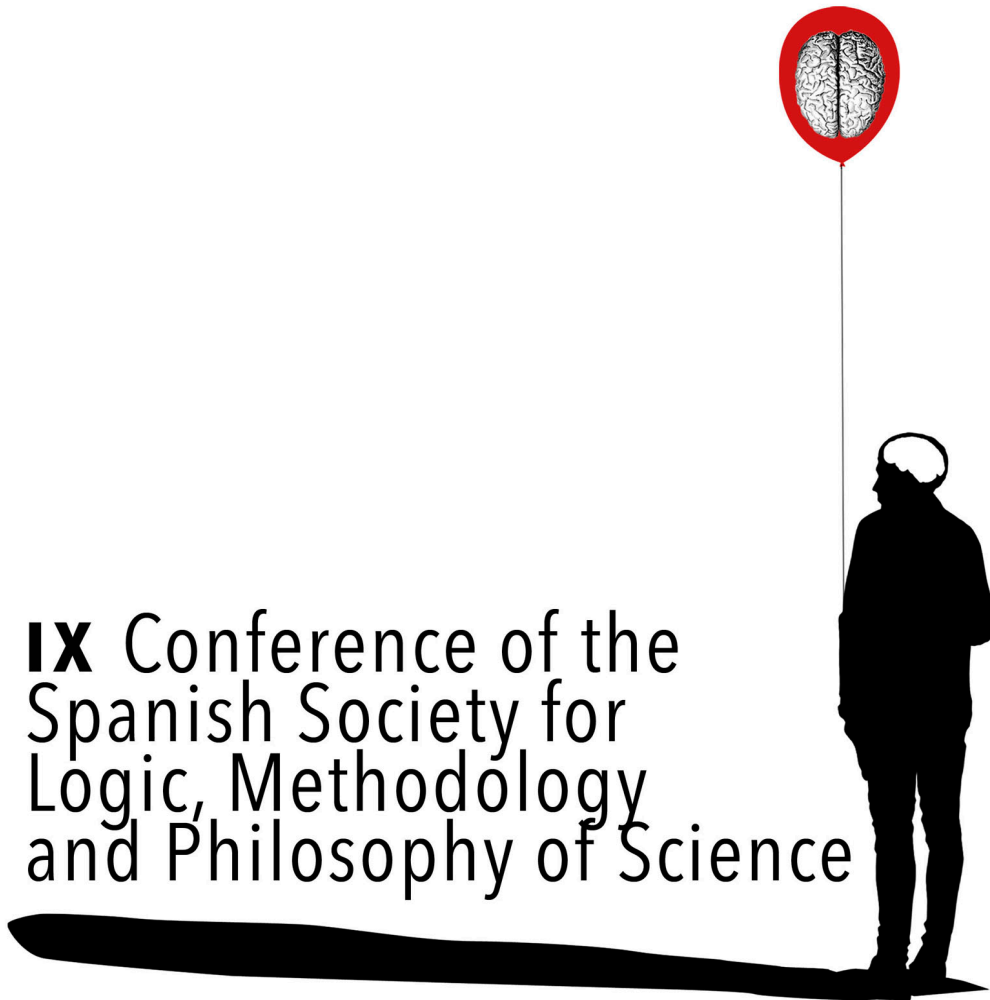


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Talks/Comunicaciones

A. Logic, History and Philosophy of Logic and Argumentation

Aliseda, Atocha (Universidad Nacional Autónoma de México). *Epistemología Médica: Significado y Uso de las Afirmaciones Causales*

Desde sus inicios, la Medicina Basada en Pruebas (Evidence-based Medicine) alude a una cuestión clave, esta es, la integración de la experiencia y pericia en la clínica con la evidencia científica, una tarea esencial en la práctica del (buen) razonamiento clínico. Sin embargo, no está del todo claro cómo es que esta integración se construye.

En esta contribución, analizo el reto integrativo a través del análisis de las afirmaciones causales en la práctica clínica durante el proceso de construcción de un diagnóstico. Analizo aspectos como el tipo información que transmiten y el rol que juegan las afirmaciones causales en tanto evidencia externa, así como las maneras en que interactúan con otra información pertinente al caso clínico y ejercitan su papel como recursos heurísticos.

En particular, analizó la afirmación “fumar causa cáncer de pulmón” para un caso clínico particular. Ofrezco además un análisis de los conceptos de causalidad y de evidencia en medicina, particularmente del estatus epistémico de los enunciados causales y de su potencial como guías heurísticas.

Barés Gómez, Cristina (University of Seville). *Razonamiento experimental e inferencia en la práctica médica*

La medicina está considerada como una ciencia experimental. Podemos explicar los procesos desencadenadores de lo que no es la situación de bienestar del cuerpo humano mediante una supuesta enfermedad. Esta enfermedad planteada en el diagnóstico médico sería una hipótesis luego contrastada experimentalmente. La contrastación empírica es una de las bases fundamentales de la medicina moderna que nos aporta seguridad y fiabilidad. Sin embargo, ¿se realizan siempre las pruebas médicas para el tratamiento de los pacientes? Si no es el caso, ¿sigue siendo un razonamiento experimental? ¿Cuál es la diferencia en ambos casos a nivel inferencial? En esta comunicación vamos a analizar el diagnóstico médico desde un análisis de la inferencia comparando un diagnóstico con y sin pruebas clínicas. Consideramos que la inferencia es abductiva y la analizamos usando el modelo G-W de Gabbay y Woods (2005,2013) para la abducción comparándola con el ST de Magnani (2001). Seguidamente usaremos la lógica dialógica para destacar los aspectos fundamentales de esta inferencia. La lógica dialógica nos permite aproximarnos a la abducción desde un punto de vista pragmático. Pretendemos analizar sus aspectos más destacados tales como la introducción del agente, la acción y la retractabilidad.

Bertran-San Millán, Joan (Czech Academy of Sciences). *Frege's adoption of the distinction between concept and object*

I discuss Frege's philosophical transit from Begriffsschrift to Grundlagen. I focus on the replacement of function-argument scheme with the concept-object scheme, which has received virtually no attention in historical studies.

Begriffsschrift's reception and Frege's response to criticisms are taken to be the main reason for Frege's adoption of the concept-object scheme. I claim that there are two additional causes of Frege's move. First, in the context of the deployment of the logicist project, Frege noticed the limitations of Begriffsschrift's formal system and the need to establish an ontological foundation - based on the concept-object scheme - that allowed him to provide a definition of natural number. Second, the function-argument scheme provided an inadequate analysis of atomic statements.

I defend that the concept-object scheme should not be seen as an extension of the function-argument scheme. What is essential to the notion of concept is its unsaturatedness, which is never attributed to Begriffsschrift's notion of function. From this stance I argue that two features show the virtues of the concept-object scheme: first, Frege's notion of concept sets a foundation for the principle of the priority of judgements over concepts; second, the concept-object scheme allows an adequate semantical analysis of categorical statements.

Carrara, Massimiliano (University of Padua), Lando, Giorgio (University of l'Aquila). *Contingent Composition as Identity*

A recurring pattern in the debate about Composition as Identity (CAI) is to focus on a feature of identity and ask whether composition satisfies this feature. CAI is thereby assessed against the background of a standard treatment of the notions at stake. This pattern is followed for example when the problem arises whether a whole is indiscernible from its parts. By contrast, when the discussion focuses on the Necessity of Identity, the current literature often resorts to non-standard views on modality, such as the theory of counterparts. We propose that it is methodologically preferable to analyse and evaluate CAI against the background of a standard view of modality, such that the same entity is allowed to exist at more than one possible world. The result of this analysis is that CAI is forced to introduce a world-relative kind of identity, which is different from standard identity and to claim that composition is this kind of world-relative identity. The resulting variety of CAI (Contingent Composition as Identity, CCAI) has never been discussed in the literature. CCAI manages to preserve the contingency of composition but is incompatible with so-called strong CAI. CCAI is better classified as an interesting form of weak CAI.

Cenci, Alessandra (University of Southern Denmark), Hussain, M. Azhar (University of Sharjah). *Robustness, equity and evidence-based policy in public health*

This communication argues that the adoption of robustness, robust analysis in economic and health evaluation could help to attain fundamental scientific as well as societal goals once robust evaluations/knowledge produced is applied/implemented at policy level. This is due to their formal properties, some operational advantages, an intrinsic capacity to rely on pivotal epistemic and non-epistemic values for science (evidence, consistency, objectivity-impartiality, equity, fairness etc.). By reviewing later empirical applications of robust methods, we illustrate how these approaches boost objectivity-impartiality of judgments behind operational choices and thus, consistency-generalizability of results/knowledge. Likewise, by relying on a plurality of objects of practical value (multiple analytical variables), they increase accuracy of evaluations but also better support claims of equity in public health research and policy making.

Conclusions said that above approaches are valuable to supplement the evidence-based policy method, exclusively based on epistemic values (evidence, efficacy-efficiency), with vital non-epistemic considerations (objectivity-impartiality, equity, fairness). Here, epistemic and non-epistemic values would be complementary aspects of improved assessments and policy procedures aimed at improving the health outcomes of vulnerable individuals and/or social groups in fair societies.

Cobrerros, Pablo (University of Navarra), Égré, Paul (Insitut Jean-Nicaud, CNRS), van Rooij, Robert (University of Amsterdam), Ripley, David (Monash University). *Inferences and metainferences*

The logic ST has been proposed in different places to deal with paradoxes. There is something very interesting about ST: that it is classical logic for a classical language, but that it provides different ways of strengthen classical logic to deal with paradoxes. For example, the logic STT (ST for a language with a transparent truth predicate and self-referential sentences) is a conservative extension of classical logic. That is, STT is not only non-trivial, but it has exactly the same valid inferences as classical logic for the T-free fragment. How is this possible? Well, because ST preserves all classically valid inferences but not some classical \textit{metainferences}. The question then arises of exactly which are the metainferences of ST. In their (2015) paper Eduardo Barrio, Lucas Rosenblatt and Diego Tajer show that ST metainferences are closely related to LP inferences. In these notes we review their result and try to highlight the connection in a broader context.

Domínguez Armas, Álvaro (Universidad de La Laguna). *La argumentación en torno a la desobediencia civil*

Normalmente se ha abordado el estudio de la desobediencia civil desde una perspectiva de la filosofía política o jurídica. Sin embargo, este acto sociopolítico ilegal, público, no violento y consciente, realizado con la intención de frustrar alguna ley o programa de gobierno; se puede visualizar como una propuesta argumentativa propia de la actividad política. Para ello, es necesario hacer una revisión de las perspectivas pertinentes que pueden dar cuenta de su justificación como estrategia política, partiendo de las siguientes máximas: (1) se ha de concebir como parte del discurso público, entendido como una dimensión donde se desarrolla la interacción comunicativa que es accesible, concerniente y está a disposición de todos, basada en el uso experto de la razón y, además, (2) atender a los fines que estructuran su desarrollo argumentativo, en especial, a la justificación, la persuasión racional, el examen crítico y los propósitos de la argumentación colectiva.

Fernandes, Diego (Universidad de Salamanca). *Expressiveness comparisons between logics: an investigation of some intuitions and formal criteria*

In the literature, it is common to make comparisons of logics in terms of expressive power. Unfortunately, these comparisons are often made on imprecise grounds and with varying criteria. Now when people are careful enough to define precisely which concept of expressiveness is being used, there is generally no further comment on it, e.g. intuitive motivations or why this particular one was chosen. This gives us reason to think it is not quite known that there can be many prima facie plausible but conflicting ways to compare expressiveness of logics.

Indeed, the literature on the subject is scarce. There is a traditional criterion for expressiveness (EC), issuing from the Lindström theorems. A few years latter, Ebbinghaus presents briefly a slightly laxer one (EE). Shapiro questions the adequacy of EC due to its strictness, and gives two broader criteria. Recently there was two even wider proposals by Väänänen and García-Matos and by L. Kuijer.

The aim of this work is to improve the considerations on the concept of relative expressiveness by selecting some intuitions, comparing putative formal criteria for them, analyzing their material adequacy and possible alternatives. Moreover, it will be shown that the recent wider criteria are not adequate.

Grimau, Berta (University of Glasgow). *Cat, Cats, Catses and Beyond: In Defence of Higher-Level Plural Logic*

Plural Logic is an extension of First-Order Logic with plural terms and quantifiers. Importantly, this formalism has the expressive power of Monadic Second-Order Logic while committing us to nothing more than a first-order domain of objects. This makes it a powerful tool with various applications in philosophy and the foundations of mathematics.

Some authors believe that Plural Logic can be extended into a more expressive language, Higher-Level Plural Logic, by adding higher-level plural terms and quantifiers to it. The idea is that second-level plurals stand to plurals like plurals stand to singulars (analogously for higher levels). Allegedly, this language is equi-interpretable with type theory while, again, committing us to nothing more than the ontology of a first-order language.

However, while the notions of plural reference and quantification enjoy widespread acceptance today, their higher-level counterparts are seen with scepticism.

In this talk, I argue for the legitimacy of the notion of higher-level plural reference and its incorporation into a formalism. First, I show that some natural languages clearly contain higher-level plurals. Second, I show that these expressions are not in general paraphrasable away. Finally, I argue that any attempts to semantically analyze them away are bound to be unsuccessful.

Herrera González, José Rafael (Universidad de La Laguna). *Las lógicas híbridadas como herramienta formal para el desarrollo de sistemas lógicos temporal-epistémicos*

En nuestra presentación, tras hacer referencia a las principales aportaciones que se han realizado en materia de combinación de sistemas modales temporales-epistémicos, analizaremos en profundidad el origen y tipos de dificultades que se nos presentan cuando pretendemos desarrollar este tipo de sistemas lógicos. Finalmente, mostraremos las ventajas que acarrea el recurrir a las lógicas híbridadas para configurar dichos sistemas.

Asimismo, haremos referencia a los aspectos ontológicos y epistemológicos de los desarrollos formales presentados, con el fin de mostrar cómo las nociones de conocimiento, creencia y tiempo formalizados con nuestras propuestas, resultan muy próximos a las concepciones de dichas nociones que solemos mantener en multitud de contextos relevantes para la reflexión filosófica.

Martin, Ben (University of Bergen). *Identifying Logical Evidence*

With the recognised weakness of historically prevalent account of logical knowledge, in terms of intuition and analyticity, a renewed interest in logical epistemology has been sparked. One recent suggestion is that we come to know logical claims similarly to how scientists know truths about the world, through abduction. However, at present, it's unclear exactly which data logical theories should have to explain, and how we should weight the competing strengths and weaknesses of logical theories. This talk proposes looking at historically important logical disagreements, and extracting from these debates an account of which data successful logical theories must accommodate.

Martínez Fabregat, Silvia (University of Valencia). *Instagram y la pereza arumentativa*

En los últimos años, la Teoría de la Argumentación ha visto en el espacio virtual una nueva cantera de actos argumentativos que han sido objeto de diversos estudios. Planteamos, en primer lugar la forma que, predominantemente y con más éxito, han adoptado estos para, a continuación, recoger las posibles características que adquiere la argumentación cuando esta se traslada al ámbito de las redes sociales. Por último, valoraremos críticamente si su uso plantea un renovado interés por las prácticas dialécticas entre el público general.

Martínez Fernandez, José (Logos, University of Barcelona), Martí, Genoveva (Logos, University of Barcelona). *Four-valued semantics for languages with two sources of pathologicity*

Three-valued logics are standardly used to formalize gappy languages, i.e., interpreted languages in which sentences can be true, false or neither. We would like to explore how to build a four-valued truth-functional semantics for a language which contains two different sources of semantic pathologies that generate two different types of gappy sentences. We will concentrate on languages that contain (i) sentences that lack classical truth value because they do not express a proposition and (ii) sentences that do express a proposition but, due to some deficiency, are neither true nor false. The semantic values will be $\{0,1,2,3\}$, with 0 (resp. 1) being assigned to sentences that express a false (resp. true) proposition, 2 to sentences that express a neither true nor false proposition and 3 to sentences that do not express a proposition at all. The main four-valued logic, Belnap-Dunn logic, will be discarded as a possible semantics, as $2 \& 3 = 0$, against the interpretation of the values. The search for a semantics will be conducted among the operators that are monotonic on the order $3 < 2, 2 < 0, 2 < 1$. We will determine the best available options and discuss some of their properties.

Michon, Marie (IHPST - Université Paris 1 Panthéon Sorbonne). *Emotions without language. The case of infants and animals*

The cognitivist hypothesis considers emotions to be dependant of language and this raises evident issues, namely the famous one in the fact that infants and animals do not have language but have emotions nonetheless. I aim to challenge the cognitivist view to show that there are ways to decorrelate emotions and language without losing emotional content nor quality of argumentation. Many theories admit two kind of emotions that can be understood in developmental terms and used to account for emotions without language. Issues remains because discussing development entails that a kind of evolution is possible, I shall discuss this problem. I will discuss the cases of infants and animal separately because the dissimilarities between them are on an ontological level. I will also argue that the fact that those entities have beliefs without having language is an argument for emotions as reactions to mental representations of the world.

Moreno Gomez, Manuel Crescencio (Universidad de Salamanca). *Existence as a property of intensions*

This study is based on the thesis that “existence” is a proper predicate when applied to intensional concepts and not to individuals. In support of this thesis we offer two accounts: an informal one and a formal one. The informal account is a philosophical justification of the thesis. The formal account presents a formalization of the predicate of existence in the language of an Intensional Hybrid Type Theory with a constant domain model. Prior to the definition of existence we have introduced a predicate of denotation and a predicate of location. Both of them are shown to be necessary for defining our predicate of existence.

Moreno Zurita, Alba (University of Granada). *Expressivism: The Frege-Geach Problems and new goals*

The Frege-Geach problem has occupied an important position within the expressivist debate. Sometimes, this problem has been considered as one of the strongest objections to classical expressivism and a reason to dismiss any version of it as a semantic alternative. In other cases, this problem has served as a motivation for the proposal of certain contemporary varieties of expressivism.

The aim of this paper is to defend that there are at least two ways (Interpretation A and Interpretation B) to understand the so-called Frege-Geach problem and show that, within the contemporary expressivist options, the hybrid forms of expressivism are not affected by any of these two versions of the problem. Interpretation A touches on the truth-conditions of a certain type of expressions: those including evaluative terms. On the other end of the line, Interpretation B deals with the distinction between the content and force of a proposition. Both interpretations showcase the fact that we are facing two problems which are by no means unrelated but imply different theoretical matters: on the one hand, we must account for the propositional content, and on the other hand, we must make sure said propositional content is stable.

Orellana, David (UNED). *La lógica del siglo XIX desde la perspectiva de Edmund Husserl y su fenomenología*

La idea clave de nuestra exposición tiene que ver con localizar el comienzo de la fenomenología husserliana en el proyecto de revisión crítica de la lógica tradicional del siglo XIX a partir de una concepción trascendental de la disciplina lógica misma. A partir del análisis de las obras de Husserl en que se trata la temática lógica (Prolegómenos, Investigaciones lógicas, Lógica formal y trascendental, y Experiencia y Juicio) se pretende ofrecer la visión particular del autor acerca de la historia de la lógica desde Aristóteles. La fenomenología aparece así del intento por reformular la lógica del siglo XIX desde parámetros subjetivo-trascendentales, fenomenológicos. Para ello, Edmund Husserl emprende a lo largo de esta selección bibliográfica su proyecto de fundamentar la lógica, entendida como teoría de los principios primeros de la ciencia, desde la fenomenología trascendental. Todo ello dio pie, en el XIX, a debates en el mundo académico acerca del papel del sujeto en la conformación de sistemas formales de pensamiento tal y como defendía el formalismo psicologistaimperante. La solución del profesor de Friburgo fue clara, a través de la crítica a la lógica formal, superación de la lógica tradicional por la lógica trascendental allende el simbolismo matemático.

Ostale Garcia, Julio (UNED). *Brouwer and Weyl on mathematical existence and existential quantifiers*

In 1920-1925, Brouwer and Weyl happened to agree on rejecting the validity of the principle "There is an x such that $F(x)$ or there is not an x such that $F(x)$ ". But they did so based on very different reasons. It is the aim of this talk to clarify them, with an emphasis on their respective treatments of mathematical existence and existential quantifiers.

Pascual, Carmen (Universidad de Valladolid). *Déficit de conocimientos médicos y no fallos en las estrategias de razonamiento como principales responsables de los errores diagnósticos*

Los estudios de la psicología cognitiva nos han revelado que los humanos no somos razonadores probabilísticos naturales. Desde la publicación de Judgment under Uncertainty: Heuristics and biases por Tversky y Kaneman en 1974 se ha tratado de comprobar nuestra frecuente utilización de

heurísticos y su tendencia a producir errores en la estimación de probabilidades. Los heurísticos no son fuentes de error para todos los autores. G. Gigerenzer, entre otros, los considera herramientas adaptativas, acuñando el término de fast and frugal heuristics.

Los modelos duales postulan dos fases en el proceso cognitivo. La primera, rápida y automática, engloba el reconocimiento de patrones y el uso de reglas heurísticas. La segunda, rigurosa y reflexiva, corregiría las hipótesis de la primera.

En este texto se argumentará en contra de la asunción de que la mayoría de los errores médicos son debidos al uso de heurísticos y a insuficiente revisión analítica. Se consideran resultado de déficit de conocimientos y de su estructuración, en particular de los adquiridos por la experiencia. Estos conocimientos equivaldrían a los Illness Scripts de B. Charlin e incluyen reconocimiento y discriminación de patrones, formación de categorías y secuencia de acciones que cada tipo de problema médico requiere para su diagnóstico.

Sánchez, Carmen (Universidad Complutense de Madrid), Gherab Martín, Karim (Universidad Rey Juan Carlos). *Lógica y razonamiento no lingüísticos: el ejemplo de los gráficos existenciales de Ch. S. Peirce*

El propósito de esta comunicación es atraer la atención sobre la principal propuesta de elaboración de una lógica no lingüística: los gráficos existenciales de Ch. S. Peirce. Dentro de su proyecto semiótico estos gráficos se clasifican como un tipo de signo icónico: el “diagrama”, cuya característica esencial es que guarda una relación de semejanza estructural – isomorfía -con el objeto de su representación. Comúnmente los diagramas han sido considerados como una herramienta auxiliar, secundaria y prescindible, puesto que se han empleado para presentar de forma simplificada expresiones formales complejas. No obstante, vamos a defender que la diagramatización de las fórmulas y argumentos lógicos no constituye una simplificación, sino un aglutinamiento que puede revelar, a través de un razonamiento no lingüístico, estructuras comunes a las expresiones representadas diagramáticamente.

Santos, Gonçalo Baptista (Universidade de Lisboa). *The possibility of unrestricted quantification*

I discuss three ways of understanding unrestricted quantification. Namely, a contextualist approach according to which quantification is always subject to contextual restrictions, a modal approach according to which unrestricted claims should be interpreted in modal terms and an intuitionistic approach according to which the range of our unrestricted quantifiers should be understood as a generating principle. I also argue that the intuitionistic understanding of unrestricted quantification has significant advantages over the other approaches.

Sforza Fogliani, Maria Paola (Scuola Universitaria Superiore IUSS Pavia – NEtS Center). *Revising Logic: Anti-exceptionalism and Circularity*

According to anti-exceptionalism (AE) about logic, logical laws do not have any epistemologically or metaphysically privileged status; rather, logical theories should be justified, revised and compared just as scientific ones – i.e., via an abductive methodology.

I'll first try to clarify the position, by reviewing which properties AEs think logic should be deprived of, by unpacking the abductive methodology, and by presenting the main implementations of the AE model – namely, Priest's [2016] and Williamson's [2017].

I will then advance some objections to AE, which stem from a well-know argument in the philosophy of logic – i.e., the Centrality Argument (CA); I'll build versions of CA specifically targeted against AE, and show the latter is at several levels threatened by circularities.

I will conclude by proposing a way of reconciling AE's merits with the metatheoretical objections it has to face, which resorts to Priest's [2014] distinction between logica docens and ens – i.e., between

what logicians claim about logic, and what is actually valid. I'll argue AEs submit only that logica docens is revisable, while a minimal version of CA shows only that we can neither revise nor justify the laws of the correct logic – i.e., of logica ens.

Toader, Iulian (University of Salzburg), Brincus, Constantin (University of Bucharest). *Categoricity and the Elimination of Negation*

The idea that an adequate language for science needs a negation operator was recently dismissed by [Kripke 2015] as 'yet another dogma of empiricism'. Kripke takes Carnap's 1943 Formalization of Logic to be a paradigm of logical negativism, for the reason that the formal logical systems presented in that book require rules for rejection, in addition to rules for theoremhood. Kripke argues that the elimination of negation blocks the logical paradoxes and improves the quality and civility of communication, and may lead, in the long run, 'to world peace'.

The problem that we want to discuss in this talk is whether positive logic, as opposed to its negativist extension, allows for what Carnap called non-normal interpretations. This problem was raised by Popper in private correspondence with Carnap. Our aim is to first clarify the general philosophical significance of the problem and then look at the consequences for Kripke's affirmativist view of logic and language.

Viejo, José Manuel (Universidad Autónoma de Madrid). *Referencia directa, inocencia semántica y opacidad*

Aparentemente,

Referencia Directa: El valor veritativo-condicional de nombres propios y deícticos (su contribución a la condición de verdad de los enunciados en que intervienen) es meramente el objeto referido,

Inocencia Semántica: El valor veritativo-condicional de una expresión al aparecer incrustada en una cláusula-que es su valor veritativo-condicional "usual" (el que habría tenido de no estar incrustada),

y

Opacidad: La sustitución, en una cláusula-que, de un nombre propio o un deíctico por otro con la misma referencia, no siempre preserva el valor de verdad de los enunciados que la contienen,

son inconsistentes entre sí. Uno de los intentos más prometedores de eliminar la aparente inconsistencia es la teoría del deíctico oculto. La cuestión que pretendo examinar aquí es si realmente esta teoría es la mejor resolución de la inconsistencia.

El artículo se desarrollará de la siguiente manera. Primero, explicaré brevemente en qué consiste la teoría del deíctico oculto y cuál es su principal motivación. En segundo lugar, haré un repaso breve de sus principales problemas, y finalmente propondré una teoría alternativa de la semántica de las atribuciones de creencia, el modelo deíctico, examinaré cómo evita los problemas mencionados, y argumentaré que es la mejor estrategia disponible para disolver la aparente inconsistencia.

Wójtowicz, Anna (University of Warsaw), Wójtowicz, Krzysztof (University of Warsaw). *A stochastic process explanation of conditionals*

We define a formal model for evaluating probabilities of conditionals in terms of stochastic processes. It is a useful method in the cases already discussed in the literature, and it can easily be extended to cover more complex situations. In particular, it allows us to describe several possible interpretations

of the conditional (the global and the local interpretation, and generalizations of them) and to formalize some intuitively valid but formally incorrect considerations concerning the probabilities of conditionals under these two interpretations. It also yields a powerful method of handling more complex issues (such as nested conditionals). The description given in terms of stochastic processes provides a satisfactory answer to Lewis arguments, and defends important intuitions which connect the notion of probability of a conditional with the standard notion of conditional probability. In particular it shows, how to incorporate the intuitions behind Ramsey's test in a formally precise way. It also illustrates the general problem of finding formal explications of philosophically important notions and applying mathematical methods in analyzing philosophical issues. In particular it contributes to the problem of mathematical explanations. Standard examples come from natural science – but here a linguistic (and philosophical) problem is offered a mathematical explanation.

B. Philosophy of Language

Agolli, Eno (University of Oxford). *The Russell, the John, and the Katherine: The-defenders of the-Predicativism*

A debate has emerged about the meaning of proper names. Referentialism claims that names refer, their semantic value being an individual, admitting that sometimes, however, names have a predicate-type semantic value. Predicativism eschews this semantic ambiguity, claiming that names are predicates in all their occurrences. The-Predicativism, particularly, claims that names are count nouns that can be used referentially by being the predicative component of definite descriptions – except that in such occurrences they take an unpronounced definite article. Fara (2015) proposes a rule that tells us exactly when the definite article is and is not pronounced (in English). Two recent objections to the-Predicativism, due to Jeshion (2017) and Schoubye (2017), have targeted precisely this rule with counter-examples. I use the notion of pragmatic stress (similar to that of topic) to make the point that, in some contexts, the presupposition that an individual is called N (“N” being some name) becomes so pragmatically relevant or important that we indicate this fact by pronouncing the definite article despite Fara’s rule. I argue that both counter-examples represent such contexts, where the pragmatic stress is on the name, and I thus accommodate them by modifying Fara’s rule so as to account for pragmatic stress.

Alhambra Delgado, José (Universidad Complutense de Madrid). *Actos de habla y estatus social. Cómo el lenguaje puede convertirse en un estigma*

El tema de mi exposición será el siguiente: estudiar el fenómeno social del estigma en el ámbito de los intercambios lingüísticos. Esta formulación se enmarca en un planteamiento más general que consiste en poner en común los resultados de un tipo de sociología, que denominaré interaccionista, con algunas concepciones de la filosofía del lenguaje, en concreto del ámbito de la pragmática filosófica. Para ello he dividido mi intervención en tres partes: en primer lugar, desarrollaré la noción de estigma a partir de las investigaciones de Erving Goffman; después expondré la concepción del lenguaje con la que trabajaré, que se apoya en las investigaciones filosóficas de J. L. Austin y L. Wittgenstein, y, finalmente, exploraré la relación que puede existir entre estas dos perspectivas, utilizando como punto de intersección el carácter convencional de los actos de habla.

Almagro Holgado, Manuel (University of Granada), Torices Vidal, José Ramon (University of Granada). *The Nature of Dogwhistle Politics*

‘Dogwhistle’ refers to a kind of political manipulation that some people carry out for political gains. They address a message to an audience with two possible interpretations. One of these is coded and affects only a subset the audience (Witten 2014). As Stanley (2015) points out, dogwhistles are a covert strategy for undermining democratic ideals without immediate rejection. Our key question is whether dogwhistles constitute a special form of implicit communication or whether they can be reduced to already existing forms of implicit communication such as presuppositions or implicatures. To carry out this task, we compare the features of each of the mentioned phenomena and analyse how they behave in the face of retraction.

Berkovski, Sandy (Bilkent University). *Imperatives and To-Do Lists: three objections*

Departing from Stalnaker's theory of common ground, a recent pragmatic theory of imperatives aims to identify a concrete pragmatic mechanism through which the speaker directs (commands, requests, instructs) the hearer to perform a particular action. The utterer of an imperative aims to update the hearer's To-Do List by including in it the relevant task. I argue that this account does not respect the

illocutionary point of commands, is threatened by an infinite regress, and fails to account for different kinds of directive force.

Bordonava, David (University of Granda), Villanueva, Neftalí (University of Granda). *Crossed Disagreements: A Quantitative and Qualitative Study on the Minutes of the Sessions of the Spanish Parliament*

The purpose of this paper is to analyze and define a particular linguistic phenomenon that we deem “crossed disagreement”. The aim of this paper is threefold. First, we describe what a crossed disagreement amounts to. Second, we provide a set of examples to support the idea that crossed disagreements are usual in many contexts. Third, we compare the examples to extract the most relevant and usual lexical features in an attempt to set apart possible regularities that could be used to identify crossed disagreements on a scale able to provide quantitative data.

Campdelacreu, Marta (Universitat de Barcelona). *The Difficulty of Finding a Commonsense Answer to The Special Composition Question*

Peter van Inwagen famously formulated the Special Composition Question (SCQ): When do some things compose something? In a recent paper, Chad Carmichael formulates an innovative answer to the SCQ which, he argues – unlike the rest of the answers proposed – accords with common sense about composition. This is Carmichael’s proposal:

Necessarily, for all x s, there is a y such that the x s compose y iff either

- (i) the x s are lump-like and the x s are bonded, or
- (ii) the activities of the x s constitute an event that imposes sufficient unity on the x s.

Peter van Inwagen stated several powerful objections to answers of this kind (i.e., series-style answers) to which Carmichael provides interesting replies. In this paper I will focus on Carmichael’s answers to two of van Inwagen’s objections. Against what van Inwagen says, he argues that his proposal is compatible with the transitivity of parthood and that it can provide a solution to the Ship of Theseus puzzle. My main aim here is to argue that Carmichael’s answers are not satisfactory, and thus reflect the difficulty of finding a commonsense answer to SCQ.

Chilovi, Samuele (Universitat de Barcelona), Wodak, Daniel (Virginia Tech). *Is Hume’s Law a Threat to Positivism and Naturalism?*

Hume’s Law — roughly, that one cannot derive an “ought” from an “is” — has been invoked repeatedly in philosophy of law and metaethics as posing a serious challenge to legal positivism and moral naturalism. But it's unclear why Hume's Law (a logical thesis about entailment relations between sentences) would pose a problem for positivism or naturalism (metaphysical theses about grounding relations between facts). We reconstruct what the problem is supposed to be, and explore several ways out.

Cortes-Aravena, Juan (Universidad de Talca - Chile). *Study on human reasoning: Conditional Perfection and Mental Models Theory*

An interesting phenomenon related to the use of logical reasoning and the way how we process information by means of conditional implicatures has been called Conditional Perfection (CP). In simple words, it is when a conditional proposition is interpreted as a biconditional proposition (when $p \rightarrow q$ is understood as $(p \rightarrow q) \wedge (q \rightarrow p)$: ‘ \rightarrow ’ represents a conditional, ‘ \wedge ’ represents a conjunction). CP has been seriously studied for more than sixty years, and there are still some discrepancies based on its theoretical foundations and its practical performance (Geis and Zwicky, 1971; Horn, 2000;

López-Astorga, 2014; Moldovan, 2009 y 2013; van der Auwera, 1997) that initially state that CP is a conversational implicature (taken from Grice) with a distortion on one of the maxims of cooperation, more specific, the maxim of quantity: make your contribution as informative as is required, and do not make your contribution more informative than is required. Moreover, CP has historically been considered a fallacy, i.e. an argument that involves an invalid, rather than a valid, form of reasoning (this is the strictly logical usage). However, as it has been shown by linguistic philosophers (logic and pragmatics), it has a systematic regularity in human reasoning.

Fairhurst, Jordi (Universidad de las Islas Baleares). *Slurs and the semantic-pragmatic divide*

Slurs are derogatory terms that have been the source of growing interest in the philosophy of language during the past decade. This paper aims to analyze the problems in semantic and pragmatic approaches to slurs in order to argue in favor of the need for a pragmatic-semantic approach. First, I will outline Hom (2008) and Hom and May's (2013) semantic approach and show its insufficiencies. Second, I will point out the problems that stem from various pragmatic approaches (e.g. Hornsby 2001; Whiting 2013; Cepollaro 2015; Lycan 2015; Allan 2016). Third, I will argue in favor of the need for a pragmatic-semantic approach, where the semantic content of a slur is pragmatically determined by the speaker's communicative attitude and his particular use of the slur.

Fernández, Ainhoa (University of the Basque Country (UPV/EHU)). *Act-based Propositions and A Posteriori Necessity: Linguistic Meaning for Modes of Presentation*

Kripke (1971, 1972/1980) defended the existence of necessary a posteriori statements by presenting the statement Hesperus is Phosphorus as a canonical example. Soames (2006) objected that this statement is not a canonical case of a posteriori necessity, since there is a way of knowing it a priori, but maintained that natural kind statements, such as Water is H₂O, do not present the same difficulties. More recently, Soames (2014, 2015) developed a theory of propositions that allows us to rehabilitate the canonical example as a genuine case and provide a different explanation for both this case and natural kind statements using the notion of mode of presentation. In this paper, I shall argue that the solution offered by Soames is unsatisfactory and shall suggest a different solution that prioritizes linguistic meaning over semantic content to explain the role of modes of presentation, allowing us to adequately account for the necessary a posteriori character of this sort of statements.

Fernández Moreno, Luis (Universidad Complutense de Madrid). *Causal Theory and Reference Borrowing*

In a reference theory a distinction can be made between a theory of reference fixing and a theory of reference borrowing. M. Devitt and K. Sterelny have supported a descriptive-causal theory of the reference fixing for proper names and natural kind terms, but they have advocated like Kripke a purely causal theory of their reference borrowing. Once I have exposed briefly the main elements of Devitt's and Sterelny's theory of reference fixing I will focus on their reference borrowing theory. After taking into consideration the views of some causal theorists who have not rejected or even have explicitly admitted that there are descriptive requirements in a reference borrowing theory for proper names and natural kind terms, I allege that a causal theory of reference borrowing for competent speakers regarding proper names and natural kind terms should not be a purely causal theory, but it has to include descriptive components, at least some categorial term that is true or approximately true of the referent of the term. Thus, causal theorists should hold a descriptive-causal theory of reference borrowing.

Geirsson, Heimir (Iowa State University). *Proper Names, Singular Thoughts, and Strong Acquaintance*

There is an important cognitive difference between a thought that is directed towards a particular object and a thought that is not so directed. For example, there is a difference between my thoughts about my brother and my thoughts about brothers more generally. The former is an example of a singular thought while the latter exemplifies general thoughts. Similarly, when I come upon a particularly grizzly murder then there is an important cognitive difference between my thought that Smith's murderer is insane when I know who the murderer is and when I do not have such knowledge. Again, the former exemplifies singular thoughts and the latter general thoughts.

Most direct reference theorists adhere to what I will call the orthodox view when it comes to acquaintance, namely the view that one can obtain a singular thought about an object in virtue of being at the receiving end of a use of a name of the object that stretches back to an initial baptism of it.

I will argue that we have good reasons to doubt the truth of the orthodox view and favor instead an account that advocates a strong acquaintance requirement.

Gimeno-Simó, Joan (University of Valencia). *Pronouns, variables, compositionality and monsters*

Recent discussions on the nature of assertoric content have put forward a seemingly problematic claim about Kaplan's Logic of Demonstratives (henceforth LD): namely, that variable binders are monsters, since they shift assignment functions, and assignment functions are parameters used for generating content, just like contexts are. Thus, allowing variable binders would prevent sentences from being compositional at the level of Kaplanian content. I will be arguing that these claims, while important, are harmless for compositionality when we are dealing with natural language: free variables, at the level of logical form, are always restricted by their ϕ -features, but these are deleted when they are bound. Therefore free and bound variables may be, after all, distinct lexical items, which means that the logical form of a sentence containing a free pronoun can never be found embedded if that pronoun is bound. This means that compositionality can still be vindicated at the level of Kaplanian content.

Lanius, David (Karlsruhe Institute of Technology). *The Value of Vagueness*

Classically, vagueness has been regarded as something bad. It leads to the Sorites paradox, borderline cases, the violation of the logical principle of bivalence, and generally to problems of justification in reasoning with language. Nevertheless, there is an increasing number of people who claim that vagueness is valuable. They argue that we could not communicate as successfully as we do if we would not use vague language. In fact, we often use vague terms when we could have used ones that are more precise instead. They argue that we do so because their vagueness itself has a positive function. In my talk, I will discuss a series of arguments given in favor of this view and I will try to refute them. I do not think that there are any conclusive arguments for the claim that vagueness is valuable, once we properly distinguish it from other linguistic phenomena. I will conclude the talk with a general argument for the contrary claim that vagueness is systematically overrated and nearly irrelevant for most purposes and in most situations.

Macià, Josep (Universitat de Barcelona). *A defense of the common ground view about assertion*

In this talk I will examine Abbott's (2008) claims that Stalnaker's (1978, 2002, 2009) widely influential views about both presupposition and assertion (that many of us make use of) are wrong. She calls those views the common ground view of presupposition and the common ground view of assertion. Abbott claims that the common ground view is not able to distinguish presupposition from assertion, and that it is subject to many different kinds of counterexamples.

I will here focus specifically on Abbott's criticisms of the common ground view of assertion. I will, in response to Abbott's arguments, point out that (i) Abbott partially misdescribes the common ground view of assertion; (ii) We can account for each of Abbott's interesting counterexamples on the basis of the common ground view of assertion and several additional (and independently motivated) facts and mechanisms.

Navarro-Laespada, Llanos (University of Granada), Frápolli, María José (University of Granada). *Inferentialism, Representationalism and Moral Responsibility*

The application of Brandom's inferentialism to the study of the meaning of ethical discourse is the thesis that ethical claims have propositional content in virtue of being part of inferential networks, and not in virtue of representing states of affairs. This strategy is systematically accused of promoting an uncertainty situation in which it would be impossible to justify the truth of some ethical claims and the falsehood of some others. This talk assumes, as a general principle, that a semantic-pragmatic theory aims to explain what speakers do with their words –not the truth value of their utterances– and defends two thesis. Firstly, that the objection assumes a solipsistic understanding of knowledge, which is excluded by inferentialism. Secondly, that the view from which the objection is addressed – the representationalist theory of meaning– is unable to explain how ethical knowledge is possible. Contrary to the usual objection, representationalism –and not inferentialism– is the theory that, by its very nature, prevents the justification of the truth of certain ethical claims and of the falsehood of others.

Pinedo-García, Manuel De (Universidad de Granada), Villanueva, Neftalí (Universidad de Granada). *Power to the people. The indispensable nature of the normative vocabulary and the political turn in analytic philosophy*

The purpose of this paper is to explore the connection between two different ideas that we hold dear: on the one hand, we take normative vocabulary to be indispensable when understanding the behaviour of entities resulting from an evolutionary process is at issue; on the other, we believe that we are witnessing a genuinely novel political turn in analytic philosophy and we welcome it. We want to defend that the former thesis is far from accessory for the latter development: only by moving from a project of identifying and individuating the mental states that underlie instances of oppression to a project of detecting and intervening on actual oppressive practices can the political agenda be properly carried out.

Plebani, Matteo (University of Amsterdam), Spolaore, Giuseppe (University of Padua). *Subject matter: a modest proposal*

We present an account of subject matter (SM) inspired by David Lewis' work. Our account shares the attractive features of Lewis' original account, but it has also a number of advantages. In particular, our framework provides a fine-grained account of sentential SM, which is missing from Lewis proposal.

Polo, Nuria (UNED). *La representación mental del sonido: ¿formalismo lingüístico o realidad cognitiva?*

El sistema de elementos estructurado que conforma la cognición fonológica, es decir, los sonidos del lenguaje en la mente, se suele denominar representación fonológica. La mayoría de los autores están de acuerdo en que la naturaleza de la representación es universal, en la medida en que todos los seres humanos comparten la misma cognición, y en que las unidades específicas de esa representación varían según las lenguas. No obstante, existe una gran polémica sobre cuáles o cómo son esas unidades. Los enfoques fonológicos actuales permiten describir cualquier fenómeno fonológico desde

cualquiera de las concepciones existentes de representación mental del sonido, asumiendo que existen unidades de procesamiento y, por tanto, que la representación existe, o sin la necesidad de postularlas, al negar la existencia de tal representación. Así que, a pesar de los avances de los últimos años, la teoría fonológica no ha podido resolver ni cómo es la representación mental de los sonidos, en caso de que exista, ni cómo es la naturaleza de su procesamiento. Por ello, en la presente charla se revisarán fenómenos lingüísticos desde diversas perspectivas para tratar de aportar luz sobre este problema epistemológico y en última instancia invitar a la reflexión sobre la ciencia fonológica.

Pribram, Ivory (Université Paris 1 Pantheon UFR 10 centre de philosophie contemporaine). *The Problem of the Ontological Value of the Variable in Russell's Theory of Denotation*

My paper discusses the problems of an ontological value of the variable in Russell's theory of denotation. The variable is essential in this theory, which logically supports what Russell thought objects are and how to talk of them. These problems were discussed by Russell, Frege, and Moore, but have gone largely unaddressed. With the support of these philosophers' critiques and a brief summary of Russell's epistemology, ontology, and theory of denotation, I explain how Russell cannot account for what the variable is, or how we could know it, without near paradoxical results. The problems arise from the variable being fundamentally and necessarily indeterminate, and Russell having no resources in his theories for denoting such an indeterminate existent. The problem can be summarised as follows: the variable is the fundamental denoting-position of a formal theory that is meant to explain the structure of the ontological. If such a formal theory is meant to ground the ontological, then the formal cannot solely be symbolic but must also represent the actual structure of the ontological. Yet the variable, the fundamental symbol of denotation in a theory that defines objects, is ontologically undefinable.

Rivas Monroy, Uxía (University of Santiago de Compostela). *Thomasson's "easy approach" to ontology: pragmatics and pragmatism intertwined*

Taking into account Thomasson's proposal called "easy approach" to ontology, I explore if it is possible to say that internal ontological questions related to a linguistic framework are not only semantic/pragmatic questions –due to the way Thomasson puts emphasis in the use of the terms of language–, but also pragmatist ones –due what is implicitly assumed in the use of language. In general, pragmatists hold that we cannot say what there is independently of a linguistic framework, where not only language but world and mind also play a role. In my opinion, this pragmatist view could be seen as implicitly evocated in Thomasson's "application conditions of a term", which render easy the answer to ontological questions. One way of considering Thomasson "easy approach" to ontology is, as she herself expresses, by understanding the internal/external Carnapian distinction in terms of the use/mention distinction, allowing for a deflationary way of answering existence questions. And it is in the use of the terms, where hard ontology implicitly arises, because language itself projects the ontological compromise in the way we use it. The easy approach to ontology is easy because it takes for granted the ontological perspective intertwined in the use of language.

Soria Ruiz, Andres (Institut Jean Nicod). *The Dynamics of Value Judgment*

This paper argues for a brand of dynamic use- and plan-expressivism as offering the best account of evaluative uses of value adjectives. Its aims are twofold: the first and foremost is to diagnose a seldom discussed yet intuitive contrast between descriptive and evaluative uses of value adjectives. Secondly, a dynamic model is offered aimed at capturing descriptive and evaluative uses of value adjectives; and a definition of value judgment falls from this model as a corollary. It is shown that this model is superior to salient alternatives, insofar as those alternatives do not countenance the observed contrast between descriptive and evaluative uses of value adjectives.

Vergara, Camilo (PONTIFICIA UNIVERSIDADE CATOLICA DO RIO DE JANEIRO).
Problemas con la categoría semántica de los expresivos

El estudio sobre el significado de los dispositivos lingüísticos denominados expresivos se ha tornado un tópico relevante en las áreas de la filosofía del lenguaje. El interés se debe a que estos términos son útiles para entender la llamada función expresiva del lenguaje. En la literatura sobre el asunto, hay consenso en que existe una diversidad heterogénea de ítems lexicales, tales como: interjecciones, insultos raciales, etc, que conforman la clase semántica de los expresivos. La categoría se funda en una caracterización generalizada que atribuye a los miembros la función de externalizar emociones o actitudes del sujeto. No obstante, cada ítem de la categoría presenta contraejemplos que sugieren que esta definición no presenta condiciones necesarias ni suficientes en relación al funcionamiento de estos términos. En el caso de que la definición funcional aceptada por gran parte de la tradición pueda ser cuestionada por no representar características específicas que se apliquen exclusivamente a este tipo, entonces no es clara la existencia de una clase semántica natural o de una categoría de términos especiales que podamos denominar con el nombre de expresivos.

Vilanova Arias, Javier (UCM). *El sentido común y la filosofía del lenguaje informal*

En esta comunicación se argumenta y explora la pertinencia del sentido común para la investigación propia de lo que se ha dado en llamar Filosofía del Lenguaje Informal (u Ordinario). Tras una breve caracterización de los objetivos, naturaleza y metodología de esta corriente filosófica, se hace un análisis conceptual del sentido común, descartando algunas caracterizaciones filosóficas deficientes (como biológico, innato, incorregible, consistente en creencias...), defendiendo su naturaleza cultural, histórica, lingüística y pragmática, y caracterizándolo como el fruto de la experiencia colectiva de amplios grupos humanos. A partir de esta caracterización se argumenta que el filósofo del lenguaje informal no solo nunca abandona el sentido común en su investigación filosófica, sino que al mismo tiempo usa y enriquece sus materiales.

C. Philosophy of Mind and Epistemology

Andrada, Gloria (Universidad Autónoma de Madrid). *Cognitive Character-Extended*

Is our cognitive character extended to the artifacts we interact with? Palermos (2014) argues that it is. According to his view, when properly coupled with an organism, external resources such as technological artifacts become integrated into an agent's cognitive character, thereby extending it. Menary (2012), on the other hand, rejects the artifact-extension view of cognitive character. He argues that cognitive character is extended by the integration of cognitive practices which transform an agent's cognitive abilities. The view I shall defend here occupies a middle ground between those two views, which in my view are too strong and too weak, correspondingly. My point is twofold. First of all, I argue that external resources are constitutive of cognitive abilities, but my argument does not rest on extended cognition but on the structural properties of abilities as dispositions. Second of all, I defend that character is extended by the acquisition of new cultural practices. This allows me to distinguish genuine extension from cognitive off-loading or outsourcing, i.e.: extension versus structural enablers. By emphasizing the centrality of cultural practices an interesting implication is revealed: we must appreciate the collective aspect of our cognitive character, which pushes virtue epistemology out of its traditional individualistic framework.

Barba Magdalena, Moisés (Universidad Autónoma de Madrid). *Sobre el fiabilismo aplicado a la justificación de las creencias colectivas*

¿Bajo qué condiciones está epistémicamente justificada una creencia colectiva? Goldman ha propuesto aplicar el fiabilismo acerca de la justificación a esta cuestión. Según su propuesta, una creencia colectiva está justificada sólo si es el resultado de un proceso que tiende a llevar al colectivo a formar creencias colectivas verdaderas. El propósito de esta comunicación es argumentar que la propuesta de Goldman no es satisfactoria, porque la fiabilidad del proceso de formación de las creencias colectivas no es condición suficiente para que las creencias colectivas estén justificadas. Para desarrollar esta tesis, tomaré como punto de apoyo teórico la teoría de Gilbert acerca de las creencias colectivas como compromisos conjuntos de cierto tipo, y desarrollaré dos argumentos: primero, que la fiabilidad del proceso de formación de las creencias de un colectivo es compatible con que su implementación se deba a la suerte. Segundo, propondré un principio, que llamo Accountability Colectivo-Miembro, como condición necesaria de la justificación de las creencias colectivas, y mostraré que hay casos en los que esta condición no se da, pero sí la fiabilidad del proceso de formación de las creencias del colectivo.

Blanco, Julia (Universidad Autónoma de Madrid). *Los límites de la acción: una crítica a la posibilidad de las personas-grupo*

El acceso privilegiado de primera persona a los estados mentales propios ha jugado un papel central en el debate en torno a la identidad personal. ¿Es posible mantener un criterio psicologista de identidad personal que no conceda ningún papel a esta característica de la primera persona? En esta comunicación se presenta un análisis crítico de la propuesta de Carol Rovane en su obra *The Bounds of Agency*, donde se presenta un criterio de identidad personal basado en la capacidad de los agentes racionales de reconocer la agencia de otros y embarcarse en proyectos que demarcan su deliberación. Esta teoría abre la posibilidad de la existencia de personas-grupo. El objetivo será mostrar que el acceso de primera persona a los propios episodios intencionales juega un papel central en la continuidad de la persona a lo largo del tiempo.

Cabrera Miquel, Marta (University of Valencia). *The role of emotions in philosophical explanations of intentional action*

In this talk, I reflect on the part that emotions play in philosophical explanations of intentional action. Of all the mental states that we traditionally refer to in such explanations, emotions tend to play an extremely insignificant role. Nonetheless, an insightful analysis of emotions and their functions within human psychology seems to indicate that the treatment they have so far been given in our explanations of action entails relevant losses that affect our understanding of human behaviour. Given the capacity that emotions have in guiding and inclining subjects to action, it is surprising how superficial the attention they have received in this area has been. Bearing in mind the way in which philosophers of mind and action of recent years have explained our actions as agents, my aim is to explore how emotions contribute to these explanations and how they relate to the various states and mental dispositions involved in them.

de Donato-Rodríguez, Xavier (University of Santiago de Compostela), Falguera, José L. (University of Santiago de Compostela). *A Neo-Carnapian Ontological Commitment for Science*

The present contribution is a defence of a deflationary approach to the ontology of science based on ideas that were presented by Carnap (1950) and that are close to those defended by Thomasson (2015), insofar as questions about what exists are involved. We argue against the aspirations of the so-called scientific realists in establishing what really exists (according to scientific theories) by concluding that traditional realist arguments, based on the inference to the best explanation and the no-miracle argument, are clearly non-conclusive to the effect of revealing the real ontology of the world. Our aim is not to argue in favour of idealism nor in favour of any other substantive position regarding ontology that commit us with an answer to external questions (independent from any conceptual framework). Rather our aim is to apply Carnap's ideas on ontology to the problem of how to interpret the ontological commitment of a scientific theory and how to respond to the issue about the reference of theoretical terms. We offer different arguments according to which theoretical terms primarily refer to abstract objects (in the version of Thomasson's abstract artefacts).

Duarte, Antonio (Universidad Complutense de Madrid). *Musement o la actividad de la red neural por defecto*

En esta contribución me centraré en analizar la noción de Musement introducida por Peirce en 1908 para, paso a paso y siguiendo la descripción del propio Peirce, identificar esta "agradable ocupación de la mente" propia del ser humano con los procesos mentales que surgen a través de la red neural por defecto. Esta red constituye un sistema cerebral que ha sido recientemente definido anatómicamente y que se activa en los individuos, preferentemente, en momentos de pasividad, cuando las exigencias de relacionarse con el entorno exterior se relajan.

Espinosa López, Jorge A. (UNAM). *Hacia una noción de verdad compatible con un pluralismo genuinamente pragmatista o pluralismo radical*

En la primera parte del texto se somete a revisión la supuesta necesidad de un requerimiento metafísico mínimo dentro de las propuestas pluralistas para evitar el relativismo del tipo todo vale, esto se hace a partir del análisis y esclarecimiento de las inconsistencias y contradicciones que presenta el realismo internalista de Hilary Putnam. Posteriormente se esclarece, mediante la propuesta pluralista de N. Goodman, lo que se entiende por un genuino pluralismo pragmatista y cómo es que este pluralismo no requiere de ningún tipo de supuesto metafísico para ser consistente.

En la segunda parte se propone una noción de verdad que es plenamente congruente con este pluralismo genuinamente pragmatista. Lo anterior permite demostrar que, aun en su acepción más radical y a pesar de abandonar cualquier requerimiento mínimo realista, el pluralismo todavía puede dar una respuesta al problema del relativismo y la verdad.

Para lograr esto último se recurre al pragmatismo y a las tesis de Wittgenstein expuestas en las Investigaciones filosóficas y Sobre la Certeza, principalmente. Así como también a la Teoría del equilibrio reflexivo de N. Goodman. Estas tesis en conjunto permiten formular una noción de verdad al margen de la imagen tradicional del conocimiento.

Fernández-Prat, Olga (Universitat Autònoma de Barcelona), Quesada Casajuana, Daniel (Universitat Autònoma de Barcelona). *The Experience and Processing of Temporal Features in Perception*

According to the emulative hypothesis, our brains simulate cognitive processes and, under certain conditions, substitute the results of simulation for the information registered by our perceptual systems. Rick Grush has put forward TEM (the temporal estimation model) as a particular model incorporating the emulative hypothesis able to explain several well-known temporal illusions in perception. Moreover, he has advanced the hypothesis that TEM underwrites several aspects of our temporal experience. In this contribution we address this latter contention. In the past, Grush contended that TEM underwrites experience with the Husserlian features of retention, primal impression and protention. Now, however, he claims that at very short temporal intervals the experience supported by TEM has a "B-ish character", that is, the character of experiences ordered by "after". We will, first, emphasize the relevance of Grush's change of heart about this, which in our mind has not been sufficiently recognized. Furthermore, we will argue for the more general point that the ambition to extract immediate conclusions about temporal experience from cognitive psychological or neuroscientific models mistakenly subverts the fundamental relation connecting philosophical analysis and scientific inquiry of the mental, the relation aimed to by what Martin Davies called "the need to descend".

Filomeno, Aldo (Institute of Philosophy, Academy of Sciences of the Czech Republic). *Are non-accidental regularities a cosmic coincidence? Revisiting a central threat to Humean laws*

If laws are as the Humean believes, it is an unexplained cosmic coincidence that the actual Humean mosaic is as extremely regular as it is. This is a strong well-known objection to the Humean account of laws. Yet plausible as it seems, it is nowadays dismissed. The reason is its unjustified implicit assignation of equiprobability to each possible Humean mosaic; that is, an application of the principle of indifference, attacked on many grounds since its inception. In fact, rather than equiprobability, recent formal models represent our doxastic state of total ignorance as suspension of judgment. In this paper we revisit the soundness of the objection against Humean laws by assessing the doxastic state that we should endorse. By focusing on specific features of our scenario we however conclude that suspending judgment results an unnecessarily weak doxastic state. We first point out that recent literature has provided independent justifications of the principle of indifference. Since the argument is framed within a Humean metaphysics, we are warranted to apply them and hence assign a uniform credence among Humean mosaics. If this is so, we should, contrary to the widespread stance, not dismiss this major objection against the Humean account of laws.

Garrido, Natividad (Universidad de La Laguna), Liz, Manuel (Universidad de La Laguna). *Creación literaria y construcción de espacios de perspectivas perspectivas*

Un tema central del perspectivismo filosófico es la propuesta de modelos acerca de cómo la interacción de múltiples perspectivas, con sus respectivos contenidos, y posiblemente también en relación a una realidad que quede fuera de las perspectivas, es capaz de constituir una especie de "espacio" donde cada uno de estos elementos consiga tener una posición específica. Analizamos algunos aspectos importantes de tal noción de un espacio de perspectivas. Y mostramos como la creación literaria de una narración sirve como ejemplo sumamente ilustrador y sugerente del proceso de construcción de un espacio de perspectivas. Utilizaremos para ello tres autores sumamente

representativos de las múltiples conexiones entre una realidad personal problemática y una creación literaria que explora de formas novedosas los recursos de la primera, la segunda y la tercera persona: Agustín Espinosa, Jean Genet y Hervé Guibert. Nuestra discusión permitirá, además, encontrar varios aspectos en los que el perspectivismo llega a distanciarse del relativismo.

Hernández-Conde, José V. (University of Basque Country). *Cuando los Conceptos Son No-Persistentes y No-Representacionales: Un Examen Contextualista-Consistente de la Mente*

En este artículo argumento que, si se asume que los conceptos dependen del contexto – aproximaciones contextualistas–, entonces los conceptos (instanciados) carecen de persistencia y no son una representación de sus categorías asociadas. En primer lugar, sostengo que los conceptos instanciados deberían ser entendidos como el resultado de procesos cognitivos, pero no en el sentido de productos (o entidades psicológicas persistentes almacenadas en estructuras mentales), sino de fenómenos (como algo que ocurre –o se manifiesta– cuando la mente categoriza algo bajo ese concepto). A continuación, muestro que los conceptos instanciados, por tratarse de fenómenos, carecen de persistencia, y que existen solamente en el preciso momento en que su proceso de instanciación concluye, pues más allá de ese instante el contexto cambia y el concepto instanciado ya es otro. Finalmente concluyo que, dado que los conceptos instanciados no cumplen el requisito de persistencia (el cual es exigido a la noción de representación en cualquier teoría cognitiva), no pueden –por ello– ser considerados representaciones de sus respectivas categorías.

Ibarrondo Murguialday, Julen (Universidad Autónoma de Madrid). *Ser racional no equivale a responder a razones*

En las últimas décadas la tesis de que en última instancia todos los conceptos normativos han de reducirse a razones ha alcanzado gran popularidad. La racionalidad, entendida como concepto normativo no ha sido una excepción. Así muchos epistemólogos y filósofos morales han defendido la tesis de que ser racional es de alguna manera conceptualmente reductible o al menos equivalente a responder adecuadamente a razones. Mi propósito en esta intervención es mostrar un caso, a mi juicio paradigmático, en el que parece claro que nos encontramos ante una situación de irracionalidad pero que no podemos caracterizar como no respondiendo adecuadamente a razones: el mantener intenciones contradictorias. Si esto es así, dado que la tesis de la equivalencia implica la suficiencia, se sigue que la tesis de la equivalencia entre racionalidad y responder a razones es falsa.

Liz, Manuel (Universidad de la Laguna), Vázquez, Margarita (Universidad de la Laguna). *Razonamientos que involucran perspectivas*

En nuestros discursos abundan los razonamientos que involucran contenidos considerados explícitamente contenidos dependientes de un punto de vista o perspectiva. Sin embargo, hay muy pocos análisis sobre este tipo de razonamientos. Entre ellos, destacan los planteamientos lógicos de Antti Hautamäki y, más recientemente, de Steven Hales. Ambos se basan en enriquecimientos de la lógica modal con nuevos operadores. Nuestro trabajo es complementario a sus resultados. Desde un enfoque semántico, epistemológico y pragmático, discutimos un conjunto amplio de patrones inferenciales presentes en nuestras prácticas discursivas. Y proponemos un conjunto de reglas que podrían modelar dichas prácticas. Nuestro trabajo tiene un marcado carácter tentativo en un campo de investigación que apenas está comenzando a ser explorado.

López Campillo, Jesús (University of Murcia). *Self-Deception: A Neo-Expressivist Account*

One of the main accounts of self-deception in the contemporary literature is motivationalism. Motivationalism claims that self-deception occurs when a subject ends up having a biased belief about p as a result of a bias in the belief-forming process caused (unintentionally) by one of her

motivational states. By contrast, I will propose in this talk a neo-expressivist account of self-deception. Firstly, I will argue that mental states are identical to expressive patterns of behaviour manifested by the subject over a certain period of time. Secondly, I will argue that the best way to explain the complexity of the self-deceived subject's behaviour is to claim, against motivationalism, that self-deception and (biased) belief are different psychological kinds because they have different kinds of expressive patterns. Thus, I will conclude that self-deception is a sui generis mental state because self-deceived subjects manifest a particular expressive pattern not reducible to the expressive pattern of (biased) belief.

Marín, Claudio (Universidad Alberto Hurtado). *Un argumento para el Monismo de Doble Aspecto*

El Monismo de Doble Aspecto (MDA) es la teoría que sostiene que la realidad a nivel fundamental es tanto mental como física, tanto experiencial como no-experiencial. Así, frente al “problema difícil” de la conciencia el MDA se presenta como una alternativa no reduccionista respecto de lo mental, pues para la teoría tanto lo mental como lo físico se encuentran a un mismo nivel fundamental en la naturaleza. La tesis central del MDA se fundamenta en cuatro postulados básicos: monismo, realismo fenoménico, no reduccionismo y rechazo a la emergencia radical.

En el artículo pretendo presentar un argumento para el MDA, pero para ello asumiré como supuesto la primera tesis (monismo) y profundizaré principalmente en la segunda y cuarta tesis (realismo fenoménico y rechazo a la emergencia radical respectivamente), en el entendido que la tercera tesis (no reducción) es en buena medida dependiente de la segunda.

Morales, Felipe (Katholieke Universiteit Leuven). *On the question of the indispensability of modal thought*

This paper examines the support for the view that modal thought is indispensable. Using an argument by Enoch and Schechter (2008) as a template, I reconstruct some claims by Williamson (2007) and Brandom (2008) as indispensability arguments. I then examine how one can think of the indispensability of modal thought globally and at a finer grained level. Finally, I consider an argument by Roca-Royes (2012) against the indispensability of certain kinds of modality.

Muñoz-Corcuera, Alfonso (Universidad Politécnica de Madrid). *Narrative and determinate identity*

We have a strong intuition that personal identity is a determinate relationship. That is, when we think about the future, we either think that we will continue to exist, or that we will not. The idea that there could be no answer to the question of our future existence seems difficult to accept. Parfit famously challenged this intuition. In this paper I explain how narrative identity theories can face that challenge and defend that personal identity is determinate by endorsing what I call the social narrativity thesis. This move will raise some concerns regarding the also strong intuition that personal identity is what matters when we care about our future existence. I address this concern to show that narrative identity theories can account for both intuitions at the same time.

Navarro, Jesús (University of Seville). *Fake Knowledge-How*

What does fake knowledge-how consist in? How is it possible? What differentiates it from fake knowledge-that? In this exploratory paper, I aim to formulate those questions properly and to lay the foundations for their possible answers. The paper has three parts, each one devoted to one of the aforementioned questions. In the first one I draw extensively on Eduard Craig's genealogical approach and Miranda Fricker's development of the idea of “indicator properties” to establish a parallel between fake knowledge-that and fake knowledge-how: epistemic impostors are those who either fake the property of being reliable sources of testimony, or the one of being reliable performers

of tasks. The second part of the paper elaborates Katherine Hawley's ideas on know-how in order to inquire into the conditions of possibility for such imposture to occur. The final part shows that the differences between those two varieties of epistemic deceit run deeper than it seems at first sight because our position as knowledge-attributors is importantly quite unlike. My final aim is to show that knowledge-how imposture may be even more resilient to detection than its propositional cognate, a point I motivate in a theoretical model previously advanced for the defeasibility of knowledge-how.

Palmira, Michele (Logos, University of Barcelona). *Introspection, Immunity, and The First-Person Concept*

Philosophers such as Anscombe, Shoemaker, and Wittgenstein have maintained that any introspection-based self-ascription of occurrent mental properties, such as 'I am thinking that it is raining', is such that I cannot be mistaken that it is I who is instantiating the relevant mental property. These self-ascriptions are immune to error through misidentification. Call this the Immunity Thesis. In "The Epistemology of Immunity to Error Through Misidentification" (The Journal of Philosophy, CXIV, 3, 2017), Ivan Hu has revived – to the best of my knowledge – the only challenge to the Immunity Thesis which relies on thought insertion, namely the phenomenon in which schizophrenic patients report that the thoughts they have introspective access to are not their own, but rather belong to some other individual. Hu contends that reports of inserted thoughts are cases of misidentification, thereby allegedly presenting a counterexample to the Immunity Thesis.

In the first part of the talk I argue that Hu fails to establish that introspection-based self-ascriptions of inserted thoughts are cases of wh-misidentification. In the second part of the talk I articulate a Metasemantic Account of the Immunity Thesis which relies on how the reference of the first-person concept gets fixed.

Pérez Otero, Manuel (Logos, Universidad de Barcelona). *Relevancia epistémica de las intuiciones*

Presento y defiendo determinadas hipótesis teóricas sobre las intuiciones, reivindicando su existencia y su relevancia epistemológica.

Llamemos SC al sistema de creencias de un sujeto en un momento de tiempo t. Simplificando mucho, SC podría identificarse con el conjunto de proposiciones creídas por S en t. Si P es una proposición, digamos que SCP es el P-subsistema de creencias (de S en t), entendido del siguiente modo: SCP contiene todas las proposiciones de SC tales que la mera comprensión de algunos de los conceptos integrantes de P proporciona justificación inmediata prima facie para creerlas.

Mi tesis sustantiva principal establecería lo siguiente: La intuición de que P es identificable (o al menos se correlaciona) con una apreciación (típicamente implícita) de simplicidad y/o de naturalidad. Más concretamente: S intuye que P si y sólo si [S considera la cuestión de si P es o no verdad], [S aprecia que el sistema de creencias resultante de añadir a su P-subsistema de creencias la proposición P es más simple y/o natural que el sistema resultante de añadir a su P-subsistema la proposición No-P] y [la justificación de S para creer que P depende principalmente de dicha apreciación].

Pino, Dani (University of Seville). *Do group agents feel group emotions?*

In this presentation I will face whether a group may feel any emotion qua group. I am aware that this is a possibility that most authors rule out as an absurd, since the need of a body as source or target of whatever it could count as a real emotion seems to be out of the question, being a requirement that prima facie collective entities don't fulfill: the possibility of collective, group or social pain, for instance, seems to work, at best, under the influence of a metaphorical enchantment. In contrast with this, I will argue for the possibility of groups feeling collective emotions, at least in exceptional circumstances. In order to spell this possibility out, I will propose an account that engages with Huebner's condition of organization (2011). If, in accordance with the Extended Mind Thesis, a coupled system may amount to a cognitive system along which mental states extend, then we may

wonder if this kind of system responds to conditions of organization akin to those required for groups to be considered as the kind of entity capable of feeling some kind of emotion that doesn't reduce to those suffered individually by its members.

Seoane, Pablo (Santiago de Compostela University). *An hybrid ontology for musical Works: between perceptualism and epistemicism on musical understanding*

Against ontological dismissivists, like Aaron Ridley and James O. Young, we defend that musical understanding, and hence musical aesthetics, is conditioned by the ontological commitments we assume in relation to musical works. And against hard ontology (Platonism and nominalism), we propose in this paper an alternative ontological status for musical works as a means for a suitable epistemic approach to music. In the wake of the research of Andy Hamilton and Bence Nanay, but stating crucial differences with both authors, and relying as well on a particular reading of Kendall Walton's theory of make-believe, we apply Richard Wollheim's notion of twofoldness to the understanding of musical works, with the main purpose of establishing a distinct epistemological position which transcends the unwarranted opposition between epistemicism and perceptualism. Therefore, in order to ground our epistemic approach and overcome at the same time some of the traditional hassles of hard ontology (like the epistemic access to abstract entities or the wrong note paradox), we will try to make plausible our ontological proposal, namely, the status of musical work as a hybrid, artefactual entity undetachable from the performance, a compound of a set of instructions plus a performance.

Serna, Edgar (FFyL - UNAM). *La discusión en torno al estatus epistémico de la doctrina filosófica del falibilismo*

El problema que examino concierne al estatus epistémico de la dimensión normativa de la teoría del conocimiento en la tradición de la filosofía analítica; en lo particular, la pregunta central que abordo se refiere a cuál es el estatus epistémico del falibilismo, pues una forma de solucionar el problema epistemológico de la objetividad gira en torno a la pregunta sobre el estatus epistémico de la epistemología. Al respecto, la respuesta tradicional se cristalizó en el programa metafísico en pos de un fundamento irrefutable del conocimiento, que pudiera alcanzarse mediante el cultivo de una filosofía autónoma, independiente distinta de cualquier ciencia particular. En el siglo pasado, este proyecto fue severamente criticado entre otros, por Neurath (1983a [1931]; 1983b [1935]), quien le reprochó a Popper seguir atado a dicho proyecto. Defiendo la tesis de que esta crítica es errónea. Para entender cuál es el estatus que para éste tiene la epistemología, sostengo que es indispensable (a) advertir el vínculo que dicho problema tiene con su particular filosofía de las ciencias sociales. A su vez, planteo que (b) resulta perentorio tomar en cuenta la forma como dicho autor explicó cuál es el estatus epistémico de la doctrina filosófica del falibilismo.

Toribio, Josefa (ICREA-Universitat de Barcelona). *Implicit bias, accessibilism and justification*

It has recently been argued that beliefs formed on the basis of implicit biases pose a challenge for accessibilism, since implicit biases are consciously inaccessible, yet they seem to be relevant to epistemic justification. Recent empirical evidence suggests, however, that while we may typically lack conscious access to the source of implicit attitudes and their impact on our beliefs and behaviour, we do have access to their content. In this paper, I discuss the notion of accessibility required for this argument to work vis-à-vis these empirical results and offer two ways in which the accessibilist could meet the challenge posed by implicit biases. Ultimately both strategies fail, but the way in which they do, I conclude, reveals something general and important about our epistemic obligations and about the intuitions that inform the role of implicit biases in accessibilist justification.

Verdejo, Víctor (University of Barcelona, Logos, BIAP). *Thinking and Experiencing the Embodied Self*

In a representational framework, there are two senses of embodiment: embodiment as body representation or representation carrying body information and embodiment as bodily awareness or awareness of our own body. One might concede that body representation is a form of self-representation and bodily awareness a form of self-awareness. However, are these reflexive cognitive capacities constitutive conditions on self-thought or first person thought? In this piece, I shall defend that whereas body representation is a plausible constitutive or necessary condition on self-thought, bodily awareness is not: one can have self-thought without bodily awareness but one cannot have self-thought without body representation. I therefore propose to detach the constitutive connection between body representation and self-thought from various forms of bodily awareness such as spatial awareness (Martin 1995), agential awareness or the sense of being under direct control (De Vignemont 2007, O'Brien 2007, Gallese and Sinigaglia 2010) or affective or emotional awareness (Damasio 1999).

D. Philosophy and Methodology of Science

Akcin, Haktan (Lingnan University). *What is Really Wrong with Ontic Structural Realism? On the Possibility of Reading off Ontology from Current Fundamental Science*

I argue that the central conflict between epistemic and ontic versions of structural realism concerns whether it is possible to read off ontology from current fundamental science. After taking a quick look at two arguments from the philosophy of modern physics challenging the ontic version, I assume that the ontic version is not vulnerable to these criticisms. However, even if we assume that structures are metaphysically superior to objects, that still does not say anything about the possibility of reading off ontology from current fundamental science. After I write down premises and conclusions of the arguments of ontic and epistemic versions, I show that the conclusion as regards to the possibility of reading off ontology from current science in the ontic version is already assumed in one of the premises; hence the argument begs the question. As a result, the problem of ontological discontinuity throughout radical theory changes in the history of science implied in the pessimistic meta-induction argument remains intact in ontic structural realism.

Anta, Javier (Universitat de Barcelona). *The Explanatory Power of Geometrical Diagrams in Modern Physics*

In this talk, I elaborate on the idea that reliable and suitable diagrammatic representations in physics could allow to develop genuine geometrical (then, mathematical) explanations of empirical phenomena. In order to defend the strong thesis, with interesting consequences in the hot debate on mathematical explanations, I will firstly investigate, from an inferential framework, how could be possible for a geometrical diagram to be epistemically reliable in the disciplinary context of physics. Secondly, I will explore a real case from atomic physics, wherein an empirical phenomena (conservation of energy and momentum) was explained just by means of genuine geometrical facts; and framing how these complex kind of multi-modal explanations are epistemologically possible.

Artiga, Marc (Universitat de València). *A Naturalistic Account of Semantic Information*

‘Information’ is used in many different ways. In this talk I would like to focus on the normative notion of information (usually called ‘semantic’), that is, the notion according to which information can be true/accurate or false/inaccurate. This is the sense in which we say, for instance, that the newspaper has information about the latest soccer match or that a friend gives us information about the country she just visited. In both cases we could be misinformed if the information is actually false.

Atencia, Paula (Universidad Complutense de Madrid). *Scientific pluralism and realism: examining problems and reducing gaps*

In recent decades, many philosophers of science have emphasized the heterogeneous and diverse nature of science developing a philosophical position called “scientific pluralism”. The core of such position is represented by the idea that many pluralist theses (if not all) are compatible with scientific realism provided that we reject another philosophical position named “monism” according to which there (only) exists one correct description or explanation of the world -or of the part of the world that a particular scientific discipline investigates- and that the aim of science is to provide us with such complete, all-encompassing description of the world. But from here, pluralists start to differ about the particular significance and scope of their pluralist theses.

The aim of this presentation is to discuss some of those theses, evaluating the difficulties that some of them may pose to scientific realism. In some cases, the difficulties will be minimal; in others, they will pose further threats for the realist and it will be necessary to bridge the gap between both

positions. In order to do so, some strategies will be presented and discussed. But even in their absence, pluralism and scientific realism may share more similarities than meets the eye.

Belastegui, Javier (UPV-EHU). *Kinds, Joints and Trees: The Non-Hierarchical Structure of Natural Kinds*

In this talk I will argue against two theses concerning natural kinds and classifications. The Hierarchy Thesis says that natural kinds must be hierarchically arranged as a tree. The Categoricity Thesis states that natural kinds must have sharp boundaries. Some philosophers have defended that these are necessary conditions for natural kinds. I disagree. First, the empirical counterexamples supplied by several philosophers of science show that these conditions only hold contingently in some specific domains of science. Second, these conditions cannot be considered as logically necessary either, since there are formal models of classifications that do not satisfy them. Third, classifications satisfying both conditions do not seem to have theoretical virtues, such as simplicity or explanatory power, that other classifications lack. Finally, if these conditions do not really hold for some domain, then imposing them in the corresponding classifications is tantamount to introducing conventional elements. Therefore, the absence of crossings or continuous transitions from one class to another is more likely to be an artifact of our representation than a real or objective feature of the world.

Bich, Leonardo (Universidad del Pais Vasco). *Operational definitions of life*

Despite numerous and increasing attempts to define what life is, there is no consensus on necessary and sufficient conditions for life. Accordingly, some scholars have questioned the value of definitions of life and encouraged scientists and philosophers alike to discard the project. As an alternative to this conclusion, it has been argued that critically rethinking the nature and uses of definitions can provide new insights into the epistemic roles of definitions of life for different research practices. This talk discusses the possible contributions of definitions of life in scientific domains where such definitions are used most (e.g., Synthetic Biology, Origins of Life, Alife, and Astrobiology). Rather than as classificatory tools for demarcation of natural kinds, it highlights the pragmatic utility of what has been called 'operational definitions' that serve as both theoretical and epistemic tools in scientific practice. In particular, it examines contexts where definitions integrate criteria for life into theoretical models that involve or enable observable operations. It shows how these definitions of life play important roles in influencing research agendas and evaluating results, and it argues that to discard the project of defining life is neither sufficiently motivated, nor possible without dismissing important theoretical and practical research.

Buckareff, Andrei (Marist College), Andrew, Marc (Marist College), Brennan, Shane (Marist College). *Contra Static Dispositions*

Work on dispositions focuses chiefly on dispositions that are manifested in dynamic causal processes. Neil Williams (2005) has argued that the focus on dynamic dispositions has been at the expense of a richer ontology of dispositions. He contends that we ought to distinguish between dynamic and static dispositions. The manifestation of a dynamic disposition involves some change in the world. The manifestation of a static disposition does not involve any change in the world. In this paper, we concede that making a conceptual distinction between dynamic and static dispositions is useful and we allow that we can truthfully represent objects as manifesting static dispositions. However, we argue that the distinction is not ontologically deep. Rather, the truthmakers for our representations of static dispositions are actually dynamic dispositions to whose manifestations we may fail to be sensitive.

Cáceres, Emilio (UNED). *La autoorganización como propiedad de nivel de sus entidades componentes*

Uno de los conceptos clave para describir el comportamiento de los sistemas complejos es la autoorganización, entendida como un proceso en el cual las interacciones locales entre los elementos de un sistema producen patrones emergentes de comportamiento sin que para ello sea necesario algún tipo de coerción o control externo (Anderson 2002).

Mi intención es intentar explicar la auto-organización como una propiedad de nivel desde la perspectiva de los intervalos de cuasi-descomponibilidad (Cáceres y Saborido 2017) (Cáceres y Saborido 2018), de forma que, sin negar su utilidad, pase a considerarse un enfoque heurístico de manera que sus características principales, especialmente la causación descendente o la emergencia, tengan una explicación deducible y reducible en sus componentes.

Camprubi, Lino (University of Seville). *Varieties of Pluralism and their Ontological Implications: The Case of Earth System Sciences*

Scientific pluralism has traditionally been made compatible with ontological monism. In recent decades, however, philosophers and historians of science have argued from realism that epistemological divides often match ontological fractures. I propose to compare different versions of this argument drawing classifying criteria from historical ontology.

Moreover, I will use Earth System Science(s) as a guiding example to ground the discussion on pluralism and historical ontology. Despite crucial connections, there is not a mathematical model able to interconnect or reduce sciences as diverse as climatology, geology and oceanography. The juxtaposition of these disciplines works at the level of local environments, but its application to the historically recent notion of the global environment results from a jump of both epistemological and ontological nature.

I will argue through a virtuous circle that the fractured ontology of nature is what explains the availability of these various and irreducible scales.

Corbalán, M. Inés (UNICAMP), Terzian, Giulia (UNICAMP). *Ockham's razor in a minimalist guise*

The Minimalist Program (MP) in generative linguistics is predicated on the idea that simplicity, economy and parsimony are properties, first and foremost, of the object of study--the human language faculty; and secondarily, of linguistic theories. MP is guided by two types of simplicity considerations: methodological economy and substantive economy.

Principles of m-economy work as general guidelines in the search of the best theory. S-economy in turn seeks to discover whether the object of inquiry itself is optimal.

Our aim in this paper is threefold: (I) to arrive at a better understanding of the nature and role of m-economy and s-economy; (II) to shed light on the largely overlooked question as to the relationship between the two (for instance: are principles of s-economy particular instances of m-economy?) (III) to determine whether the familiar philosophical readings of Ockham's razor can also be found to underlie principles of s-economy, as well as m-economy. To this end, we focus on two s-economy conditions: Inclusiveness and Full Interpretation. We argue that they work in tandem as a version of Ockham's razor --specifically, as a parsimony principle.

Corral Villate, Amaia (University of the Basque Country). *Analysis of the Infinite Gods Paradox in Classical Particle Mechanics. Representation of a Causal Problem*

The Infinite Gods paradox is introduced by Benardete (1964) in the context of his problems of the infinite and Yablo (2000) achieves a broad acceptance in the scientific community reasoning that it contains a logical impossibility.

My communication is based on the introduction of a proposal for a representation of the paradox in the strict context of Classical Particle Mechanics, which is a novel contribution to the scientific literature. The objective of following such a methodology in the analysis of the paradox is to deepen in the comprehension of it and clarify the type of problem that underlies it using the analytical power of Classical Mechanics. My mechanical representation of the paradox results in concluding that the underlying problem is not of a logical type but causal, in clear contrast to the generally accepted conclusion introduced by Yablo (2000). I then point out what I consider is wrong in his diagnosis and identify contexts in which his conclusion is reasonable.

In addition, the analysis of the problem of evolution via my mechanic representation possibilitates the identification of the type of interaction in it, what in itself is an interesting and relevant result in the context of the Classical Mechanics theory.

Dziurosz-Serafinowicz, Patryk (University of Gdańsk). *Justifying Lewis's Kinematics of Chance*

In his "A Subjectivist's Guide to Objective Chance", David Lewis argued that a particular kinematical model for chances (physical probabilities) follows from his Principal Principle. According to this model, any later chance function is equal to an earlier chance function conditional on the complete intervening history of non-chancy facts. This paper, first, investigates the conditions that any kinematical model for chance needs to satisfy to count as Lewis's kinematics of chance. Second, it presents Lewis's justification for his kinematics of chance, and explains why it is bound to be problematic. Third, it gives an alternative justification for Lewis's kinematics of chance that does not appeal to the Principal Principle. Instead, this justification appeals to a well-supported requirement for chance, according to which any prior chance function must be a convex combination of possible posterior chance functions. It is shown that, under a plausible assumption, Lewis's kinematics of chance is equivalent to this requirement. Finally, by focusing on this requirement, it is explained why so-called self-undermining chances may fail to obey Lewis's kinematics of chance.

Fasce, Angelo (University of Valencia). *Un criterio de demarcación. Fundamentos teóricos y capacidad práctica de una herramienta para discernir entre ciencia y pseudociencia*

Esta comunicación tiene como objetivo la presentación de un criterio de demarcación entre ciencia y pseudociencia, desarrollado sobre la base del análisis de veintidós multicriterios. La exposición se centrará en los fundamentos teóricos de la herramienta, que nacen tanto del rechazo a la demarcación estadística de la ciencia como de la toma de consciencia de los problemas que tradicionalmente han afectado a los intentos demarcativos dentro de la filosofía de la ciencia. Tras exponer la metodología de análisis de estos veintidós criterios y cómo se ha desarrollado este nuevo criterio de demarcación en base a estos datos, la herramienta se pondrá a prueba con ejemplos exigentes, que demanden una demarcación minuciosa y compleja. De este modo, se pondrá de relevancia tanto la sofisticación teórica como la capacidad práctica de un criterio que, aunque aún pendiente de mayor elucidación conceptual, permite una demarcación óptima en su estado actual.

Fernández Moreno, Luis (Universidad Complutense de Madrid). *Causal Theory and Reference Borrowing*

In a reference theory a distinction can be made between a theory of reference fixing and a theory of reference borrowing. M. Devitt and K. Sterelny have supported a descriptive-causal theory of the reference fixing for proper names and natural kind terms, but they have advocated like Kripke a purely causal theory of their reference borrowing. Once I have exposed briefly the main elements of Devitt's and Sterelny's theory of reference fixing I will focus on their reference borrowing theory. After taking into consideration the views of some causal theorists who have not rejected or even have explicitly admitted that there are descriptive requirements in a reference borrowing theory for proper names and natural kind terms, I allege that a causal theory of reference borrowing for competent

speakers regarding proper names and natural kind terms should not be a purely causal theory, but it has to include descriptive components, at least some categorial term that is true or approximately true of the referent of the term. Thus, causal theorists should hold a descriptive-causal theory of reference borrowing.

Findl, Johannes (Universitat de Barcelona). *Knowledge vs Understanding: Epistemic Scenarios and Scientific Practice*

In my talk, two goals will occupy center stage. First, following ideas by Pritchard and Kvanvig, I will argue that a difference in kind between knowledge and understanding can be established by appealing to hypothetical epistemic scenarios where one but not the other kind can be had. Second, I will show that these scenarios exhibit some features which are also constitutive of ordinary scientific practice. I will suggest that therefore the sought-after distinction in epistemology may be of great use in the assessment of how science is done.

García Lapeña, Alfonso (Universitat de Barcelona, Logos). *Truthlikeness for quantitative deterministic laws*

Truthlikeness is a property of a theory or a proposition that represents its closeness to the truth of some matter. According to the “likeness approach” the truthlikeness of a theory or a proposition depends on the similarities between the state of affairs it allows and the actual state of affairs of the world. Given some phenomenon P and some language L , truthlikeness is defined by the introduction of a metric in the space of possibilities $S_{(P/L)}$. Scientific quantitative deterministic laws (QDL) typically have a real function representation $f(x_1, \dots, x_n)$ in some state-space. According to the “likeness approach”, we can define truthlikeness for QDL by the Minkowski metric. We will present some counterexamples to this definition and argue that it fails because it considers truthlikeness for QDL to be a function of just accuracy, but an accurate law can be completely wrong about the “causal structure” of the world. Finally, we will present a proposal where the distance between two functions is measured according to their quantitative distance (given by the Minkowski metric) and their qualitative difference in behaviour (given by the absolute difference of the derivative) and therefore truthlikeness for QDT is defined as a function of accuracy and nomicity.

Gomez de Segura, Mikel Henda (University of Salamanca). *La teoría relacional del tiempo como teoría constructiva y su poder explicativo*

Podemos distinguir dos tipos de teorías, las "teorías de principios" y las "teorías constructivas". En el primer tipo de teorías, la explicación consiste en mostrar que los fenómenos a explicar se dan necesariamente en el mundo como consecuencia de los postulados asumidos. En oposición están las “teorías constructivas”, que tratan de explicar los fenómenos a través de leyes o de procesos subyacentes. Estas teorías ofrecen una serie de modelos de una parte de la realidad física, por lo que la teoría es explicativa en tanto que aporta modelos empíricamente adecuados de la realidad. En el texto se defiende que una interpretación relacional del tiempo (tiempo como medida relativa del cambio) posibilitaría una explicación constructiva del fenómeno relativista de la dilatación y contracción temporal. Este modo de ver el tiempo, permite una comprensión de este fenómeno que no es posible con la explicación de principios que aporta hoy día la Teoría de la Relatividad, además de posibilitar una interpretación ontológica más simple que la espacio-temporal comúnmente aceptada. Por no decir que por ello mismo sea probablemente menos problemática epistemológicamente hablando.

González de Prado, Javier (Universidade NOVA de Lisboa). *Meaningful signals: biological self-regulated systems as (mis)interpreters of information*

Information is a notoriously multifaceted notion. In a broad sense, we can think of information as a ‘difference which makes a difference’ (Bateson 1973: 428). This broad conception allows us to capture a minimal notion of physical information, according to which the information contained in a system differentiates the state of the system from other possible alternative states.

However, when dealing with intentional agents it is common to appeal to a richer notion of information as meaningful data (often called semantic information). This type of information is associated with an expected or correct interpretation, which characterizes its meaning. In particular, a meaningful informative signal carries information about some other system, or specifies instructions to perform some action (Floridi 2010). Meaningful information introduces the possibility of misleading information, that is states of a system that appear to contain some information when they actually do not. If misleading information is generated intentionally by an agent, we can talk of misinformation. Thus, meaningful information has a normative dimension, in the sense that it brings in standards of correct interpretation and production.

The question that I will address in this presentation is how to give a naturalistic account of the emergence of meaningful information and the related standards of correct interpretation, starting from a merely physical notion of information. I will suggest that the relevant standards of interpretation can be seen to be introduced by the self-regulatory behavior of biological organisms.

González Herrerías, César (Universidad de Oviedo). *El reduccionismo informacional en biología molecular como herramienta metodológica con función heurística*

El uso de términos informacionales derivados de la teoría de la comunicación de Shannon (Shannon, 1949) es muy habitual en biología molecular. Conceptos como “información”, “mensaje”, o “codificación”, se utilizan con gran profusión en los trabajos de esta disciplina. Sin embargo, la justificación epistémica de su empleo continúa siendo objeto de permanente debate, fundamentado en la escasez de desarrollos teóricos y aplicaciones prácticas derivados de su uso. Esta discusión puede estructurarse a partir de dos visiones contrapuestas: Por un lado, desde una perspectiva teleosemántica, no sería posible entender los procesos de transmisión de información sin atender al significado, lo que podría implicar alguna forma de conocimiento de carácter intencional de difícil encaje. En contraste, desde una óptica que llamaremos reduccionista informacional, los sistemas vivientes son interpretados como una realización concreta de un sistema general de comunicación, capaz de procesar y transmitir la información desde los ácidos nucleicos a las proteínas. En la presente comunicación se discutirá la posibilidad de que, bajo la mencionada concepción reduccionista informacional, exista una visión pseudomecanicista que es en realidad una simple herramienta metodológica con función heurística, esto es, un diagrama, imagen, entidad no lingüística o modelo científico fenomenológico de carácter no explicativo.

Heras Escribano, Manuel (Euskal Herriko Unibertsitatea), Aguilera, Miguel. *The Nature of Ecological Information*

Ecological psychology (EP) is one of the most prominent theories of cognition within the embodied, situated, and non-representational cognitive sciences. According to EP, cognition is based on the active exploration of the organism within its environment. This exploration allows the agent to perceive the affordances or possibilities for action of its environment that guide her behavior. The engagement of organism and environment within EP is based on the perception of ecological information, a special kind of information that is scaled to agent’s bodily capacities.

Hermida, Margarida (CIIMAR-Madeira). *Functional kinds as universal natural kinds in the life sciences*

Biology does not seem to fit the natural kinds framework as well other sciences such as physics or chemistry. Traditional essentialist accounts are unable to incorporate evolutionary change and while homeostatic property cluster theory incorporates the historical nature of biological kinds, it runs into conflict with scientific practice in privileging similarity over relatedness, in contrast with biology. Some authors eschew natural kinds altogether (the species-as-individuals approach), while others suggest an essentialist approach where the essential properties are relational, not intrinsic. Even if either of these accounts successfully captures the nature of species, they cannot apply to functional kinds, such as ecological (e.g. trophic mode, life history strategy) and evolutionary ones (e.g. convergent evolution of fusiform shape in fast-swimming organisms); yet these broad generalizations are extremely useful in the life sciences. Taxonomy is not the only goal of biology, nor are taxa the only groups which allow inductive inference; as long as functional kinds are rigorously defined and inference restricted to the particular function under study, they support induction. These kinds are as universal as any in the physical sciences, but have not been usually recognized as such due to our current lack of examples of independently evolved life.

Hernández, Abraham (Universidad de La Laguna). *Más allá de Kitcher: la reformulación del contrato social de la ciencia*

El "Contrato social para la ciencia" fue diseñado a partir del informe "Ciencia, la frontera sin fin" que elaboró, en 1945, Vannevar Bush. Trataba de responder a las inquietudes políticas sobre la gestión de la relación entre la ciencia y los poderes políticos en un nuevo contexto de paz, donde la producción científica no estuviera prioritariamente destinada a un uso militar y pudiera revertir en beneficio general de la sociedad. Algunos autores recientes, como Philip Kitcher, han argumentado que tal idea de un "contrato social para la ciencia" se sustentaba en una imagen de la ciencia basada en el mito de la pureza, donde las investigaciones pueden ser evaluadas al margen de sus implicaciones o consecuencias. En nuestro trabajo, profundizaremos en las críticas de Kitcher y añadiremos algunos nuevos elementos. Algunos de ellos son 1) la creciente globalización, 2) la producción científica con financiación privada y 3) los recientes movimientos de contestación por parte de las comunidades científicas. El objetivo será mostrar que la vieja figura de un "contrato social de la ciencia" debería reformularse radicalmente de cara a conseguir ese supuesto objetivo último de la ciencia de mejorar las condiciones de vida.

Heylen, Jan (Katholieke Universiteit Leuven), Tump, Lars (Katholieke Universiteit Leuven). *The Enhanced Indispensability Argument for Platonism and the Circularity Problem*

Within the context of the Quine-Putnam indispensability argument, one discussion about the status of mathematics is concerned with the 'Enhanced Indispensability Argument', which makes explicit in what way mathematics is supposed to be indispensable in science, namely explanatory. If there are genuine mathematical explanations of empirical phenomena, an argument for mathematical platonism could be extracted by using inference to the best explanation. The best explanation of the primeness of the life cycles of Periodical Cicadas is genuinely mathematical, according to Baker (2005, 2009). Furthermore, the result is then also used to strengthen the platonist position (e.g. Baker 2017). To avoid circularity, the explanandum shouldn't refer to mathematical entities. Therefore, the explanandum is paraphrased away in first-order logic with identity. The question is how to connect the explanandum, which is allegedly non-mathematical, with the explanans, which is still mathematical. This paper questions the possibility of arguing for mathematical platonism on the basis of this or any such example in which the explanandum is, to prevent circularity, paraphrased away, but in which the explanans is still mathematical.

Imocrante, Marina (IHPST - Université Paris 1 Panthéon-Sorbonne), Osta Vélez, Matías (IHPST - Université Paris 1 Panthéon-Sorbonne; MCMP - LMU (Munich); FHUCE - UdelaR). *Conceptual Change: Which Semantics for Mathematical Terms?*

The problem of conceptual change has been one of the main concerns of philosophers of science since Kuhn. However, the attention has been drawn on the empirical sciences, leaving aside the issue of conceptual change in mathematics and the formal sciences.

The present work aims at confronting the issue of conceptual change in mathematics, trying to clarify a suitable semantic framework to understand this phenomenon. In particular, we are going to investigate which are the conditions that a theory of meaning (and reference) has to meet in order to account for cases in which a given mathematical term seems to change meaning through the historical development of the discipline.

Our cases studies will be drawn from the history of infinitesimal calculus. We argue that, unlike what happens with natural kind terms, reference should not be considered as a central semantic feature for mathematical terms. Instead, we suggest to understand the meaning of those terms as emerging from the collective cognitive practice of the mathematicians' community through times, their central semantic properties being operational, inferential and epistemically-oriented.

Krauss, Alexander (London School of Economics). *How our minds enable and constrain reasoning and knowledge*

The limits of our mind shape the limits of knowledge and the sciences. A common assumption among scientists is that our mind has evolved well for scientific reasoning and theorising. I argue that this common assumption oversimplifies the cognitive and sensory constraints we face in formulating highly complex and precise scientific theories about the world, and especially about phenomena we cannot directly perceive. I show this combining evidence and perspectives from the evolution of our cognition and empirical research on adults, children and other animals. The paper thereby addresses the broad question of how our cognition and senses enable and also constrain the particular theories we can develop. Implications are then discussed on how scientists need to label different types of knowledge accordingly in order not to oversell their reliability.

Kvasz, Ladislav (Czech Academy of Sciences). *Patterns of Theory Change in Physics*

The aim of this paper is to discriminate four levels at which theory change occurs: the level of aims of scientific research; the level of instrumental practice, by means of which those aims are achieved; the level of conceptual frameworks used to interpret the outcomes of the instrumental practice; and finally the level of facts stabilized on the basis of the particular conceptual framework. These levels interact in many different ways, but the changes occurring on these levels vary in their character. Therefore I propose to discriminate four kinds of theory change, for each kind I will discuss few examples from the history of physics, offer their epistemological analysis, and suggest for each of them a particular pattern of theory change.

Loaiza, Juan R. (Humboldt-Universität zu Berlin). *Can functionalism save emotions from elimination?*

In the past decades there has been a growing skepticism about the natural kind status of emotions and, consequently, about their place as objects of scientific study in psychology and neuroscience. This skepticism takes the form of either eliminativism (Griffiths, 1997) or constructionism (Barrett, 2006; 2014; 2016). In either form, the skeptic claims that the scientific and explanatory value of emotions as a distinct category is doubtful. In my talk, I will resist skepticism and argue that we can offer an account of emotions that cashes out neural and bodily variability as the multiple realization of a group of functional kinds. First, I present recent empirical evidence showing the lack of unique, specific,

and consistent neural and bodily markers of emotions, i.e. the Variability Problem. Then I explore the problem as one regarding the identification of emotion kinds and discuss the notion of ‘scientific kind’. Afterwards, I explore different ways to cash out emotion kinds, opting for a functionalist account. I conclude by exploring some questions about what sort of functionalism do emotions require and what are the consequences of this approach.

Luque, Víctor L. (University of Valencia). *Is there room for a new foundation for the force interpretation?*

This article analyses the view of evolutionary theory as a theory of forces. Thus, evolutionary theory would be structured by a zero-force law (what happens to a system when no forces act on it), consequence laws (which describe how forces, once they exist, produce changes in the system), and source laws (which describe the circumstances that produce forces). The force interpretation has been challenged in the last years by several authors. I argue that these critiques are not counterexamples to the force interpretation itself, but only to the original formulation elaborated by Elliott Sober. I then propose a new formalization of the force interpretation that avoids these critiques. This new formalization establishes a new zero-force law (what I call The Principle of Stasis), and a single consequence law for all evolutionary systems: the Price equation. This new formalization has the benefit of being more closely allied with contemporary practice in evolutionary biology than the traditional force interpretation.

Martínez, Manolo (Universitat de Barcelona). *Direct Perception and Computation*

In this paper I examine the notion of ecological information, developed as part of ecological psychology, the picture of the mind spearheaded by Gibson (2014). Gibson’s main interest was to substitute what he saw as the excessively rationalistic mainstream in cognitive science with a view of cognition where the interactions of agents and their environment is first in the order of explanation.

Martínez-Vidal, Concha (University of Santiago de Compostela), Rivas de Castro, Navia (University of Santiago de Compostela). *The enhanced indispensability argument. Where are we?*

Different authors have advanced several cases of purported ‘genuine’ mathematical explanation (the cicadas, the Königsberg bridges, the honeybee comb ...) to conclude, by inference to the best explanation, that there are mathematical objects. However, nominalists (Saatsi 2011, Knowles and Saatsi, forthcoming) contend that—even if mathematics is expressively indispensable—, it is not explanatory indispensable; at least not in a way that conveys a commitment to mathematical objects. A debate has been going on since i) there is no agreement on the character of purported genuine mathematical explanation; and, ii) as Marcus has noted, the argument “leaves open the question of how one is supposed to determine the commitments of an explanation.”

In this contribution, we intend to show that, even if some progress has been made in order to get a better understanding of how mathematics explains, the debate still remains in a standoff. Alternatively, it might be the case that cognitive salience suffices for light-weighted platonism, a possibility that Baron contemplates (2016).

Militello, Guglielmo (University of the Basque Country). *Structural and Organisational Conditions for Machine-Likeness*

Although the analogy between macroscopic machines and biological molecular devices is important for both neo-mechanistic accounts and nanotechnology, it has been claimed that certain complex (biological and synthetic) molecular devices cannot be considered machines since they are subject to physicochemical forces that are different from those of macroscopic machines. This paper has a threefold aim: first, to clarify the structural and organisational conditions of macroscopic machines

and microscopic devices; second, to determine whether the machine-like analogy fits nanoscale devices; and third, to assess whether the machine-like analogy is appropriate for describing the behaviour of some biological macromolecules. Finally, the paper gives an account of ‘machine-likeness’ which, while acknowledging the physicochemical and organisational differences between man-made machines and biological microscopic devices, nevertheless identifies a common conceptual core that allows us to consider the latter ‘machines’.

Mossio, Matteo (IHPST/CNRS/Paris1/ENS), Difrisko, James (Konrad Lorenz Institute). *Organizational criteria of diachronic biological identity*

What does it mean to be the same organism over time? We put forward an understanding of diachronic biological identity from an organisational perspective. Our claim is twofold. On the one hand, we submit that a necessary condition of diachronic identity is organizational continuity i.e. the fact that, in spite of all possible material and functional changes that they might undergo, biological systems realise a continuous temporal succession of organized regimes. Yet, organizational continuity is not a sufficient condition, insofar it cannot discriminate between development of the same individual and appearance of a new individual through reproduction. We therefore suggest, on the other hand, that the temporal boundaries of identity correspond to the appearance of spatial discontinuities, i.e. a change in the local number of organized systems that are organizationally continuous with one another, either via multiplication (fission) or reduction (fusion). We discuss the prospects of the organizational account, as well as its relations with other approaches of diachronic biological identity.

Montejo, Carlos (Universidad de Navarra), García Valdecasas, Miguel (Universidad de Navarra). *Los mundos posible de Lewis son entrópicos*

Abstract. I argue that David Lewis’ possible worlds are entropic unless they are worlds where the events are decidable more geometrico, in which case this world does not necessitate at all a theory of possible worlds, and the theory of possible worlds ceases to be a Best System Account and can be discarded. But the theory of possible worlds is necessary because objective chance is an observable feature of reality. Chance events introduces the need to analyze events by comparison of possible worlds and this comparison is necessary to determine which is our actual world. Such comparison is impossible or undecidable without the principle of maximum entropy. Hence, entropy is a feature of all of Lewis’ possible worlds.

Ongay de Felipe, Íñigo (University of Deusto). *The Dappled World of Evolutionary Biology: Scientific Pluralism and the Extended Evolutionary Synthesis*

This paper examines the present state of the art in Evolutionary Biology with a view of showing how the sort of scientific pluralism Nancy Cartwright argues for in *The Dappled World* casts lights on some debates pertaining to the field. In that respect, the author first reassesses some of the new developments in the areas of epigenetics, evo-devo and behavioral biology to show that while there is not to date a well-articulated new evolutionary synthesis encompassing all these factors, they do conjointly point out to a paradigm which sharply contrasts with the modern synthesis constructed in the decade of the 1930s. Secondly, the paper will show how this much debated contemporary area of concern represents a case in point where scientific research vindicate the merits of the type of epistemic pluralism advocated by philosophers such as Nancy Cartwright, H. Chang or P. Kyle-Stanford. Finally, the paper goes on to elaborate on a further philosophical point in relation to evolutionary biology and scientific pluralism: the idea that epistemic pluralism goes hand in hand with a number of profound ontological implications not only about the disunity of science but also about the irreducible disorder of the world.

Pelacho, Maite (Universitat de València). *Universidad del País Vasco y Fundación Ibercivis*

En esta investigación propongo la ciencia ciudadana como una práctica idónea para lograr una ciencia más sostenible y, al mismo tiempo, comunidades más cohesionadas e inclusivas en las que todos sus miembros tengan la capacidad de disfrutar del conocimiento científico - adquiriéndolo y generándolo - si bien de diversos modos. Esta afirmación implica una comprensión de la ciencia como un "recurso de uso común" en el sentido explicado por Elinor Ostrom. Sin embargo, bajo este enfoque, lograr aquel doble objetivo dependerá significativamente no sólo de las acciones en sí mismas, sino también de las motivaciones más adecuadas de los diversos actores, a saber, aquellas relacionadas con la corresponsabilidad respecto del interés general. Conocer las motivaciones entre los distintos grupos de interés involucrados en diferentes proyectos de ciencia ciudadana en España es un objetivo de esta investigación. Afirmar que las prácticas de ciencia ciudadana son constituyentes de lo común requiere, como condición, que tales motivaciones están realmente ligadas a la consecución de intereses generales. Para lograr el conocimiento de estas motivaciones se realiza un estudio empírico que busca también promover la reflexión y deliberación compartida respecto de las diversas implicaciones epistémicas, éticas y políticas de las prácticas de ciencia ciudadana.

Pérez-González, Saúl (Universitat de València). *The development of general notions of mechanism*

In this paper, I introduce and discuss a general principle shared by new mechanists: the search for generality. New mechanists agree that a proper notion of mechanism has to be suitable for most of the fields of science where mechanisms are relevant. The development of general notions of mechanism is pursued with two different and alternative strategies, which I call the extrapolation strategy and the across-the-sciences strategy. After analysing paradigmatic examples of them, I argue that both strategies are unsuccessful. It is also showed that the failure of the search for generality challenges a relevant argument in support of the mechanistic account of scientific explanation.

Picó Pérez, Vicent (Universitat de València). *The primitive ontology of classical mechanics and Bohmian mechanics*

The relationship between physics and metaphysics can be described by the so-called primitive ontology (PO) approach. The PO of a fundamental physical theory consists in entities that are of a basic kind and constitutive of everything else, so that an obvious choice of PO are particles in space that evolve with time. Different formulations of both classical and Bohmian mechanics adopt this PO but differ in their non-primitive ontologies. The scrutiny of their differences shows the usefulness of the PO approach for the debate on scientific realism.

Pinheiro, João (Centre for Philosophy of Sciences of the University of Lisbon). *The Science of Ethics & Evolutionary Moral Realism*

The Science of Ethics is converging in the following theory: the biofunction of Ethics is, bluntly speaking, the resolution of conflict so as to maximize individuals' (and possibly groups') fitness, and this is better accomplished with wholesale cooperation between agents.

Considering this, metaethicians have come up with a theory according to which moral truths are grounded in facts about cooperation [e.g. Brosnan 2011 & Sterelny & Fraser 2016].

In this talk we'll argue that this theory, aka "evolutionary moral realism", allows naturalists and realists

1. To solve traditional "Street-style" evolutionary debunking arguments [Street 2006]. Evolutionary explanations of moral cognition in terms of truth-tracking and fitness-tracking are complementary descriptions of a same process, though at different levels of abstraction [pace Griffiths & Wilkins 2015];

2. To explain why, as moral error theories frequently stress [e.g. Joyce 2016] moral error is rife. This has to do with an environmental mismatch between moral cognition and its selection environment;
3. To say that “fitness-enhancing is morally good” is an analytic & a posteriori truth [cf. Enoch 2010]; And conclude that
4. Expectedly, owing to the extrinsicality of fitness [cf. Brandon 1990:39], some measure of moral pluralism is true [e.g. Wong 1995, & Dean 2012].

Pogonowski, Jerzy (Adam Mickiewicz University). *Extremal axioms in mathematics*

We are going to discuss the origin and function of extremal axioms (like: induction axiom in arithmetic, continuity axiom in algebra, geometry and analysis, restriction axioms in set theory, axioms of the existence of large cardinals in set theory). We will present some of their consequences as well as the reasons for rejection of some of these axioms (e.g. restriction axioms in set theory). Finally, we will discuss the role of mathematical intuition in characterization of the intended models of some fundamental mathematical theories.

Pontarotti, Gaëlle (Université Paris Diderot/IHPST). *Organizational inheritance : rethinking about gene-culture coevolution*

Gene-culture coevolution can refer to different phenomena according to our definition of culture and cultural inheritance. For example, when culture is described as a set of mental representations transmitted from one brain to another through social interactions in parallel with genes, gene-culture coevolution usually refers to the fact that cultural transmission modifies selection pressures acting on genetic variants. This talks explores an alternative and original account of gene-culture coevolution based on an organizational perspective of biological inheritance. In this view, inheritance is defined as the conservation, across generations, of organizational patterns involving multifarious functional parts that collectively harness flows of matter and energy so as to maintain themselves and the system they belong to. Cultural inheritance refers more specifically to the conservation of those functional parts – preferences, habits, etc. – that are reconstructed through social interactions. Gene-culture coevolution, as for it, appears as the coevolution of multifarious functional traits whose conservation, across generations, is ensured by intertwined genetic and non-genetic mechanisms. Such perspective opens a new way to make sense of the long-term effects of cultural transmission on evolutionary trajectories.

Rivadulla, Andrés (Universidad Complutense de Madrid). *Theoretical Innovation. A New Look at Creativity in the Natural Sciences*

Theoretical innovation is a form of creativity. Each innovation has to comply with the demands of novelty, surprise (for the dominant paradigm) and theoretical value.

Theoretical innovations take place at the intra-theoretical level. The postulation of so many theoretical novelties within the framework of the general theory of relativity, whose discovery I will present briefly, are a good example of this. These theoretical developments have impacted the culture of our time by providing new images of the Universe.

But innovations also occur at the inter-theoretical level making use of productive reasoning (I made a presentation of this concept in my contribution to the Proceedings of the VII Conference of the Spanish Society for Logic, Methodology and Philosophy of Science, 2012). Revolutionary discoveries in the fields of wave mechanics and relativistic quantum mechanics, which I will also present briefly, are an excellent example of theoretical innovations in contemporary theoretical physics.

But these are not the only ways for the incorporation of theoretical novelties into science. The other ways in which the scientific methodology is applied: induction, abduction and analogy, also contribute significantly to theoretical innovation, as I am going to concretize in decisive examples in the history of science.

San Pedro, Iñaki (University of the Basque Country, UPV/EHU). *Computer Simulations, Emergence, and Scientific Representation*

This paper explores the challenges that computer simulations —and more especially complex systems which involve the emergence of new, unknown or unexpected properties— pose to our understanding of the notion of scientific representation, broadly understood, i.e. as an activity carried by scientist aimed at acquiring knowledge about certain aspects of the world.

Arguably, computer simulations understood in a broad sense entail some particular characteristic epistemic features, which suggest a revision of some of our present ideas around scientific representation. In particular, in view of such epistemic particularities, one can address the question as to what computer simulations tell us about scientific representation? Put it differently, what account of scientific representation best fits (computer) simulations of complex systems involving emergence? Emergence, I claim, poses a particularly difficult challenge to the usual accounts of scientific representation, be it in terms of structure-preserving maps or even the more flexible deflationary pragmatic approaches. I argue that the emerging of properties demands a deeper revision of the epistemological role and status of representations. In particular, I claim that if we are to account for emergence in scientific representational practices we must require that they have a further performative or constitutive epistemic role.

Sánchez, Carmen (Universidad Complutense de Madrid). *Diagramatización en física: aproximación semiótica al alcance representativo de los diagramas de Feynman*

El objetivo de esta comunicación es aportar un punto de vista semiótico al debate acerca de la relación de representación que guardan los diagramas de Feynman con los procesos físicos que se manejan a través de ellos. Se propone abordar esta cuestión desde la noción de “diagrama”, en tanto que signo, y determinar el modo específico y propio de la representación diagramática y, solo posteriormente, reflexionar sobre la relación diagrama de Feynman – proceso físico. El signo “diagrama” es aquél que guarda una relación de semejanza estructural – isomorfía – con determinadas relaciones entre los componentes de su objeto de representación. En el caso de la herramienta ideada por Feynman, al menos para el caso específico de la interacción electro-magnética, la semejanza estructural de los diagramas es con una expresión formal (matemática); aquella con la que se calcula la amplitud de probabilidad de darse un proceso de interacción concreto. En consecuencia, la pregunta por la relación de representación diagramática entre los diagramas de Feynman y los procesos físicos queda trasladada a la pregunta por la relación de representación simbólica que guarda la expresión matemática citada con los procesos físicos cuyas probabilidades arroja. Y esta es la cuestión que debe resolverse.

Sánchez-Dorado, Julia (UCL). *The creative similarity account of the means of representation*

The concept of similarity, if adequately characterized, can provide an account of the epistemic success of scientific representation. In this paper, I first discuss the difference between an account of the "constituents" and the "means" of representation (Suárez 2003; van Fraassen 2008). Then, I examine —and reject— the possibility of taking similarity (and its structural variants isomorphism and homomorphism) as constituents of representation (like Bartels 2006; French 2006). Next, I explore if similarity can help account for how epistemically successful representations are produced in scientific practice, that is, if similarity is a central means of representation. Three arguments against similarity as means of representation will be considered: the argument from variety, from vagueness, and from misrepresentation. None of these arguments, I claim, is conclusive enough to prevent us from trying to offer such an account. Finally, I advance my own specific account, the “creative similarity account of the means of representation”. This account has three important assets: it can adequately avoid to the criticisms against similarity previously presented; it is sustained on a practical investigation of

actual uses of judgments of similarity in modelling practices; and it makes similarity and relevant distortions and idealizations compatible with each other.

Sánchez Gómez, Pedro J. (Universidad Complutense de Madrid). *A propensionist interpretation of Lewis structures*

In this communication I present an alternative interpretive framework for Lewis Structures (LS's). LS's are a schematic description of the frame of a molecule in terms of the valence electrons of the atoms that make it up. My approach is grounded, on the one hand, on the probabilistic character of chemical equations, and, on the other, on a propensionist vision of these probabilities based on the idea of mechanism of reaction. My point is that the nuclear role of Lewis Structures lies in that they provide a propensionist account of reactivity by means of a visual reasoning that is typical of the chemical explanation. Ideas such as those of (single or multiple) bonding, lone pairs, (full or vacant) orbitals, resonance, electrophilicity and nucleophilicity, and so on, idiosyncratic of the chemical thought, cannot be understood outside the framework set by Lewis' structures and rules. It is thus within the framework of chemical reactivity that LS's must be studied and, in particular, where their epistemic status must be defined.

Soler, Jaime (UNED). *Usefulness (or not) of defining the concept of life in biology*

Due to the development of some new scientific disciplines such as astrobiology or artificial life, the interest in defining the concept of life has been increasing since the end of the twentieth century. However, this interest has not led to a minimum consensus.

As a result, some authors have questioned the possibility and usefulness of defining the concept of life. All these criticisms are based on the assumption that these definitions imply necessary and sufficient properties, which are characteristic of natural kinds. However, some authors consider definitions in a different way, for example in an instrumental sense. Not only that, but also identifying natural kinds with essentialist positions means obviating some interesting proposals.

Therefore, the first goal of this paper is to show the limitations of the positions which are skeptical with the possibility of defining life. The second target is to show the advantages of adopting instrumental, plural and revisable definitions of the concept of life. To do this, two examples of how the concept of life is used in scientific research will be studied.

Suárez, Javier (Universitat de Barcelona - University of Exeter). *Holobionts as units of selection: A trait-based account of holobiont individuality*

Holobionts are biological entities that consist of a multicellular host plus its symbiotic microbiome. Holobionts are omnipresent in the living world and are supposed to bear traits, resulting from the interactions between the host and its symbionts. Defenders of the holobiont view have recently argued that holobionts are units of selection. This claim has been recently criticized on the basis the species that compose a holobiont's microbiome are not faithfully transmitted intergenerationally. In this paper, I contest their argument by distinguishing between the notions of "stability-of-species" and "stability-of-traits". Stability of species demands that the different species that integrate a holobiont are faithfully transmitted every generation for the holobiont to be a unit of selection. Stability of traits, however, only requires the existence of a statistical correlation among the traits that are identified across generations of holobionts for holobionts to be units of selection. I defend that the arguments that have been offered against the role of holobionts as units of selection assume the idea of stability of species, which I argue to be conceptually mistaken for representing the concept of units of selection and argue that the idea of stability of traits is more suitable for doing so.

Suárez, Javier (Universitat de Barcelona - University of Exeter), Deulofeu, Roger (Universitat de Barcelona). *Equilibrium explanation as structural non-mechanistic explanations: The case of long-term bacterial persistence in human hosts*

Philippe Huneman has recently questioned the universality of mechanistic models of scientific explanation on the basis of the existence of structural explanations, explanations that account for the phenomenon to be explained in virtue of the mathematical properties of the system where the phenomenon obtains. Structural explanations are very diverse, and include cases like explanations in terms of bowtie structures, in terms of the topological properties of the system, or in terms of equilibrium. The role of mathematics in bowtie structured systems and in topologically constrained systems has recently been examined, and mathematics has been found to play two possible roles in explanation: (a) either determining the identity of the system or (b) constraining the possible mechanisms that may appear in the system. However, the exact role that mathematical properties play in equilibrium explanations has nearly been examined. In this paper, we cover this gap by investigating the role that mathematics play in equilibrium explanations. We analyse Blaser and Kirschner's nested equilibrium model of the stability of persistent long-term human-microbe associations and argue that, in their model, mathematical properties play an explanatory role by constraining the set of possible behaviours of the entities that interact in those systems.

Suñé, Abel (Universitat de Barcelona, Logos). *An account of fundamentality for the metaphysics of science*

A prominent view on metaphysical fundamentality, recently labelled the ontological minimality approach (OM) (Takho (forthcoming)), proposes to think of the metaphysically fundamental as the "minimally encompassing portion of reality" that God would have to create in order to duplicate this world. This can also be expressed as the proposition that the set of the fundamental cannot contain any redundant entities. James Ladyman and Don Ross (2007) have formulated a naturalistic theory of ontology submitting it as a theory of existence that rules out all metaphysically relevant sorts of redundancy. This theory is an important step in the field of naturalized metaphysics; however, the details of its formulation haven't received much attention. In this paper I argue that there is an important sort of redundancy relevant to metaphysics -pragmatic redundancy- that is, claims to the contrary notwithstanding, admitted by Ladyman and Ross's theory of ontology. I then argue that while removal of pragmatic redundancy cannot be considered a tool to define existence, it carves an important metametaphysical joint: its identification serves to track metaphysical fundamentality as conceived by OM. With this in mind, I suggest a way to formulate a naturalistic semi-formalised definition fundamentality based on the removal of pragmatic redundancy.

Urueña López, Sergio (University of the Basque Country, UPV/EHU). *Scientific Realism beyond Pessimistic Induction: from Truth to Plausibility*

The purpose of this paper is to present a meta-analysis of the realism/anti-realism debate focused on the 'No-miracles' Argument (NMA) and Pessimistic Induction (PI)'s concepts of truth. The principal hypothesis outlined in this study is that despite the fact that NMA/PI are sound and valid arguments, PI is defective against any form of scientific realism in which truth is understood in terms of plausibility. First, the paper points out that the effectiveness of NMA/PI is dependent on the commitment towards differentiated conceptual frameworks regarding truth, i.e., both arguments are proven to work if and only if a concrete notion of truth is previously assumed for each case. Second, the paper identifies which one of those conceptual frameworks of truth is more suitable to comprehend scientific practice. Finally, the study concludes that NMA is reasonable beyond PI iff the truth of our current scientific theories is understood from the stance of plausibility. The relevance of this research is to shed new light on NMA/PI debate and propose plausibility as a novel and robust enough analytical tool which supports NMA and scientific realism.

Vecchi, Davide (Universidade de Lisboa), Casetta, Elena (University of Turin). *Probing geno-centric approaches to conservation biology*

The literature in biodiversity studies and conservation biology mirrors the same lurking ideological clash between geno-centric approaches and their alternatives pervading the practice of other biological disciplines. On the one hand, some biologists and philosophers argue that genes cannot be chosen as the fundamental unit of conservation. On the other hand, many conservation biologists consider genetic diversity as primary. We suggest that geno-centric approaches to conservation biology rest on an explicit rationale and an implicit assumption. The explicit rationale is that genetic diversity is the main prerequisite for evolutionary adaptation, i.e. the key condition for a species to survive in a rapidly changing environment and also to speciate. The underlying implicit assumption is that phenotypic diversity somehow depends on genomic diversity. In this contribution we propose to scrutinize both the explicit rationale and the implicit assumption. While the tenability of the first is, at least in part, challenged by what might be called the “paradox of evolution and conservation”, the tenability of the second is challenged by the difficulty of characterizing the causal link between genomic and phenotypic diversity.

Vidal, Oriol (Universitat de Girona), Teira, David (UNED). *Has classical genetics been practically reduced? ?*

The reduction of classical genetics to molecular genetics has been a source of controversies for almost half a century in the philosophy of biology. We will discuss the reducibility of one of the fundamental traits of the classical gene: position, a locus in the genome associated to phenotypic effects, but with no fundamental role in the molecular gene. This lack of correspondence has been interpreted as an argument for the non-reducibility of classical to molecular genetics. We want to explore an alternative interpretation. In the first place, we will discuss whether there was anything to reduce in the classical trait position. Did chromosomal loci played any causal role in the explanation of phenotypical traits? We contend it didn't: molecular genetics has been using molecular markers to locate genes in DNA strands without any causal implications. We argue that the introduction of molecular markers constitutes, at most, a practical reduction of the classical chromosomal position, in the sense of having a classical research heuristic replaced for a molecular alternative. Yet, the practical reduction of position would open up the possibility of an epistemic reduction of classical to molecular genetics, now focusing on the remaining three fundamental traits.

Vinuela, Pedro (UNIR). *Kant and Wittgenstein on Pictures and Proofs in Mathematics*

In the Critique of Pure Reason, Kant assigns a key role to figures and ostensive representations in order to argue that mathematics is a priori cognition as well as applicable to experience. However, since the last nineteenth century the visual intuition and diagrammatic reasoning were regarded only as heuristically fruitful resources, their role in justification, by contrast, was considered as unreliable and, therefore, they were discredited and relegated to a second-order position. With this background, it can be of special interest reconsider with new eyes the later Wittgenstein's philosophy of mathematics, for it is well-known his fondness for pictures. The point is that this raises the interesting problem as to why many diagrams convince and can serve as proof, in spite of its possible flaws. In this communication, therefore, I'll focus on examine the role and importance that Kant concede to constructions and ostensive representations as well as the role Wittgenstein attributes to pictures and diagrams in mathematics. In the end, the aim is to raise questions as: Is the function of diagrams merely heuristic and tentative or rather constitutive in a mathematical proof? Can and should we dispense with pictures in a rigorous proof?

Wójtowicz, Krzysztof (University of Warsaw). *Metaabstract explanations in science*

The thesis, that there are genuine, non-causal, mathematical explanations in science has a strong support in the contemporary discussion. According to it, physical phenomena are explained by referring to the truths of mathematics, not to the causal mechanisms. But then, identifying the mathematical resources needed to prove the respective theorems becomes crucial. Importantly, there are examples of sentences with a clear physical interpretation, which are independent of the standard set theory (i.e. ZFC): da Costa and Doria proved such results for example for models of general relativity (there are also other examples). The program of the Topos Quantum Theory also might be interpreted in this spirit, as it is based on strong metatheoretical assumptions. The problem becomes especially interesting, when we think of mathematical theorems as expressing modal constraints: what is their metaphysical and epistemological status? Set theory is focused on studying models – so for this kind of explanation properties of models, not of physical systems are most essential. In the talk I will discuss the possibility of defining the notion of metaabstract explanation, which takes these set-theoretic results into account – and focuses rather on the properties of models, not only the systems in question.

Zach, Martin (Charles University). *Scientific understanding and the facticity condition*

In this talk I argue that philosophers have been too quick to dismiss the possibility of idealized models providing factive understanding. I discuss the model schema of a metabolic pathway inhibition which is both idealized and abstract and it omits key difference-making factors such as the role of molar concentration or the exact type of the inhibition. The omissions here also suggest that it is not always the case that idealizations highlight non-difference-makers. Nevertheless, I argue that the model schema provides factive understanding if the system is causally organized in the way the model suggests. Furthermore, my account of factive understanding differs from the two recent ones (Alexander Reutlinger et al., Collin Rice) because it neither relies on theory-driven de-idealization of the assumptions, nor does it give us counterfactual knowledge of the relevant and irrelevant factors. Instead, it suggests a new way for accommodating factive understanding.

E. History of Science

Labrador Montero, Daniel (University of Salamanca). *Telos y especie biológica: la historia de dos conceptos inseparables*

¿Son las especies categorías reales o meras convenciones? ¿Son las especies clases naturales? ¿Son los enunciados teleológicos un rasgo distintivo de la biología como ciencia? ¿Pueden deshacerse de la finalidad las ciencias de la vida? Estas preguntas y otras muchas son una constante en la filosofía de la biología. En esta comunicación se pretende mostrar que difícilmente se puede dar respuesta a alguna de ellas sin adquirir una posición respecto a las otras, lo cual quiere decir que existe una relación entre las cuestiones acerca del concepto de especie y las cuestiones acerca de la finalidad. Para escenificar dicho vínculo se acudirá a una perspectiva histórica, donde se indagará en el desarrollo de esta ligazón entre las nociones de especie y finalidad a lo largo de los siglos, desde Aristóteles a la biología del siglo XIX con Charles Darwin a la cabeza.

Romero de Pablos, Ana (Consejo Superior de Investigaciones Científicas). *Mujeres en la física nuclear: género y experimentación*

Mi presentación se centrará en la investigación desarrollada por cuatro investigadoras -físicas y químicas- españolas, que en los años 50 y 60 trabajaron en la Junta de Energía Nuclear (JEN), institución creada en 1951 por el estado franquista para fomentar el desarrollo atómico.

María Aránzazu Vigón, Margarita Celma, María Alicia Crespi y Dolores García Pineda investigaron y tuvieron responsabilidades en física de reactores, medicina nuclear, ingeniería química y medición de radiación ambiental, respectivamente. Aunque trabajaron en unos campos de investigación entonces pioneros, también para los hombres y no solo en España, sus trayectorias investigadoras permanecen todavía ocultas en la historia y en la historiografía de la ciencia.

Cuatro objetivos articulan la investigación: hacer una reflexión crítica sobre el papel que deben cumplir las biografías científicas en la investigación histórica de la ciencia y de la historia de las mujeres; pensar nuevos marcos epistémicos que ayuden a visibilizar y a comprender, desde la historia, las diferencias de género; cuestionar la escasa presencia de mujeres en la historia y en la historiografía de la ciencia; y mostrar experiencias individuales para reflexionar sobre un colectivo, el de las mujeres investigadoras y técnicas en el espacio aparentemente masculino de la JEN .

F. Science, Technology and Society

Arraiza, Maite (University of the Basque Country). *Desmontando el determinismo biológico del los cazadores del origen sexo-genérico: lo trans* como multiplicidad y relación*

Lo trans* se ha convertido en el campo de batalla donde el paradigma sexo-genérico heteronormativo está siendo relegitimado y/o disputado. En tanto que categoría todavía en construcción, no presenta un significado homogéneo, y frente a su acepción de multiplicidad original, nos encontramos con una fuerte tendencia a reducirlo a lo biológico, material y tecnológico. Cuestionaremos tres supuestos aceptados socialmente y provenientes del mundo de la ciencia: lo trans* como error de la naturaleza; la inmutabilidad, privacidad y el carácter innato de la identidad sexo-genérica; y su localización cerebral en el núcleo del lecho de la estría terminal (BSTc). Problematizaremos cuatro artículos científicos que se esconden detrás de estas afirmaciones y componen la Brain Sex Theory, ya que defienden el dimorfismo sexual cerebral y una concepción de la transexualidad ligada a la inversión de este en esa zona. Criticaremos asimismo los cuatro estudios por errores metodológicos, de diseño, confusión conceptual, falta de rigurosidad y científicidad. Finalmente, ante estas concepciones deterministas y reduccionistas, propondremos enfoques y narrativas que se sustentan en la relacionalidad constitutiva y en la multiplicidad, en las que el sexo-género, la sexualidad y el desarrollo se explican en devenir continuo.

Bernabeu, Cristina (Universidad Autónoma de Madrid). *Predecir personas: la opresión de género en los perfiles los buyers persona*

Mi objetivo es ofrecer, desde una perspectiva feminista, una explicación estructural del rol normativo que exhiben los artefactos tecnológicos en sus interacciones con los seres humanos; concretamente, de su rol normativo en tanto que colaboradores de relaciones de opresión en contextos androcéntricos. Para ello, presto especial atención al trabajo desarrollado por Sally Haslanger en torno a la estructura social y los procesos de objetivación sexual (Haslanger, 2017; 2016; 2012).

Esta propuesta pretende ofrecer una respuesta a uno de los asuntos más destacados dentro de la filosofía de la tecnología contemporánea: el problema de la agencia tecnológica. Mi mi objetivo es abordar el problema de la agencia tecnológica desde una perspectiva estructural de tales disposiciones, tomando en consideración la posición social de los agentes en tanto que ocupan ciertos nodos dentro de la estructura social (Haslanger, 2016).

A modo de ejemplo, desarrollo el caso de los persona (buyers persona o customer persona), utilizados como herramientas de predicción. Los persona son representaciones ficticias (masculinas o femeninas) configuradas a partir de personas reales que tienen como objetivo simular, imitar y predecir su comportamiento o disposición a partir de la recolección de cierta información sobre de ellas.

Cañizares-Gaztelu, Jose Carlos (Universidad de Málaga). *Qué es la sostenibilidad, y cómo la comprometen las tendencias de innovación*

Si bien el capitalismo promueve necesariamente oleadas periódicas de innovación, el fetichismo acerca de la innovación fue una tónica peculiarmente notable en el ambiente intelectual de las últimas décadas. Sin embargo, los análisis de los patrones recientes y actuales de innovación revelan, en estas tendencias, unas fuertes tensiones que ponen en peligro las expectativas de sostenibilidad social y ecológica. Estas evidencias y argumentos sobre los impactos de la innovación pueden, por tanto, servir de base empírica para asentar los fundamentos de una filosofía de la tecnología con fuerte inclinación social y política, y donde el valor de la sostenibilidad ostente el lugar prominente que merece. En este artículo propondré una definición de la sostenibilidad que la presente como un valor fundamental y que emerge de las dinámicas estructurales de una sociedad. Luego examinaré el papel

estructural que la innovación tiene en el capitalismo y, en particular, en el reciente capitalismo informacional. Concluiré señalando de qué manera estas tendencias tienen, plausiblemente, un impacto negativo sobre la sostenibilidad, y discutiré brevemente qué perspectivas hay para revertir estos impactos.

Cañizares-Gaztelu, Jose Carlos (Universidad de Málaga), Diéguez Lucena, Antonio (Universidad de Málaga). *Transhumanism, NBIC convergence and the Anthropocene challenges. Towards a conflict-sensitive philosophy of technology*

The literature on transhumanism and the Anthropocene suggests that a radical reshaping of human life will take place in the following decades. While both issues are increasingly attracting the attention of scholars from all disciplines, few have examined their relations. In this conference I argue for the urgency of building a philosophical framework capable of providing society the tools to think about the potential futures opened up by these challenges. These, I claim, are deeply entangled, so that they require as much an integrated scientific analysis as they require an exercise of imagination and philosophical critique. Further, I will also describe and justify how I structure this problem in my PhD plan, and exemplify the steps that I aim to take with reference to interdisciplinary literature.

de Cózar Escalante, José Manuel (Universidad de La Laguna). *Antropoceno y praxeología de la cultura científica*

El Antropoceno es una nueva época en la que --cada vez más voces así lo proclaman-- habríamos entrado. Esta “época de la humanidad” viene definida por la capacidad de nuestra especie para transformar el planeta en su conjunto, a la manera de una fuerza geológica. Por su parte, la praxeología de la cultura científica consiste en la investigación de los elementos y dimensiones de la cultura científica que conciernen a la praxis, es decir, la creación o modulación de disposiciones comportamentales y la acción humana. Pues bien, se está originando una interesante cultura científica del Antropoceno, en la que se hallan implicadas variadas formas de presentar (framing) y de comunicar a la ciudadanía la información científica necesaria para comprender esta novedosa situación en la historia de la humanidad. En el proceso, están comenzando a generarse nuevas percepciones y actitudes sobre nuestra relación con los sistemas biofísicos planetarios, y más en general, distintas “narrativas” o “relatos” sobre el significado del Antropoceno. En función de estos y otros factores se producirán nuevos comportamientos y cursos de acción con objeto de adaptarse al Antropoceno y, lo que es más importante, a fin de encauzarlo hasta donde sea humanamente posible.

Diéguez, Antonio (Universidad de Málaga). *El síndrome Galatea y el uso de las técnicas de biomejoramiento en animales*

Gracias a la ingeniería genética y a la biología sintética podremos diseñar especies nuestro antojo. Es lo que ha sido denominado ‘biomejoramiento animal’.

Sarah Chan (2009) ha proporcionado una definición de este biomejoramiento: “Un mejoramiento de un animal puede ser algo que: (1) produzca un incremento en alguna función natural o confiera una nueva función; (2) mejore algún aspecto del animal para propósitos humanos; (3) permita al animal un cumplimiento mayor de sus propios intereses.”

En esta definición se considera que un animal puede ser mejorado tanto si el resultado es beneficioso para los seres humanos (aunque no lo sea para el animal), como si lo es para el animal (aunque no lo sea para los seres humanos).

Esto marca una asimetría con el “mejoramiento humano”, donde solo los intereses de los individuos implicados se supone que son relevantes.

Si las aplicaciones de la ingeniería genética a los animales han generado ya una intensa discusión filosófica, mucho más controvertidas serán las posibles transformaciones que pondrá a nuestro alcance el futuro desarrollo de la biotecnología. Analizaremos algunas de ellas que, siendo

especulativas, están sin embargo fundamentadas en lo que permite inferir el uso de técnicas que ya están en ejercicio.

Fernández Jimeno, Natalia (University of Oviedo). *La intencionalidad en la tecnología: cómo identificarla y transformarla*

Las nociones de «affordances» y de «guion» son enfoques similares que tratan de dar cuenta de cómo la intencionalidad de las personas que diseñan y desarrollan las tecnologías puede quedar reflejada en ellas. Según estos planteamientos, el diseño de una tecnología (o un artefacto particular) incorpora ciertas limitaciones planteadas por quienes la han diseñado con el propósito de hacer de ella una tecnología transparente y accesible al usuario. Sin embargo, la intencionalidad con la que se limita un artefacto o una tecnología no siempre es manifiesta. En este trabajo examinaré cómo se manifiesta la intencionalidad y cuáles son las estrategias de las personas usuarias para actuar sobre ella desde el caso de las tecnologías de reproducción asistida.

García, Laura (Universidad de La Laguna), Hernández, Abraham (Universidad de La Laguna). *El papel de las series de televisión en la democratización de la ciencia ciencia*

Philip Kitcher se suma al debate en torno a la “democratización de la ciencia” abierto por Paul Feyerabend en los años ’70. Aunque con una perspectiva y actitud distinta, también insistirá en la necesidad de que el público, en un sentido amplio, se involucre en la práctica científica. Este aspecto permite analizar el valor de algunas series de televisión como un medio para instruir al público, pues son capaces de crear narraciones y transmitir el contenido que debería ser divulgado por la propia comunidad científica o política. Más allá de llevar al espectador un conocimiento que le resulta desconocido, es capaz de incentivar el cuestionamiento de las prácticas y fines en la ciencia, es decir, proporcionan una forma de problematizar y generar opiniones sobre los desarrollos científicos actuales y sus repercusiones en el futuro. Esta comunicación se propone resaltar el papel democratizador de ciertos medios de producción cultural que permiten al público acercarse a algunos problemas científicos o, en términos de Kitcher, que permitan formar una opinión responsable sobre conocimiento científico y sus posibles aplicaciones tecnológicas a través de la proyección de diferentes puntos de vista.

García-Barranquero, Pablo (Universidad de Málaga). *A new framework for thinking about life extension*

In the last two decades, the possibility of extending human lifespan has been a highly debated topic by both biomedical scientists (de Grey and Rae, 2007; Olshansky and Carnes, 2001) and philosophers (Agar, 2010; Overall, 2003). In this talk, I will propose an alternative framework to clarify different categories in the theoretical literature. This model builds upon the distinctions that Juengst (et al, 2003) and Wareham (2016) make about the different levels of control human senescence. Firstly, I will compare these previous approaches with my own perspective. Second, I will define each of the categories: prolonged senescence; compressed of morbidity; decelerated aging or SENS (1.0); arrested aging or SENS (2.0); rejuvenation. Finally, I will justify why my own perspective is more complete than Juengst (et al, 2003) and Wareham (2016) for four reasons.

Perdomo Reyes, Inmaculada (Universidad de La Laguna). *Socially Responsible Philosophy of Science*

The aim of this paper is to defend a view of the philosophy of science as a practice that should reflect not only about the disciplinary classical topics: science methodology, the practice of model construction, explanation or relations with technology. I claim that philosophy of science should reflect also on the directions science might take and the goals sought, and ponder; as well, must

include questions concerning who should make these decisions and in accordance with what procedures to promote a more inclusive and democratic science. It's an agenda that includes ethical topics and a commitment with responsible research and innovation in the context of our democratic societies. I'll propose three areas of topics and analysis: related to theory contents, related to the practice of science, and related to the goals and directions of science. Included in the agenda of a socially responsible Philosophy of Science will help us to evaluate the risks associated to the climate change and the advances of Biotechnologies and promises of Transhumanism, contribute to public discourse of science, including a valuable defense of a responsible science, and to promote a more pluralist and democratic society.

Pérez Sedeño, Eulalia (IFS-CSIC). *Biología y maternidad por sustitución: ¿cosificación, mercantilización o altruismo de género?*

Partiendo de la idea de que la biotecnología es una institución que se ha desarrollado gracias a determinadas visiones ideológicas y políticas, podemos ver que las investigaciones que se plantean y las innovaciones que se desarrollan están en gran medida vinculadas a los intereses y prioridades de las agencias de financiación, las empresas, los gobiernos e incluso determinados grupos de presión, dejando de lado los intereses de las mujeres, a las que la biotecnología afecta de manera desigual y pueden ayudar a perpetuar las desigualdades existentes.

En este trabajo abordaremos la biotecnología de la maternidad por sustitución, una de las tecnologías de reproducción asistida que más controversia ha producido en nuestro país en el último año. A través de informes y reportajes que aparecen en los medios de comunicación daremos cuenta de las complejas narrativas que hay alrededor de esta práctica y los debates suscitados recientemente. Por lo general, estos debates están muy polarizados y se centran en si la globalización del trabajo reproductivo es una explotación de la madre de sustitución, una oportunidad para ella, una expresión del altruismo de género e incluso empoderamiento de género.

Rivero, Thais (Universidad de La Laguna). *Proyecto Isotipo: Hacia un lenguaje visual unificado*

Otto Neurath compartía con los otros componentes del Círculo de Viena la concepción de un lenguaje unificado y el activismo político. En el lenguaje visual unificado (LVU) se conjugan ambos objetivos. Esto se materializó en el proyecto Isotipo.

Las pautas del Isotipo eran muy simples: 1) usaban símbolos del mismo tamaño y forma; 2) los objetos eran reproducidos de forma isométrica; y, 3) la nitidez a la hora de la presentación. La idea subyacente es que muchas imágenes no son auto-evidentes y necesitan completarse con un lenguaje de símbolos normalizados. El impulso de Neurath hacia el universalismo, que acompaña a cada una de las parcelas del Isotipo, se basa en nociones de transparencia, libertad de valor y una confianza básica en las instituciones históricas del conocimiento. Neurath enfrenta los lenguajes naturales a un lenguaje visual que es capaz de unificar sociedades, completamente divergentes entre sí, mediante imágenes.

Vemos que, el LVU de Neurath posibilita y abre las puertas a un entendimiento entre diferentes sociedades a través de signos. Además, se pueden encontrar sus huellas en algunos proyectos de filosofía visual. Por ejemplo, Wonder Ponder.

Torres González, Obdulia (Universidad de Salamanca). *El desequilibrio de género en filosofía*

La preocupación exclusiva por las disciplinas STEM hace que se haya pasado por alto campos pertenecientes a las humanidades o las ciencias sociales, como la filosofía, la historia o la economía, donde la mujer se encuentra igualmente infrarrepresentada. En lo que respecta a España y con datos del curso 2014-2015 del total del PDI en filosofía un 26,3% son mujeres, un 12,2% catedráticas, un 24,3% titulares, un 26,3% ayudantes doctor y un 41,8% contratados doctor. La situación no es coyuntural y es común a otros países del entorno. En la comunicación se muestran los datos referentes

a la disciplina, se contextualiza internacionalmente y se apuntan algunas de las causas señaladas en la literatura.

Vázquez Campos, Margarita (Universidad de La Laguna), García Díaz, Laura (Universidad de La Laguna). *Puntos de vista y referencias temporales en una serie de televisión. El caso de “The Affair”* ”

En este trabajo, relacionaremos la noción filosófica de puntos de vista con estructuras temporales ramificadas y lo ejemplificaremos en la serie de televisión “The Affair”.

Nuestros puntos de vista están llenos de contenido indéxical. Uno de estos índices es el emplazamiento temporal. Para representar este emplazamiento necesitamos aspectos internos y externos. Pero para representar el cambio en el tiempo necesitamos algo más, sobre todo si no queremos restringirnos a una perspectiva determinista.

Es habitual utilizar la metáfora de un árbol para representar el tiempo indeterminista. En su lugar, utilizaremos la noción de cable y la relacionaremos con la de punto de vista y la de escenario de una simulación. En todas ellas vemos historias paralelas que comparten hechos similares. A partir de cierto momento (que puede ser el presente) estas historias divergen y se sitúan en el espacio de la posibilidad.

Estas ideas encuentran su ejemplificación en “The Affair”. En ella se expresan los puntos de vista de sus protagonistas por medio de la narración en distintas voces, en distintas historias. Coinciden los tiempos y los espacios, pero no los relatos. Esta técnica resulta especialmente idónea para explicar la noción de punto de vista temporal.

Veit, Walter (University of Bayreuth). *Enhancement Technologies and Inequality*

As scientific progress comes closer to the point where human enhancement could become reality, debates arise whether this should be permissible (Bostrom & Roache; 2007: p.1). This paper will evaluate the claim from Maxwell J. Mehlman & Jeffrey R. Botkin (1998: chapter 6) that human enhancement will lead to inequality in a free market and analyze whether prohibition is the optimal public policy for this objection, as strict egalitarians might therefore advise (Lamont, Julian and Favor, Christi; Fall 2014: 2. Strict Egalitarianism). This paper will further consider whether this kind of argumentation is a threat for utilitarianism. First, there is no empirical evidence that human enhancement will lead to inequality. Second, even if we accept that human enhancement will lead to inequality, it is not clear whether this will outweigh the potential benefits of human enhancement. Third, even if it does, a strict egalitarian solution, i.e. outright prohibition of enhancement, may not necessarily be the best if we want to maximize well-being. Therefore the claim that human enhancement leads to inequality, does not sufficiently support the conclusion that human enhancement should be prohibited by policy-makers.

Symposia/Simposios

Workshop on Nancy Cartwright

Arruda, Renata (Universidade Federal de Goiás). *Causal pluralism and the boundaries of manipulation*

The human organism, object of study of medicine, imposes great challenges for its practice. Despite the biological variability of human beings, medical procedures are predominantly successful. The unlimited connection that takes place in the whole allows, therefore, intended changes in practice. But on what to intervene in this complexity? One of the ways medicine establishes the delimitation of the causal factors set is by the real possibility of manipulating them. Nancy Cartwright (1999, 2007) offers a very important perspective on this topic from her analysis of the manipulability theory, such as that developed by James Woodward (2003) and Daniel Hausman and James Woodward (2004). But their theory imposes severe limitations to the practice, which is essential to the sciences. My purpose here is to recognize this and to show, in agreement with Cartwright, that the plurality of distinct scientific activities fully justifies the plurality of conceptions of causality. I also accept Cartwright's challenge for the unification between the hunting and the use of causes (Cartwright, 2007, p. 1), arguing, finally, that manipulation is capable of promoting the connection between these notions in the activity of medicine.

Bujalance, Laura (Cela Open Institute). *In the Beginning There Were No Laws of Nature and Now, What is Out There?: On Nancy Cartwright's "Dappled" Causal Explanations*

When in 1983 Nancy Cartwright's wrote *How the Laws of Physics Lie*, it was only just foreseen how much of an impact her claim that the covering-law model of explanation is a mistaken one would have. She claimed it as mistaken because laws don't state facts.

Cartwright's rationale is built from case studies of scientific practice. And, in doing so, she makes her cases about what is a real explanation of phenomena: an explanation tout court has to meet the requirement of non-redundancy and only causations do so. But, for Cartwright, 'cause' is a plural term dependent on a system, thus Cartwright's 'causal explanation' is not a straightforward concept, even for current theorists of causal accounts of scientific explanation.

Cartwright took laws of nature as explanations of scientific phenomena away from us; and left us with a set of "causal systems" whose explanatory nature is "entangled" to terms such as 'tests', 'capacities', 'contributions' and so on. Maybe, we all should get loose of laws of nature, but there are still some issues to be addressed for us to be able to hold on Cartwright's alternative explanatory model. And, in this paper, it will be dealt with several of them.

Helding Vembye, Mikkel (Aarhus University). *Rejecting on Nancy Cartwright's conception of the external validity of RCTs*

With inspiration from a recent discussion in the *Journal of Social Science and Medicine*, this symposium paper aims to reflect and discuss Nancy Cartwright's criticism of randomised controlled trials (RCTs), and especially, the use of the knowledge extrapolated from RCTs. The initial part of the paper presents Cartwright's view on the external validity of RCTs, and proceeds with a discussion of what impact Cartwright's notion of external validity/causality has on the conduct and use of RCTs and research in general. One of the main topics of discussion will be Cartwright's causal principles (CP). The paper aims to reach a deeper understanding of how to obtain knowledge about the structural causal principles governing different populations and how to make the best use of this knowledge. In

this relation, the paper examines whether any methods can deliver this kind of knowledge. Cartwright describes CP as a model of the INUS condition, but one of the challenges about the INUS condition is that it can be rather difficult to distinguish between relevant causal factors and unnecessary contextual factors. Therefore, the paper explores how to separate redundant circumstantial factors from causally efficacious ones in the hunt for structural knowledge.

Squitieri, Juan Carlos (Universidad Autónoma Metropolitana de México Iztapalapa), Jiménez Buedo, María (UNED). *The role of social mechanisms in causal inference*

In the present talk, we review and contrast two recent approaches, by Harold Kincaid (2012), and Daniel Steel (2004), about the role of social mechanisms in causal inference. We put to test each of these accounts by analyzing the empirical research on the “Relative risk aversion” mechanisms (RRA), which has been used in the explanation of educational inequality among children from different social classes (Breen, R & Goldthorpe, J: 1997) (Goldthorpe, J: 1996). We show that neither Kincaid’s nor Steel’s approaches can make sense of the strategies adopted by empirical research on RRA. We conclude by arguing for an account of the role of social mechanisms in causal inference that is closely informed by examples as developed by practitioners.

Issues at the intersection between metaphysics and biology

Christopher J. Austin (University of Oxford), Marta Bertolaso (Campus Bio-Medico of Rome-Institute of Philosophy of Scientific and Technological Activity), María Cerezo (University of Murcia), Laura Nuño de la Rosa (Universidad Complutense de Madrid), Vanessa Triviño (Rey Juan Carlos University), Cristina Villegas (Universidad Complutense de Madrid).

Recent work in metaphysics and in philosophy of science, and in particular in philosophy of biology, shows a revival of interest in issues that might be considered to be either metaphysical issues that can be further elucidated by recourse to biological cases or metaphysical consequences that some theoretical or empirical developments in biology might have. In some cases, the application of some metaphysical notions to classical debates in philosophy of biology helps to clarify what is at stake, and to solve some misunderstandings in the discussion. The interactions that can take place between metaphysics and biology are therefore of different kinds. The aim of this symposium is to present four examples of issues in which such interaction takes place in order to discuss the philosophical issue itself and, through such discussion, to explore the way in which the interaction takes place. In the symposium we will focus on metaphysical issues related to developmental biology, evolutionary biology and evo-devo. We have chosen four classical metaphysical notions which have interacted with biology in different ways, namely teleology, natural kinds, dispositions and emergence.

La filosofía de la argumentación

Jesús Alcolea (Univeraitat de València), Galindo Castañeda (Universidad de Valladolid), Hubert Marraud (Universidad Autónoma de Madrid), Andrei Moldovan (University of Salamanca), Luis Vega (UNED).

La teoría de la argumentación es un campo interdisciplinar de investigación en el que confluyen la lingüística, la psicología del razonamiento, la teoría de la comunicación, la retórica y la filosofía. La teoría de la argumentación, es un campo de investigación más que una disciplina. Una disciplina se caracteriza por tener un método unificado y un objeto concreto; un campo de investigación por tener un simple repertorio de temas aún no unificado. Cabe preguntarse si dentro de ese campo existe una filosofía de la argumentación, es decir, una reflexión filosófica sobre las prácticas argumentativas. Por

“práctica” hay que entender “una especie de término técnico que se refiere a cualquier forma de actividad especificada por un sistema de reglas que definen oficios, roles, movimientos, castigos, defensas, etcétera, y dan a la actividad su estructura.” (Rawls, 1955: 3-32), y por “prácticas argumentativas” las prácticas que consisten, total o parcialmente, en pedir, dar y recibir razones. ¿Cuáles son las características definitorias de la filosofía de la argumentación? ¿Qué cuestiones aborda? ¿Cuál es su ubicación dentro del conjunto de la filosofía? Las presentaciones de este simposio pretenden ser aportaciones a esa filosofía de la argumentación y sugerir respuestas a estas y otras preguntas parecidas.

La argumentación de la filosofía

Francisco Álvarez Álvarez (UNED), Lilian Bermejo Luque (Universidad de Granada), Cristina Corredor Lanas (Universidad de Valladolid), José Ángel Gascón Salvador (CIEDE, UCSC), Paula Olmos Gómez (Universidad Autónoma de Madrid).

Aparte de una incipiente filosofía de la argumentación, el interés de la teoría de la argumentación para la filosofía se sustenta en consideraciones heurísticas y metodológicas. En primer lugar, el crecimiento de los estudios de la argumentación en los últimos 50 años ha ido de la mano de una revisión de ciertos presupuestos y asunciones comunes en el tratamiento filosófico de conceptos como argumento, inferencia, validez, razones o razonamiento. Como se trata de conceptos centrales sobre asuntos como la lógica, el conocimiento, el lenguaje, la ciencia, la mente o la acción, la teoría de la argumentación puede ser una fuente de nuevas ideas, intuiciones e interconexiones en lógica, epistemología, filosofía de la ciencia, filosofía del lenguaje, filosofía de la mente, filosofía de la acción o ética. En segundo lugar, ese proceso de revisión conceptual ha ido acompañado del desarrollo de distinciones y herramientas analíticas. Esos instrumentos pueden ser útiles para clarificar o abordar problemas tradicionales de las disciplinas filosóficas mencionadas.

Las presentaciones de este simposio se proponen mostrar las posibilidades que ofrece la teoría de la argumentación a la epistemología, la filosofía del lenguaje, la filosofía de la ciencia y la lógica como fuente de herramientas e intuiciones teóricas.

The genesis of geometric knowledge

José Ferreirós (University of Seville), María de Paz (University of Seville), Manuel J. García Pérez (University of Seville).

The philosophy of geometry is a field with a long tradition, enriched in recent times by new insights coming from the cognitive sciences. Some connections between philosophical reflections on geometry and space, and notions from the fields of physiology and psychology, can be traced back to the golden age of the philosophy of geometry (the classical writings of Helmholtz or Poincaré, to name only two key figures). Currently, a more sustained and sophisticated effort is being made to advance in this area, with contributions from many different disciplines. The special session we propose is interdisciplinary, combining history and philosophy of mathematics with reflections on current cognitive science, and even inputs from cognitive archaeology.

The three speakers are members of the project “The genesis of geometric knowledge” (FFI2017-84524-P) and represent different areas of expertise — history of mathematics, archaeology, philosophy of mathematics, logical-foundational studies, history of mechanics and geometry. These interdisciplinary connections, including also the links between early geometric ideas and astronomy, have important roles to play in understanding the emergence of geometric concepts, methods and results. The three talks have been conceived so as to complement each other covering several key lines of thought.

Biological inter-identities

Argyris Arnellos (IAS Research on Life, Mind, and Society; Department of Logic and Philosophy of Science, UPV/EHU), Leonardo Bich (IAS Research; Department of Logic and Philosophy of Science, UPV/EHU), Arantza Etxeberria (IAS Research on Life, Mind, and Society; Department of Logic and Philosophy of Science, UPV/EHU), M.J. Ferreira (University of Buenos Aires), Ramiro Frick (Universidad Alberto Hurtado), Alvaro Moreno (IAS Research on Life, Mind, and Society; Department of Logic and Philosophy of Science, UPV/EHU), Laura Nuño de la Rosa (Complutense University of Madrid), Kepa Ruiz-Mirazo (IAS Research on Life, Mind, and Society; Dept of Logic and Phil. of Sci. & Biofisika Institute (CSIC, UPV-EHU) UPV/EHU), Ben Shirt-Ediss (Interdisciplinary Computing and Complex BioSystems Group, University of Newcastle), Jon Umerez (IAS Research on Life, Mind, and Society; Department of Logic and Philosophy of Science, UPV/EHU).

We present 5 papers on Biological ‘inter-identities’ for a symposium; they review interactive phenomenologies related to identity in the following aspects:

Prebiotic evolution.- How biological identities were –or can be– constructed for the first time will be here explored, from an interactivist perspective that takes into account both metabolic and evolutionary aspects.

Biological reproduction.- Biological organization involves material overlapping and reproducer transformation. Here pregnancy and the female-fetus relation in its developmental and evolutionary aspects motivate a philosophical study of interidentity.

Hierarchical organization.- Inter-identity compared to previous interactionism in evolutionary and developmental biology from an explicitly hierarchical perspective levels of organization and material constraints.

Collaborative interactions.- An organizational account of collaboration in which the collective dimension of life is acknowledged without ignoring the individual organization of living systems and its key role as the locus of mechanisms, of adaptations, of selective–evolutionary dynamics, and its role in the evolution of biological complexity.

Biological Communication.- How minimal living and prebiotic systems can interact by exchanging signals, and how such interactions can be studied by synthetic biology through models involving protocells and synthetically modified cells, in such a way as to shed light on the phenomenon of biological communication in general.

Illocutionary Acts in Mathematics

Marco Ruffino (University of Campinas), Giorgio Venturi (University of Campinas), Luca San Mauro (Vienna University of Technology).

Contemporary speech act theory was originally thought as an account of the pragmatics of ordinary language and devoted solely to linguistic aspects of human actions. In the philosophy of mathematics very little attention has been paid to pragmatic phenomena (such as implicatures, presuppositions and illocutionary acts) in mathematical language. This is in part understandable, since mathematics is usually seen as the realm of objective truths, and ideally its results are expressed in a purely formalized language. However, this picture overlooks many important (and, in some cases, essential, as we shall argue) aspects of mathematical theories and mathematical practice. It is our working hypothesis that the activity of discovering and proving theorems is impregnated with some essential

speech acts perpetrated by mathematicians (either as a group or individually or through the projection of an “ideal” subject with “ideal” judgments). These acts create a network of what Searle calls “institutional facts” (i.e., non-natural facts) that do not belong originally to the mathematical realm, but interact with that realm and are used as a kind of platform for the study of that realm. Or so we shall argue and illustrate with examples from working mathematicians.

Evidencia científica y regulación: alimentos y fármacos

Juan Bautista Bengoetxea (Universidad de las Islas Baleares), Montaña Cámara (Universidad Complutense de Madrid), José Luis Luján (Universidad de las Islas Baleares), Noemí Sanz (Universidad de las Islas Baleares), David Teira (UNED), Niccolò Tempini (University of Exeter), Oliver Todt (Universidad de las Islas Baleares).

El simposio consta de 4 comunicaciones que abordan diferentes aspectos de las cuestiones que se plantean en la ciencia reguladora, específicamente en la investigación sobre alimentos y fármacos.

El tema de las tres primeras comunicaciones son las declaraciones de salud. La primera se ocupa del uso de los ensayos clínicos en las investigaciones sobre alimentos. La segunda comunicación presenta un análisis de las controversias sobre el nivel de evidencia científica que se considera adecuado para fundamentar la regulación. En una tercera comunicación se analiza la influencia de los valores no cognitivos en la determinación de los estándares de prueba. La cuarta, por su parte, se centra en el debate metodológico respecto a la adecuación de las jerarquías evidenciarias frente al pluralismo metodológico.

The Bodily Self

Michele Palmira (Universitat de Barcelona, Logos, BIAP), Léa Salje (University of Leeds), Carlota Serrahima (Universitat de Barcelona, Logos, BIAP), Víctor Verdejo (Universitat de Barcelona, Logos, BIAP), Frédérique de Vignemont (Institut Jean-Nicod).

The Cartesian, purely mentalist approach to the nature of the self has struck many as incomplete. Philosophers such as Gareth Evans, Thomas Nagel, and P.F. Strawson have countered it by urging that the very possibility of self-consciousness rests on our thinking of ourselves in a first-person way qua spatially located bodies and hence opening the door to the consideration of a bodily or embodied self.

This symposium will investigate the nature and philosophical significance of the bodily self. Taking into account the latest developments on the topic, it will address the following questions: What is the relation, if any, between a mentalist and a bodily picture of the self? What special epistemic properties, if any, are exhibited by self-ascriptions of bodily properties, as opposed to self-ascriptions of mental properties? What is exactly the connection between first-person thought, self-representation, and bodily self-awareness? How does crossmodal bodily self-perception result in an integrated first-person conception of ourselves?

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