Cranney, A. (2022). “If It’s Not on Strava, It Didn’t Happen”: Perceived Psychosocial Implications of Strava Use in Collegiate Club Runners. *Recreational Sports Journal*, 47 (1), 36–47. <https://doi.org/10.1177/15588661221148170>

Aristotle's Analogy : Acknowledging the Mathematical Legacy, and Overcoming it

Cyprien CARRAUD

Sorbonne-Université, Paris, France

cyprien.carraud@gmail.com

Analogy is traditionally associated with literary *loci*. This holds also for Aristotle, whose *Poetics* characterize it as one form of metaphor. Yet for him, its primarily meaning lies in another domain: analogy is an equality of ratios *in mathematics* ($a/b = c/d$). Aristotle inherits this concept from the mathematician Eudoxus, his contemporary, credited with Euclid's *Elements*, V. Eudoxus develops the analogy in order to create a *generalized* theory of proportions: while Greek mathematics are at the time divided into two distinct branches – geometry, on magnitudes, and arithmetic, on numbers – he aims to prove that the laws of division apply in the same way in both areas: $3/2 = 3\text{meters}/2\text{meters}$ (the same does not apply for other operations like multiplication: $3*2 \neq 3\text{m} * 2\text{m} = 6\text{m}^2$). In doing so, Eudoxus builds a bridge between arithmetic (numbers) and geometry (magnitudes), paving the way to one unified mathematical science. Therefore, Aristotle's notion of analogy has a mathematical root, based on one fundamental characteristic of numbers and magnitudes: being measurable. Analogy relies on the concept of *ratio*; every ratio, even irreducible, involves relating a measured item to a measuring element.

But Aristotle extends the use of analogy to many fields: of course in rhetoric and poetics (the shield is for Ares what the cup is for Dionysos); but also – and foremost – in sciences. For example, in *physics*, analogy helps to understand what an instant is, by allowing

a 4-term comparison with elements of movement and geometry : an instant is to time what a moving body is to motion, and again what a point is to a line (identity of whole-part relationship). In *biology*, analogy ensures the unity of the living world by identifying the commonality among major life forms: while, for Aristotle, fish and terrestrial vertebrates do not belong to any common family, analogy makes it possible to connect them, explaining the fish's spine in analogy with the bone: the spine is to the fish what the bone is to the vertebrate (identity of the organ's function). In *economics*, analogy is the condition for the very constitution of the economic object, namely value: the relationship between the value of a shoe and that of a house mirrors the relationship between the shoemaker and the architect (identity of production relationship).

Analogy is fundamental: it establishes the unity of each science, since relative identity of function make it possible to transcend boundaries of categories: for Aristotle, a point and an instant have no intrinsic connection, nor do the fish and the vertebrate, or the house and the shoe; but a four-term relation makes it possible to transcend those differences. Analogy is a major instrument: while having this extension, it also accounts for simpler cases (when the relation reduces to a basic measure).

However there is a tension because of the mathematical root of analogy. If a ratio is based on *measurement*, then analogy *assumes that we can measure the things it connects*. This point is obvious in mathematics, but it becomes a problematic assumption elsewhere: how do we get across from the realm of measurement to that of expressing thought? What allows the concept of ratio to be extended from a *mathematical quotient* to a relation between *unquantified entities*, such as the definition of a fish or the characterization of an instant? This is more than just a shift: for Aristotle, measurement is specific to quantity, whereas the mentioned examples fall under other categories of being: substance, time, quality... It is not self-evident that all *relations (pros ti)* can be thought of as *ratios (logos pros ti)*.

After outlining the mathematical root of analogy and its various applications, my presentation will attempt to address this question.

Drawing from a selection of texts in which Aristotle characterizes analogy (*Poetics*, *Rhetoric*, *Physics*, *History of Animals*), I will examine the links between the concepts of measurement and knowledge, on the one hand, and between the *mathematical* sense of *logos* as ratio and the *ontological* sense of *logos* as definition, on the other. I will argue that analogy can only serve as a scientific instrument on the condition that we understand that, for Aristotle, to know is to *rationalize*, *i.e.* to express what is unknown in terms of what is known, and in doing so, to unify multiplicity. I will especially focus on physics, since my approach makes it possible.

Between Resemblance and Free Association: Is Any Analogy False?

Maira DE CINQUE

University of Canada West, Vancouver, Canada

mairadecinque@gmail.com

This presentation proposal explores whether the idea of a “false analogy” makes sense when examined through Wittgenstein’s notion of family resemblance and Freud’s theory of word association. While classical logic defines good analogies as those comparing similar features, this presentation questions whether such standards hold in contexts where meaning is shaped more by use and association than by fixed criteria.

Wittgenstein suggests that concepts are linked through overlapping similarities, not shared essences. Freud highlights how associations form through unconscious patterns rather than logical structure. These perspectives challenge the idea that analogies can be simply right or wrong. Can an analogy truly be “false,” or is that judgment shaped by convention and context?

This presentation aims to reflect on how we draw analogies, where we draw the line between meaningful and misleading comparisons, and whether that line is more a matter of usage than logic.

References:

Freud, S. *Introductory Lectures on Psycho-Analysis*. <https://ia802907.us.archive.org/6/items/b31359942/b31359942.pdf>

Wittgenstein, L. *Philosophical Investigations*. Translated by G.E.M. Anscombe. Oxford: Blackwell Publishing, 1953.

Baroque and Analogy

Katarzyna GAN-KRZYWOSZYŃSKA

Adam Mickiewicz University, Poznań, Poland

katarzyna.gan-krzywoszynska@amu.edu.pl

The aim of my talk is twofold: on the one hand I will present analogies between different concepts of the Baroque style, on the other hand I will analyze the fundamental role of analogy in Baroque, using some examples found in particular works of art.

Firstly, the Baroque can be considered as an historical style or as a cultural style (Eugenio D'Ors 1993 and Alejo Carpentier 1975). The latter is understood as a supratemporal analog system, put another way, an analog historical constant.

Secondly, I will analyze selected analogies within the so-called “old European Baroque” (particularly Spanish, Italian and Polish). Then, some similarities and distinctions between European and Latin American Baroque will be presented.

Thirdly, I will reflect on “épistémè baroque” following Jean-Claude Vuillemin (2013) and “Ethos barroco” according to Bolívar Echeverría (1993).

Finally, I will present how analogy plays an important role in the Baroque style at the theoretical level as well as on examples of some Baroque masterpieces particularly in the form of variations and nuances.

References:

Carpentier A., “Lo barroco y lo real maravilloso”, *La novela latinoamericana en víspera de un nuevo siglo*, Mexico City: Siglo XXI, pp. 111–32, 1975.

D'Ors E., *Lo Barroco*, Madrid: Editorial Tecnos, 1993.

Gan-Krzywoszyńska K., „Escepticismo en diálogo: el escepticismo como elemento del estilo barroco”, *Inquietar la duda. Ensayos escépticos sobre escepticismos* / Campos Benítez Juan Manuel, Domínguez Claudia Tame, Martínez Isaac Herrera (ed.), 2024, Morales Espinoza Alejandro Noel, pp. 137–150.

Kurnitzky H., Echeverría B., *Conversaciones sobre lo Barroco*, Mexico: Universidad Autónoma de México, 1993.

Sarduy S., *Barroco and Other Writings*, Stanford, Stanford University Press, 2025.

Vuillemin J.-C., *Épistémè baroque. Le mot et la chose*, Paris: Hermann, 2013.

Two Analogies of Time in the Film “The Endless” by Justin Benson and Aaron Moorhead

José David GARCÍA-CRUZ

Universidad del Valle de Puebla, Mexico

jdgarci2@uc.cl

Tempus autem, ex qualitate mentis, temporalis est
Saint Augustine (Confessions XI.14)

Ὁ ἀεὶ ἐστὶν ἀλλοίωσις τῆς φύσεως
Heraclitus (Fragment 33)

This brief talk seeks to guide the audience toward a reflection on time, its limits, and horror in cinema, from a philosophical point of view. The conceptual source for this reflection is the film *The Endless* by Justin Benson and Aaron Moorhead. The aim of this reflection is to consider two analogies of time present in the film we analyze. Rather than time itself, the focus is on our impression of time and, simultaneously, on the conception of time held by a group of characters. The central theme of the film is how to approach the experience of cyclical time, a situation the characters are forced to confront. This fictional scenario allows us to explore, by analogy, two situations that touch upon reality in an intriguing way. The audience is encouraged to watch the films *The Endless* (2017) and *Resolution* (2012) by Justin Benson and Aaron Moorhead, as much of what will be discussed in this talk presupposes at least one viewing of both.

References:

Saint Augustine. *Confessions* (H. Chadwick, Ed.). Oxford: Oxford University Press, 2006.

Heraclitus. *Heraclitus: The Cosmic Fragments* (P. Wheelwright, Ed.). Harper Collins, 2001.

Ings, S. «Timeless avant-garde.» *New Scientist*, Vol. 46 (2018), pp. 239–246.

Pitts, M. «The Endless by Justin Benson and Aaron Moorhead.» *Science Fiction Film and Television*, Vol. 13 (2020), No. 3, pp. 445–449.

History of Analogy in Polish Philosophy

Zofia HAŁĘZA

University of Łódź, Łódź, Poland

zofia.haleza@edu.uni.lodz.pl

The early 20th century in Poland was marked by a notable interest in analogy among scholars from various disciplines, including philosophers, natural scientists, and physicians. Analogical reasoning attracted attention due to its flexibility and its applicability across diverse domains of knowledge. This variety of applications demonstrates that, depending on its definition, analogy can serve as a valuable tool in fields as different as the natural sciences, philosophy, and theology.

My presentation begins with the figure of Władysław Biegański – a physician and philosopher who devoted significant attention to analogy as a tool of scientific cognition. His work was continued by Władysław Szumowski, a philosopher of medicine, who also viewed analogy as a valuable practical instrument. A contrasting approach was taken by the members of the Lvov-Warsaw School, who emphasized logical precision and were skeptical of analogical reasoning due to its lack of certainty. Nonetheless, Zygmunt Zawirski acknowledged the role of analogy in the construction of scientific models. A different, more formal and rigorous account of analogy can be found in the work of Janina Hosiasson-Lindenbaum, whose studies on induction included an interest in analogical reasoning. Meanwhile, members of the Kraków Circle employed analogy within the framework of analytical philosophy of religion.

This diversity of perspectives shows that, although analogy was not a central theme in Polish philosophy, it served as an important point of reference for many thinkers. The richness of these approaches offers valuable insights and may still inspire contemporary reflections on the function of analogy in philosophy and science.

Analogy as the Core of Consciousness (*What It Is Like e.g. Nagel 1974*)

CP HERTOUGH

noromyx02005@gmail.com

If one considers analogy central to cognition, Thomas Nagel's *What It Is Like to Be a Bat* is paradigmatic as it can be analyzed as a logical argument from analogy. Hofstadter 2006 *The Cognition-core hypothesis* states a similar inductive argument. With regard to optical illusions, examples of feedback loops in *GEB* (Hofstadter 1999/1979), we don't consider a cross-cultural hypothesis far-fetched as that optical illusions (such as Necker cube, Penrose figures, rabbit-duck, Kanizsa triangle, spinner dancer) are possibly related to Chán (禪) huàtóus (話頭), Zen kōans (公案) and ancient forms of Daoist yīnyáng (阴阳), ambiguous syntheses of opposites. E.g. in the Necker cube one either sees left and top front first (most common angle) or right and bottom front, as reminding modern kōans (as by Hakuin Ekaku) and traditional huàtóus (as from *The Gateless Gate*).

Nagel's Bat as well as Nagel's speculative proposal of an objective phenomenology tries to unite opposites as objective and subjective, and it can be considered a similar *feedback loop* based on analogy since it is the logical structure of the argument defining not only cognition but consciousness itself.

Distinction and Difference in Dialogue

Betül Fatma KARAL

Anadolu University, Eskişehir, Turkey

bfgkara@gmail.com

Katarzyna Gan-Krzywoszyńska & Piotr Leśniewski (2023) defined analogy as a “deliberate introduction of nuance” in their article “Analogy-Making as an Art. Prolegomena to the Culture of Smile”. In this sense, it can be said, one of the basis of analogy is nuance. Nuance is a widely used term in music, architecture, colour theory, linguistics, etc. In this article, nuance is used as an analogical term. Analogy here is used in a Dussel-ian way. In Enrique Dussel’s approach to polysemy, there are three main models: the univocal, the equivocal, and the analogical model (Leśniewski, Gan-Krzywoszyńska, 2016). In univocal approach, we can see difference as an opposition to identical. If there is only one truth, all the others must be wrong in this approach. As Gan-Krzywoszyńska (2022) stated about the univocal approach, “This is why all dialogue is impossible – for there are only radical dichotomies: for/against, identical/different, with us/against us.” Difference acts as a divider in a univocal approach between one and other. As an opposite to the univocal one, there’s also the equivocal approach, where dialogue is also impossible due to lack of a common ground. Dussel’s stance in this picture is neither of these approaches. He proposes analogy as a mean ground. In analogy, there are no differences, only distinctions. It is the only place where dialogue can happen and nuance matters. In this article I’m going to approach distinction on a dialogical ground. My goal is to see how it differs from difference in analogy.

References:

Leśniewski P., Gan-Krzywoszyńska K., “Analogies in the Meta-Methodology of the Humanities”, *Studia Metodologiczne*, Vol. 37 (2016), No.14, pp. 241–254.

Gan-Krzywoszyńska K., *Freedom and Abundance: Dialogical Philosophy of Style*, Poznań: Publishing House of The Poznań Society for the Advancement of Arts and Sciences, 2021.

Gan-Krzywoszyńska K., Leśniewski P., Campos Benítez J. M. (eds.), *Timeliness of Analogy*, Poznań: Kontekst Scientific Publisher, 2022.

Republic as an Analogical Concept

Przemysław KRZYWOSZYŃSKI

Adam Mickiewicz University, Poznań, Poland

drpk@amu.edu.pl

The aim of my talk is to present republic as an analogical concept, based on the theoretical and historical context of Modern Europe. Following Enrique Dussel, I assume that most of the concepts from social sciences and humanities are in fact analogical, i.e. we should not strive for one, “correct” or “true” definition but an analogical one as a nuanced and dynamic structure of similarities and distinctions (Krapiec, for analogical analysis see: Gan-Krzywoszyńska, Ting 2025: 13-18). Moreover, following Albert M. Krapiec and Dussel, I believe that clarity is obtained by analogy not by univocity.

In order to elucidate the modern analogical concept of republic I will present similarities and distinctions between three selected historical examples: Dutch Republic (The United Provinces of the Netherlands) (1579–1795), The Republic of Venice / Most Serene Republic of Venice (*La Serenissima*) (697-1797) and The Polish – Lithuanian Commonwealth, First Polish Republic (1569–1795). In analogical analysis quite distant – both chronologically and geographically – examples enable us to notice and consider more profoundly the advantages and disadvantages of each case of a republican government. In addition, we may gain a new perspective on its sources and evolution.

According to Douglas Hofstadter (...) concepts has a non-spherical shape with “two or three nuclei” (Hofstadter 2001: 499), in my talk I will argue that analogical concept of a modern republic

is based on law making process, mix system of government, and the risk of succumbing to oligarchy. Finally, I will also point out some analogies concerning its origins and decline.

References:

Boxe, C. R., *The Dutch Seaborne Empire, 1600–1800*. London: Penguin Books, 1990.

Contarini G., *The Republic of Venice*. F. Sabetti intr. and ed., G. Pezzini, A. Murphy transl., Toronto: University of Toronto Press, 2020.

Dussel, E., “Analogy and Communication”, *Philosophies* 4(2), 2019, 31., <https://doi.org/10.3390/philosophies4020031>

Frost, R., *The Oxford History of Poland-Lithuania*, Vol. I: *The Making of the Polish-Lithuanian Union, 1385–1569*, Oxford: Oxford University Press, 2018.

Gan-Krzywoszyńska, K., Pires-Ting C., *Towards the Culture of Charm: An Analogical Study*, Poznań: PTPN, 2025.

Haitsma Mulier E. O. G., *The Myth of Venice and Dutch Republican Thought in the Seventeenth Century*, Assen: Van Gorcum, 1980.

Hofstadter, Douglas R., “Analogy as the Core of Cognition”, in: Gentner D., Holyoak K. J., Kokinov B. N. (eds.), *The Analogical Mind: Perspectives from Cognitive Science*, Cambridge: MA, MIT Press, 2001, pp. 499–538, https://worrydream.com/refs/Hofstadter_2001_-_Analogy_as_the_Core_of_Cognition.pdf

Israel, J. I., *The Dutch Republic: Its Rise, Greatness, and Fall, 1477–1806*. Oxford: Clarendon Press 1995.

Krąpiec, M. A., “Analogia”, *Powszechna encyklopedia filozofii*, 2009, <http://ptta.pl/pef/pdf/a/analogia.pdf>

Krzywoszyński, P., “Escepticismo político y su impacto en las garantías de libertad en la Polonia de los siglos XVI y XVII”, in: Campos Benítez, J.-M., Tame, C. and Martínez I. H. (eds.) *Inquietar la duda. Ensayos escépticos sobre escepticismos*. México: Fides Ediciones, 2024, pp. 101–112.

Krzywoszyński, P., “The Polish Nobles’ Democracy: Between Ancient and Modern Democracy”, *Philosophia. Revista de Filosofía*, 81, (2021). No 1, pp. 29–49

Skinner Q., Gelder M. van (eds.), *Republicanism. A Shared European Heritage*, vol. 1–2, Cambridge: Cambridge University Press, 2002.

Hanging on by a Thread over Thin Ice: Hermeneutical Analogies in Cross-Cultural Philosophy

Juan MARQUEZ

University of Waterloo, Waterloo, Canada

J8marque@uwaterloo.ca

Analogies can be a useful tool for exploring areas of research in which we are not experienced navigators. This is especially evident in cross-cultural philosophy. In this subfield of philosophy, scholars often explore different philosophical traditions by establishing analogies between concepts or ideas from various traditions. However, common approaches in cross-cultural philosophy have used analogies in ways that end up distorting the very traditions which they attempt to understand.

The edited volume, *Buddhist Perspectives on Free Will* (Repetti 2016), exemplifies this approach. The contributors to the volume attempt to demonstrate that despite the inherent differences of its concepts and its cultural background, Buddhist thought can still prove useful for contemporary debates surrounding free will. However, this approach is not without its challenges. Karin Meyers has cautioned against the potential pitfalls of relying on analogical reasoning, arguing that such comparisons may obscure the unique contexts and metaphysical commitments of the philosophies being explored (Meyers 2018). Meyers contends that while analogies may facilitate dialogue between traditions, they can also lead to distortions that misrepresent the original concepts.

I will draw on arguments from debates surrounding scientific analogies to clarify the issues at stake in cross-cultural analogies. Specifically, I will use the arguments and technical terminology to develop a detailed account of two issues, one which Meyers refers to as an *overdrawn analogy* and the second, which I will refer to as a *reversed analogy*. With a clear understanding of these two issues, I will then address Meyers surprising insistence that despite the pitfalls, analogies are necessary for cross-cultural philosophy. As a result, as we attempt to interpret other philosophical traditions through the use of analogies, we must grapple with the challenge of striking a balance between fostering meaningful connections while also preserving the integrity of distinct traditions. Thus, a more complete understanding of the role of analogies in cross-cultural philosophy emerges as a vital task, prompting us to critically assess the ways we engage with the philosophical import of diverse cultures.

References:

Meyers, K. "False Friends: Dependent Origination and the Perils of Analogy in Cross-Cultural Philosophy." *Journal of Buddhist Ethics* 25 (2018): 785–818.

Repetti, R. ed. *Buddhist Perspectives on Free Will: Agentless Agency?* Routledge Studies in Asian Religion and Philosophy 18. New York: Routledge, 2016.

Only the Same is Truly Similar: On Identity, the Importance of Analogy and Fragility of Conceptual Webs

Alex MCQUIBBAN

The University of St Andrews, St Andrews, Scotland

agrm1@st-andrews.ac.uk

This paper proposes a new methodological and metaphysical reframing of analogical reasoning. It begins from (and defends) a stricter claim than is often assumed: there are no objective similarities between fundamentally distinct things. At the most basic level, all genuine similarity reduces to identity. That is: any ‘true’ similarity derives from the shared presence of identical fundamental entities/properties – not merely similar ones. Thus, only a set whose members are comprised, in part, of one and the same set of fundamental entities/propertie(s) which is (at least, roughly) correctly-identified (often by surrogate higher-level properties/entities) as producing an apparent similarity can be said to reflect a true similarity and constitute a unified concept. Water – if it is a unified concept – reflects a true similarity among all water molecules insofar their shared atomic structure from which this similarity is derived is a higher-level surrogate for a real identity in their fundamental constituents. Where this kind of identity obtains, true similarities exist and real inference from them and their unified concepts is possible. Where it does not, resemblance is at best a heuristic – a pragmatic scaffold awaiting correction.

The problem is that we rarely have direct access – if any access at all – to fundamental identities. In empirical contexts, inductive generalisations and experimental control infer shared structure at a useful albeit non-fundamental level. Philosophical methodology often mimics or aspires to the same. But in all cases, our reasoning proceeds via inevitably imperfect analogy. As analogies cannot be expected to track true similarity, grounded in these fundamental identities, perfectly, they are only approximately successful/unsuccessful, and so can only impart this level of assertive/empirical force. However, analogies are, in practice, assessed depending on how well they map onto a fluid conceptual web which is more-or-less reflective of this ideal metaphysical barometer depending on the pre-existing albeit equally fluid structure surrounding the conceptual space, i.e. the exact part of the web, into which any proposed analogy under assessment would presumably insert itself. Though fluid, this conceptual web often admits of different anchors restricting which analogies are accepted, giving it an extra dimension. Some anchors aim to track concrete physical phenomena (e.g. through empirical science); others stabilise the conceptual system for different purposes (e.g. normatively). The challenge is to distinguish between these anchors, assessing analogies not just by *whether* they ‘fit’ at all but according to *where* they would ‘fit’. Still, through sheer repetition and gradual conceptual drift, analogies initially judged poorly can garner acceptance, dragging the conceptual web to the point of reshaping underlying anchors. Crucially, however, as our anchors are not faultless, it may be salutary or even necessary to popularise analogies initially judged to be poor to shift parts of the web and recover (or, indeed, discover) better moorings.

Since most meaningful assertions aim at something other than strict identity claims, but since the truth of these assertions depend on virtually epistemically inaccessible base-level identities, analogical reasoning becomes the very bedrock of rational thought, predication and discussion albeit a very unstable one. This gives analogy an outsized methodological importance, but also makes it a point of great epistemic vulnerability, opening the floodgates to distortion through the repetition of bad analogies and

conceptual (dis)engineering. Thus, this exploratory paper aims to detail and motivate this novel framework as well as highlight the philosophical insight that analogical reasoning is both indispensable and epistemically hazardous, given its role as a proxy for the inaccessible identities which ground conceptual unity and similarity. Accordingly, this paper also presses the importance of correctly-identifying and assessing the conceptual anchors of our conceptual web(s), and diagnosing analogies according to how they shift them.

Peculiarities of the Nomination of God as a Non-univocal Agent according to Aquinas

Jorge MEDINA

UPAEP, Puebla, México

jorge.medina@upaep.mx

Thomas Aquinas establishes an inverse proportion between predication and agency: while in the former the equivocal is reduced to the univocal (*aequivoca ad univoca reduci*), in the latter the non-univocal [whether equivocal or analogical] precedes the univocal (*agens non univocum ex necessitate praecedit agens univocum*)¹.

A univocal agent is one that produces an effect of the same species (a dog begets another dog); an equivocal agent is one that produces a dissimilar effect (as a watchmaker produces a watch). But God cannot be an agent of either of these two kinds (*agens universale licet non sit univocum, non tamen est omnino aequivocum*), for otherwise the universe would either be God or would lack being altogether – neither of which is viable. Hence, God's agency must be of a third kind: analogical². How can we name this kind of agency?

For Aquinas, the names given to God³ are of three kinds: a) negative (they deny or remove a quality, e.g., “immaterial,” “immortal,” etc.); b) relative (they relate other beings to Him, e.g.,

¹ *Sum. Theol.*, I, q. 13, a. 5, ad 1.

² *Super Sent.*, lib. 1, d. 8, q. 1, a. 2, co.

³ *Sum. Theol.*, I, q. 13, a. 2, co.

“creator,” “provident,” etc.); c) affirmative and absolute (such as “good,” “living,” “wise,” etc.). Names of types ‘a’ and ‘b’ do not signify substantially (*substantiam eius nullo modo significant*). Regarding names of type ‘c’, some argued that: c₁) they are essentially negative, for when we say “God is living,” we are affirming “God is not inanimate”; others held that: c₂) they are essentially relational, for when we say “God is good,” we are affirming that “He is the cause of the goodness found in things.” But Thomas, besides arguing why c₁ and c₂ are incorrect, offers a third way to understand divine affirmative and absolute names: c₃) as analogical; in his view, in this case analogy *does* signify substantially, albeit imperfectly (*significant substantiam et praedicantur de Deo substantialiter, sed deficiunt a repraesentatione ipsius*). Therefore, the meaning of the phrase “God is good” is neither “God is not evil” nor “God is the cause of goodness,” but rather “What we call good in creatures preexists (*praeeexistit*) in God, and in a sublime mode (*modum altiore*).” In this sense, Saint Thomas concludes, it is not that God is good because He is not evil or because He causes goodness in other beings, but rather the opposite: because God is good, He *diffuses* (*diffundit*) goodness into things.

Preexistence⁴, eminence⁵, and diffusivity⁶ are, as we know, three categories that Saint Thomas adopts from Dionysius the Areopagite and which greatly assist him in formulating his theory of analogical naming of God’s affirmative attributes. In order to develop this proposal, Thomas must maintain a delicate balance between two truths: on the one hand, that the effects (creatures) are dissimilar in species (*dissimiles in specie*)⁷ from their Cause, such that there is a maximal inequality between them and God⁸; but on the other hand, that every agent produces

⁴ *In De divinis nominibus*, cap. 1, lect. 3.

⁵ *Sum. Theol.*, I, q. 6, a. 2, co.; *De veritate*, q. 11 a. 3 co.; *Super Eph.*, cap. 1, lect. 2.

⁶ *De potentia*, q. 7, a. 5, ad 7.

⁷ *Super Sent.*, lib. 4, d. 1, q. 1, a. 4, qc. 4, co.; *Sum. Theol.*, I, q. 45, a. 7, co.; *Super De Trinitate*, pars 3, q. 6, a. 3, co.

⁸ *Sum. Theol.*, I-II, q. 114, a. 1.

some likeness in its effect⁹, and thus the effect is in some way in the agent¹⁰. This paradox is captured in Dionysius' expression of "dissimilar similarities" or "unlike likenesses" (ἀνομοίους ὁμοιότητας, *dissimiles similitudines*)¹¹, which Saint Thomas himself adopts in various passages¹² to explain the analogical naming of certain divine attributes.

The aim of this presentation is to clarify – using certain logical formalizations – the peculiarities and paradoxes of the analogical nomination of affirmative and absolute attributes given to God, closely following the proposal of Thomas Fay¹³ and Walter Redmond¹⁴ but adding a few remarks.

References:

Aquinas, Thomas. *Opera omnia*, <https://www.corpusthomisticum.org/>
Cayetano, *Tratado sobre la analogía de los nombres*, Oviedo: Fundación Gustavo Bueno, 2005.

D'Ettore, Domenic. *Analogy After Aquinas*, Washington, D.C.: Catholic University of America Press, 2019.

Dionysius, *De coelesti hierarchia, de ecclesiastica hierarchia, de mystica theologia, epistulae*, Berlin: De Gruyter, 1991.

Fay, Thomas «Analogy and the Problem of the Divine Names in the Metaphysics of Thomas Aquinas», *Angelicum*, Vol. 52 (1975), No. 1, pp. 69–90.

⁹ *Super Sent.*, lib. 4, d. 1, q. 1, a. 4, co.

¹⁰ *Super Sent.*, lib. 4, d. 1, q. 1, a. 4, qc. 4, co.; *In De divinis nominibus*, cap. 1, lect. 3; *In Rom.*, c. 1, lect. 6.

¹¹ *De coelesti hierarchia*, cap. II, secc. 4: “Ἔστιν οὖν ἐκ πάντων αὐτῶν ἐπινοῆσαι καλὰς θεωρίας καὶ τοῖς νοητοῖς τε καὶ νοεροῖς ἐκ τῶν ὑλαίων ἀναπλάσαι τὰς λεγομένας ἀνομοίους ὁμοιότητας, ἐτέρῳ τρόπῳ τῶν νοερῶν ἔχοντων ἃ τοῖς αἰσθητοῖς ἑτεροῖως ἀπονενέμῃται.”

¹² “dissimilis similitudo”: *Super Sent.*, lib. 2, d. 16, q. 1, a. 2, ad 5; *Super Sent.*, lib. 3, d. 2, q. 1, a. 1, qc. 1, ad 3; *Super De Trinitate*, pars 3, q. 6, a. 3, co. / “similitudo dissimilium”: *Super Psalmo* 34, n. 7.

¹³ Fay, Thomas A. «Analogy and the Problem of the Divine Names in the Metaphysics of Thomas Aquinas», *Angelicum* 52, no. 1 (1975), pp. 69–90.

¹⁴ Redmond, Walter. «*Analogia entis: Stein–Dionysius–Thomas*», *Steiniana*, Vol. 8 (2024), pp. 102–129.

Mariev, Sergei «Hypatios of Ephesos and Ps.-Dionysios Areopagites», *Byzantinische Zeitschrift*, vol. 107, (2014), No. 1, 2014, pp. 113–138.

McInerny, Ralph. *Aquinas and Analogy*, Washington, D.C.: Catholic University of America Press, 1996.

Muñoz Medina, Ceferino, «El debate sobre la analogía en Cayetano. Una revisión panorámica de las posiciones fundamentales de los últimos años», *Disputatio. Philosophical Research Bulletin*, Vol. 12 (2023), pp. 33–52.

Redmond, Walter «Analogia entis: Stein–Dionisius–Thomas», *Steiniana*, Vol. 8 (2024), pp. 102–129.

Rego, Thomas «Identity and Unity: the Analogy of ‘ens’ in *De principiis naturae* 6 and its sources», *Revista Chilena de Estudios Medievales*, Vol. 25 (2024), gpp. 95–122.

Strumia, Alberto «*Analogy*», <https://inters.org/analogy/DOI:10.17421/2037-2329-2010-AS-1>

Similarities and Differences between “logica docens” and “logica utens” according to Juan Manuel Campos Benítez

Ricardo Arturo NICOLÁS FRANCISCO

Nicolaus Copernicus University, Toruń, Poland
National Autonomous University in Mexico, Mexico City, Mexico

ricardonicfran@doktorant.umk.pl

According to Campos Benítez (2022), *logica docens* and *logica utens* refer to two modes of the presentation of logic. *Logica docens* refers to the science of logic, a subject of matter, whereas *logica utens* refers to the art, logic used as a tool for investigation. Both modes of presentation have existed since the beginnings of logic but with different emphases along the history of logic. These differences in emphases may suggest that both are exclusive, when in fact both are compatible.

Logica docens has been related to formal logic and mathematical logic. *Logica utens*, in its turn, has been related to critical thinking, argumentation theory, and informal logic. One can establish different comparisons between the similarities and differences between both presentations, as well as some ways to approach them.

In this paper, I want to establish analogies between *logica utens* and *logica docens* according to Juan Manuel Campos Benítez. Moreover, I want to address the problem of the multiplicity or unity of logic within the study of *logica docens*. Roughly speaking, the problem is whether there is just one logic or several logics. Assuming that there are several logics implies considering whether logic has

different senses, which calls for an analogical treatment according to Juan Manuel Campos.

References:

Campos Benítez, J. M., *Hemanas y enemigas: Ensayos sobre los conflictos entre dos aspectos de la lógica ayer y hoy*, Mexico City: Ediciones del Lirio, 2022.

Diagrammatic Thought and the Aesthetics of Renewal: Translating Wényánwén across Worlds

Fernando SANTORO
Caroline PIRES TING

Federal University of Rio de Janeiro (UFRJ) / Faperj Nota 10

This paper explores 文言文 (*wényánwén*), the classical Chinese written language, as a paradigmatic case of untranslatability – one that calls for analogy as both a method and a mode of thought. Far from being merely a literary register, *wényánwén* embodies a cosmology structured by simultaneity, condensation, and visual rhythm – qualities that resist the linear and phonetic logic of alphabetic languages. Its syntax functions less as a sequential order and more as a spatial topology, where meaning arises through ideographic resonance and visual structure.

Focusing on the Confucian aphorism inscribed on the ritual basin of King Tang (from the Shang dynasty) — 「苟日新，日日新，又日新」 (“If you can renew yourself for one day, do so every day, and again every day – we analyze how this fragment is not merely translated, but re-enacted through acts of analogical creation. Through comparative readings of Heraclitus, Ezra Pound, and Augusto de Campos, we argue that translation in this context is not a matter of equivalence, but of analogy: a dynamic tension between incommensurable systems – diagram and line, image and speech, East and West.

This inquiry also arises from our contribution to the *Dictionary of Untranslatables*, a transdisciplinary project that underscores the philosophical and cultural stakes of terms that re-

sist straightforward translation. In line with the Congress's commitment to analogy as a bridge between disciplines and worldviews, this paper proposes that *wényánwén* compels us to rethink translation itself – not as linguistic conversion, but as a transformative analogical practice that opens new paths for intercultural understanding.

Vinyl Realism: Analogy, Authenticity, and Metaphysical Commitment in the Evolution of DJ Technology

Vida Mia S. VALVERDE

Ateneo de Davao University, Philippines

vmsvalverde@addu.edu.ph

This paper explores the analogical relationship between vinyl turntables and digital DJ controllers through a realist framework grounded in Mary Hesse's model-theoretic analysis of analogy and the metaphysical realism of Michael Devitt. The central argument is that the evolution of DJ technology offers a compelling case for examining not just analogical reasoning but the deeper metaphysical stakes of realism, parallel to those in scientific theory change.

Using Hesse's distinctions between positive, negative, and neutral analogies (Hesse, 1966), the paper identifies structural and functional continuities (e.g., manipulation of pitch and tempo, tactile control) as positive analogies, while the transition from mechanical to digital interfaces reflects negative analogies. Most philosophically charged are the neutral analogies: questions about whether digital tools capture the full *performative ontology* – the embodied, skill-laden, and materially engaged nature – of analog DJing.

Crucially, the paper draws on Michael Devitt's defense of scientific realism not in its epistemic or semantic aspects, but in its metaphysical core: the belief in a mind-independent reality that scientific (or by analogy, artistic/technological) practices aim to

describe or engage with. Devitt argues that realism is fundamentally a metaphysical thesis about the existence of entities and structures independent of our theories or perceptions (Devitt, 1991), and that epistemology and semantics must follow this ontological commitment (Devitt, 1981). Applied analogically, the claim is that vinyl DJing engages a real, materially grounded domain of musical performance, one that is constitutively linked to physical media, causality, and embodiment.

By contrast, digital controllers may offer functionally equivalent outcomes, but without the same ontological anchoring. Their use represents a shift from realism to instrumentalism – where models simulate effects without committing to the reality of what is being represented. Just as Devitt challenges scientific instrumentalism for reducing theories to prediction tools, the paper argues against reducing artistic practices to digitally mediated simulations that lack referential contact with their original material base.

Ultimately, this analysis positions analogy as a method for tracking metaphysical continuity and rupture across technological change. The case of DJ performance thus becomes a site for testing the boundaries of realism – not only in scientific inquiry, but in cultural and aesthetic practices. The paper concludes that Devitt's metaphysical realism offers critical tools for understanding how and when technological models preserve, distort, or sever our connection to real-world practices and entities, and that such questions are vital in an era increasingly dominated by simulation.

The Semiotic Nature of Analogy

Miroslava TRAJKOVSKI

University of Belgrade, Serbia

mandjelnk@f.bg.ac.rs

Inference by analogy means inference based on similarity. In this sense, analogy is similar to abduction because abduction is based on similarity. The bearer of similarity in abduction is the icon. Namely, the middle term of abduction is, by its semiotic nature, an icon. For example, the conclusion that X is pregnant, if X is pale, is based on the similarity of symptoms, not on the conclusiveness of paleness as a symptom – it is only a possible, not a sure, symptom of pregnancy. A symptom that would enable a deductive conclusion would be that X, for example, has milk. Therefore, the conclusion that X is pregnant because she is pale is based on abduction. However, Peirce distinguishes abduction from analogy: analogy is a combination of induction and abduction (Cf. C.S. Peirce, *Collected papers*, 2. 513, 2.733).

In induction, a series of subjects (say, a_1 , a_2 , and a_3) that have a common property (say, P) is replaced by one subject, e.g. denoted by A, which includes a_1 , a_2 , a_3 , but also an indefinite number of other a_i . The conclusion by induction reads: A is P.

Abduction, in contrast to induction, “discovers” to which possible class some object A belongs. Let's assume that a certain object A has some properties (say P_1 , P_2 , and P_3), but this is not enough to classify it with certainty. Therefore, based on the similarity with objects from a class B, which have these same properties but also a number of other P_i properties, we assume that A has all the properties that determine B. The conclusion of abduction is the hypothesis: A is B.

We see that induction and abduction are similar: both are based on generalizations. In the former by objects, in the latter by properties.

Analogy is a combination of these two because in it we have both: generalization by objects and generalization by properties.

In the present paper relying on the argumentation given in Trajkovski “Semiotic implication as an enthymematic implication: semiotic, material and logical validity” and “Normativity, Validity and Semiotic Implication” (2024), I will explore semiotic nature of analogy. I will specifically deal with the question of whether the fact that the analogy is a combination of induction and abduction indirectly confirms the thesis that the middle term of induction is an index.

Wired-non-Wired Analogies

Maurício VIEIRA KRITZ

University of Manchester, Manchester, United Kingdom

mauricio.kritz@manchester.ac.uk

Graduate Program on Modelling Knowledge Diffusion, Brazil

kritz@lncc.br

One of the simplest and most direct explanations for analogy comes from Rosen (1991) and ground on his modelling relation. It states that two phenomena (Ph_1, Ph_2) form an analogy if they share a common model allowing to interpret one into the other. That is, if there are encodings and decodings $(M \simeq Ph_i, i = 1, 2)$ from a formal system M into each phenomena allowing to create a bridge between both. Since modelling is a rather fundamental step in the scientific process (MVK, 2020, 2023), this characterisation is encompassing within scientific activities. Furthermore, if we consider the collection of all phenomena, $F = \{Ph\}$, being scientifically investigated that have M as a model and name this class after M , for instance $F = \mathcal{M}$, will abide to one of the definitions of analogy (Beziau, this congress) and there will be one analogy for each pair $[Ph, Ph'] \in F \times F$. In this case, and rather generically, M will be a second level, immaterial, phenomenon that is instantiated by a $Ph \in F$ in a given context. The harmonic oscillator and travelling perturbations are rather universal examples of this. For reasons that will be soon clear, let us call Ph wired analogies and M a non-wired analogy.

Turning now to our brains and minds as apparatuses that allow us to think and reason, and seeing them as proposed in [MVK, 2020, 2022a, 2022, 2025], we have two synexions, one stemming

from human neurones network, the other picturing the stabilised intra-skull EC-pulses or currents. Both are coupled by a constraint requiring the EC-pulses to travel over the (unidirectional) neurones' network, none of them strictly matching their anatomical or physiological counterparts. Pulses originating from one neurone are never directed to a single neurone but provoke a pulse cascade reaching several other neurones. That is, signal transmission in brains and minds is always $[1 \rightarrow n]$. Against this backdrop, even signals σ incoming primarily from a single sensorial organ and stimulus result in a rather sophisticate synexion that is called the signal's signature by neuroscientists, and here denoted by $Sg(\sigma)$. Signals σ' incoming through the same sensor-organ and resulting in the same signature [$Sg(\sigma') = Sg(\sigma)$] are not easily distinguished and are considered the same imprint [MVK, 2017, 2025]. Paraphrasing the definitions above, $Sg(\sigma)$ is a wired analogy, while thoughts (not reason) based on this imprint (perception) are non-wired analogies.

In this talk, I shall deepen the description of these ideas, also considering synaptic plasticity, and discuss consequences of theirs that may affect the ways we reason and think. In particular, how adaptable or plastic wired and non-wired analogies are.

References:

This talk presents one facet of a multi-faceted model aiming to depict how our brains interact with the scientific milieu. Thus, the references in any work of mine below should be added as references.

Vieira Kritz M., «From Systems to Organizations». *Systems*, 5(1):23 (2017).

Vieira Kritz M., De la modélisation à la créativité mathématique. In J.-Y. Béziau and D. Schulthess (eds.), *L'Imagination. Actes du 37e Congrès de l'ASPLF (Rio de Janeiro, 26-31 mars 2018)*, volume 1 of *Academia Brasileira de Filosofia*, pages 267–289, Londres: ASPLF/College Publications, 2020.

Vieira Kritz M., «Scientific milieu, multi-disciplinary science, and creativity», *Journal of Systemics, Cybernetics and Informatics*, 20(5):1–16, 2022a.

Vieira Kritz M., «Mathematics, perception, and creativity – a biology aware account», Talk presented at UNIOLOG 2022, *Orthodox Academy of Sciences, Crete, Greece, April 1-11, 2022*.

URL: https://www.researchgate.net/publication/360321422_Mathematics_Perception_and_Creativity_-_a_Biology_Aware_Account

Vieira Kritz M., «Letters to the moon», (2025, to appear).

Rosen R. *Life Itself: A Comprehensive Inquiry into the Nature, Origin, and Fabrication of Life, Complexity in Ecological Systems Series*, New York, NY: Columbia University Press, 1991.

Biophilia as an Analogical Concept: Philosophy, Biology and Art

Aleksandra WALAS

Adam Mickiewicz University, Poznań, Poland

aleksandra.wallace@gmail.com

The aim of my talk is to present *biophilia* as an analogical concept. The term derives from the Greek words *bios* (life) and *philia* (love), and literally means “love of life”. Inspired by Umberto Galimberti (2009), who proposed rethinking *philosophy* not as “love of wisdom” but as “wisdom of love”, I consider what a similar inversion might bring to the understanding of the concept of biophilia.

The starting point of my reflection is analogical analysis in the spirit of Enrique Dussel, which aims to highlight the dynamic structure of meaning rather than capture a single and universal definition (Dussel 2019). In analogical approach, the meaning of a concept emerges not through dichotomous oppositions, but through similarities and distinctions. This allows us to avoid both reductive simplifications.

Following this approach, I will conduct analogical analysis of the concept of *biophilia* in opposition to several selected concepts. The first is *necrophilia*, according to Erich Fromm (1964) as a love and an attachment to what is non-living and therefore controllable and predictable and following Paulo Freire (1996) as a social attitude that suppresses spontaneity and authenticity in favour of obedience and authoritarian model of education. The second is *biophobia*, defined as an aversive stance towards nature, rooted in the fear. The third concept is *biolatry*, understood as the

idealisation and worship of nature which, on the one hand, may exclude the human being, and, on the other, may appear affirmative while ultimately leading to the objectification of nature.

In contrast to these approaches, *biophilia* emerges as a dialogical attitude, based on presence, reciprocity and a creative openness to life in its unpredictability and complexity. Hence, *biophilia* becomes a mode of engaging with the world that transcends both idyllic naivety and apocalyptic pessimism. Illustrative examples from biology, particularly notions of interdependence and symbiosis, as well as art, support this multidimensional perspective.

References:

Dussel, E. Analogy and Communication. *Philosophies*. 2019; 4(2):31. <https://doi.org/10.3390/philosophies4020031>

Freire, P. *Pedagogy of the Oppressed*, transl. by Myra Bergman Ramos, London: New York, Penguin Books, 1996.

Fromm, E. *The Heart of Man: Its Genius for Good and Evil*, New York: Harper & Row, 1964.

Galimberti, U. *Per una filosofia attentat all'altro*. <https://antemp.com/2009/03/18/umberto-galimberti-per-una-filosofia-attenta-allaltro/> accessed 6.07.2025.

7. Notes

Notes

Notes

Notes





Katarzyna Gan-Krzywoszyńska Ph.D., Assistant Professor at Faculty of Philosophy, Adam Mickiewicz University in Poznań (Poland). Co-founder of World Congresses on Analogy and co-editor of all the congresses publications. Author (and co-author) of three books and many papers on methodology of humanities, philosophy of dialogue and history of logic. Coordinator of Dialogical Collection and Secretary of the Board of Directors of the Logica Universalis Association (LUA).

Przemysław Krzywoszyński is an University Professor at the Department of Government Systems Studies and Political and Legal Thought at the Faculty of Law and Administration, Adam Mickiewicz University in Poznań, Poland. He is the author of over 90 publications on the theory of democracy (the analogical model of the referendum), European constitutionalism, the history of political ideas, theory and history of French and Italian 18th– and 19th centuries opera and on mutual influences between opera and law, literature and film in Polish, English and Spanish.



Aleksandra Walas, biologist, landscape architect, and philosophy student. Her interests include environmental humanities and the philosophy of dialogue. Co-founder (and vice-president) of the Fundacja Ziemia i Kosmos (Earth and Cosmos Foundation), which promotes science communication and creative education. She takes part in interdisciplinary projects combining science and art.

ISBN 978-83-68332-10-0



9 788368 332100 >

Kontekst
Publishing House

SCIENTIFIC PUBLISHER

www.wkn.com.pl

ISBN 978-83-68332-10-0



Faculty of Law
and Administration



ORTHODOX
ACADEMY OF
CRETE

www.analogycongress.com