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Welcome Message

Dear colleagues,

We are very excited to host the first Young Scholars Conference of the European Society for the History of Science and look forward to this meeting of postgraduate researchers from across Europe and beyond together in Paris. Since it is the first conference of its kind, we had to face some challenges but mostly great experiences – the best of them surely was the huge resonance we got from so many researchers. We received many abstracts on various topics from all over the world. The program represents this wide variety, and we hope that it will allow you to discover new interesting topics within the vast field of the history of sciences. This event would not be possible without the help and support of many others. We are especially grateful for the financial support given by the European Society for the History of Science and the CNRS which allowed us to keep the registration costs affordable and enabled us to offer travel grants. We would also like to thank the Paris Observatory and SYRTE for their financial support as well as the opportunity to host the conference within the Observatory. We are most grateful to the keynote speakers Karine Chemla, Rivkah Feldhay, Samuel Gessner and Erwin Neuenschwander for sharing with us their latest research projects and thus broadening our horizons.

Last but not least, we would like to thank Ana Simões, the president of the ESHS, and Mathieu Husson as well as the members from the board of the ESHS for their support throughout the organizational process. It was their initiative which laid the cornerstone for this first Young Scholars Conference and brought us together to establish it.

This conference is meant for us young scholars to meet, connect and exchange ideas to support the postgraduate community of the History of Sciences. We wish you all an exciting event!

The Organizing Committee
Idit Chikurel
Laure Miolo
Hugo Soares
Alexander Stoeger
Social Media Guidelines

The European Society of the History of Sciences Young Scholars Network welcomes and supports people of all backgrounds and identities. This includes – but is not limited to – members of any ethnicity, nation, culture, social background, immigration status, sex, sexual orientation, gender identity, age, size, family status, religious and political belief, as well as mental and physical ability. We strive to provide a welcoming and inspiring environment for all.

To provide a safe and productive conference for all participants, we expect everybody to act appropriately, which includes conference-related social events and social media comments.

The organizing committee will use social media to accompany the conference to inform people who are not able to attend the conference or parallel sessions. We encourage participants to do likewise to engage with the talks.

To ensure that the conference social media use is an affirmative and positive experience for all participants and non-participants we request social media users to follow our guidelines:

- First and foremost: Think before you tweet, be respectful and polite and keep in mind that a tweet is not suited for expanding criticism. Keep in mind the Golden Rule: Tweet unto others as you would have them tweet unto you.
- Be generous with compliments and feel free to connect with your colleagues’ work by sharing interesting links to other projects and sources.
- Questions, comments and constructive feedback should be made on social media with professionalism and scholarly values of intellectual collegiality and accuracy. Always avoid misrepresentation and appropriation. Your questions and comments should always be related to the content of the presentation, not to the person presenting.
- Please respect the presenter’s wishes. Do not tweet, if they ask their paper not to be posted about, for example, because of unpublished results. Please also respect if a presenter does not want to have taken pictures from their slides or themselves.
- If you do not want to have taken pictures, put the red card that comes with your welcome pack in front of your name tag to signal it. Also state clearly at the beginning of your presentation if you want people to refrain from tweeting about your presentation to avoid misunderstandings.
- If you have a Twitter handle or want to use a hashtag for your presentation, put it on your first slide. If you want to tweet on other presentations, always refer to the name and – if possible – the hashtag to make them easily findable. Also use the Hashtag of the conference #eshsys2019.

These guidelines serve to extend the communication at our conference and beneath in a constructive and openly inspiring way. If you notice inappropriate social media use, please do not engage at all with such tweets and inform a member of the ESHS Young Scholars Conference organizing team.
Practical Information

How to get to the Observatory

Address
77 Avenue Denfert Rochereau,
75014 Paris, France

[Please note: The former Entrance you can still find on Google Maps (61 Avenue de l’Observatoire) is closed.]

Access by bus:

Lines 38, 83 or 91: stop at Observatoire-Port Royal
Lines 38, 68 or 88: stop at Denfert-Rochereau

With the Underground:

Metro lines 4 and 6: stop at Denfert-Rochereau station

With the Overground (RER):

RER B: stop at Denfert-Rochereau or Port-Royal stations
From the Orly airport: take the Orly bus until Denfert-Rochereau station or take the Orlyval until Antony, then take the RER B to Denfert-Rochereau station.

From Roissy Airport: take the RER B until Denfert-Rochereau Station.

From Gare du Nord: RER B in the direction of Robinson or Saint-Rémi-lès-Chevreuse: stops at Port-Royal or Denfert-Rochereau stations.

**Restaurants & Fast Food Facilities**

**Around Place Denfert Rochereau**

**Indiana Café**  
Around 10€ to 30€  
1 Bis Avenue du Général Leclerc, 75014 Paris

**Ayko Sushi**  
Japanese restaurant.  
Lunch meal: around 15€  
11 Place Denfert-Rochereau, 75014 Paris

**Le Lakanal**  
For lunch, dinner, coffee or drink.  
Around 15/20€ for a lunch meal  
2 Avenue René Coty, 75014 Paris

**Mc Donald's**  
5 Avenue du Général Leclerc, 75014 Paris

**Swann et Vincent**  
Italian meals: 20€  
22 Place Denfert-Rochereau, 75014 Paris

**Maison Péret**  
Wine bar and restaurant. 25€.  
6 Rue Daguerre, 75014 Paris

**Café du Rendez-vous**  
Around 15/20€ for a Lunch meal  
2 avenue du General Leclerc, 75014 Paris, France

**Monoprix**  
Supermarket where you can buy salads, sandwiches etc...  
52-54 Avenue du Général Leclerc, 75014 Paris
Les Grands voisins
In the former hospital Saint-Vincent-de-Paul. A nice place for having a drink or a snack.
74 avenue Denfert-Rochereau, 75014 Paris

***

Around Port Royal and Montparnasse

La Bête noire
Mediterranean cuisine: 10 to 20€ for a meal.
58 Rue Henri Barbusse 75005 Paris France

Istanbul Grill Kebab
For a classic kebab!
94 Boulevard de Port-Royal, 75005 Paris

Boulangerie Alves Heleno
Snacks, salads, sandwiches, baguettes and cakes to take away.
94 Boulevard de Port-Royal, 75005 Paris

Figue et olive
Mediterranean cuisine: 15 to 20€.
4 Rue Pierre Nicole, 75005 Paris

Zhang’s Gourmet
Chinese restaurant: around 15€.
42 Rue Pierre Nicole, 75005 Paris

Le Bar Bullier
French brasserie: 15 to 30€.
22 Avenue de l’Observatoire, 75014 Paris

Il Forno de Napoli
Italian restaurant: 15 to 30€.
62 Boulevard du Montparnasse, 75014 Paris

Boulangerie Montparnasse
Snacks, salads, sandwiches, baguettes and cakes to take away.
152 Boulevard du Montparnasse, 75014 Paris

Chao Sapa
Vietnamese restaurant.
Around 15/20€
50 Boulevard du Montparnasse, 75014 Paris

Mian Fan
Oriental cuisine. Around 20/30€
20 Rue de Mogador, 75009 Paris, France

**La Mie cale**
Sandwiches, salads to eat there or to take away. Lunch meal for less than 10€
132 Boulevard du *Montparnasse*, 75014 *Paris*.

**La créole**
Specialities from the Antilles. 10€ to 40€.
122 Boulevard du Montparnasse, 75014 Paris

**My Noodles**
Chinese restaurant. 10€ to 20€.
129 Boulevard du Montparnasse, 75006 Paris

**Exki**
Salads, sandwiches, meals with seasonal and organic products.
82 Boulevard du Montparnasse, 75014 Paris

***

**For a drink in the area of the Observatoire**

**Le Lakanal**
2 Avenue René Coty, 75014 Paris

**Maison Péret**
6 Rue Daguerre, 75014 Paris

**Café du Rendez-vous**
2 avenue du General Leclerc, 75014 Paris, France

**Les Grands voisins**
74 Avenue Denfert-Rochereau, 75014 Paris

**Le Bar Bullier**
22 Avenue de l'Observatoire, 75014 Paris
# List of Symposia and contributed Papers

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Abstracts of the Plenary Lectures

Mathematical cultures in flux and the reshaping of language games. Views from China.

Karine Chemla
SPHERE, CNRS & University Paris Diderot, France

In this talk, I argue that scientific work was never carried out in any “natural language,” but rather that actors have always shaped languages, and more generally cultures, in relation to the issues they addressed and the kind of answers they hoped to achieve. To illustrate these claims, I will focus on two cases of changes that actors from ancient China brought to the mathematical culture in the context of which they were practicing mathematics. My intention is to highlight how in these settings, actors inherited language practices and reshaped them in relation to the work they were carrying out. I will thereby insist on the artificial dimension of the languages with which these actors practiced mathematics. Artificiality lay, in one of these cases, in the syntax of the language used for a certain purpose, and, in the other, in textual practices that actors designed to be able to work towards their goals.
Humanities through the Lens of Migration: The Case of Historian Richard Koebner (1885-1958)

Rivkah Feldhay
Minerva Humanities Center, Tel Aviv University, Israel

This paper grew out of years of reflection on the mobility of knowledge and the nature of migration. My main insight on the mobile nature of knowledge concerns the transformations it undergoes along the trajectory of motion, especially where knowledge touches upon the identity and authority of its carriers. This crossroad seems all the more relevant in dealing with the migration of humanistic knowledge that is always relational to other disciplines - hence reflective - and carries an educational mission, namely always political and critical. My ideas about the transformations undergone in the body of knowledge and the identity of its carriers will be exemplified through the case of historian Richard Koebner (1885-1958). I shall present the epistemic and normative dilemmas at the center of his reflections on the nature of historical writing and their crystallization into a unique critical voice after his migration from the University of Breslau in Germany to the Hebrew University in Eretz Israel/Palestine in 1934.
Early modern mathematics as transcultural knowledge: a reflection on the historian’s tools

Samuel Gessner
SYRTE - Paris Observatory, France

Johann Chrysostomus Gall is remembered by historians of science only as one of the students who helped Christoph Scheiner to observe the sun spots in the early days of telescopic astronomy before 1620. Interestingly, Gall had embraced a career of Jesuit teacher and missionary that led him to travel from southern Germany and the University of Ingolstadt to Lisbon and from there to West India. It is noteworthy that, on his journey, he did not just cross various geographies and linguistic boundaries, but he moved also through other dimensions: the stages of his career corresponded to various institutional situations and roles. From teaching in a Bavarian college, being a theology student at the University of Ingolstadt, to the jesuit College in Lisbon where he taught topics of mixed mathematics, Gall finally became director of the Jesuit college in Baga, Goa by 1634. In this study on a Jesuit moving through different spheres I will scrutinise a few key categories of historical description and explanation. How can these help us to make sense of some newly discovered notes from lectures given by this early modern mathematician?
Three case studies of mathematicians in the Third Reich (Erich Bessel-Hagen, Felix Hausdorff, Bartel Leendert van der Waerden): Paths and detours to a Riemann biography

Erwin Neuenschwander
Institute of Mathematics, University of Zürich, Switzerland

The mathematician Erich Bessel-Hagen (1898–1946) is perhaps best known for the many jokes that still circulate about him although having been an excellent and very decent mathematician. Hel Braun tells in her autobiography that Carl Siegel threw on a sea trip the only copy of Bessel-Hagen’s habilitation thesis overboard – which he had to review – because this task hindered him in his own work. Another well-known joke goes back to Kerékjártó who referred in his book on topology to Bessel-Hagen by a topological diagram with oversized ears. Because of his shyness, Bessel-Hagen did not publish much. However, during World War II, he was on account of his physical handicap for a long time the only mathematician at Bonn University and helped among other things to preserve the papers of his Jewish colleagues for posterity.

Bessel-Hagen’s papers are an important source for mathematics under the Nazi regime. They contain besides his extensive correspondence great parts of the literary remains of Otto Toeplitz, who emigrated in 1939 to Palestine. Bessel-Hagen was one of the very few persons who held close contacts with Felix Hausdorff during these difficult years. It is therefore not surprising that I discovered around 1990 when I arranged the papers of Bessel-Hagen in the University Archive in Bonn Felix Hausdorff’s farewell letter. Another important source for the Nazi period is the voluminous correspondence of B.L. van der Waerden on which I am presently working.

Vandermonde and the improvement of the human species: breeding between agricultural practice and natural history in the early French Enlightenment

Jens Amborg
EHESS, France
jens.amborg@me.com

In 1756 the Parisian physician Charles-Augustin Vandermonde published his *Essai sur la manière de perfectionner l’espèce humaine* in which he suggested that humans, if properly coupled for marriage, can be improved in just the same way as domesticated animals have been through practices of selective breeding. Taking Vandermonde’s work as its point of departure, this paper explores the transition of knowledge between breeding practice and naturalist theories of generation and hereditary transmission of traits in eighteenth-century France. Vandermonde proposed his eugenic project in a time where such theories were a highly debated question among prominent French naturalists such as Maupertuis, Réaumur and Buffon, who all had a significant influence on Vandermonde. All three of them likewise became experimental breeders. In an intellectual landscape where experiment and observation were highly valued, breeding results were seen as a convincing source of evidence in the quest for the laws of generation. However, these naturalists did not hold in high esteem the knowledge of people who they deemed to be lacking the right senses for scientific experiment and observation and they preferred to be carrying out their own experiments rather than relying on observations made by people of a simpler kind. Pet fanciers breeding dogs and birds, agricultural breeders of horses and livestock, and other people with a wealth of practical experience nonetheless provided a rich source that could not be neglected. This knowledge made Vandermonde confident that the human species and races could be reproductively governed and improved in the same way as animals, thus approaching what in hindsight is one of the darkest doors opened up through the western Enlightenment project.

Short CV

Jens is a Swedish student of history of science at the Centre Alexandre Koyré at EHESS in Paris. He is interested in eighteenth-century conceptions of generation/reproduction in relation to practices of animal breeding among naturalists and agriculturalists, and in projects to "improve" humans in the age of Enlightenment. He has previously studied at the University of Uppsala and the University of Cambridge.

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1 Abstracts are arranged alphabetically by speakers’ last name.
Colonial Domination by Resisting Cultural Assimilation

Robrecht De Boodt
K. U. Leuven, Belgium
robrecht.deboodt@kuleuven.be
http://www.mdrn.be/people/robrecht-de-boodt

In the first half of the twentieth century, Belgian colonial discourse witnessed a shift from the ‘white man’s burden’ to ‘protecting the Congolese culture and environment’. Both discourses were geared towards colonial dominance, but behind the latter, a deep fear of ‘mixed cultures’ and ‘degeneration’ appears to be the driving force. Mixed-race children and ‘negrofied colonials’ threatened to undermine the ‘cultural dominance’ of white male colonials and the moral justification for the colonial endeavor. This fear is echoed by Belgian colonial authors, such as Sylva de Jonghe (1904-1950), who wrote many colonial novels and plays.

In his novel *Het Groene Hart van Afrika* (*The Green Heart of Africa, 1942*), he laments the effects of ‘ruthless capitalist colonialism’ on the ‘unique and valuable negro culture’. However, as Homi K. Bhabha points out, such a discourse of ‘protection’ is a thin veil for what he calls the ‘colonial anxiety’ of wanting the colonial subjects to assimilate, but only to a certain degree. Complete cultural equality would undermine the legitimacy of the colonial endeavor and the sense of cultural superiority.

Sylva de Jonghe therefore clearly demarcates ‘European culture and rationality’ in the form of laws and science, and claiming that the natives are unable to adapt to these norms because the tropic environment, rife with prehistoric energies, is resistant to rationality and science. He uses different descriptions for European sciences and laws and ‘local customs and knowledge’, claiming that the former cannot be used to explain the latter. This paper aims to map literary techniques and themes that emphasize the ‘otherness’ of the Congo and its inhabitants and their ‘resistance’ to Western rationality and science as a way of ensuring the need for a perpetual colonial force.

**Short CV**

I have obtained a BA and MA for History Studies as well as a BA and MA for Linguistics and Literature (German and English) at the K.U. Leuven. After 1,5 years of teaching in Brussels I started working on the 'Colonized Citizens' project, which will last for 4 years.
Analysis of the ethos of an associative biohacking laboratory, the Myne at Lyon

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The biohacking movement or Do-It-Yourself Biology emerged in the USA at the turn of the new century with the development of synthetic biology, to spread rapidly worldwide thereafter. It is an amateur scientific movement that can be described as carrying out scientific and technical studies in biology outside the framework of official institutions. Biohackers conduct their experiments at home, in their kitchen or garage, by turning them into laboratories. Through physical interaction in these laboratories and during meetings, as well as communication on forums and websites, communal activities and practices started to take shape. In this presentation, with a historical and philosophical approach, I intend to focus specifically on the collaborative construction of ethos in one biohacking laboratory. In my thesis, I showed that the biohacking movement was shaped by several heterogenous influences resulting in a protean movement. I also showed the strong links that the movement maintains with certain streams of citizen science (especially the most critical and pragmatic approaches) even if they diverge in particular when it comes to their relationship with the institutions. Biohacking also took up some aspects of the business models promoted by Silicon Valley, the culture of computer hackers, and the cyberpunk philosophy. The hybridization of these different cultures and movements ended up creating diverse collectives with varying values, policies and general organizations. The aim of this presentation is to lead – through a critical analysis of biohacking – to a broader reflection on citizens’ participation in technoscientific choices and on policies concerning scientific and technical production.

Short CV

Docteur en philosophie, chargé d'enseignement à l'université de Montpellier, chercheur associé au Lisis, je m'intéresse particulièrement à la participation citoyenne dans les choix technoscientifiques. J'étudie actuellement un mouvement récent avec une double approche anthropologique et philosophique.
A Reflection on the Meaning of Concepts of Authenticity and Integrity in contemporary Heritage Conservation

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In this paper I discuss the concepts of authenticity and integrity within the framework of heritage conservation and suggest new avenues for their interpretation. The first theorists of conservation date to the 19th century in the context of boundless faith in science and awakening of nationalisms, when starts to use national monuments as symbol of identity. Truth and identity were, thus, the guidelines for leading theorists’ arguments, even if they had opposite positions, such as John Ruskin and Violet-le-Duc. Building on the maturation of the concept of heritage in the 19th and particularly in the 20th century, the idea of truth emerges in the Venice Charter (1964), under the complex label of the concept of authenticity, as a criterion of patrimonialization. Thirty years later, the Nara Charter (1994) changed the perspective of the concept of authenticity, by expanding the scope of cultural heritage concerns and interests and accommodating its diversity according to different traditions, values and sources. Despite these efforts to make the concept of authenticity and integrity more inclusive and efficient, according to Stovel (2005, 2007) and Jokilehto (2006), their current understanding within heritage conservation is still too subjective and difficult to use. On the other hand, alternative perspectives have been put forward, such as the Salvador Muñoz Viñas (2005), who argues that the focus should be on persons first, since as they give value to monuments, proposing a shift from the notion of truth to the one of transmission of meaning. One of the aims of my PhD research project is to contribute to mature and stabilize the concepts of authenticity and integrity by widening the range of attributes that are used to assess them. In this paper, I present and discuss a contemporary perspective of the concepts of authenticity and integrity for the conservation of cultural heritage.

Short CV

Phd candidate of History, philosophy and heritage of science and technology. Research about concepts of heritage conservation, specifically authenticity, integrity and significance, how evaluate them and has as your case of study the railways heritage.
Among those who opposed Einstein’s theory of relativity during the first half of the 20th century was also the eugenicist doctor and popular novelist, Arabella Kenealy. Kenealy rejected Einstein’s take on gravitation in favor of the earlier Newtonian model. She also went beyond Newton, by developing her own theory of a ‘Great Potter’s Wheel’ that aims to account for almost every aspect in nature from the cosmos to biological evolution and the distinction of the sexes. In The Human Gyroscope (1935) she deploys an elaborate scientific method of argumentation and relies on various sources and quotations to validate her position. At the same time, her arguments are based on a critique of the increasing scientific specialization she saw around her. Instead of separating discourses into different branches, Kenealy argues for a comprehensive explanation of nature, one that encapsulates not only all branches of knowledge, but also highlights the poetic and the emotional aspects of existence and labels them as scientific. For, leaving out “all aesthetic and spiritual aspects of the sacredness of Life” in scientific discourses is for Kenealy a sign of the degeneration of the sciences. Through a close reading of some representative extracts in both her fiction and nonfiction writings, I will argue that Kenealy’s rejection of Einstein’s theory is primarily a rejection of scientific specialization and what she perceives as a narrowing of knowledge. I will also interpret this opposition in terms of the gendered norms that made scientific research a male preserve. While this gendered division allowed female authors to provide an alternative perspective of established scientific praxis and theories, it also weakened the effectiveness of their interventions.

**Short CV**

Fatima Borrmann is a German Phd researcher at KU Leuven. Her research project is on eugenic women writers from the late 19th to the early 20th century in Germany and Britain. She did her MA in English Literature and Culture at the Ruhr Universität Bochum.
The First All-Union Television Conference

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In 1930 the first All-Union television conference took place. In order to "arm themselves" with this technical innovation, Soviet engineers had to "tame" television first, recreating this invention in laboratory labs, and then adapting it to the realities of their time. The mastery of the new promising technology "image transfer to a distance" was a logical step for the young Soviet industry of the 1930s. But the progress of innovations was still in question, and required decisions and certain risks. The problem of innovations was one of the leading in the decisions taken at the first all-union television conference. The author attempts to reveal the "science in making" in the history of the Soviet television technologies. In accordance with the terminology of Thomas Hughes, who wrote, about the “high momentum, force, and direction” of large socio-technical systems one can see in the decisions at the first All-Union television conference the inert forces of the previous technology, namely, the radio. To answer the research questions, the author refers to the materials of the first All-Union conferences, memoirs and correspondence of employees of television and radiotechnical laboratories in the USSR at that time. The development of the Soviet television was set against the backdrop of the 1920s-1930s chaos, that making the survey much more important. Soviet engineers who aimed to popularize and distribute television relied heavily on the experience of the development of Soviet radio in the 1920s, the Network of Radio Societies, as well as radio magazines. The process of "taming" the television, was heavily depending on the already well-known innovations in the field of radio communications, which significantly influenced the development of television in the USSR.

Short CV

In 2018, I earned a Bachelor's Degree in History at the National Research University The Higher School of Economics in Saint Petersburg. Currently, I am enrolled in their Master's program in Applied and Interdisciplinary History (Usable Pasts). For the past four years, I have been studying the history of the Soviet tech, and the Soviet TV industry in particular. The development of the Soviet television was set against the backdrop of the 1920s-1930s chaos, that making the survey much more important. But, unfortunately, these developments are not as well documented as many other parts of tech history. There’s a lot left to investigate and uncover.
Bachelard and the Science of Objectivity in the Life Sciences

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The philosophy of science in the Analytic tradition prior to Gaston Bachelard conceived of as objective and ever reaching a conception of the universe. However the extent to which Bachelard's own history of science alongside rationalism not defined by historians but by philosophers actually represents a progress of reason and objectivity is fundamental. One factor in the misrepresentation of Bachelard's philosophy of science is the concept of science's "incommensurability" as designated by the work of Mary Tiles in *Bachelard: Science and Objectivity* (CUP, 1984), however Bachelard's view is not that the history of science does not make progress or not possess an inherent, internal form of rationality, but that the rationality of science is not comprised by norms and practices, but rather through a sequence of corrections. However, where does Bachelard's philosophical view of the history of science derive from? Arguably, the central albeit hidden controversy of Bachelard in the generations succeeding him in Canguilhem, Foucault and Derrida is ultimately, his historicism, the work of Dominique Lecourt in *Marxism and Epistemology, Bachelard, Canguilhem and Foucault* (NLB, 1975) concede this fact. In the scholarship of Cristina Chimisso *Gaston Bachelard Critic of Science and the Imagination* (Routledge, 2001) and Roch Smith *Gaston Bachelard, Philosopher of Science and Imagination* (Suny Press, 2016), it is characteristic of the anti-Hegelianism of the French generation in Hyppolite and Kojève which contributed to the misunderstanding of the German thinker who embodied a historicist position as well as the philosopher of totalitarianism. Despite Bachelard's description of the history of science as dialectical without being as what he perceived as, Hegel's "closed" dialectic. In conclusion, it shall be seen that in the advent of war the German intellectual tradition manifested in Hegel was neglected in France to its detriment, but as Bachelard points out in his Hegelianism, errors create.

Short CV

As a PhD German Studies candidate at Durham University, my doctoral work concerns the Concept of Totality: Visions of the Whole in the Work of Fredric Jameson (2016--). I read English Literature and History at the University of Leicester (2012-2015). I worked with Ian Harris on a dissertation on Locke and the State of Nature which consolidated my interests in philosophy of history and literature. After my bachelor, I undertook a Masters of Letters in Intellectual History at the University of St Andrews (2015-2016) working with Caroline Humfress on essays concerning Derrida, Badiou's and Nietzsche's Saint Paul, and a masters thesis on Foucault in the College de France lectures.
Plea for an Ecology of Savant Practices: A Brief Theoretical Venture

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Symposium:


Involving ten young researchers from Italy, Turkey, and France, at the crossroad of the history of science, the history of cartography, urban history, the history of technology, and colonial history, this research programme is still at an early stage of its development, gradually taking shape as we collegially think, write, erase, correct, and re-write through a contrasted variety of media and milieus such as workshops, emails, and online collaborative platforms. Through a wide array of case studies as well, ranging from the field studies of the ruins of Persepolis during the eighteenth century, to the making process of a map of the Bosphorus in Enlightenment Istanbul, to the foundation of a zoological gallery in nineteenth-century Lyon, and extends to the examples used in the present proposal. For this ESHS First Young Scholars Conference, we would like to propose a symposium session starting with a quick theoretical introduction and followed by three case studies chosen among our many topics of interest. Thus, illustrating and fleshing out a yet too conceptual endeavour, this would also allow us to put things into perspective and thrive on the ensuing discussion.

The media of knowledge

Recent developments in media studies have led philosophers to emphasise the role played by mediation in a broad sense, conceiving of a medium as what lies in between two alterities and that at once enables and constrains, materialises and shapes our perception, understanding, and manipulation of what there is (Barad, 2007). A medium is never neutral: it has an effect on what it conveys by shaping it in a certain way so as to make it visible, and by embedding it into a regime of signs so as to give it meaning. Yet a medium is never visible from itself: mediation enacts signification while at the same time erasing the effects of this enaction. The medium evades while unveiling (Mersch, 2006). Although social scientists have long used this concept to study mass medias, and the transmission, circulation, and alteration of information (e.g. McLuhan, 1967), scholars in the history of science or anthropology of knowledge would benefit from reappraisals (Kittler, 1986) and new developments (Stiegler, 1994-2001; Dourish, 2017) in the philosophy of technique understood as a medium: how does a peculiar object such as a terrestrial globe and its material life always-already re-enact the face of the Earth? How does the use of ink-and-paper inscriptions define the realm of what is knowable and
shape our knowledge of the world? How do physicians reconfigure a space such as a church into the practical place of knowledge that is a field hospital? And, reflexively, how does the multiplicity of media the scholar is confronted to – manuscripts, microfilms, interviews, digitalisations, objects... – impact on his or her discourse?

From medium to milieu

The successive shifts undertaken by research programmes such as that on “places of knowledge [lieux de savoir]” (Jacob (ed.), 2007, 2011; Jacob, 2014) or, more recently, on “home-for- science” (Geissler and Kelly, 2016) seem to us to betray a wider – yet unacknowledged – turn towards an understanding of science in medial terms. At the crossroad of the anthropology of knowledge, the sociology of science, and the philosophy of technique, we would like to further this turn. First, shifting from materiality to materials – broadly understood as “the stuff that things are made of” (Ingold, 2011) –, we endeavour to account for the ever-changing nature of things subject to a milieu that shapes, wither, and alter them – media being a species of milieu. Thus, rather than bluntly taking things as the material, yet passive, repository of human intentionality only (Appadurai, 1986), we intend to focus on the never-ending efforts for savants to crystallize things into immutable objects of knowledge – liable to circulate without being altered – through a certain use of dedicated media. Second, thereby taking into account this indeterminate dynamic of medial objectification entails a shift from places to milieus of knowledge. By paying attention to the indefinite material and social practices of (re)definition and stabilisation of places of knowledge, the latter appear as unstable and dynamic milieus which need to be re-enacted daily (Woolgar and Lezaun, 2013, 2015) so as to take shape as immutable places of knowledge – liable to be dwelled by savants.

An ecology of savant practices

Indeed, as the recent work of the artist Tomás Saraceno shows (Saraceno, 2018), the subject, rather than freely roaming a crystallised place of knowledge, is always-already inextricably enmeshed into a milieu that he or she influences, and whom it influences in turn. As the savant can only seize the world through a sea of mediation devices in which he or she is immersed, such media always generate their own ecology of knowledge by redefining the realm of what is knowable, reconfiguring practices, restructuring the state of knowledge and forms of scholarly subjectivities (Rotman, 2008). Consequently, we suggest replacing the geographical acceptation of places of knowledge with an ecological understanding of milieus. This acceptation calls for an ecology of savant practices (Waquet, 2015, 2018) redefined as the study of the media and the practices of re-enactment that allow for the crystallisation of things into objects of knowledge, and of milieus into places of knowledge. Contra Bateson (1972), such an ecology of savant practices should be attentive to the meshwork of the becomings of media and milieus, rather than to a hub-and-spokes network of already-given objects and places of knowledge (Ingold, 2015, 2016). Thus, a nineteenth century construction site in Marseille appears as an ever-reconfigured milieu where technical media are put into practice and adapted to local constraints, while the colonial museums of fascist Italy become a diffuse milieu scattered across local embodiments of an instrument of mass propaganda and power.

References:


**Short CV**

Trained in theoretical physics at the Ecole polytechnique, in philosophy of knowledge at the Université Paris-Sorbonne then in history of science and technology at the EHESS, I hold a PhD in the history of science from the joint programme of the European University Institute (EUI, Florence) and the École des hautes études en sciences sociales (EHESS, Paris). My work focused on the drafts and working papers belonging to two natural philosophers of the second half of the 17th century: Galileo’s last disciple Vincenzio Viviani in Florence and Gottfried Wilhelm Leibniz in Hannover, and could be described as a work of historical anthropology of knowledge. Now a postdoc at the EPFL, I am more generally interested in in the potential interdisciplinary approaches represent to address contemporary concerns about science and knowledge at large. I am particularly inquiring about the birth and development of an analytical way of thinking that gave rise to a peculiar computational rationality that has become the ground of contemporary algorithmics.
On the translation of scientific and philosophical texts in the early Abbasid Caliphate (9th century) and the philosophical objective of translation in the Kindī-circle

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During the Abbasid Caliphate a huge translation movement (8th -10th century) took place, where scientific and philosophical texts were translated from Greek, Indian and Persian into Arabic. Within this translation movement, a group of translators around al-Kindī (approx. 800-880) were active, translating Greek texts into Arabic. Despite all differences, the translations resemble one another inasmuch as all of them were translated very literally. In the scientific literature of Oriental Studies, this literalness is mostly traced back to a lack of linguistic skills and is considered to be lacking elegance.

Based on the notion that the inclusion of the translator’s aims is vital when assessing a translation with a descriptive approach to Translation Studies, I would like to point out that the literalness of these translations does not imply a lack of language and comprehension skills, but actually was influential in the development of the Arabic philosophical discourse. It seems as if the Kindī-circle was not primarily aiming at opening up new philosophical contents, but rather at developing an Arab philosophical language through translations (which at that time was still in its early stages). Secondly, they tried to develop an Arab tradition of philosophizing. The aim of my paper is to show, how al-Kindī intended to establish a certain philosophical form of argumentation through the translation of Aristotelian texts. Against this backdrop I want to draw a distinction between the translation of philosophical texts and philosophical translations themselves.

Short CV

After doing her bachelor's degree "Transcultural Communication (Arabic/Italian)" at the University of Graz, Garda Elsherif completed her master's degree "Translation and Interpreting (Arabic)" writing her Master thesis on "Philosophers as Translators. A theoretical Analysis of the al-Kindi translator circle and ist philosophical work". Since March 2019 she works on her dissertation as a part of a Project funded by the German Research Foundation (DFG) on the scientific translations in France in the Classical Age (17th-18th century), led by Prof. Dr. Andreas Gipper.
International Geophysical Year as an example of scientific data exchange during the Cold War

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This research paper is devoted to the study of international cooperation between scientists during the International Geophysical Year. The IGY was a complex and a large scale project in the area of natural sciences, lasting eighteen months from July 1, 1957 to December 31, 1958, during which thousands of scientists from 67 countries from around the world joined forces to conduct geophysical research and collect global data in oceanography, meteorology, seismology, etc. Cooperation between scientists from the countries with different political ideologies certainly had its own peculiarities and did not always proceed as smoothly as the participants would have wished. The Ideal sought by scientists was the free (or at least not limited by strict rules and restrictions) exchange of information on research activities, curious discoveries, recent theories, etc. – exchange that undoubtedly contributes to the development of scientific knowledge. In addition, scientists were interested in creating databases that would simplify the collection and exchange of data within the academic community – three world centres for geophysical data collection were created during the IGY. The World Data Centre system was regulated by the principle of equitable access: data should be easily accessible to all qualified scientists. The IGY significantly contributed to the development of science during the Cold War and was one of the most important attempts to make scientific cooperation and the exchange of information more open and ambitious. The success of IGY research depended on the free exchange of scientific data among scientists. Cooperation during the IGY allowed scientists to share scientific data and complete some projects that individual national research teams would not have been able to complete on their own, without financial support. The pursuit of scientific exchange “without political manipulation” was a major breakthrough in easing tensions between countries from different political blocs.

Short CV

Irina Fedorova holds a Bachelor's degree in history from the National Research University Higher School of Economics in Saint-Petersburg. She is currently a Master's student in Applied and Interdisciplinary History at the HSE, Saint-Petersburg, and an exchange student at the Department of History and Ethnology, The University of Jyväskylä in Finland. She has been working as a research assistant at the Laboratory for Environmental and Technological History, HSE, Saint-Petersburg. Her Bachelor's thesis focuses on the International Geophysical Year 1957-58 and highlights the history of scientific contacts and features of science diplomacy during a period of confrontation. In her MA thesis, Irina examines the Soviet scientists' participation in the Pugwash movement as an example of informal diplomacy's influence on Cold War politics.
Where to place a diagram? The case study of “Treatise on Measurement and Calculation” and its various translations

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Abraham bar Ḥiyya ha-Nasi (ca. 1065-1145), also known as Abraham Savasorda, is well known due to his manuscript in Hebrew Hibbur ha-Meshiḥah ve-ha-Tishboret (“Treatise on Measurement and Calculation”), written between 1116 and 1145, which was translated in 1145 into Latin by Plato of Tivoli, naming it as Liber embadorum a Savaso rdo in hebraico compositus. Indeed, bar Ḥiyya, born in Barcelona, is now well acknowledged as the one enabling the transmission of Arabic mathematics to the Jews in Spain and France, and via the translation of Plato – to the Christian Latin West. The book, being on practical geometry, introduced for the first time in Europe the techniques of Islamic algebra for solving quadratic equations, and became a principal textbook in western European schools. In my talk I aim to focus on the first part of the book, which deals with proving geometrically certain algebraic identities, such as (a+b)2 = a2 + 2ab + b2 or (a+b)2 + a2 = 2a(a+b) + b2. I will concentrate on the way Bar Ḥiyya was using diagrams in his manuscript, proving with them these identities. Bar Ḥiyya – and his followers, who copied, edited and expanded the book – either placed the diagrams inside or next to the text, or, more often, in the later versions of the book, leaving in many places an empty space for drawings that were eventually not drawn. Hence these empty places functioned as virtual diagrams, which needed to be drawn by the reader herself. However, the translations to Latin and in 1902 to German (by Maximilan Curtze) were hardly supplying any diagrams, hence in a way, making the virtual diagrams even more virtual – or just absent. As I will show, only with the 1912 re-publication of the book in Hebrew by Michael Guttmann, are all the drawings to be found – but at the end of the book. The question that rises: what was the role of the diagrams in each of these versions? And how the different translations and copies shaped and re-shaped this role?

Short CV

I am a historian of mathematics and currently a research associate at the cluster of excellence "Matters of Activity" of the Humboldt University, Berlin. My research interests are currently material cultures of mathematics, history of mathematical practices and the history of algebraic geometry during the 20th century.
Transnational Archaeology: How Egyptian workers contributed to the findings of German-led excavations in Egypt, 1898-1914

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Knowledge about ancient Egypt mostly comes from archaeological excavations. Between 1898 and 1914, a total of 45 excavation campaigns were conducted in Egypt by German archaeologists Borchardt, Möller, Steindorff, Rubensohn, and Zucker. Each employed a daily average of 165 Egyptian workers; the maximum was around 600 workers. Some of them were unskilled day-labourers from the excavation site’s surroundings; others were archaeological specialists from certain villages in Egypt with considerable experience and expertise. Although the German archaeologists did not much admit it, their Egyptian workers must have had a considerable impact on the excavations’ scientific results. Rather indirectly: by being present or absent in certain numbers; rather directly: by helping the excavation with their knowledge and/or discipline, or hindering it with their inaptitude and/or recalcitrance. For my ongoing PhD research into the Egyptian workers of those German-led excavations, I have analysed the Germans’ excavation diaries. In my paper for Paris, I would like to present what they tell us about the workers’ archaeological significance. In the history and theory of Egyptology, excavation workers have so far received little attention, owing to different priorities, a lack of sources, an elitist bias, and Orientalist prejudice. Nevertheless, what and how objects and structures are found within ancient sites depends not least on an excavation’s workers, since they are more than the ‘hands’ of academic archaeologists. And since still today, many of the latter come from the West whereas their workers are Egyptians, archaeology in Egypt produces knowledge by way of transnational and transcultural interactions. In fact, even local residents around ancient sites may possess knowledge valuable for archaeologists, but few excavations have started reaching out to local communities.

Short CV

I studied mainly history at Luxembourg, Clermont-Ferrand (II), Vienna, Santa Barbara (California) and Leipzig Universities, and I’m currently a PhD researcher at the Graduate School Global and Area Studies at the University of Leipzig, Germany.
Writers of the Lost Ark: Catholic Historiographies of Science in the Chinese Rites Controversy, c. 1640-1742

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Through a close-reading of the Acta Pekinensia—a detailed account of Charles-Thomas Maillard de Tournon’s (1668-1710) infamous papal legation to the Kangxi court, compiled by the Würzburg-born Jesuit astronomer Kilian Stumpf (1655-1720)—I discuss the role played by the Chinese Rites Controversy in shaping Catholic historiographies of science and religion, exposing a thread of radicalism in Jesuit narratives of the ancient, tacit transmission of knowledge. Sinologist David Mungello characterised the “bitter 17th-century debate” as a conflict between missionaries of different Catholic orders in China over two particular matters: whether or not they should adopt the Chinese terms “tiān” and “shàngdì” for “God”, and over the extent to which they should “accommodate” Chinese rites honouring Confucius. The Controversy profoundly troubled the Vatican, which issued a series of contradictory edicts regarding the appropriateness of Catholic missionaries’ adoption of Chinese rites; on 12th September 1645, following a complaint by the Dominican Juan Bautista de Morales (c. 1597-1664), Pope Innocent X (1574-1655) prohibited missionaries from observing certain Chinese rites. However, on 23rd March 1656, upon being petitioned by the Italian Jesuit Martino Martini (1614-61), Innocent X’s successor, Pope Alexander VII (1599-1667) issued a decree permitting observing those same rites, without annulling the previous ruling. In an attempt to better-understand the situation, Pope Clement XI (1649-1721) sent a legation led by Maillard de Tournon to the Kangxi Emperor’s (1654-r. 1661-1722) court. Given the evident animosity between different religious groups during the Rites Controversy, it may be tempting portray the conflict as a proxy war amongst different Catholic orders vying for power and influence in Rome, being fought “on the ground” in China. However, I argue the converse, suggesting that the Controversy emerged from the dispute between what different missionary groups believed China revealed about their own origins and the legitimacy of their theologies.

Short CV

I will begin a PhD in History and Philosophy of Science at St Edmund’s College, University of Cambridge in October 2019, funded by the university’s School of Humanities and Social Sciences, the Department of History and Philosophy of Science and St Edmund’s College. My research interests include postcolonial histories of cross-cultural encounters, the Jesuit China mission, history of natural history, histories of race, actor-network-theory, and sociology of scientific knowledge. As an undergraduate I read Natural Sciences at Trinity Hall, Cambridge, graduating joint top of my cohort with a first class BA (Hons) in History and Philosophy of Science in 2018 and was awarded the Cambridge HPS Department’s Jacob Bronowski Prize. In
June 2019, I received a Distinction in my MPhil in History and Philosophy of Science and Medicine at Wolfson College, Cambridge.
'Should a wise man believe in their existence' ? - The Jewish reception of Atomism in 16th 17th century Italy

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The goal of this proposed paper is to sketch different forms of reception of the Atomist theory by Jewish-Italian scholars in the 16-17 centuries, comparing them vis-à-vis their Christian contemporaries. Much scholarly effort was dedicated recently in order to reveal the role of Atomistic and Corpuscular theories in various Theological and Philosophical discussions during the 'scientific revolution'. I will discuss three different schools of thought within Jewish-Italian scholarship which show different forms of familiarity with early modern Atomistic reasoning and the problems it raised. I intend to show how Atomism was integrated in their philosophical and theological arguments, in manners same and different from what is known of parallel discussions within Christian discourse. Particularly, I will discuss the way in which members of kabalistic school (such as Menachem Fano, Mantua, 1548-1620) tried to identify Atoms with widely known kabbalic concepts such as the Nekuda (נקודה), the Skeptic response of Simone Luzzato (Venice, 1588-1663) to Atomist empiricism, and Moshe Hefetz’s (Venice, 1664-1712) total integration of Gassendian Atomism into his Bible commentary. Based on these Jewish references to Corpuscular and Atomist theories (Cartesian and Gassendian) my intention is to analyze the unique aspects of this cultural transfer, pointing the Similar and the different between the Jewish and Christian receptions of early modern Atomism in Italy. For instance, it is interesting to note that Jewish atomism considered the Muslim Kalām atomism as one of its sources, while parallel Christian authors neglected it. Like the well-studied case of the Jewish reception of the Copernican theory, the case of Atomism also reveals different modes of trans-cultural transmission of knowledge and some of the unexpected courses in which it took action.

Short CV

Ahuvia Goren is a doctoral student in Ben Gurion University who studies Jewish attitudes to renaissance humanism and the scientific revolution. His dissertation will deal with skepticism among Italian Jews in the late 17th and 18th centuries from the perspectives of cultural history of knowledge and the history of the book. From 2014 He was employed as a research assistant in different research projects in Tel Aviv University under Dr. Maoz Kahana. His M.A, thesis entitled “Rabbi Moshe Hefetz and his Book Melekhet Makshevet: Science, Theology and Skepticism in Early Modern Venice” was submitted to the Cohen institute for History and Philosophy of Science and Ideas (Tel Aviv University) in 2018 , and won the Amos Funkenstein prize.
Child prodigies in Paris: between science and popular culture

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This presentation looks at the double role of child prodigies as psychological subjects and “child stars.” The setting is Paris during the nineteenth and early twentieth centuries. At that moment, developmental psychology defined the “normal” child and gave rise to new theories, such as the measurement of intelligence. Being counterexamples of normal children, prodigies inspired scientific knowledge in these areas. Along with the UK, France was the center of psychological research on child prodigies. Calculating and musical geniuses were presented at the Académie des Sciences or at psychology conferences. Scientific commissions were set to study these children’s giftedness. Examples include the calculating prodigies Henri Mondeux and Jacques Inaudi, or the “Spanish Mozart” Pepito Arriola. However, prodigies were more than subjects of psychological research. The same “child geniuses” that scientists studied triumphed in the Parisian theatres and throughout Europe, giving rise to the contemporary phenomenon of the child star. In this regard, the presentation will reflect on how scientific knowledge on child prodigies influenced their cultural perception and vice versa. For example, the fame of some prodigies contributed to popular and scholarly notions of genius based on the IQ, which would be transmitted both through the media and scientific publications. In this way, we can observe a reciprocal influence of scientific and popular knowledge on gifted children.

Bibliography:

Short CV

Andrea Graus is currently a Marie Curie Fellow at the Centre Alexandre Koyré (CNRS). She holds a PhD in the History of Science from the Autonomous University of Barcelona, and was postdoctoral researcher at the University of Antwerp. She has published on topics such as the history of psychical research, mysticism and hypnosis.
The Khagolādhyāya: One of the earliest Sanskrit astronomical treatises with Islamic influence

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This is the first report on the Khagolādhyāya (literally "lesson" or "chapter" on the celestial sphere), a previously unstudied Sanskrit treatise on astronomy, written by Malayacandra Sūri in north India around 1370 CE. The teacher of this author, Mahendra Sūri, is the author of the Yantrarāja (Astrolabe), generally regarded as the first Sanskrit treatise dealing with Islamic astronomy. In general, the Khagolādhyāya follows the tradition of earlier Indian treatises: It is a versified Sanskrit text, makes references to previous astronomical texts and their parameters for planetary computations and explains the cosmography as found in other Sanskrit literature. On the other hand, some Islamic elements are noticeable. For instance, planets are sometimes referred to in the order of their orbits (as opposed to the Indian style of addressing them in week-day order), the sphere of the fixed stars are referred to as "the eighth sphere" as in Islamic traditions, and there is even a reference to the Arabic word "falak" (sphere) in the colophon. In this talk I would like to explain these elements in an attempt to locate this work in the history of the arrival of Islamic astronomy in South Asia.

Acknowledgements: The investigation of the only manuscript of the Khagolādhyāya was funded by the SAW/ERC project with the cooperation of the Baroda University Oriental Manuscripts Library and the study of the text is a joint project with Michio Yano.

Short CV

My research focuses on the history of mathematical astronomy in the Indian subcontinent, notably in the southwest region of Kerala between the fourteenth and nineteenth centuries. Astronomers and mathematicians during this period are grouped today in the "Kerala School" under the assumption that their achievements were made through pedagogical lineage and in isolation from Islamic influence. I critically examine the notion of this "Kerala School" by exploring the mathematical elements that are known to characterize it. Most notably, I study the texts by Parameśvara (c.1360-1460) who is known as the direct disciple of Mādhava, the purported founder of the "Kerala School". The mathematical topics that I am especially interested in are: Sine computations, including the usage of power series attributed to Mādhava; fixed-point and other iterative methods; practices of reasoning in mathematical and astronomical texts.
Retracing McLaren's Search for Graft Hybrids

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One of the most fundamental claims of Lysenko’s biology in the Soviet Union was that new plant species could be created through grafting. The ability of plants to supposedly exchange hereditable material without resorting to sexual crosses was held to undermine Mendelian and Morganist genetics. Yet outside of the Soviet Union, the vast majority of Western scientists were highly sceptical that graft hybrids even existed. One exception to this rule was Anne Laura Dorothea McLaren (1927-2007), developmental biologist, first female Officer of the Royal Society and member of the Communist Party of Great Britain. Harnessing previously unpublished archival sources from the Anne McLaren Papers, this paper examines two of McLaren’s attempts to bring graft hybrids back into the scientific mainstream. The first of these case studies examines McLaren’s behind-the-scenes efforts to promote the work of Czech biologist Milan Hašek. During the early 1950s, Hašek claimed to have overcome the immunological barriers between species using grafting. McLaren introduced Hašek to the British immunologist and 1960 Nobel Prize winner Peter Medawar, who later ensured that Hašek’s results were published by the Royal Society. The second case study follows McLaren’s attempts to verify the creation of graft hybrid tomatoes by Ruzicka Glavinic of the Faculty of Silviculture at Belgrade University. In 1958, McLaren travelled to Belgrade to observe grafting experiments. Upon her return, McLaren also endeavoured to grow graft hybrids at Nuffield Lodge in London. By retracing McLaren’s Cold War era research and its reception by her peers, we gain fresh insights into the obstacles of conducting science across an ideologically-charged divide.

Short CV

Matt Holmes is a Postdoctoral Research Associate on the ERC-funded project ARTEFACT at CRASSH and a member of the Centre for Global Knowledge Studies (gloknos). Within ARTEFACT Matt examines the British agricultural and scientific revolutions in their imperial and colonial context. Through his ARTEFACT-Hybrid project, he explores the history of grafting and chimeras. Matt was awarded his PhD in the History and Philosophy of Science from the University of Leeds in 2017. His thesis ‘From Biological Revolution to Biotech Age: Plant Biotechnology in British Agriculture since 1950’ examined untold stories of biotechnology and their reception in Britain.
Technical tryst with America: The birth of the Indian technical nation

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The Second World War marked the decline of the scientific interventionism of the British imperial state’s activities in India. The suspension of imperial technical and scientific schemes in India marked a critical juncture of the re-wiring of India’s technical and scientific connections - the loosening with Britain, while the strengthening with America. This paper looks to expand the work of Ross Bassett who suggests that the technical and scientific relationship between America and India is based in the Indian MIT graduates emerging from the 1920s. This paper will show that though these graduates were significant, it was the strategic importance of India during the war that set the precedent for a burgeoning circulation of technical and scientific knowledge from America to India. Central to this was, Dr Henry Grady, who led the American Technical Mission to India in 1942, and it was this mission that sparked the circulation of American technical and scientific knowledge into India. Grady suggested that India was not ready for independence in 1942 and that ‘the loosening of British ties with India should be succeeded by a period of American tutelage and instruction centred on technical and scientific knowledge.’ This paper will argue that the circulation of technical and scientific knowledge was not only significant to Indian technical development during the war, but set a precedent for the technical development trajectory of India in the post-independence years, as seen under the Point Four Program for providing technical assistance from America to India. By developing India into a workshop for the Allied forces, this paper will show this enhanced the technical and scientific capabilities of India on a scale not seen under British rule, but also served as the origin of the emergence of a channel of scientific and technical knowledge from the America into India.

Short CV

I am entering into my third-year of my PhD at KCL. My research focuses on the expansion of education, science and technology in both colonial and post-colonial India, with a particular focus around charting the developments surrounding technical education. I completed both my BA and MA at Queen Mary University of London.
Marie Curie and the "Woman Scientist": Construction of Persona through Biographical Representation

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My presentation will deal with the different narratives in the main biographical works about Marie Curie, which shaped her public image, and her cultural depictions (in newspapers, films and books). These narratives, that changed throughout her life and after her death, were profoundly shaped by cultural-historical circumstances and political interests. Thus, I will deal also with the effects that social changes and shifts in the public perception of science had on the cultural representations of Marie Curie, and the changes of emphasis in the narrative in her biographies – from mother, to wife, to career woman.
As the first internationally recognised woman scientist, Marie Curie’s biographical corpus is the largest one about a woman scientist. Examining narratives in Marie Curie’s biographies and in biographical representations of her could illuminate the ways Curie’s scientific persona was fashioned and refashioned, as a cultural identity that bridges between her as an individual and her social-cultural role as a woman scientist. Examining the events highlighted and erased from her history, could shed light not only on her own public image, but also on the period and culture in which she worked, and the periods and changing culture during which her story was used after her death. These changes in narratives, public image and persona were needed to make space for a new form of female scholarly habitus, enabling women scientists to participate in science, publicly recognising their role in it, and thereby changing the perception of the ways science would be practiced while redefining gender roles at home.

Short CV

M.A student at the Cohn Institute, writing a thesis about the changing narratives in Marie Curie’s biographies
Bernhard Blechmann, anthropology and the emergence of the notion of a Jewish race 1880-1900

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It is a generally accepted view among historians that singling out “the (recognizable) Jew” entered physical anthropology towards the end of the 19th century through the works of non-Jewish anthropologists, which then caused Jewish scientists to react in self-defense and self-assertion. This view is based on a mistaken understanding of the anthropological study by Bernhard Blechmann, “Contribution to the anthropology of the Jews”, which is known for being an early example of a study in physical anthropology which concentrates solely on Jews. So far, historians grouped this study together with works by non-Jewish physical anthropologists on the topic of “Jews and race”, blamed Blechmann for “othering the Jews” and even for perpetuating anti-Jewish stereotypes. But, as I can show, Bernhard Blechmann was Jewish. I will juxtapose Blechmann’s conviction with that of Rudolph Virchow (Report on Germany’s school children; published in 1886) to prove my hypothesis: In the 1880s, different opinions were expressed in the discussion among anthropologists about the existence of a “Jewish race”, but the different scientific opinions were not necessarily determined by the identity of the researcher as a Jew or non-Jew. Blechmann’s example shows that this research was rather driven by an honest, unapologetic motivation of clarifying the scientific value of the notion of “a Jewish race”.

Short CV

PhD in 2010 at the Ben-Gurion University of the Negev, Jewish History Department. I am currently a research fellow at the Jacques Loeb Centre for the History and Philosophy of the Life Sciences. The subject I will speak about is part of my current research project "Ethnicity/Race in biological research. Changes in research concepts and technological sophistication as reflected in scientific research into ancestry from the 19th to the 21st century". My main point of interest is identity construction through science.
Structural assumptions of the emergence of the Non-aligned Science

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Our intent is to examine structural changes and newly arisen conditions in the realm of the organization of science in Yugoslavia after the rift between the USSR and the Federative People’s Republic of Yugoslavia in 1948. These events resulted in the creation of the assumptions for a “non-aligned science”—predicated on social and ideological structure based on a heterodoxical understanding and application of Marxist-Leninist ideology, dominant in the Eastern Block. Drawing on archive materials, official positions of the ruling Communist Party of Yugoslavia and legislation, we will follow the development of structure and dominant understanding of the organization of science in Yugoslavia, from classical Stalinist model, to “self-managing socialist” model. Until the break with the USSR, Marxist-Leninist understanding of scientific and sociopolitical circumstances was propagated, as opposed to different deficiencies inherent to “bourgeois” science. The rift with Stalin started the process of ideological transformation within Yugoslavia that was finalized in 1952, when the new ruling paradigm was inaugurated: self-managing socialism, i.e. the Titoism. The structure of scientific work and the mode of science financing were changed, which led to the weakening of the centralization in the organization of the science itself. The role of the Council of the Academy of Sciences in managing and supervision of scientific work was substantially decreased. This also impacted on the change in the nature of the dominant scientific paradigm, which was mainly defined by the context of the Cold War. By analyzing the introduction of the concept of scientific “sovereignty” and the impact of other liberal elements in the Yugoslav scientific practice, we will try to underscore certain social systematic features giving rise to a specific “non-aligned” version of the socialist organization of science.

Keywords: scientific organization; scientific paradigm; USSR; FPRY; ideology

Short CV

Date and place of birth: 02/26/1990, Knin, Croatia.
Currently attending multidisciplinary PhD studies at the University of Belgrade; study program: History and Philosophy of Natural Sciences and Technology.
2016: Obtained master’s degree in Sociology at the Faculty of Philosophy of the University of Novi Sad, with an average score of 9.80; acquired academic degree: master sociologist; master work title: Bernal's understanding of the relationship between science and society.
2015: Completed the first year of master's academic studies in Business Psychology at the Faculty of Law and Business Studies “Dr Lazar Vrkati” in Novi Sad, Union University, with an average grade of 9.40, on the basis of which she acquired the title: graduate psychologist.
Work experience:
2018: A collaborator at the Institute for Multidisciplinary Research (IMSI), as an Research Trainee, in the framework of the project Theory and practice of science in society: multidisciplinary, educational and trans-generational perspectives. Fundamental project in
home country, carried out with the support of the Ministry of Education, Science and Technological Development of the Republic of Serbia.
Knowledge across National and Social Borders: Popularizing Darwinism in Romania Nineteenth-Century

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In countries where the institutionalization of science was far from complete, journals of science popularization were amongst the most efficient way in building and consolidating scientific communities. After completing their studies in Western University centers, Romanian naturalists invested considerable thought and time in consolidating their academic positions, while also assuming the role of educators of the lay people. Thus, the aim of this paper is to discuss how popularization journals and the spread of Darwinism in Romanian nineteenth-century public sphere were affected by French and German scientific traditions. In contrast with their work, the appearance of anarchist popularization will illustrate how knowledge transcended not only national borders, but also social classes.

Focusing on the practice of science popularization, this talk will seek to answer questions regarding the transcultural influences in establishing two of the most important Romanian periodicals, Isis and Revista Științifică [The Scientific Review]. What role did the French scientific culture played on the dissemination of Darwinism to Romania? Focusing on the practice of science popularization and taking as a case study the appearance of anarchist science popularization, what difference did it make in the diffusion of Darwinism to Romania? First, the talk will briefly address the proliferation and objectives of Romanian science popularization during the nineteenth century; secondly, it will critically assess the first encounters with Darwin’s evolutionary theory based on articles published in periodical journals; finally in order to have a better understanding of how knowledge in transit worked across various social classes, my analysis will take in account examples of Romanian anarchist involvement with popularization of science and Darwinism.

Short CV

Doctoral student at the School of History, Philosophy and Culture within Oxford Brookes University and a post-graduate member of Royal Historical Society. Recently awarded by the Royal Society of London with the 'Lisa Jardine' grant for the history of science. My research area focuses on the social history of science of nineteenth-century Romania, mainly the popularization of Darwinism in the public sphere. By doing this, my investigation deals with science popularization periodicals in order to illustrate the interconnectedness between the political and scientific construction of knowledge, while tracing in the same time the cultural hegemony of certain scientists on public opinions. By linking the evolutionary theory with popularization, rather than just focusing on dissemination, my research will highlight the paths of the transfer of knowledge and scientific influences across national borders and various social classes. Insisting that the practice of communicating science was not a top-down
process, my project aims to reveal for the first time how other voices from the European periphery could deal with the same theory in popular terms and use the scientific discourse as a tool of cultural and social reform. In this vein, my research focuses also on the Romanian nineteenth-century anarchist encounters with science popularization as well as with their long run for establishing a critical public sphere.
Understanding the Deranged Mind: Mental Illnesses and Knowledge Transfer in 18th- and Early 19th-Century Hungarian Medical

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In the second half of the 18th century, an intensifying interest appeared in the Hungarian scientific discourse towards the ‘sciences of man’, and especially psychology. Problems, such as the place and function of the soul, its impact on the human body and the nature of mental maladies surfaced in the medical, philosophical and anthropological treatises of the age, whereas the treatment of the mentally ill posed new challenges and demanded answers previously unaddressed by medical authorities. As for the scientific discourse, one of the most complex body of materials is offered by the dissertations written by Hungarian medical students at the universities of Vienna and Pest, in which the students, by relying mostly on the ‘bookish knowledge’ of the age, gathered and compiled ideas from the most current Western authors on the aforementioned issues to shape their own argumentation on mental maladies. The proposed presentation will discuss the patterns of knowledge transfer on the example of 18th- and early 19th-century Hungarian medical dissertations, with a special focus on the different methods of compilation and adaptation by which psychological knowledge was cumulated and interpreted by Hungarian students. I will also address such questions, as the reception of Western European ideas on the nature of madness, the transformation of psychological knowledge between the 1750s and 1820s in Hungary, as well as the characteristic shift from the strictly theoretical approaches to the observation of mental disorders within their social context.

Short CV

I am a PhD student from Budapest, Hungary. Before obtaining my MA degrees in History and English Literature at Eötvös Loránd University, I spent a semester studying at the University of Vienna. I am currently enrolled at the Early Modern History Programme of Eötvös Loránd University, where I am working on a PhD dissertation focusing on the early history of psychology and psychiatry in Hungary (18th and early 19th centuries). In the past few years, I conducted research in collections in Hungary and Austria, published papers in Hungarian journals, worked as an editor in several projects and organized conferences on diverse topics, from the history of deviance to the history of the body.
Therapeutic Occupation and Knowledge Transfer in Communist Hungary in the 1950s and 1960s

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After the communist takeover at the end of the 1940s in Hungary, beyond the political and social changes, the evolving state socialist regime tried to establish a new human ideal. This intention did not leave the psy-disciplines untouched either. The communist power liquidated those healing methods (such as psychoanalysis, heterofamilial care etc.) that were incompatible with its ideology. Parallel to this process, they encouraged techniques that were reconcilable with Marxism-Leninism (and Stalinism). Work therapy belonged to these methods, as it placed one of the most considerable points of reference of the communist system, labor, and especially productive labor, into the focus of mental normalization. However, motivated by quite different ideological purposes, different forms of psychotherapy focusing on activities for the mentally ill (occupational therapy and industrial therapy) developed in the post-war period in Western Europe and in the United States too.

In my proposed paper, by examining the literature written on Hungarian work therapy, I will discuss the relations between the different forms of therapeutic occupation, and thus the knowledge transfer between Hungarian and Western scientific discourses. I will argue, that the spread of these methods – irrespective of political and ideological systems – means more than giving similar answers to the problem posed by mentally illness. Although work therapy (considered as an alternative to the bourgeois psy-disciplines) was created to fit the ideological standards and to become the independent communist way of psychiatric normalization, in practice, this was not fully realized. Paradoxically, the physicians who developed work therapy, relied widely and substantially on the Western literature of occupational therapy, and these Western elements were incorporated into their texts by using varied techniques. In my presentation, I shall rely on their books, articles and treatises to decipher how Hungarian psychiatrists made use of Western ideas in a communist setting.

Short CV

Viola Lászlófi is a PhD student in the ‘Atelier’ Department of European Social Sciences and Historiography at Eötvös Loránd University, Budapest. She is interested in the social history of healthcare and the history of psychiatry in Hungary in the 20th century. Her PhD research focuses on the problems of biopolitics and the role of physicians in communist Hungary, with special attention on the questions of the doctor?patient privilege in society. Since 2016 she has conducted research in the history of psychiatric work therapy in Stalinist Hungary. Her main inquiry is where the communist power found a new place for the mentally ill in the evolving state socialist society in the 1950’s, and how the psychiatrists coped with the changing norms of ideology and their profession as well.
Personal Psyche, Public Exposure: West Wind Monthly and Psychological Knowledge Dissemination

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Chinese mind received unprecedented attention in Republic era accompanying the nation-saving movement. Chinese backwardness was greatly attributed to mental deficiency by intellectuals. Thus, the ‘mentally ill’ obtained increasing public exposure as objects of regulation, discipline, salvation and treatment. However, they were not totally inactive. The author is trying to explore how psychological knowledge was disseminated and produced effects among the mass, and how the public reacted, which was deemed as vital for judging the discourse of mental hygiene movement in China.

This research will mainly focus on a popular magazine of the day: West Wind (西风), a Western-knowledge-translation monthly. It was widely distributed in Shanghai while exerting nationwide influences from 1936 to 1949. Besides, it covered diverse topics related to mental illnesses, psychiatry and psychology. Targeting the common people, these articles differentiated from professional texts in format and content, and disclosed editors’ manipulation of knowledge presentation. Readers also got chance to tell personal feeling and life. Their daily-related and empirical-based experiences succeeded in attracting broader interests and participation. West Wind could be treated as a public space where intellectuals invited audiences onto stage to manifest their presence. In a word, its populace orientation presented a new facet of translingual knowledge dissemination. From this analysis, the author expects to clarify how psychological knowledge was translated, adjusted and appropriated in order to approach the public, how readers understood, accepted or reacted to these operations. To what extent the discourse of knowledge dissemination resonated with Chinese nationalism tides and political transitions.

Short CV

I am a fourth-year Ph.D. candidate from Warwick. I have been engaging in the Department of History and two research centers (Center of the History of Medicine, Global History and Culture Centre). Before this, I got my Master’s Degree and Bachelor’s Degree from Xiamen University in China, where I got training in Chinese History, World History, and Geographic History.
Learning mathematics in XVIIIth and early XIXth century Bohemia

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The general aim of our talk is to explore the interplay between institutional changes and changes in the teaching and learning of science, especially mathematics. In particular, we are interested in the effects that the suppression of the Society of Jesus in the Habsburg empire, in 1773, had on the teaching and learning of mathematics in Bohemia and in Prague, where the Jesuits had monopolized a segment of the university teaching for more than a century. Until the half of the 18th century the Jesuit teaching of mathematics in Bohemia was traditionally organized around the ratio studiorum, the curriculum of studies developed by the Jesuits at the end of 16th century. However, from mid-18th century, the traditional Jesuit curriculum yielded to the pressure of internal and external factors, and was eventually modified on several occasions. All changes aimed at increasing the role of empirical sciences to the detriment of Aristotle, and at stressing the importance of mathematics in the curriculum by increasing the number of university chairs devoted to different branches of mathematics. This process, however, was by no means linear and orderly. Until the suppression of the order, for instance, modern scientific disciplines, such as the infinitesimal calculus, were included in the more traditional architecture of the ratio studiorum, while new textbooks were written, which aimed to present a balance between modernity and classicism. By exploring this rich, but little known literature, as well as other types of documents, such as a manuscript containing the written exams for the chair of elementary mathematics which took place in 1804, we aim to assess whether the official death of an institution such as the Society of Jesus actually implied that the forms and contents of the education it imparted were also disestablished.

Short CV

Jan Makovský studied philosophy, French philology and history of science, focusing especially on the 17th century intellectual milieu of France. His PhD thesis concerned the origin of the calculus in the works of Leibniz, Bernoulli and L'Hospital and the development of its methods as a result of interpenetration between the philosophy of nature and the metaphysics of infinity. His present research is dedicated to the role of Leibniz's "law of continuity" in the 18th century rational mechanics. He's also interested in translation of Latin and French works of the classical science.
When oil hit geology: Flows of knowledge, expertise and data in the Mediterranean basin research

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Between the mid-1960s and the mid-1980s, the Mediterranean’s deep seafloor moved from being an unreachable and only-imagined place, to became a detailed geological formation, with its particular history, structure and dynamics. This transformation was driven by an intensive exploration of offshore hydrocarbons around the world, which started in the wake of the Second World War. In European coastal countries, the sudden spur of interest in the geology of the Mediterranean basin triggered investments in marine geosciences research by public and private institutions. These contributed to new relationships of financing and cooperation among research centers, oil companies and government agencies. These new alliances, as I will argue, deeply transformed the practices of the scientific communities involved.
This paper aim to explore how the geologists’ cooperation with oil companies, mediated by government-lead research projects, contributed to the enhancement of the knowledge of the Mediterranean basin. I will do so by examining the flows of data, technologies, knowledge and expertise in which that cooperation relied, with the goal of explaining how those exchanges transformed the practices of particular communities of French geologists.

Short CV
Beatriz Martínez-Rius is a first year PhD candidate in History of Science at Sorbonne Université (Paris). Her PhD is framed in the ETN project Saltgiant, a scientific project funded by the European Union, which aims to explore the geological history of the Mediterranean basin by bringing together researchers from different disciplines, including history of science. Her research project is focused on the history of the exploration of the Mediterranean seafloor during the Cold War period; mainly by France, Italy and the United States. Her research interests include the intersections of earth and ocean sciences with geopolitics and the industry, especially in the struggle for natural resources.
French and German Influences on Edinburgh Teaching of Scientific Medical Psychology

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The teaching of medical psychology in mid-nineteenth century Britain was characterised by growing emphasis on science. Alienists sought to increase the prestige of their work through association with science and placed high hopes on scientific research to bring about advancements in understanding, treatment and prevention of mental illness. However, what made medical psychology scientific and on how it should be taught to medical students were highly contested subjects. In my paper I discuss these issues focusing on the two courses on mental diseases which ran in Edinburgh in 1860s and 1870s. One was taught by Thomas Laycock at the University of Edinburgh, the other by David Skae at the Royal Edinburgh Asylum. By examining these courses and the debates surrounding them I identify the differences between Laycock’s and Skae’s perspectives on what constituted scientific of medical psychology but and their pedagogical approaches. I argue that these striking differences were to a large extent due to the teachers’ educational backgrounds and association with different European traditions: Laycock’s approach was heavily influenced by German psychiatrie whereas Skae often drew on the works of French aliénistes. I demonstrate that this debate reflected contemporary discussions in the wider British medico-psychological community and that pedagogical issues had serious implications for shaping British medical psychology and the assimilation of foreign knowledge and practices into it. I end the paper with some reflections concerning the historiographical advantages of examining educational practices for the history of science and medicine in general and the history of psychiatry in particular.

Short CV

I am a PhD student at the University of Leeds working on the history of British psychiatric education in the long nineteenth century. I hold a specialist's degree in Counselling and Clinical Psychology from the Moscow University of Psychology and Education (2013) and an MA in History of Science, Technology and Medicine from the University of Leeds.
Historical Geometry: Chasles as an historian and practitioner of mathematics

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In the mind of French geometer Michel Chasles (1793-1880), historical analyses of past mathematical texts, and novel geometrical theories were closely linked endeavours. His very first book, a historical survey of the development of Geometry, explicitly aimed for epistemological teachings derived from historical studies, rather than knowledge of the past for its own sake. Like his classmate at the Ecole Polytechnique, Auguste Comte, Chasles envisioned a greater purpose for the study of past sciences: therein he sought the means for his own mathematical research to reach ever higher levels of generality and simplicity. Conversely, his mathematical research kept informing and enriching his reading of historical texts. Furthermore, this scientific practice of reading historical texts, while delineated and promoted amongst and by Polytechniciens at large, was combined by Chasles with a broader argument in defense of pure Geometry against the hegemony of algebraic methods. To bring out the embarrassment of riches that ancient texts contain, for Chasles, served to reveal the latent potential of pure geometrical methods.

In this talk, I wish to describe a few cases of concrete interplays between Chasles readings of ancient mathematical texts and his contemporary mathematical practice, borrowed from a sequence papers published in the 1850s, which all revolve around past, non-algebraic texts which Chasles read as expressing ‘equations’ of geometrical curves. I will show how this led Chasles to shape and internalize a set of normative rules and virtues for geometrical practice, which he also used as an historian to judge and evaluate the achievements of his predecessors. In keeping with the theme of this conference, Chasles’ historical geometry illustrates how the internalization of epistemic norms, both constitutive and derivative of Chasles’ image of what being a mathematician means and entails, enabled the transfer, translation and adaptation of past knowledge into contemporary scientific practices.

Short CV

Nicolas Michel is a PhD student at the University Paris-Diderot, where he studies the emergence of enumerative geometry in the nineteenth century and works with the research team SPHERE (CNRS, UMR 7219). Nicolas studied mathematics and philosophy at the Ecole Normale Supérieure de Lyon from 2012 to 2015, graduating in both fields. He then went to the University Paris-Diderot for his MSc in history and philosophy of science, which he obtained in 2016 with a dissertation on Michel Chasles’ geometrical theory of attraction. He has recently been published in the Journal for General Philosophy of Science, and has given talks on the history of nineteenth-century geometry as well as on related philosophical and
epistemological issues at various institutions, such as the CIRM (Luminy), the IHP (Paris), and the Biennial Conference of the ESHS (London).
Statistical Observations and Methods in Nineteenth-Century Botanical Sciences

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One of the main topics of my research deals with historical epistemic transfer of theories, methods, concepts, instruments, and the like between disciplines: such transfer can be framed as the ‘flow’ of ‘cognitive goods’. As a first case study, I have looked at the research method of the questionnaire, how it was developed in multiple disciplines, and how the method found its way into the discipline formation process of General Linguistics around the turn of the twentieth century. For a second case study my research turns to statistical methods and how these were adopted by a large amount of disciplines. Reviewing various disciplinary journals shows that a range of disciplines such as economics, astronomy, nutrition studies, sociology, botany, epidemiology, meteorology, and criminology not only refer to similar statistical methods and techniques, but also all point towards the same scholar as influential to their methodology: the Belgian astronomer and statistician Lambert Adolphe Jacques Quetelet (1796-1874). This intrigues me: what does this similarity mean for these disciplines, these methods, and especially for Quetelet, within the context of nineteenth-century statistics? How were Quetelet and his work adopted by these varying disciplines? In this proposed talk I will look at Quetelet’s influence on botany and I will examine how Quetelet’s methods and phenological observations at the Royal Observatory of Brussels were received. Through this case study I want to show an episode of the flow of cognitive goods.

Short CV

I am a PhD candidate in my final year at the University of Amsterdam. I received my Master's degree in History and Philosophy of Science at Utrecht University. In my PhD project, I look at historical interactions (1800-2000) between different disciplines, specifically the transfer of methods. I focus on disciplines where clear disciplinary boundaries are absent such as social science disciplines, to see what such boundaries are and how they are formed.
The Scientific Conference as Transcultural Space and Practice. The Case of the Scientific Conferences at the Universal and Colonial Expositions, 1889-1958

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International conferences are standard features of scientific life, with a total number since 1851 estimated at 170,000. The gathering of scholars from various cultural and disciplinary origins, united by common concerns in the pursuit of knowledge is often described as an exemplary form of transnational integration. As such, scientific conferences can be regarded as spaces of knowledge transmission *par excellence*. Yet for all its prominence, the history of scientific conferences and their role in the development of science have hardly been researched.

This paper investigates the significance of scientific conferences in the transnational production and transmission of knowledge. It focuses on the numerous scientific conferences held as part of the Universal and Colonial Expositions organized between 1889 and 1958. These peculiar spaces – where science merged with state politics and the carnivalesque tradition of funfairs – were international scientific hotspots, which attracted scientists from around the world. Scientists met and exchanged at the many international scientific conferences organized during these fairs. These conferences were diverse in forms and purposes and were integral to the fair ground. The Expositions offered a variety of facilities such as museums and botanical gardens that scientists contributed to design but also included as part of the conference’s experience.

This study aims to highlight how scientists experienced these Expositions and to examine the interactions between the meeting hall and the fair ground. It seeks to explore how the setting of the Exposition shaped the kind of transcultural relations, modes of performing, identities and knowledge produced by these conferences. It finally intends to identify the inclusionary and exclusionary patterns of these conferences and their effects both for the practice of science and for society.

This research is part of a joint research project, titled ‘The Scientific Conference. A Social, Cultural and Political History’, recently funded by HERA.

Short CV

Thomas’ research interest concerns the history of science and international history with an emphasis on the mid-twentieth century (1930-1960). His PhD thesis (completed at Maastricht University, 2012-2018) focused on the political engagement of scientists during and after the Second World War, the development of science in the Global South, the origins of the UN system and the relations between science and international politics in the early post-WWII era. He has recently been appointed as a post-doc researcher at the Centre Alexandre Koyré on the HERA project (2019-2022) titled ‘The Scientific Conference: A Social, Cultural and Political History’. He investigates the culture of scientific conferences at Universal expositions in Paris.
between 1889-1958 focus on the importance of the setting in the shaping of 20th century culture of scientific conferencing. The case study examines the interactions between meeting hall and fair ground - their modes of performing and experiencing public culture, their notions of internationality and civilization and their various attendants’ experiences of public space.
John Smeaton's research on cement mixtures, and its sources in Roman technology, French military expertise, artisanal know-how and chemical analysis

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In this paper, I would like to discuss the topic of this conference, transcultural knowledge, in the context of John Smeaton’s research into hydraulic lime mortar. John Smeaton (1724-1792) was an early English engineer who was commissioned to build a lighthouse off the south coast of England. During his preparatory work on the lighthouse, he carried out investigations into the best mortar to be used in its construction, finally settling on a mixture similar to that used by the Romans. Cement-making has a long history, involving many different knowledge-production cultures. Smeaton’s research brought together these different cultures in a way that was unprecedented for the eighteenth century. I will focus on four issues:
1) Hydraulic mortar – mortar that hardened in wet conditions – was used by the Romans (it is discussed in Vitruvius’ De architectura), but the technique of making it was lost, or fell out of use in more northerly parts of Europe, after the end of the Roman empire.
2) Smeaton used Bernard Forest de Bélidor’s Architecture hydraulique as a primary source of information on hydraulic lime, and Bélidor himself referred to the little-known French military engineer Milet de Monville as having carried out experiments on hydraulic mortars.
3) Smeaton’s research took as its starting point the actual artisanal practices that were used in England at the time, which he described as the ‘opinions of the workmen’.
4) On the other hand, Smeaton also sought the advice of William Cookworthy, a local chemist, who taught him how to carry out a chemical analysis – part of the emerging discipline of chemistry – on the raw materials that made up the mortar. I hope to show that Smeaton’s research on cements was so successful in part because he mobilised such a diverse range of traditions and methodologies.

Short CV

Andrew M. A. Morris is in the first/second year of a PhD at the Vrije Universiteit Brussel, on the subject of English engineer John Smeaton’s scientific methodology. He has a background in philosophy, which he studied at the University of Warwick (BA), KU Leuven, and the Université libre de Bruxelles (MA). His research focus is on the eighteenth-century history of science, history and philosophy of technology, and scientific methodology in the early Industrial Revolution. His preliminary research on this topic has been published as ‘John Smeaton and the vis viva controversy’ in History of Science 56(2).
The problem of reflection in eighteenth-century projectile optics

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In this communication, I analyze the difficulties that eighteenth century projectile theorists had to explain a simple optical phenomenon: the reflection of light. During the first decades of this century, most optical studies were influenced by Newtonian doctrines on light and colors presented in his *Opticks* (1704). It is well known among historians that Newton’s followers transformed his hypothetical arguments on the corpuscular nature of light in the *Queries* into true statements, considering the existence of short-range forces of attraction between light and bodies a well-established fact. However, although most Newtonians were able to elaborate mechanical models to explain optical phenomena, these models usually discussed the behavior of light only in the case of refraction or total internal reflection, based on the attraction between light and the refracting body. These authors rarely mentioned partial refraction and reflection. The major missing element in these mechanical explanations was a detailed account of the concept of repulsion, which was not completely accomplished by the Newtonians throughout the eighteenth century. First, I will discuss Newton’s explanations of reflection, described in Book II and in the *Queries* of Book III of his *Opticks*. Then, I will analyze the explanations of his followers, such as, Willem Jacob ‘sGravesande, Benjamin Worster, John Rowning, Robert Smith, William Porterfield, Thomas Melvill, among others. While some of them have not elaborated a mechanical explanation for reflection, others attempted to introduce the concept of repulsion in optics, but, in general, the result was filled with conceptual inconsistencies. I will also mention the criticism of other natural philosophers regarding this matter, such as, Claude Le Cat and Andrew Wilson. With this analysis, I hope to clarify other aspects involving the development of the projectile optics and the influence of Newtonian doctrines in the eighteenth-century natural philosophy.

Short CV

Breno Arsioli Moura has a degree in Physics (State University of Campinas) and Master and PhD in Science (University of Sao Paulo), with emphasis in History of Science. His main research interests are History of Science (History of Optics) and Eighteenth Century. He is Assistant Professor at Federal University of ABC (UFABC), located in the city of Santo André, metropolitan region of São Paulo, Brazil. He occupies a tenured position at the university. At UFABC, he is responsible for the courses of "History of Science and Teaching", "Birth and Development of Modern Science" and "Evolution of Physics", along with other courses in physics teaching. In 2014, he was a post-doc at the Department of History at the University of California (Berkeley).
Circulating Chemical Knowledge in the German Periphery, c.1820-1850

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This paper discusses the circulation of chemical knowledge in early nineteenth century Copenhagen. This circulation of knowledge, I argue, may provide new perspectives on the early history of academic chemistry in Denmark. Specifically, I discuss how W.C. Zeise (1789-1847) encountered and appropriated chemical knowledge from the German states. My paper has two parts. First, I discuss existing historiography of Danish chemistry in the early nineteenth century in terms of knowledge circulation. Most notably, H.C. Ørsted’s (1771-1851) chemistry has been subject of detailed studies in relation to Naturphilosophie. In addition, there is a consensus on the importance of countries like France or the German states to Danish scientists in the nineteenth century. Despite this, I argue, knowledge circulated by actors central to the institutionalization of chemistry remain insufficiently studied. The second part of my paper will focus on a specific case. In 1822, W.C. Zeise became the first professor of chemistry at the University of Copenhagen. The standard historiography notes his travels through Germany to Paris in 1818-1819. In Germany, we learn, he trained analytical chemistry, but his stay in Paris receives the most attention. By contrast, I suggest focusing on Zeise’s circulation of chemical knowledge and ideals across national borders through teaching, e.g. lectures and textbooks. His chemistry differed considerably from that propagated by the dominant figure of Ørsted. By studying Zeise’s appropriation of chemistry formulated by German chemists, we might gain new perspectives on the negotiation of a new academic discipline in Copenhagen.

Short CV

Research assistant at the Centre for Science Studies, Aarhus University (Denmark). Working on a project about Danish expeditions, specifically the work of entomologist Marie Hammer (1907-2002) as well as Danish ice-core research in Greenland. Chemistry and textbooks in nineteenth century Denmark was the topic of my master thesis, and this is a topic that I am still exploring. Otherwise broadly interested in museum work, memory studies, and gender in the history of ideas.
Communicating Science and Technology. Gradiva's Books of Popularization of Science and Technology and the Portuguese Public

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The relevance of a wide access by a non-specialist public to science and technology knowledge, both concerning the perception of its importance for general well-being and as basis for an active and participative citizenship has been widely studied both internationally and in Portugal. However, in the Portuguese case, this topic has been mostly addressed within the time framework of the Republican regime (1910-1933) and the Estado Novo dictatorship (1933-1974). In this paper I focus on the period after 1974, the year of the Carnation Revolution that put an end to a long half century dictatorship, and analyze the books published by Gradiva to grasp the mechanisms and strategies to bring science and technology to a broader audience. I use a mix conceptual framework: on the one hand I use the scientific literacy and public understanding of science and technology main references to explore the public's behavior and opinion concerning scientific and technological knowledge and its relevance to general well-being; on the other hand, I analyze Gradiva's choices concerning the collections aimed at popularizing science. In the end, I hope to contribute to map the perception of the Portuguese public about techno-scientific themes that influence their daily life and their decisions, to better understand how scientists relate to scientific and technological popularization literature and the assess scientific literacy in the Portuguese population. My research is also looking to contribute to national and international debate within the History of Science and Technology on the issue of the expert/lay public relationship, thus expanding the existing scholarship on Portuguese audiences of S&T, their main actors and agendas.

Short CV

Inês Navalhas is a PhD candidate on History, Philosophy and Heritage of Science and Technology at NOVA Faculty of Science and Technology. She's a member of Interuniversity Center for the History of Science and Technology. Navalhas studied social communication on her bachelor's degree and is master's in communication, culture and information technologies. Her research focus is science and technology communication being that her thesis is about the popularization books influence on building scientific literacy among the Portuguese public.
Medical knowledge in the Western borderlands of the eighteenth-century Russian empire

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This paper investigates the intricacies of the construction of medical knowledge in the Western borderlands of the Russian empire—the Hetmanate (Left- Bank Ukraine), Sloboda Ukraine, the Baltics and the lands acquired after the partitions of Poland. While scholars have paid considerable attention to the adaptation of the Western medical model in the Russian empire, this paper aims to show its intra-imperial formation due to the interaction of the local medical traditions with the official imperial tradition. The Western borderlands—acquired primarily throughout the 17th and 18th centuries—were highly heterogeneous: their social, political and cultural compositions were characteristic for the states they previously belonged to (the Polish–Lithuanian Commonwealth and Sweden). This makes them a perfect field to trace the transcultural formation of knowledge. I argue that the formation of medical knowledge in these communities was twofold. On the one hand, the imperial medical system gradually permeated these lands, especially at the end of the eighteenth century, which can be viewed in the broader context of the imperial integration policy of these territories. On the other hand, the limited institutional and discursive power of imperial medicine and, in many cases, the strong local medical traditions (German, Polish, Jewish) sometimes provoked clashes, and occasionally generated curious combinations and new forms of medical practice. Following Philipp Sarasin’s approach to the history of knowledge, I investigate the “co-formation” of knowledge by both scientists and the “public” in their respective roles as recipients, mediators and creators. My sources are official documents from the main medical institution in the empire, the Medical College, and the local archives, which present “voices” of the administrative authorities as well as literate and illiterate populations through the mediation of clerks.

Short CV

My full name is Pasichnyk Kateryna Iuriivna and I was born on the 23rd of November 1994 in Vinnytsia (Ukraine). In 2012, I entered the National University of Kyiv-Mohyla academy (Ukraine), specialising in history within the faculty of humanities. From 2016, I studied at the Central European University in Hungary on a two-year MA program in Comparative history. In 2018, I received my MA in comparative history and defended my thesis on the topic, "Official physicians within the medical landscape of the Russian Empire (1760s)." Currently, I am a PhD student at the International Graduate School "Verbindlichkeit von Normen der Vergesellschaftung?, Martin Luther University, Halle-Wittenberg. I am at present researching my PhD, "Crafting values in medicine: the case of the Russian Empire (second half of the eighteenth century)" under the supervision of Professor Yvonne Kleinmann.
Teaching of embryology was introduced at the Hebrew University in 1955 with the appointment of Hefzibah Eyal-Giladi, the begetter of Israeli developmental biology (Frank, Sela-Donenfeld 2017).

A closer look at the history of embryology in Israel, however reveals a rich prehistory of developmental studies, a sort of “generation 0” of scientists working in the Zoology and Parasitology departments of the Hebrew University, who tackled developmental questions in order to solve ecological and epidemiological issues.

The talk selectively explores this range of developmental studies as they are mirrored in the scientific training and early research of the Israeli/American developmental biologist Aron Moscona (1922-2009), a former student and researcher at the Hebrew University. Here he worked with the entomologist Friedrich Bodenheimer, surveying histological and biochemical changes accompanying developmental stages of rodents and insects to control population increase; with the paleontologist Georg Haas, comparing embryological processes in different species of reptiles to build more reliable evolutionary trees. Finally, he assisted the parasitologist Oskar Theodor in his attempt to identify embryological changes in membrane resistance to toxic agents.

Moscona’s case study helps reconstructing the rise of developmental biology as an independent discipline in Israel out of a well-established tradition in applied embryological research.

We suggest that the specificity of this tradition is due to the German filiation and agricultural scope of zoological research in Mandate Palestine/Israel.

On one side, the German zoological tradition encouraged a comprehensive, systematical, morphological, anatomical and embryological picture of the species under scrutiny, making embryology an unavoidable knowledge for a zoologist.

On the other side, the Zoology Department of the Hebrew University grew out of the former Institute for Biological Natural Sciences of the Agricultural Experimental Station, incorporating in its teaching many of the agricultural concerns of the rising Jewish community.

**Bibliography**


**Short CV**

I am an historian and philosopher of science currently holding a post-doc fellowship at the Jacques Loeb Centre for the History and Philosophy of the Life Sciences at Ben Gurion University of the Negev (Beer sheva, Israel). My training includes a bachelor degree in ancient Greek philosophy at Federico II University of Naples, a master degree in the philosophy of
contemporary developmental biology and a PhD in the history of chemical embryology both defended at Sapienza University of Rome. During these years, I often took advantage of the Erasmus exchange program to spend some long-term research periods in France (Paris IV University and Paris I Panthéon Sorbonne University). This was a great opportunity to become familiar with other methodological approaches to epistemology and history of science and one which later pushed me to combine different disciplinary perspectives to the objects of my research. My current project aims at retracing the historical co-evolution of tissue and organ culture techniques with embryological questions. Living now in Israel and thus having the possibility to access archival material from the Hebrew University of Jerusalem, I chose to focus on the scientific contribution of the Israeli-American developmental biologist Aron Moscona (1922-2009).
The revival of Galen and the problem of anticipating nature

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The questioning of systematic understanding and the emergence of an anti-dogmatic spirit represent some of the changes which brought English philosophy to be appreciated by Enlightenment thinkers in the 1700s. Despite Bacon’s unquestionable contribution, these aspects were also fostered by the revival of Galen’s methodology and the centrality taken on by the faculty of judgment in medicine.

The purpose of my presentation is to highlight how humanistic medicine attributed great importance to avoiding conditions in which the ability of judgment is compromised. Judgment was presented as an instrument which both physician and patient were to acquire, because it allowed to understand Nature’s path and the benefits this could provide. It was indeed established that the route towards reaching this objective consisted in the wise utilization of one’s capabilities, and not in the completeness of one’s knowledge or in the strict adherence to binding procedures.

I will illustrate this point showing how judgment was used as an antidote to two improper forms of “anticipation of nature” which could be translated as excessive adherence to a method (Boyle, Harvey, Sydenham, Willis) or as hypochondria (Elyot, Brooke). These two attitudes were criticized as being the expression of an intellect which, chasing thoroughness, isn’t able to grasp the complexity of the dynamics of Nature.

Short CV

Lucia Randone has a Ph.D from the University of Turin where she is a member of the Research Group on Early Modern & Modern Philosophical and Scientifical Thought. Her research focuses on 16th and 17th Century medicine and philosophy as a humanistic endeavour. She is particularly interested in understanding the importance learned physicians gave to judgment as an instrument to prevent thought from getting trapped in wanting to create a system, and the influence this had on British philosophy.
Under the same stars: astrology as a connecting knowledge between cultures

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Throughout its long history astrology transverse numerous cultures serving as common link between different people, religions and geographies. This practice of various occidental cultures was one of the main hubs for astronomical knowledge. In early modern Europe astrology was embedded in society and in science. It carried a solid heritage from the past, be it the wisdom of the Greeks, the experience of the Arabs, and the clarifications of medieval authors. The early modern thinkers encased it into an acceptable Christian discourse and revised it under the new scientific visions of the World, but astrology’s identity and function remained intact. An example of this process is in the study and teaching of astrology by Jesuit scholars. Despite their religious stand and pivotal role in the counter-reformation, the Jesuits maintained astrology a relevant part of the society’s portfolio of useful knowledges and sciences. This was not so visible to history, in part because astrology was not an evident part of their teaching programme, and in part because for many decades history blinded itself to this topic. Thus, for a long time Jesuits and astrology were view almost as antonym words. However, the case of Santo Antão in Portugal, where astrology stood as topic of the teaching programme, as well as the role astrology played in the Jesuit mission in China, tells us otherwise. This paper will discuss how astrology was considered an essential knowledge for the Jesuit missionaries, and how it was used as a common ground to facilitate the cultural contacts in the Far-East.

Short CV

Luís Campos Ribeiro has a Master in Art History by the Faculty of Social Sciences and Humanities Nova University of Lisbon and is currently working on his PhD in History and Philosophy of Sciences in the Faculty of Sciences of the University of Lisbon. He is a member of the Centro Interuniversitário de História da Ciência e Tecnologia, University of Lisbon His research includes medieval illuminated scientific manuscripts, as well as medieval and early modern history of science in the fields of astrology, astronomy and medicine.
The scientific innovations of the early twentieth century, among which physics was the ‘leading discipline’ or ‘Schicksalswissenschaft’, were all too easily considered incompatible with common-sense notions of physical reality. Einstein’s critics not only found fault with his theory of relativity for its lack of an accessible and stable interpretation, they also criticized it for departing from the principles of classical cosmology, Euclid, Ptolemais, Copernicus, and Kant. A quarter of a century after Einstein had published his work on relativity and about ten years after the Einstein craze had swamped Europe, a polemic work called 100 Authors against Einstein (1933) sought to dismantle Einstein and to attack his public fame. Milena Wazeck, who worked on 100 Authors in her recent book, Einsteins Gegner (Einstein’s Opponents, 2009), identifies three groups of opponents: physicists, philosophers, and so-called “Welträtsellöser” (world riddle solver), all of whom published essays, critiques, and, in short, non-fiction. However, literary fiction and its authors who take up position within this discourse, are less well-researched. In fact, among the opponents was Salomo Friedländer, a writer of fiction, who frequently disguised himself as the Expressionist author Mynona (read anonym backwards). Confronted with a new system of knowledge in conflict with his, Mynona’s resistance to Einstein was intense and satirical, witness the deliberate distortion of one of his characters, Aribert Neinstein. Through a reading of Mynona’s works More Geometrico (1921), Graue Magie (1922), and Nonplusultra (1926), I will show how these works subvert both physical and moral relativity by means of irony and satire, so as to show up the absurdity of Einstein’s alleged worldview in everyday life.

Short CV

Christoph Richter is a PhD candidate (2019-2023) and faculty member of the Literary Theory and Cultural Studies Department at Leuven University, Belgium and the MDRN research unit ‘Literary Knowledge: Modernisms and the Sciences in Europe’. He graduated from Halle University, Germany in 2018 in German studies, British studies, and Geography. His current project seeks to comprehend how writers responded to new astronomical discoveries and interpretations of the universe, which had been accelerating in the course of the nineteenth century. Generally, it aims to arrive at a better understanding of the epistemic function of British and German literature within a European context in the modernist period (1890-1930) and, more specifically, aims to analyse different popular genres and narrative conventions that were used to represent, disseminate and re-imagine new as well as old astronomical observations and technologies. His research interests include nineteenth and twentieth-century literature(s) from a comparative and interdisciplinary perspective, in particular literary modernism and eco-criticism, nature writing, and literary anthropology.
"Development" discourses and material limitations in a context of knowledge transfer between university and industry. A Mexican case study

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The aim of this paper is to analyze and discuss how the discourses on “development” and “modernity”, coined by Western academy in the first part of the XXth century and reinforced by international organizations, such as OECD, have strong impact not only in the design and implementanion of public policies on Science and Technology that favor the linkages between universities and industry, but also, in the everyday practice of scientists and entrepreneurs. The study is based on the analysis of the “Incentives for Innovation Program” (PEI, Programa de Estímulos a la Innovación) implemented in Mexico in 2009 by the Science and Technology Council (Conacyt). The main purpose of PEI was to encourage enterprises of all sizes to invest in Science, Technology Development and Innovation activities by handing them direct funding. The distinctive feature of PEI was that the percentage of the fund was determined by whether or not, the projects were carried out with the involvement of universities or public research centers.

By analyzing the final reports of the approved projects (between 2009 and 2015) and interviewing direct participants of these projects (scientists, entrepreneurs, and members of technology transfer offices in universities), I found that while there is a wide appropriation of the concept of “innovation” and of the expectations of linkages between these two fields, as modeled by international organizations and the Mexican public policy among both, scientists and entrepreneurs; in everyday practices, the process of knowledge transfer is strongly influenced by the economic context, leading to a local understanding of innovation.

Short CV

I was born and raised in Mexico City. I have a bachelor degree in Psychology with a specialization in Social Psychology from UNAM. After that I got a MSc with focus on Educational Research in which I worked on the gender bias working against female social scientists in the biggest university in Latin America. Afterwards I took a couple of years to teach in a high school as well as in a Psychology bachelor program. At the same time I worked as a research assistant in a project of linguistic inequalities. In the past years I have worked on my PhD, in which I focused my attention to the relationships between academia, government, and industry built around a public policy on Science and Technology.
“To the King our Sovereign”: Comparing “Transcultural” Knowledge Production in Works by Manuel Godinho de Erédia and Felipe Guamán Poma de Ayala

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The study of the texts and images produced by mestizo (mixed-ethnicity) and indio (“Indian”, but broadly signifying “indigenous”) writers in the early modern Iberian empires has a long historiographical tradition. However, the comparative study of these materials is still limited by an enduring area studies tradition which tends to divide between the investigation of Southeast Asia and Latin America. This paper aims to join scholars who challenge this division by comparing works by two contemporaneous “indigenous intellectuals” who produced knowledge about vastly different areas of the Iberian world: the first in Portuguese Goa (Manuel Godinho de Erédia, Declaraçam de Malaca e India Meridional com o Cathay, 1613), and the second in Spanish Peru (Felipe Guamán Poma de Ayala, El primer nueva corónica y buen gobierno, c. 1615). This paper aims to view the concept of “mixture” not as an assumed given, but as the starting point of analysis, and to interrogate the extent to which these texts can be termed “transcultural”. Furthermore, to what extent were both authors participating in a shared, global Iberian framework of knowledge production, and how far did their divergent geographic and cultural contexts shape their engagement with this framework? This paper aims to address these questions by analysing three knowledge categories in these works: 1) history, 2) cartography, and 3) ethnography. This paper argues that although these two men possessed a degree of “indigeneity”, this did not inevitably lead them to produce knowledge in consistently “transcultural” ways. Rather, other factors such as the idiosyncratic nature of self-fashioning, the centrality of Catholicism to establishing legitimacy, and the variation between their cultural contexts shaped how these men crossed boundaries between cultural worlds. This paper concludes that global studies of the history of science in the Iberian world have much to gain from a trans-regional approach.

Short CV

Chase holds an MSt in Global and Imperial History from the University of Oxford (2018) and a BA in History from the University of Cambridge (2017). He has interned at the New-York Historical Society, W. W. Norton & Company, and Columbia University Press. He is the co-host of The Global History Podcast. His historical interests center on processes of cultural encounter in the early modern Iberian empires, both in Southeast Asia and the Americas. He works at the intersection of histories of ethnic and racial identity, visual culture, knowledge production, and religious conversion.
Neo-colonial character of digital technologies:
Information Imperialism

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Warwick Anderson thinks that the post-colonial theory mostly attempted to provoke and destabilize "Western" knowledge that is usually perceived as a single and unique knowledge that is objective and globally applicable. However, postcolonial science and technology, as well as modernization, are constantly changing and interfering with other cultures in the age of the “global village” we are currently experiencing.

Bearing in mind post-colonial thinking in this text, I will try to examine the technological hegemony and “know-how” of the imperial powers, as main obstacles for transcultural knowledge. My main concern relates to the information (internet) imperialism, which on the wings of the neoliberal economy makes further differences between the "rich" and the "poor", that is, the "North" and the "Global South". Technologically determined Western Economies through democracy "enrich" other civilizations and bring knowledge in terms of new technologies and digitization. Territorial boundaries have been cancelled, and geography in the digital world is determined by the networks on which the Internet operates.

Methodology of critical discourse and the method of content analysis will be applied in order to evaluate the dominance of internet platforms as products of democracy, but at the same time as means of neoliberal capitalism.

The paper is influenced with David Harvey’s “The New Imperialism”, thus discussing the ideas and main concepts from the authors such as Edward Said, Warwick Anderson, M.I. Franklin, Antonio Negri and Michael Hardt.

Internet platforms have many characteristics of imperial economic, political and cultural power. Hence, Dal Yong Jin calls it "platform imperialism" and in this paper I will try to examine the impact of digital technologies on society and knowledge itself attempting to interpret the neo-colonial, imperial character that these technologies carry with them.

Short CV

I have been awarded with BA degree in International Business with specialisation in Marketing from Nottingham Trent University, Lucca, Italy and with MSc degree in State Management and Humanitarian Affairs from University of Rome 'La Sapienza" and University of Belgrade. I am PhD Candidate in History and Philosophy of Natural Sciences and Technologies at University of Belgrade. My professional development was influenced mostly by acquiring the responsibilities and duties of a Public Relations Manager at the Societe General Bank in Serbia, and while employed by Their Royal Highnesses Crown Prince Alexander II and Crown Princess Katherine of Serbia where my job duties were in regard with the promotion of TRH's work related to humanitarian activities. I have worked in the field of advertising and marketing communications for more than 10 years as Belgrade Office Manager of a regional advertising
agency and having my own agency for a while. I also have experience in teaching, grading, consulting and mentoring which I gained as a Lecturer- Adjunct professor for Service Management-Social Customer Relationship Management and Internet Marketing at American University in Bosnia and Herzegovina.
Conjuring the 'spirit of Laplace': The analytical works of Mary Somerville (1780-1872)

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In the early 19th century, the need to increase the acceptance and utilization of analytical mathematics in Great Britain was keenly felt by a group of mathematicians, who saw it as a remedy to the perceived decline of British science. Thus in 1826, Mary Somerville began preparing what was intended to be a translation of Pierre-Simon Laplace’s *Mécanique Céleste* (printed in five volumes between 1799-1825). Published in 1831 under the title *Mechanism of the Heavens*, this work was received with great critical acclaim. There are, however, many key differences between the work of Somerville and that of Laplace. During the translation process, Somerville focused on preserving ‘the spirit of Laplace’ whilst making it both accessible and palatable to a British readership, through introducing diagrams and ideas of the sublime. Somerville treated but a small subset of the results found in the original work, but expanded and updated many sections by embedding relevant ideas from recent publications, all of which were notably developed outside of Britain.

Whilst the work was thus described as ‘the most complete account of the discoveries of continental mathematicians in physical astronomy which exists in [English]’ (Monthly Notices of the Royal Astronomical Society), it appears to have been commercially unsuccessful. Somerville’s second attempt at encouraging the study and adoption of analysis was instead a qualitative survey of results, titled *On the Connexion of the Physical Sciences*. This book illuminated the fecundity of the so called analytical methods as applied to physical astronomy, without presenting the mathematics itself.

Through a comparison of Somerville’s two works, I will demonstrate how the *Mécanique Céleste* was shaped and repurposed during its transition into the British scientific community, and thus identify what constituted this deeply desirable ‘spirit of Laplace’.

**Short CV**

I am a doctoral candidate in the History of Mathematics at the Open University, UK, where my research looks at the circulation of mathematics in Great Britain and France at the beginning of the nineteenth century. In the context of the ‘decline’ of English science and mathematics, I focus on four differential calculus texts written by Mary Somerville (1780-1872) in the 1830s, and consider how she interpreted and repurposed the knowledge she found in French maths texts to make it suitable and palatable for British readers. I am also interested in how Somerville’s work was affected by her gender and social status, including how they affected her access to esoteric knowledge in an increasingly professionalized environment; the types of research output she produced; and the ways in which Somerville was subsequently remembered by the mathematical and scientific communities.
From Religion to Science: Turning a Monastery into a Field Hospital (Italy, 1796-1797)

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https://eui.academia.edu/PaulArthurTortosa

Most narratives of the first Italian campaigns emphasise the military prowess of a young General: Napoléon Bonaparte. I argue in this article that victory was not primarily about individual leadership, but rested instead on medical success. Indeed, throughout 18th-century conflicts, microbes killed more soldiers than gunshot wounds. Therefore, hospitals were designed to solve a military problem by treating thousands of sick soldiers. However, unlike most civilian hospitals, field hospitals are temporary and mobile structures, which means that they largely rely on local resources; yet, they are also supposed to comply with military legislation. As a consequence, founding military hospitals in a foreign land was far from an obvious endeavour; I will argue in this paper that it was a threefold challenge: a scientific one, an administrative one and a political one.

Since lay buildings had to be transformed into medical institutions, doctors needed to creatively use their knowledge to create adequate spaces for medical practice given architectural and material limitations. Field hospitals were predominantly established in churches, which were dark and closed, whereas hospitals at the time had to be sunny and well-ventilated. Indeed, in the late 18th century, medicine was environmental, meaning that doctors thought that most diseases came from dirt and atmospheric unbalance and consequently paid great attention to have cleanness and fresh air. Doctors therefore recommended quick architectural modifications based on their scientific knowledge.

The ability to supervise field medicine constituted the main administrative challenge, since French health officials could not check directly if the new hospitals complied with military laws or indeed followed medical prescriptions. This is why they sent a health inspector to Italy, Pierre Groffier, who wrote long and detailed reports about field hospitals. These reports could be understood as a paper technology aimed at making the hospitals’ very materiality controllable by remote observers. They show how the scientists’ concern about the material conditions of their practice was translated into an administrative text that circulates from the warzone to the capital.

Finally, the story of field hospitals shines a light on the role played by local circumstances and hazards on the practice of medicine. The massive introduction of sick bodies into the city was perceived as a major sanitary threat by the Italian population: what looked like a scientific place for curing the sick from a French perspective was seen as an imperial symbol and a source of contamination through Italian glasses. That is why military hospitals became a prime target during uprisings. This threat had to be taken into consideration, leading to the arming of patients, which radically changed the doctor/patient relationship compared to civilian or fixed military hospitals.

To conclude, stepping aside from Foucauldian narratives of hospitals as strong disciplinary institutions, this paper seeks to analyse field hospitals as fragile entities, whose history is one of tackling a wide range of material issues.
Short CV

Paul-Arthur Tortosa is a 4th year PhD researcher at the European University Institute and the EHESS. He works under the Supervision of Stéphane Van Damme and Rafael Mandressi on the history of epidemics in Italy under Napoleonic rule (1796-1814). He uses the methodology of microhistory in order to write a social and political history of public health. After a semester at the University of Manchester, he is now a TA at Sciences Po Paris.
Translation of Atlas Maior into Turkish

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Justinus Colyer (1624-1682), the Dutch ambassador to Istanbul, set out for his mission in Istanbul in 1668, the ultimate aim of which was to obtain prerogatives so that the Dutch ships could sail the Mediterranean Sea under their own flags. Customarily, he brought a set of gifts so as to present the Sultan Mehmed IV (r. 1648-1687), the Grand Vizir and various officials. Among them was the most luxurious atlas ever published: Atlas Maior of Joan Blaeu (1596-1673). Seven years later, Sultan Mehmed IV (r. 1648-1687) ordered that it be translated into Turkish. Abu Bakr al-Dimashqî (d. 1691), mudarris and geographer, embarked upon its translation by the favour of Grand Vizir Fazıl Ahmed Pasha (1661-1676). Abu Bakr’s ten-year endeavour resulted in an eleven-volume book called Nusrat al-Islam va’l Surûr fî Tahrîr Atlas Mayor (1685) just as the Latin version of Atlas. Upon its completion, he also prepared an amended version of the translation in two volumes called Mukhtasar Nusrat al-Islam. Even the eleven-volume work, however, was not a verbatim translation. Abu Bakr abridged and altered some parts of the text and the maps of Atlas Maior. In this context, this paper aims to investigate how and why Abu Bakr transformed the text and the maps of Atlas Maior during the translation process by touching upon various instances.

Short CV

Kaan Ucsu is a PhD candidate in the Department of the History of Science at Istanbul University. His research is mainly focused on the history of geography and cartography in the Ottoman Empire, both in the pre-modern and modern era. His doctoral project, which is expected to be completed in early 2020, is on the translation of Atlas Maior of Joan Blaeu (1596-1673) into Turkish in the late seventeenth century. In addition, he is also interested in intellectual history and occult sciences.
Coronelli’s Terrestrial Globes as Milieux of Knowledge, or How to Fix an Ever-Changing World on an Unstable Sphere (1680-1715)

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In 1683, the Venetian cartographer Vincenzo Coronelli completed a pair of giant cosmographic globes, commissioned by the Cardinal d’Estrées for his king Louis XIV. Stored for twenty years at the Cardinal’s residence, the globes were eventually exhibited in 1704 at the palace of Marly, then center of the Louis-quatorzian power. Suffering from the evolutions of early modern geography but also from the outrages of time, Coronelli’s terrestrial globe was already outdated when it was exposed. The surface of the globe was not kept up-to-date; the painting slowly faded away, thus changing the face of the world. However, the materials and techniques employed in the making of the globe had been patiently developed by Vincenzo Coronelli, a technician concerned with the durability and quality of the object he was building for the Sun King. The way the structure of the sphere was constructed, the canvasses and plaster employed to create a smooth surface, the paint, and finally the various varnishes applied to protect the globe were all materials which influenced this particular place of knowledge. The outrages of time were at the heart of the concerns of Marly’s globe-keeper, François Le Large who watched over it from 1704 to 1715. Throughout his work explaining the figures of the globe, he highlighted the missing updates and warned against any damage to the painted surface while also recording, in his own manuscripts, the pieces of geographical knowledge threatened by disappearance. The theoretical discourse of the cartographer who claims to suspend the world as it appears on the surface of a globe is weakened when considering the material sand its vulnerability. In addition, the way the globe is read, (re)interpreted and understood reveals the changing nature of the geographical object, oscillating between art and science, between fact and fiction. Thus, by taking into account all the stages stretching from the construction to the reception of this geographical object, a milieu of knowledge appears: a world of social interactions, intellectual debates, vitiated atmospheres that gradually erode the surface of objects to the point of damaging their integrity and blurring their meaning.

Short CV

I am a 5th year doctoral researcher from the European University Institute and the EHESS. My research project is concerned with early modern French geographical culture and its place in education as well as social interactions at the court of Louis XIV. In my dissertation, I focus on Vincenzo Coronelli’s great globes, their reception and use among the French elite. I work under the supervision of Jorge Flores (EUI) and Christian Jacob (EHESS).
Both Raoul Haussmann and D.H Lawrence eschewed Einstein’s theory of relativity in favor of alternative cosmological models in which human perception is central. In his text *Trommelfeuer der Wissenschaft* (1931), Raoul Hausmann addresses Einstein in a polemic tone. He argues that Einstein is probably the most popular but misunderstood figure of his age and that his theory is based on a calculation error. He describes Einstein as an incomprehensible ‘idol’. Instead of representing the new cylindrical shape of an Einsteinian world, Hausmann prefers to believe in a scientifically discredited yet popular glacial cosmogony from the Austrian scientist Hans Hörbiger and imagines in *Maikäfer Flieg!* (1921) his own cosmogony. In D.H Lawrence’s text *Fantasia of the Unconscious* (1921), Lawrence argues for a ‘theory of human relativity’. He adheres to a ‘subjective science’, in which men and life are at the epicenter of a vitalistic cosmogony. However this reaction was not directly aimed at Einstein’s relativity theory, but more at the overall positivist discourse which had received a boost because of Einstein’s popularity. Writers such as Hausmann and Lawrence resisted Einstein’s theory in order to break free from the constraints of logical positivism. They saw a danger in the widely accepted theory of relativity being interpreted as capable of explaining everything. By offering alternative cosmogonies, Hausmann and Lawrence dared to question the popular reception of Einstein’s theory of relativity and replaced it with their own imaginative cosmos.

**Short CV**

Abigael van Alst is a French and Dutch pursuing a PhD at KU Leuven focusing on the interactions between cosmology and modernist literature.

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Codiphagia on the *Libellus de Medicinalibus Indorum Herbis* (1552)

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The aim of this proposal is to set up the notion of “codiphagia”, coined by the philosopher Bolívar Echeverría (2001, 2005), on the *Libellus de Medicinalibus Indorum Herbis* (1552) as a significative example for the transmission and transformation of knowledge during the colonial Latin American times. The *Libellus* is the first herbarium produced in the New World, by both Indigenous scholars of the “Colegio de Santa Cruz de Tlatelolco” in Mexico City: the medic Martín de la Cruz, and the lettered Indian Juan Badiano which translates the contents from Náhuatl to Latin. The *Libellus* presents several -visual and written- references to medicinal plants of New Spain, where it is acknowledged how Indigenous cultural contents are explained, transformed and adapted through the European model (medieval herbarium). Our "codiphagic" reading on the *Libellus* goes to expose three central elements for analysis. First, to establish the New Spain (and colonial Latin America) into a cultural context related to several processes of transference and appropriation of knowledge and technologies from Europe to the New World and vice-versa. Second, to analyze the intellectual exercise of the cultural translation made in the design and manufacture of the *Libellus* in the Colegio de Santa Cruz de Tlatelolco. Third, to display a questioning about the place of this work in terms of a new reading which engages the History of Science in Latin America following a critical perspective, embracing the colonial background and the circulation of knowledge at a global level in the early modernity. Finally, we propose to reconsider and gather these three elements as fundamental in order to build a “codiphagic” interpretation on the *Libellus* contents, shedding light to new questioning horizons.

**References:**


**Short CV**

Alejandro Viveros is a scholar of the Latin American Cultural Studies Center at the University of Chile. He is PhD in Latin American Studies (University of Chile), Master in Philosophy (University of Chile) and Bachelor in Philosophy (University of Chile). His research subjects develops a critical approach towards Latin American colonial studies using translation studies, critical theory and contemporary Latin American philosophy. Currently, he is working on a research project focused on conviviality and political philosophy in colonial indigenous chronicles of New Spain (1570-1640).
The Foundations of Evolutionary Cell Biology

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There is a renowned focus on military, medicine and agriculture in Cold War science. The disciplines of evolutionary biology and cytology remain on the outskirts. When the British evolutionary botanist Irene Manton transitioned from traditional light microscopy to the electron microscope, after the Second World War, her disciplinary identity was in flux. As a plant cell cytologist, who traced the evolutionary histories of ferns (and some flowering plants), she worked at the cutting edge of her field. It is only in retrospect that her specialism has been designated 'experimental taxonomy' (constituting a merger of traditional taxonomical practices with newer experimental methods). This paper considers the fate of this nascent area of investigation, in the context of its inevitable post-war encounter with a new and more powerful microscope — the electron microscope.

In the changing post-war disciplinary landscape, this apparently obscure area of research takes on a special significance, in demonstrating a case of reciprocal knowledge transfer, between the University of Leeds, UK, and the American based Rockefeller Institute. It presents a revised viewpoint on the activities of the Rockefeller Foundation, well-known for its role in the transfer of physical technologies (such as the electron microscope and the ultracentrifuge) into biology, prior to the war, and for its part in forging the new post war discipline of Molecular Biology.

The Rockefeller Foundation is further known for its advocacy of teamworking and collaboration and this case presents us a transnational example, but with a hard edge. The Leeds Botany and Rockefeller Institute laboratories respectively, constitute an example of technological upscaling — a microscopical "arms race" (both aided and complicated by RF funding policy), according transnational laboratories increasing power and leading to a mutually beneficial contribution to new knowledge building in evolutionary cell biology.

Short CV

I am currently undertaking a PhD in the History of Science in Leeds, where I am writing about the University's first female professor in science, Irene Manton. Manton worked in the Botany Department at Leeds between 1946 and 1969. My research tracks her Leeds career by focusing upon her research with the electron microscope. Manton was an innovator in biological electron microscopy and through the 1950s and 1960s, she made fundamental discoveries about the cell. The scope of this conference incorporates the theme of 'transnational knowledge' which is highly relevant to my work on Irene Manton. As well as looking at her work within the Leeds institution, my research considers relations between Leeds Botany and the Rockefeller Foundation (as a potential funding body) and its associated research institute??the Rockefeller Institute (now Rockefeller University). The Foundation, as a colossal funding magnate and employer of first-rate scientists, has a reputation for its role
in being a disseminator of knowledge. My thesis revises this viewpoint through an analysis of Manton's earliest work with the electron microscope. This research has uncovered a case of reciprocal knowledge transfer in biological electron microscopy, between the Leeds Botany Department and the Rockefeller Institute, New York.
Knowing the Enemy: Polish Émigré Scholars in American Sovietology after 1945

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The beginnings of the Cold War posed a challenge to political decision makers in the US: Until World War II Eastern Europe had been a marginal field of research in American academia. In order to overcome this lack of expertise, new institutes and research centers for East European Studies were established and generously funded. Since there were only few domestic experts, émigré scholars from Eastern and Central Europe constituted a vital human resource in this field. Scholars from Poland who had come to the United States in the course of World War II or the Communist takeover gratefully accepted these career opportunities, and in the course of their integration into the American academic community they gradually assimilated into American society. But already during the war, they had also founded research institutions of their own, such as the Polish Institute of Arts and Sciences of America in New York, which were supposed to continue their native scholarly tradition. They sustained networks among each other and with Polish émigrés in other countries in order to promote their own historical narratives and mental maps within the public spheres of the Western world. This particularly concerned their views on Russia and the Soviet Union. Against this background, the paper explores to what extent narratives and concepts from the Sovietology of interwar Poland found their way into the American discourse. It takes into account that there were obstacles to the circulation of knowledge, and that knowledge has to change in order to circulate. Therefore, particular attention will be paid to the questions of how the process of assimilation affected the émigrés’ scholarly practices, and which factors determined the acceptance or rejection of their ideas by the American expert audience.

Short CV

2010-2013, B.A. studies in History and Political Science at the University of Freiburg; 2014-2016, M.A. studies in Modern European History at the Humboldt University of Berlin and the University of Warsaw. 2011-2016, scholarship holder of the German Academic Scholarship Foundation. 2012/2013, student assistant at the Chair of Modern and East European History of the University of Freiburg. Since December 2016, research assistant at the Institute for the Culture and History of the Germans in Northeastern Europe, Lüneburg; from April to September 2017, recipient of the Humboldt Research Track Scholarship. Since November 2017, research associate and doctoral candidate at the Graduate School for East and Southeast European Studies, Ludwig Maximilian University of Munich.
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