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Training Curriculum

Legal Reasoning and Cognitive Science

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INTRODUCTION



0.1. Objectives

‘Cognitive science’ is a fuzzy notion, that embraces the open-ended range of disciplines that study both natural and artificial minds. Since its gestation, in the 1950s, and its official birth, at the end of the 1970s, cognitive science was conceived as a thoroughly interdisciplinary endeavor. In one of the first systematic attempts at definition, it involved not only psychology and neuroscience, but also philosophy, linguistics, anthropology, and, last but not least, Artificial Intelligence.

Since its inception, cognitive science has developed very rapidly and has produced a profound impact on many fields of knowledge. So rapid and so profound, to be called a ‘revolution’, the ‘cognitive revolution.’

One of the fields where cognitive science’s impact has been more profound is our understanding of human reasoning and decision-making. As depicted by contemporary cognitive science, the human mind appears, first, as an intuition-driven device, making use of cognitive shortcuts (heuristics) which may easily lead to systematic cognitive distortions (biases); and, second, as an emotional device, whose apt reasoning and decision-making, far from being the product



of cool and disembodied cognition, relies on affective mechanisms grounded in the body. This picture is at odds with the dominant approach, both normative and descriptive, to legal (and especially judicial) decision-making. Adjudication, in the mainstream self-narrative, is still regarded as the realm of dispassionate reason and argumentation.

In the last decades, however, several research programs have been developed, aiming at updating our understanding of the “legal mind” on the basis of the contributions coming from cognitive science. “Emotions and the law”, “Heuristics and the law”, “Neuro-law”, “Law and Intuition”, “Law and embodied cognition”, have become central topics, and fortunate catchwords, in the academic debate. Moreover, cognitive models of legal reasoning have become increasingly important in order, first, to design AI systems mirroring reasonable legal decision-making, and, second, to highlight constraints and limitations to which this activity is subject.

Despite its crucial importance, this body of knowledge is not part of the usual training of European lawyers. This is a serious gap in legal education, with significant consequences. Legal scholars and professionals usually lack even basic knowledge of the cognitive mechanisms governing legal reasoning and decision-making, and of



the most common biases and distorting factors that lead reasoning and decision astray. They are unaware of the personal and environmental conditions which increase the probability of falling prey of such cognitive distortions, and they lack knowledge of, and the ability to apply, cognitive strategies and techniques aimed at preventing them. The purpose of the project RECOGNISE – Legal Reasoning and Cognitive Science was to contribute to filling this gap by developing and testing a Training Curriculum targeted at bachelor students, newly graduated, post-graduates and Master students, Ph.D. students, Post-doc researchers, teaching staff in Law Departments, as well as legal professionals (in particular, barristers and judges).

0.2. Training program

The program we have developed is articulated in three different formats: (1) teaching course for Law Degree Programs, (2) Intensive Study Program (hereinafter, ISP), and (3) online lessons.

As regards to (1), we have designed and implemented two teaching courses, one in *Legal Reasoning and Cognitive Science*, in English, 6 ects, 48 hours, at the University of Palermo (ITA), and one in *Diritto e*



scienze cognitive (Law and Cognitive Sciences), in Italian, 7 ects, 48 hours, at the University of Bologna (ITA). Section 1 contains general guidelines and suggestions for the development of similar courses, together with a report on our experiences. Annex 1-4 contain teaching materials: a preliminary needs assessment questionnaire (Annex 1), syllabus and examples of assessment tests of both the course in *Legal Reasoning and Cognitive Science* (Annex 2) and the course in *Diritto e scienze cognitive* (Annex 3).

As regards (2), we have designed and implemented two ISPs in Legal Reasoning and Cognitive Science (5 days), one at the University of Ljubljana (SLO) and one at the University of Palermo (ITA). Section 2 contains general guidelines and suggestions for the development of similar events, together with a report on our experiences. Annex 4 and 5 contain teaching materials (call and program, info about participants, self-evaluation questionnaires, satisfaction questionnaire, certificate of attendance template) of both the 1st ISP at the University of Ljubljana (Annex 4) and the 2nd ISP at the University of Palermo (Annex 5).

As regards to (3), we have recorded and made freely available online (<https://www.recognise.academy/education/lectures/>) a series of video lessons on the topics of the project. Section 3 contains a



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presentation of what we have done, together with the full list of lessons, including a short abstract of each of them.

Finally, related to all Intellectual Outputs, Section 4 contains a list of suggested introductory readings.

We strongly hope that our experience will inspire further attempts in the direction we have begun to explore.



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SECTION 1

Teaching Course for Law Degree Programs



1.1. Presentation and guidelines

As indicated above, the first format of the training was a teaching course within Law Degree Programs.

We have developed two versions of the course: *Legal Reasoning and Cognitive Science* (48 h, 6 ects), in English, at the University of Palermo; *Law and Cognitive Science* (48 h, 7 ects), in Italian, at the University of Bologna. You can find below (§ 1.2) a more detailed report of our experience. Here we limit ourselves to a few minimal guidelines and suggestions.

In general, law students have manifested great interest in the contributions of cognitive science to the understanding of legal reasoning and decision-making. Perhaps surprisingly, they were however more interested in topics that lie, so to speak, on the fringe of the legal domain than within its core. In particular, their overall preferred topics were (a) nudge and choice architecture and (b) the psychology of moral dilemmas (such as the trolley problem). These topics captured their attention more than topics like the psychology of rule-based decision-making or the psychology of judging, and even more than ‘catchy’ topics like implicit biases in adjudication. The reason for this is probably the strongly perceived need of moving out



from the adjudication-centered perspective of traditional legal education, and the desire to explore the connections between the law and other social phenomena.

We strongly suggest taking into account the inclination towards the above-mentioned topics, that consistently emerged during the courses, and using them as starting point for the development of more general inquiries into the cognitive underpinnings of legal phenomena (e.g., start with the analysis of the automatic psychological processes exploited by nudging technics, move then to the controlled form of decision-making involved in rule-based reasoning, and finally focus on the implications for legal practices and the rule of law).

As regards teaching methodology, we strongly recommend participate learning. This is, in the case of this course, particularly important, due to students' lack of familiarity with the topics.

We also found useful to submit, at the beginning of the course, a preliminary questionnaire aimed at assessing students' level of knowledge about and interest in the topics of the course. The model we have used is reported below, Annex 1.



1.2. Report on our experience

1.2.1. *Legal Reasoning and Cognitive Science* at the University of Palermo

The *Legal Reasoning and Cognitive Science* course at the University of Palermo (holder: Prof. Marco Brigaglia; URL: <https://www.unipa.it/persona/docenti/b/marco.brigaglia/en/?pagina=insegnamento&idInsegnamento=169159&idCattedra=164938>) started in the second semester of the academic year 2021-22, as part of the activities of the *Recognise* project. This is an optional course of 48 hours, corresponding to 6 ects. The course was confirmed for the academic year 2022-23, and it is also planned for the academic year 2023-24. Starting from the academic year 2024-25, it will stably be included in the didactic offer.

In terms of content, the course was divided into (a) a monographic part; (b) seminars on specific topics; (c) study groups.

The monographic part was entitled *Normative Decision-making, from Morality to Law*. We addressed the traditional problem of the relationship between law and morality through an examination of the cognitive structure of moral and legal reasoning, judgment, and decision-making and their possible differences. We started with



models of moral psychology that emphasize the role of emotions in moral judgment (Haidt, Greene, Prinz); we went on to examine models that emphasize the role of rules (Gibbard, Nichols, Mikhail); finally, we focused on some aspects of the specific way in which rules operate within legal decision-making (procedural rules, authoritative rules, conventional rules) and the cognitive abilities involved.

The seminars, held by trainers participating in the project, have dealt with specific topics such as cognitive biases in adjudication (Prof. Brigaglia), the cognitive foundations of legal institutions (Prof. Roversi, University of Bologna), the dual challenge from AI and cognitive science (Prof. Waltermann, Maastricht University). In addition, students have been given the opportunity to participate in additional seminars on topics related to the project, such as the origins of human normativity (Prof. Rochat, Emory University) and psychological and philosophical perspectives on authority (Prof. Gur, Queen Mary University London, Prof. Caspar, Ghent University).

The study groups are a form of participate learning, during which students were asked to prepare ppt presentations on specific topics such as Biases in adjudication, Emotions in adjudication, Free will and criminal responsibility, The moral self, Nudge, The psychology of norms (some of the ppt presentations are included in Annex 12).



In terms of teaching methods, the course has tested a participate learning method. Besides of the study groups, each lecture had a part devoted to students' activities – brainstorming and discussion groups. Feedbacks from students were very positive. They repeatedly expressed their interest in the topics of the course, and the need of a stable inclusion, within the law degree, of interdisciplinary courses exploring the connections between law and other disciplines. Since the beginning of the course, 7 former students have decided to do their final theses on topics of the course (2 on nudge; 1 on biases in adjudication; 1 on emotion in adjudication; 1 on neurolaw; 1 on psychological approaches to moral dilemmas; 1 on law and artificial intelligence).

You can find below, Annex 2, the course's Syllabus and examples of assessment tests.

1.2.2. *Law and Cognitive Science* course at the University of Bologna

The *Law and Cognitive Science* course at the University of Bologna (holder: Prof. Corrado Roversi; URL: <https://www.unibo.it/it/didattica/insegnamenti/insegnamento/2>



[022/469163](#)) started in the second semester of the academic year 2021-22, under the stimulus of the *Recognise* project. This is an optional course of 48 hours, corresponding to 7 ects. In the academic year 2022-2023, the course structure has been confirmed, although it has been divided into two modules, one taught by Prof. Corrado Roversi and one taught by Prof. Silvia Vida. The course is also planned for the academic year 2023-2024 and will again be divided into two modules.

In terms of content, the course adopts a tripartite distinction, which recalls a similar and classical distinction in the field of legal philosophy, between an ontological task devoted to the nature of law and its cognitive foundations, a methodological task devoted to the cognitive aspects of legal reasoning and in particular judicial reasoning, and a deontological task devoted to the problems relating to the cognitive manipulation of legal subjects. After a general introduction of about a week on the relationship between normative and empirical-causal sciences, rationalism in the history of legal conceptions and its limits, psychologistic realism as a possible alternative and some aspects of the anatomy of the human brain, the next two weeks dealt with the cognitive capacities necessary for the maintenance of legal institutions, analyzed both from an ontogenetic



and from a phylogenetic and evolutionary point of view. Thereafter, another two weeks or so were devoted to the topic of cognitive biases and so-called 'heuristics' in judicial reasoning, the topic of emotions in normative reasoning, and 'ego depletion' and its possible effects on decision-making in the legal sphere. The final part of the course was instead devoted to the possible exploitation of agents' cognitive biases by both private and public actors (the so-called 'nudge'), including in this discussion the topic of dark patterns on the web and neuro-marketing, as well as possible forms of legal protection, with particular reference to 'neuro-rights'.

Part of the course has been realized in the form of seminars, including online and face-to-face lectures by experts on specific topics: Prof. Francesco Romeo (University of Naples 'Federico II') on the evolution of law, Prof. Luisa Lugli (University of Bologna) on legal concepts, Prof. Arianna Rossi (Université du Luxembourg) on dark patterns, Prof. Marco Brigaglia (University of Palermo) on cognitive bias in judicial reasoning, Prof. Michele Ubertone (University of Maastricht) on the effect of emotions in moral psychology and legal reasoning. In the first year of the course, some lectures were also shared with the University of Palermo, under the supervision of Corrado Roversi for Bologna and Marco Brigaglia for Palermo.



In general, the course was very well received by students, who expressed great interest in the subject matter and repeatedly shared with the lecturer the need and wish for more courses of this type, i.e. of an interdisciplinary nature, to be included in their curriculum, which would be able to take them beyond the limits of the legal approach in the classical sense. Especially in the second year, several lecturers from the University of Bologna also expressed interest in the course and participated in particular in the seminar lectures. This is certainly an innovative and extremely stimulating teaching experience for both lecturers and students, an experience that goes in the direction of opening up legal studies to aspects that are central to regulation, which, however, are mostly ignored in law degrees.

You can find below, Annex 3, the course's Syllabus.



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ANNEX 1

Needs Assessment Questionnaire

NEEDS ASSESSMENT QUESTIONNAIRE

The questions are grouped in sections. The short note below indicates what information we expect to get from the questions contained in each of the sections. Both the title of sections and of course this note will not be visible in the final version that will be submitted online to the interviewees.

Section I: Intuition and Adjudication

Do the interviewees realize that much of the decisions taken in the legal domain are often the product of non-rational processes? Do they have a specific understanding of how contextual factors like tiredness and hunger may affect legal judgement?

Section II: Heuristics and Biases in Adjudication

Are the interviewees familiar with the notion of cognitive bias? Do they understand how some of the most common biases work? How many of the interviewees are victim of such biases? What are the biases they are most conscious of?

Section III: Emotions and Adjudication

What is the interviewees' understanding of the relations between legal reasoning and emotions? Do they deny that emotions play a role in legal decision-making? Do they acknowledge that emotions do play a role, but think that they should not? Do most of the interviewees think that emotional detachment is a necessary feature of an impartial decision-making process in the legal domain?

Section IV: Defeasible Reasoning, Law, and Cognitive Science

Do the interviewees understand the notion of defeasibility? How formalist are the interviewees? Is their conception of the rule of law and legality compatible with the defeasible nature of legal reasoning?

Section V: Legal Reasoning, Cognitive Science, Artificial Intelligence

Are the interviewees familiar with the notion of machine learning? Do they understand the notion of algorithmic bias? Do they think it would be important for lawyers to receive education about the use of algorithms in the legal domain?

Section VI: The Cognitive Structure of Legal Concepts

How do the interviewees understand institutional conceptualization? Do they acknowledge the existence of a division of linguistic labor in the legal domain? What are the institutional concepts which they consider most fundamental? Do metaphors play a role in the interviewees' understanding of basic legal notions?

Age:

Place of residence (postal code):

Gender identity:

- Female
- Male
- Non-Binary
- I prefer not to answer

Instruction:

- High School
- Bachelor degree
- Master degree
- PhD

University training in law:

- Yes
- No

Occupation:

- Student
- University Professor
- Lawyer
- Other (please specify)

Section I

1. Please express your agreement with the following statement using a scale from 1 to 5 points where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. The arguments contained in a court's written decision usually reflect the actual mental process that led the judges to decide as they did.

2. Please evaluate how familiar you are with the notion of *ex post* rationalization using a scale from 1 to 5 points where 1 = Not at all familiar; 2 = Somewhat familiar; 3 = Familiar; 4 = Quite familiar; 5 = Extremely familiar.

3. Do you think it would be important to study the correlation between the outcome of court decisions and what the judges had eaten before making them? Provide a rating using a scale from 1 to 5 points where 1 = Not at all important; 2 = Somewhat important; 3 = Important; 4 = Quite important; 5 = Extremely important.

4. Consider a study showing that parole judges, after a break and a meal, are more prone to grant parole (65% of the requests were approved), whereas, when tired and hungry, they are more prone to deny parole (only 35% of the requests were approved). Please evaluate how likely to exist this study is.

- Not at all likely.
- Not very likely.
- Likely.
- Quite likely.
- Extremely likely.

Section II

5. Please evaluate how familiar you are with the notion of cognitive bias using a scale from 1 to 5 points where 1 = Not at all familiar; 2 = Somewhat familiar; 3 = Familiar; 4 = Quite familiar; 5 = Extremely familiar.

6. Please express your agreement to the following sentence using a scale from 1 to 5 points where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. Judges' reasoning is often distorted by prejudice or unconscious and unjustified presuppositions.

7. Please evaluate for each of the following factors how much it may cause systematic mistakes in judges' everyday decisions using a scale from 1 to 5 points where 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Always.

- Personal traits of the parties (race, ethnic origin, gender identity, and the like).
- Inability to understand social or psychological phenomena.
- Lack of time, tiredness and stress.
- Concerns about their career and responsibility.
- Ideological preconceptions.
- Ignorance of/lack of consideration for the consequences of their decisions.
- Overconfidence.

8. In a cognitive science experiment, judges with many years of experience were asked to determine a fair punishment for a case of shoplifting after having rolled a pair of dice. Dice were loaded so that a group of judges always obtained 3, while the others always obtained 9. Please evaluate how likely the following sentences are using a scale from 1 to 5 points

where 1 = Not at all likely; 2 = Not very likely; 3 = Likely; 4= Quite likely; 5 = Extremely likely

- The result did not influence the decision.
- The group of judges who obtained a higher score gave a harsher sentence.
- The group of judges who obtained a lower score gave a harsher sentence.

9. Please evaluate how surprised you are by the findings reported in the following sentence using a scale from 1 to 5 points where 1 = Not surprised at all; 2 = Not surprised; 3 = Neutral; 4= Surprised; 5= Extremely surprised. An unknown taxi driver caused an accident during the night. 85% of taxis are green, the remaining 15% are blue. A witness says that the taxi was blue. The witness's reliability has been valued of 80%. Many people think that there is about 80% of possibilities that the taxi from the accident was blue. According to the principles of probability theory, these common intuitions are mistaken: the real probability is 41%.

10. Please express your agreement to the following sentence using a scale from 1 to 5 points where 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. A core aspect of the education of legal practitioners should consist in training their ability to spot fallacies and mistakes in legal reasoning.

Section III

11. Please express your agreement to the following sentence using a scale from 1 to 5 point where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. In order to be impartial, good judges should never be influenced by their emotions.

12. Please evaluate how much would you like to learn if and to what extent judges, in adjudication, can master their emotions using a scale from 1 to 5 points where 1 = Not interested at all; 2 = Somewhat interested; 3 = Interested; 4 = Quite interested; 5 = Extremely interested.

13. Consider the two following cases in your own legal system.

Case 1: A trolley out of control is heading towards five rail workers. If nothing happens to stop it, they will all be run over and killed. A bystander pulls a switch diverting the trolley onto another railway where another worker is operating: five are saved and one dies.

Case 2: A man, who is on a bridge above the railway, pushes a very big man who is standing next to him down onto the railway, with the intention of stopping the trolley, and preventing the death of the five workers. The big man is killed, but the trolley is stopped: five are saved and one dies.

Please evaluate how likely to adopt the following decisions a judge is using a scale from 1 to 5 points where 1 = Not at all likely; 2 = Not very likely; 3 = Likely; 4 = Quite likely; 5 = Extremely likely

- The judge decides that the two cases are analogous: the two bystanders would both be acquitted.
- The judge decides that the two cases are analogous: the two bystanders would be subjected to the same punishment.
- The judge decides that the two cases are different: the bystander pulling the switch would be acquitted, the bystander pushing the big man on the railway would be found guilty

- The judge decides that the two cases are partially different: both bystanders committed a crime, but the punishment for pushing the big man would be harsher.

14. Please consider the option you thought to be more likely in the last question and express your agreement with the following statements using a scale from 1 to 5 point where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree.

- Emotions helped the judge to adopt the legally correct solution.
- Emotions hindered the judge from adopting the legally correct solution.
- Emotions did not play any significant role.

Section IV

15. Please express your agreement to the following sentence using a scale from 1 to 5 points where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. Legal reasoning is best understood as an application to law of the rules of logic.

16. Please express your agreement to the following sentence using a scale from 1 to 5 points where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. Allowing judges not to apply general statutory rules to particular cases where the result of the application would be unfair is compatible with the rule of law.

17. Imagine a legal rule to read: "Whoever walks a dog nearby the entrance of the kindergarten shall be punished". A blind man walks in front of the kindergarten while being led by his guide dog. A woman walks in front of the kindergarten with a huge gorilla on a leash. Please express your agreement with the following sentences using a scale from 1 to 5 points where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree.

- the woman should be condemned, and the blind man acquitted. This solution is determined by the most rational interpretation of the law.
- the woman should be condemned, and the blind man acquitted, putting aside law and deciding on grounds of fairness.
- the blind man should be condemned, and the woman acquitted. This solution is determined by the most rational interpretation of the law.
- the blind man should be condemned, and the woman acquitted, putting aside law and deciding on grounds of fairness.

Section V

18. Please evaluate how familiar you are with the notion of machine learning using a scale from 1 to 5 points where 1 = Not at all familiar; 2 = Somewhat familiar; 3 = Familiar; 4 = Quite familiar; 5 = Extremely familiar.

19. Consider the following statements: U.S. courts make use in their decisions of an algorithm about the rate of recidivism. According to this algorithm on average recidivism risk level of black defendants is significantly higher than the risk level of white defendants. Please express your agreement to the following sentences using a scale from 1 to 5 points where 1= Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree

- This algorithm exists, but judges always refuse to use it.
- Researchers are working on developing an algorithm of this kind, but no prototype has been released yet, because of the biases that were encoded in it.
- This algorithm exists, and judges use it regularly.

20. Please evaluate the importance of incorporating in legal education an explanation of how legal reasoning is, could or should be conducted by digital computers using a scale from 1 to 5 points where 1= Not important at all; 2 = Not important; 3 = Somewhat important; 4= Important; 5 = Extremely important.

Section VI

21. Please express your agreement to the following sentence using a scale from 1 to 5 points where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree. In the mind of the citizens of a given country, legal concepts like “property”, “trial” and “contract” are essentially shaped by the corresponding statutory or case-law definitions.

22. Please list what are in your opinion the five most fundamental legal concepts.

23. Please rate the following concepts using a scale from 1 to 5 points, where 1 represents the most fundamental concepts and 5 the least fundamental ones.

- Norm
- Right
- Obligation
- Crime
- Contract
- State
- President
- Marriage
- Parliament
- Trial
- Property
- Sanction
- Responsibility
- Validity
- Justice

24. Assess the following legal concepts according to the following 4 oppositions¹. Hard/Soft; Light/Dark; Static/Dynamic; Horizontal/Vertical

- Norm
- Right
- Obligation
- Crime
- Contract
- State
- President
- Marriage
- Parliament
- Trial
- Property
- Sanction
- Responsibility
- Validity
- Justice

¹ The answer should be given through a graphic interface still to be designed.

Final section

25. Please tell us how much are you interested in knowing more on the topics addressed by this questionnaire and reported below using a scale from 1 to 5 points where 1 = Not interested at all; 2 = Somewhat interested; 3 = Interested; 4 = Quite interested; 5 = Extremely interested.

- To what extent in adjudication judges' decisions are based on a thorough examination of the normative and factual grounds, and to what extent they are based on unconscious intuitive thinking?
- What are the most significant biases (cognitive strategies which may lead to systematic errors) affecting legal decision-making and how can legal decision-makers be trained to avoid them?
- Which role do emotions play in legal reasoning? If this role proves to be determinant, is there room for the ideal of judicial impartiality?
- Is the judge still applying the law when she regards a given case as an implicit exception to an explicit legal rule? Which kinds of psychological processes underlie the detection of implicit exceptions?
- How does machine learning work? Which are the main moral challenges about the use of algorithms in adjudication?
- How do people conceptualize institutions? What is the role of our physical and social environment in our conceptualization of institutions? Are some institutional concepts essentially metaphorical?



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ANNEX 2

Course in *Legal Reasoning and Cognitive Science:* Teaching Materials

(a) Syllabus

COURSE DESCRIPTION FOR LEGAL REASONING AND COGNITIVE SCIENCE (ELECTIVE COURSE), AY 2022/23, 2ND SEMESTER

Teaching and Enrolment

In the second semester of the 2022/23 academic year, a course will be taught in English by Prof. Marco Brigaglia titled “Legal Reasoning and Cognitive Science.” The course is linked to the European project Recognise: Legal Reasoning & Cognitive Science (<https://www.recognise.academy/>), coordinated by Prof. Brigaglia himself.

The course is elective in all three concentration tracks (“Profili”) in the five-year law degree program, and it can be included in your curricular plan of study starting from the third year as follows. Fifth-year students will be able to choose the course through the regular procedure. Fourth- and third-year students will instead have to fill out a *modulo navetta* (“shuttle form”). This form—available at the Registrar’s Office and sent out to students’ unions—needs to be emailed to Ms. Teresa Affatigato (teresa.affatigato@unipa.it) between January 1 and February 28, 2023.

The course can accommodate no more than seventy students, and because it is linked to the aforementioned European project, it will launch even if it fails to meet the minimum enrolment threshold of ten students.

Contents

The course dives into a research area in the vanguard of contemporary legal-theoretical thought, looking at the ways in which the cognitive sciences can help us better understand, and improve, the structure of legal reasoning.

The main theme of the course will be the psychology of normative decision-making: what happens in our minds when we follow a norm? What is the role of emotions and reason (and their interpenetration) in normative decision-making? Is there any relevant difference, and what, between the psychology of moral reasoning and the psychology of legal reasoning?

Along the way, we will dwell on the perspectives opened up by neuroscience on various issues, such as moral dilemmas (is it right to kill one to save five?), ethical objectivism and subjectivism (is something right or wrong objectively, or only for those who find it so?), “animal” morality (do animals have “values” similar to ours?), free will (to what extent, and in what sense, are our choices “free?”), criminal obedience (what are the mechanisms that drive obedience to criminal orders?).

In addition to the main topic, we will also have two thematic focuses:

(1) *Implicit Biases in Judicial Decision Making*. We will look at some studies of the unconscious factors that, although legally irrelevant, tend to heavily influence, and distort, the judicial decision. (Would you have guessed that one of the greatest predictors of the decision is its temporal distance from the judge’s meal? Would you have ever known that exposure to a completely irrelevant number can significantly influence the numerical assessments given by the judge, for example, the amount of compensation or punishment?)

(2) *Natural born punishers*. We will examine some studies on the human tendency to punish. We will see how humans tend to forgo gain in order to punish opportunistic behaviour.

Finally, some professors from other project partner universities will do some seminars on specific topics.

Midterm Assessments

During the course, weekly anonymous self-assessment tests will be conducted (students will be able to answer a multiple-choice test, and check the correctness of their answers, while the lecturer will not have access to individual answers). It will also be possible, during the course, to conduct tests with assessments that will be taken into account at the time of the final evaluation.

English Proficiency

All reading materials will be in English, as will be all class discussions and lectures and the midterm assessments and final exam, for which reason the course will require an appropriate command of the English language, enabling you to put your ideas across successfully. Even so, you will not be assessed on your spoken English, for that is not the point of the course; rather, you should see the course as an opportunity to practice your English in an environment designed to encourage you to contribute to and advance the discussion, and your participation will be valued for it, regardless of how effective or polished the English.



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Giurisprudenza		
ACADEMIC YEAR	2018/2019		
SINGLE CYCLE (7TH LEVEL) COURSE	LAW		
SUBJECT	LEGAL REASONING AND COGNITIVE SCIENCE		
TYPE OF EDUCATIONAL ACTIVITY	D		
AMBIT	20016-A scelta dello studente (dm270)		
CODE	21792		
SCIENTIFIC SECTOR(S)	IUS/20		
HEAD PROFESSOR(S)	BRIGAGLIA MARCO	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	6		
INDIVIDUAL STUDY (Hrs)	102		
COURSE ACTIVITY (Hrs)	48		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	5		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	BRIGAGLIA MARCO Friday 09:30 12:30 Piazza Bologni 8, stanza 11, piano 2		

PREREQUISITES	Basic knowledge of legal theory and basic knowledge of technical legal terms.
LEARNING OUTCOMES	<p>Knowledge and understanding: knowledge and understanding of the main models of the cognitive structure of legal reasoning and decision-making.</p> <p>Applying knowledge and understanding: ability to apply knowledge and understanding in order to reconstruct the decision-making patterns underlying legal decisions, and to identify possible biases.</p> <p>Making judgments: ability to develop a critical attitude towards legal decision-making, taking into special account the degree to which the organizational context and the specific training of legal officials protect their decision-making from biases and cognitive distortions.</p> <p>Communication: ability to communicate the acquired knowledge in a clear and exhaustive way, and to merge the technical language of cognitive science with that of legal theory.</p> <p>Lifelong learning skills: ability to combine the theoretical-conceptual approach of traditional legal theory with the empirical methods of the cognitive sciences.</p>
ASSESSMENT METHODS	<p>Exam type: oral exam. Minimum number of questions: two.</p> <p>Evaluation: Grades on a scale between 18 and 30 cum laude.</p> <p>Evaluation Grid:</p> <ul style="list-style-type: none"> - Excellent: 30-30 cum laude. Excellent knowledge and understanding, excellent communication and argumentative skills, proper use of technical language. - Very good: 26-29. Good knowledge and understanding, good communication and argumentative skills, proper use of technical language. - Good: 24-25. Basic knowledge and understanding, average communication skills, limited argumentative skills. - Average: 21-23. Limited basic knowledge and understanding, sufficient communication skills, poor argumentative skills. - Fair: 18-20. Minimal basic knowledge and understanding, poor communication skills, poor argumentative skills. - Poor. Insufficient knowledge and understanding.
EDUCATIONAL OBJECTIVES	The course is aimed at presenting the main contributions of the cognitive sciences to an understanding of legal reasoning: psychological models of normative reasoning; heuristics and biases in legal reasoning and decision-making; the role of emotions and imagination; the cognitive structure of legal concepts; the psychological grounding of defeasible reasoning; the relation between legal reasoning and AI. (The course is connected with the Erasmus KA2 Project RECOGNISE - Legal Reasoning and Cognitive Science (https://www.recognise.academy/), and will rely on didactic materials and teaching collaborations developed within the project.)
TEACHING METHODS	Lectures and seminars
SUGGESTED BIBLIOGRAPHY	<p>The course will be based on the following readings. Alternative readings replacing some of the ones in the list may be indicated during the course, on the basis of specific interests expressed by students.</p> <ul style="list-style-type: none"> - Wistrich, Andrew J., and Jeffery J. Rachlinski. "Implicit Bias in Judicial Decision Making: How It Affects Judgment and What Judges Can Do About It." In <i>Enhancing Justice: Reducing Bias</i>, edited by Sarah E. Redfield (Chicago: American Bar Association, 2017), 87-130. - Maroney, Terry A. "The Persistent Cultural Script of Judicial Dispassion." <i>California Law Review</i> 99, no.2 (2011): 629-681. - Brigaglia Marco, and Bruno Celano, 'Reasons, rules, exceptions: towards a psychological account', in <i>Analisi e Diritto</i> 14 (2017), pp. 131-144. - Haidt, Jonathan. "The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment." <i>Psychological Review</i> 108, no.4 (2008): 814-834. - Danziger S., Levav J., Avnaim-Pesso L. 2011. Extraneous Factors in Judicial Decisions, «Proceedings of the National Academy of Sciences of the United States of America», 108, 17, 2011, 6889-6892.

SYLLABUS

Hrs	Frontal teaching
4	Introduction: Legal theory and the 'cognitive revolution'
4	Normative decision-making: (1) social intuitionism (J. Haidt)
6	Normative decision-making: dual process theory (J. Greene). The psychology of moral dilemmas: the trolley problem
6	Normative decision-making: rules and emotions (J. Prinz, S. Nichols, J. Mikhail)
4	Psychology of natural law: moral tastes (J. Haidt), moral grammar (J. Mikhail), ethological perspectives (F. de Waal)
4	From morals to law: fairness, rules, autorità

SYLLABUS

Hrs	Frontal teaching
6	Rules and authority: a psychological perspective
4	Legal reasoning and AI: an introduction
6	Psychology of judging: implicit biases
4	Concluding remarks: the natural science of legal orders



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ANNEX 2

Course in *Legal Reasoning and Cognitive Science:* Teaching Materials

(b) Assessment Tests

INTERIM ASSESSMENT. QUESTIONS

1. You are an experimenter who wants to find out whether a certain group of people treats the rule against hitting children as moral or conventional, according to Turiel's distinction. Which of the following questions you should ask?

- **Is hitting children wrong for real or just for some people?**
- Is hitting children wrong or simply incorrect?
- Is hitting children forbidden in all cultures?
- Does everyone agree about the wrongness of hitting children?

2. One of the following expressions doesn't apply to the innateness of the six moral foundations according to Haidt. Which one?

- prewired
- organized in advance of experience
- **hardwired**
- malleable

3. Among students at the Tampstead College of the University of North Paperagua, there is an age-old initiation ritual, whereby freshmen are required, throughout their freshman year, to tidy up the room of one of the senior students. Martha, a new freshman, protests against this rule, but Johanna, a sophomore, looks at her disapprovingly and tells her that "This is the college rule, it is wrong not to follow it". To which of the degrees of moral development identified by Turiel does Johanna's attitude correspond?

- pre-conventional
- **conventional**
- post-conventional

4. Only one of the following statements applies to Greene's theory of morality. Which one?

- **Strong emotions against a certain action prevent people from processing the moral values of the action's consequences**
- Most of the time, people reach a moral judgment intuitively
- Intuitive moral judgments are the result of the unconscious and quick application of moral rules
- Moral judgments are always the product of the interplay between intuition and reasoning

5. One of the following statements doesn't apply to Prinz's view of emotions. Which one?

- Emotions have the function of detecting concerns and preparing the organism to deal with them
- Emotions have the function of detecting relations between an organism and the environment relevant to the organism's well-being
- Emotions are perceptions of patterned bodily changes
- **Emotions are innate bodily patterns**

6. Only one of these statements describes Gibbard's account of morality. Which one?

- **Morality consists of norms about how to feel**
- Morality consists of norms about how to act
- Morality consists of norms about belief

7. Only one of the following statements about Gibbard's notion of normative avowal is incorrect. Which one?

- Normative avowal has to do with public discussions
- Normative avowal has to do with how it makes sense to act, feel, or believe in counterfactual conditions
- **Normative avowal is a form of private reflection**

8. Only one of the following statements about Haidt's theory of the six moral foundations is incorrect. Which one?

- Most moral norms about sexual behavior belong to the moral foundation sanctity/degradation concerns
- At the core of the moral foundation loyalty/betrayal is the protection of ingroup members
- **The moral foundation authority/subversion involves the refusal of external constraints**

9. Only one of the following statements doesn't apply to Haidt's social intuitionism. Which one?

- Moral judgment is akin to aesthetic judgment
- Moral judgment includes a belief in the rightness or wrongness of an act
- Moral judgment may be governed by rules
- **Moral judgment reduces to a positive or negative emotion**

10. Only one of the following statements doesn't apply to Prinz's account of morality. Which one?

- One can be said to accept a moral rule that forbids a certain action if she is disposed to disapprove of those who commit that action, including oneself
- Moral emotions are basic emotions, or blends thereof, recalibrated to the transgression of moral rules
- Deviant cases aside, moral judgments are produced by moral sentiments
- **Reasoning doesn't play an important role in morality**

11. Only one of the following statements about Prinz's theory of morality is incorrect. Which one?

- **Guilt is a reactive moral emotion, resulting from the recalibration of sadness**
- Moral emotions are either positive (praise) or negative (blame)
- Moral disgust can be directed both to others and to the self
- One may need a lot of thinking before coming to a moral judgment

12. Only one of the following statements about Greene's dual process theory of morality is incorrect. Which one?

- Consequentialist answers to the Footbridge version of the Trolley problem usually take longer than Deontological ones
- **Emotionally impaired people, like psychopaths, are more likely than normal people to give Deontological answers to the Footbridge version of the Trolley problem**
- To give a Consequentialist answer to the Footbridge version of the Trolley Problem, normal people need to overcome a strong aversive emotional response
- There is no significant difference in the frequency of Consequentialist answers in the Loop and the Switch versions of the Trolley Problem

13. Only one of the following statements is correct. Which one?

- Both Prinz and Gibbard reduce morality to networks of emotions
- In their account of the Trolley problem, both Foot and Thomson resort to the Principle of the Inviolability of Personal Space
- **Both for Prinz and Green moral judgment usually involves emotions**
- Both Haidt and Prinz think that morality is innate

14. Which of the following authors has the most critical attitude toward moral intuitions?

- **Greene**
- Haidt
- Foot
- Thomson

15. In a country, a hateful, racist campaign is launched against immigrants. These are the kind of slogans the campaign resorts to: 'Immigrants steal jobs away from your brothers'; 'Trust and respect your government! It is protecting you from the invasion of strangers'; 'Immigrants corrupt our customs and bring diseases'. One of the following moral foundations doesn't play a significant role in the campaign. Which one?

- Authority/Subversion
- Loyalty/Betrayal
- **Fairness/Cheating**
- Care/Harm



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ANNEX 3

Course in *Diritto e scienze cognitive:* Teaching Materials

(a) Syllabus

96478 - DIRITTO E SCIENZE COGNITIVE

ANNO ACCADEMICO 2022/2023

Conoscenze e abilità da conseguire

Al termine del corso lo studente: - conosce le principali teorie psicologico-cognitive rilevanti per lo studio del fenomeno giuridico, con particolare riferimento alle teorie sui concetti e i processi di categorizzazione; - conosce le peculiarità dei concetti giuridici alla luce di dati sperimentali e delle teorie dei concetti astratti; - è in grado di orientarsi nella letteratura psicologico-sperimentale rilevante per lo studio del diritto e dei fenomeni giuridici; - conosce i fondamenti cognitivi delle strutture istituzionali in una prospettiva sia evoluzionistica sia evolutiva; - conosce i "punti deboli" cognitivi su cui possono influire strategie di potere istituzionali ed extra-istituzionali ed è in grado di adottare un approccio critico su questi problemi; - è in grado di problematizzare il modello razionalista della decisione in ambito giuridico alla luce di una conoscenza dei pregiudizi ed errori cognitivi che possono influire sul processo decisionale.

Contenuti

La concezione standard del ragionamento giuridico prevede il modello di un agente e decisore razionale, in grado di prendere le decisioni corrette in qualsiasi contesto. Si tratta di un modello che ha delle motivazioni e radici filosofiche molto risalenti ed una giustificazione (fondata su esigenze di giustizia e di certezza del diritto) di importanza cruciale per la nostra concezione del diritto. Le scienze cognitive contemporanee, tuttavia, stanno sempre più mostrando i limiti di questo modello razionalista, rivelando che il processo decisionale ed analitico degli esseri umani si fonda su capacità mentali limitate e soggette ad errori sistematici. Per di più, esse mostrano che le decisioni possono essere manipolate agendo sul contesto, creando illusioni cognitive, oppure generando fenomeni di dipendenza ed *addiction* comportamentali, non dissimili nei meccanismi di base da quelli di abuso di droghe, cibo, o alcool. In questo corso si discuteranno queste scoperte, mostrandone l'impatto e le conseguenze per la nostra concezione del diritto e del ragionamento giuridico. Il corso si divide in tre parti fondamentali: in primo luogo, si analizzerà la struttura delle istituzioni giuridiche ed i meccanismi cognitivi che ne permettono l'esistenza; in secondo luogo, si analizzerà la struttura del processo decisionale in ambito giuridico ed i limiti cognitivi cui esso è soggetto; in terzo luogo, si analizzeranno alcuni modi in cui il processo decisionale degli agenti può essere manipolato, sia dalle istituzioni per fini (almeno parzialmente) positivi, sia da agenti privati per fini di massimizzazione del profitto. In conclusione, si rifletterà sui modi in cui il giurista, essendo almeno in parte conscio di questi limiti cognitivi del proprio ragionamento, può mettere in atto comportamenti per limitarne l'impatto.

Testi/Bibliografia

Il corso prevede una distinzione tra frequentanti e non-frequentanti.

Studenti frequentanti:

1) M. Tomasello, *Storia naturale della morale umana*, Milano, Raffaello Cortina Editore, 2016.

2) R. Rumiati, C. Bona, G. Canzio, *Dalla testimonianza alla sentenza. Il giudizio tra mente e cervello*, Bologna, Il Mulino, 2019. (Selezione di capitoli da concordare con il Prof. Corrado Roversi)

3) M. Galletti, S. Vida, *Libertà vigilata. Una critica del paternalismo libertario*, Roma, IF Press, 2018. (Selezione di capitoli da concordare con la Prof.ssa Silvia Vida)

4) Materiali discussi e distribuiti durante le lezioni e sul sito *Virtuale* del corso.

Studenti non frequentanti

1) M. Tomasello, *Storia naturale della morale umana*, Milano, Raffaello Cortina Editore, 2016.

2) R. Rumiati, C. Bona, G. Canzio, *Dalla testimonianza alla sentenza. Il giudizio tra mente e cervello*, Bologna, Il Mulino, 2019.

3) M. Galletti, S. Vida, *Libertà vigilata. Una critica del paternalismo libertario*, Roma, IF Press, 2018. (Selezione di capitoli da concordare con la Prof.ssa Silvia Vida)

4) Materiali discussi e distribuiti durante le lezioni e sul sito *Virtuale* del corso.

5) Capitoli (da concordare con i docenti) tratti da:

- J. Haidt, *Menti tribali*, Codice edizioni, 2014.

- D. Kahnemann, *Pensieri lenti e veloci*, Milano, Mondadori, 2017.

Metodi didattici

Il corso è strutturato in lezioni frontali in aula. Il corso (previsto nel secondo semestre) consiste di 24 lezioni di 2 ore ciascuna, per un totale di 48 ore, ed è diviso in 2 moduli: il primo (dedicato ai fondamenti cognitivi delle istituzioni giuridiche e agli aspetti psicologico-cognitivi del ragionamento giuridico) tenuto dal Prof. Corrado Roversi, il secondo (dedicato alla regolamentazione tramite manipolazione cognitiva (nudge), alla manipolazione cognitiva nel settore privato e ai neuro-diritti) tenuto dalla Prof.ssa Silvia Vida.

Ogni lezione consisterà nella presentazione di un argomento, che includerà anche la formulazione di domande attraverso sondaggi in tempo reale, seguita da una discussione "aperta" con gli studenti, nella quale sarà loro richiesta la propria opinione. L'obiettivo è, in primo luogo, potenziare la consapevolezza da parte dello studente delle caratteristiche e dei limiti cognitivi del ragionamento in ambito giuridico, in modo da limitarne l'impatto, ed offrire conoscenze sia sulle strutture cognitive dei fenomeni istituzionali, che rappresentano il fondamento ultimo del dominio giuridico, sia sulle modalità manipolative dei fenomeni di potere, che sempre più spesso il giurista si troverà a dover conoscere ed affrontare.

Modalità di verifica e valutazione dell'apprendimento

La verifica dell'apprendimento avviene mediante una prova orale consistente nella discussione di tre argomenti: uno sui fondamenti cognitivi delle istituzioni, uno sulle caratteristiche cognitive del ragionamento giuridico, ed uno sulle strategie di manipolazione cognitive e su come limitarle. La prova mira sia ad accertare il livello di conoscenza maturato dallo studente sia a valutare il grado di risposta agli obiettivi del corso, in particolare per quanto riguarda la capacità di appropriazione critica e di elaborazione autonoma degli argomenti trattati.

Gradazione del voto finale:

Preparazione su un numero molto limitato di argomenti; capacità di analisi che emergono solo con l'aiuto del docente; linguaggio complessivamente corretto → 18-19.

Preparazione su un numero limitato di argomenti; limitate capacità di analisi; linguaggio

corretto → 20-24.

Preparazione su un numero ampio di argomenti; capacità critiche al di sopra della media; padronanza della terminologia specifica → 25-29.

Preparazione esaustiva; capacità critiche al di sopra della media; piena padronanza della terminologia specifica; capacità di argomentazione autonoma → 30-30L.

Strumenti a supporto della didattica

Schede riassuntive e *slides* sui principali argomenti trattati, software per l'annotazione di testi discussi direttamente su schermo, software (*Rationale*) per mostrare la struttura degli argomenti, software per la costruzione di test da effettuare in un contesto di gioco competitivo (*Kahoot*), software per effettuare sondaggi online (*Polleverywhere*, *Wooclap*) durante le lezioni in modo da migliorare il grado di interazione e discussione. Tutte le informazioni relative al corso ed i materiali didattici integrativi saranno reperibili nel sito del corso su *Virtuale*.



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SECTION 2

Intensive Study Programs



2.1. Presentation and guidelines

The second format of the training was an Intensive Study Program in *Legal Reasoning and Cognitive Science* (hereinafter, ISP). As foreseen in the application, we have realized two editions of the ISP, the first at the University of Ljubljana (online, 31 January - 4 February 2021) and the second at the University of Palermo (27 June- 1 July 2022). You can find below a brief report of both experiences (§ 2.2) and the relevant materials (Annexes 5 and 6). Here, we limit ourselves to some general remarks and guidelines:

- (1) If—as in our case—the ISP is targeted at learners lacking specific knowledge and expertise, we strongly suggest addressing various topics, rather than focusing on specific issues: it will help maintain the level of attention high. In fact, the variety of the program was one of the aspects students appreciated the most. They also appreciated the presence of unexpected topics, such as the use of cognitive science by Sharia courts, or Islamic conceptions of free will.
- (2) As regards methodology, we suggest increasing the amount of participate learning. We did include workshop sessions in the program, but many students suggested having more, and this impression was also shared by most trainers.



(3) At the end of each seminar, we asked students to complete a self-evaluation questionnaire. The completion of the questionnaires was required in order to receive a certificate of attendance. The answers, however, weren't evaluated. We found the questionnaires very useful both to help students elaborate on the acquired knowledge and to gather feedback about their level of understanding.

2.2. Report of our experience

2.2.1. 1st ISP – Ljubljana 2021

Due to the Covid pandemic, we decided to postpone the first ISP in Ljubljana, originally scheduled in September 2021, to February 2022 (31 January - 4 February). The online modality allowed an unexpected number of registered trainees: 326 (42% undergraduates, 17% master students, 19% legal practitioners, 9% PhD students). The effective number of participants for each session was ca 100. Ca 60 trainees fulfilled the conditions to obtain a certificate of attendance (having attended at least half of the planned seminars). The feedback from students was very positive. In terms of organization, in a scale from 1 (very bad) to



5 (excellent), 73,2% gave an evaluation of 5, and 21,1% of 4. In terms of contents, in a scale from 1 (very bad) to 5 (excellent), 66,2% gave an evaluation of 5, and 22,5% of 4.

2.2.2. 2nd ISP – Palermo 2022

The second ISP in Palermo took place from the 27th of June to the 1st of July 2022, in a blended modality. Most trainees from the partner institutions participated face-to-face. It was a wonderful opportunity for joint work and exchange. The number of registered participants was 52. 29 trainees attended the ISP from the first to the last day. 4 trainees from Alicante could attend only the last day. The feedback from students was very positive. In terms of organization, in a scale from 1 (very bad) to 5 (excellent), 64,3% gave an evaluation of 5, and 37,3% of 4. In terms of contents, in a scale from 1 (very bad) to 5 (excellent), 50% gave an evaluation of 5, and 50% of 4.



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ANNEX 4

1st ISP – Ljubljana 2021

(a) Call



Invitation

to an online Intensive Study Programme on LEGAL REASONING AND COGNITIVE SCIENCE

31 January – 4 February 2022

The study programme will be tackling interdisciplinary topics, such as:

- heuristics and biases in adjudication,
- emotions and adjudication,
- intuition and expertise in legal reasoning,
- the cognitive structure of legal concepts ,
- defeasible reasoning, law and cognitive science,
- legal reasoning, cognitive science, artificial intelligence.

The programme will consists of lectures, interactive seminars, and discussions. For a detailed **schedule of the programme** see below.

The study activity is suitable for law students, legal researchers and legal practitioners.

The **registration is free of charge** and can be made [on this online form](https://forms.gle/BjVPMj4pJUtpyovKA) (if you don't have an updated browser, you might want to try copying the link directly into your browser: <https://forms.gle/BjVPMj4pJUtpyovKA>) until 28 January 2022. Participants who will attend at least ten sessions and will complete self-evaluation test will be awarded a **certificate of attendance**. The Intensive Study Programme will be hosted by the University of Ljubljana, Faculty of Law on Zoom. A link to Zoom meetings will be sent to participants upon registration.

This study activity is part of the [RECOGNISE project](#), a strategic partnership of six European universities for higher education (University of Palermo, University of Ljubljana, University of Bologna, Jagiellonian University of Krakow, Maastricht University, and University of Alicante) and is sponsored by the Erasmus+ Programme.



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ANNEX 4

1st ISP – Ljubljana 2021

(b) Program

LEGAL REASONING AND COGNITIVE SCIENCE

Intensive Study Programme I

Ljubljana, 31 January 2022 – 4 February 2022

Monday, 31 January

9.00 – 9.20 Welcome addresses

Jerca Kramberger Škerl, *Vice-Dean of the Law Faculty, University of Ljubljana*

Marco Brigaglia, *University of Palermo*

9.20 – 10.50 The future of legal education – Presentation of the Recognise and related discussion (discussion)

Manuel Atienza, *University of Alicante*

Aldo Schiavello, *University of Palermo*

Corrado Roversi, *University of Bologna*

Antonia Waltermann, *Maastricht University*

Miha Hafner, *University of Ljubljana*

Marco Brigaglia, *University of Palermo*

Bartłomiej Kucharczyk, *Jagiellonian University of Krakow*

Kristina Čufar, *University of Ljubljana*, moderator

11.00 – 11.45 Cognitive distortions in adjudication: An introduction for students (seminar)

Marco Brigaglia, *University of Palermo*

12.00 – 13.45 Is legal mind a righteous mind? Experiments in legal psychology (workshop)

Kristina Čufar, *University of Ljubljana*

Michele Ubertone, *University of Palermo*

Giuseppe Rocchè, *University of Bologna*

LEGAL REASONING AND COGNITIVE SCIENCE

Intensive Study Programme I

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11.00 – 11.45 Cognitive distortions in adjudication: An introduction for students (seminar)

Marco Brigaglia, *University of Palermo*

12.00 – 13.45 Is legal mind a righteous mind? Experiments in legal psychology (workshop)

Kristina Čufar, *University of Ljubljana*

Michele Ubertone, *University of Palermo*

Giuseppe Rocchè, *University of Bologna*

Tuesday, 1 February

- 9.00 – 9.45** **Constitutionalism and cognitive sciences** (*seminar*)
Manuel Atienza, *University of Alicante*
- 10.00 – 10.45** **Legal reasoning and the rule of law** (*seminar*)
Jaap Hage, *Maastricht University*
- 11.00 – 11.45** **Legal reasoning, rhetoric, and ideology: Some perspectives from both traditional legal theory and the cognitive science** (*seminar*)
Aldo Schiavello, *University of Palermo*
- 12.00 – 12.45** **The psychology of legal decision-making: cognitive bias** (*workshop*)
Mojca M. Plesničar, *University of Ljubljana*
Katja Šugman Stubbs, *University of Ljubljana*
Miha Hafner, *University of Ljubljana*

Wednesday, 2 February

- 9.00 – 9.45** **Discrimination by courts: A psychological perspective** (*seminar*)
Jaap Hage, *Maastricht University*
- 10.00 – 10.45** **The psychology of legal decision-making: The role of stereotypes** (*seminar*)
Katja Šugman Stubbs, *University of Ljubljana*
Miha Hafner, *University of Ljubljana*
Mojca M. Plesničar, *University of Ljubljana*
- 11.00 – 11.45** **Psychological issues in evaluation of legal evidence** (*seminar*)
Bartłomiej Kucharczyk, *Jagiellonian University of Krakow*
- 12.00 – 13.45** **Presumptions, legal argumentation and cognitive sciences** (*seminar*)
Josep Aguiló, *University of Alicante*

Thursday, 3 February

- 9.00 – 9.45 **Conceptions of legal argumentation and cognitive sciences** (*seminar*)
Rafael Buzón, *University of Alicante*
- 10.00 – 10.45 **Non-Western perspectives: Cognitive sciences and Islamic law** (*seminar*)
Ewa Górka, *Jagiellonian University of Krakow*
- 11.00 – 11.45 **Acts and responsibility of AI: The relevance of cognitive science** (*seminar*)
Antonia Waltermann, *Maastricht University*

Friday, 4 February

- 9.00 – 9.45 **Embodied cognition and legal concepts** (*seminar*)
Caterina Villani, *University of Bologna*
- 10.00 – 10.45 **Legal concepts and cognitive science** (*seminar*)
Marek Jakubiec, *Jagiellonian University of Krakow*
- 11.00 – 11.45 **Cognitive structure of legal institutions** (*seminar*)
Corrado Roversi, *University of Bologna*



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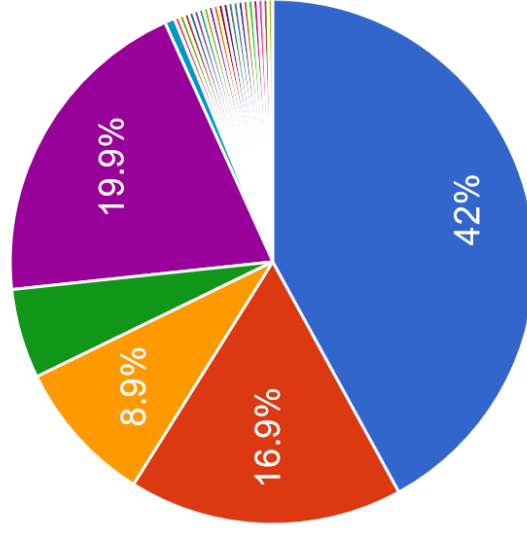
ANNEX 4

1st ISP – Ljubljana 2021

(c) Participants' data

Status

326 responses



- Undergraduate student
- Master's student
- PhD student
- Researcher/academic
- Legal practitioner

61 participants resulted eligible for the certificate at the end of the first ISP taking place in Ljubljana.



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ANNEX 4

1st ISP – Ljubljana 2021

(d) Self-evaluation questionnaire

**Intensive Study Programme on
LEGAL REASONING AND COGNITIVE SCIENCE
31 January – 4 February 2022**

Aldo Schiavello, *University of Palermo*

Legal reasoning, rhetoric, and ideology: Some perspectives from both traditional legal theory and the cognitive science

Q: What is the goal of interpreting?

- a) To find the correct meaning of a sentence;
- b) To create a meaning for a sentence;
- c) To choose among some possible meanings that can be attributed to a sentence;
- d) **One of the previous options depending on which conception of legal interpretation we share.**

Q: Is it possible to distinguish between clear and hard cases?

- a) It is not. All cases are clear;
- b) It is not. All cases are hard;
- c) Yes, it is. There is a clear-cut distinction between easy and hard cases;
- d) **It is not. There is only an uncertain and weak distinction between easy and hard cases.**

Q: What is the role of internal justification?

- a) None, because easy cases do not exist;
- b) It is the only justification that matters in so far as all cases are easy;
- c) None, because law deals with experience and wisdom, not with logic;
- d) **It is always helpful to check whether a conclusive argument is consistent and correct.**

Q.: “Law is what the judges had for breakfast”. If this claim is valid there is no room for legal reasoning?

- a) Correct: if judges exercise strong discretion, everything goes in law;
- b) The claim is however false because the justification of a legal decision should be consistent;
- c) The role of the legal reasoning would be that of discovering judges’ biases;
- d) **Even if this claim is true, legal reasoning would have a “civilizing force”**

Embodied cognition and legal concepts

How do embodied and grounded accounts of language define concepts?

- 1) Concepts are stable, universal constructs stored in long-term memory.
- 2) **Concepts are flexible, multimodal representations couched in bodily and cognitive systems, re-enacting relevant information of a given category in a situated context.**
- 3) Concepts are abstractions of relevant features of things we encounter in our everyday life, that are collected and collated into a single instance.
- 4) Concepts are symbolic, abstract, amodal representations.

How are abstract concepts framed by recent embodied and grounded theories?

- 1) Abstract concepts are grounded in perceptual, motor, emotional and introspective states.
- 2) Abstract concepts are symbolic representations derived from linguistic experience.
- 3) **Abstract concepts are a multifarious set of concepts each rely on different grounding sources, including not only sensorimotor but also inner, linguistic, and social experiences.**
- 4) Abstract concepts are a set of concepts that do have a physical, material object as a referent.

In experiment 1, to what extent do the ratings of experts and non-experts on institutional concepts differ?

- 1) **Compared to non-experts, experts rated institutional concepts as more concrete, contextually situated, and positively connoted**
- 2) Non-experts rated institutional concepts as more abstract and less familiar than other concepts.
- 3) Experts find institutional concepts as more associated with linguistic and social experiences than other concepts.
- 4) Compared to experts, non-experts rated institutional concepts as more negatively connoted.

In experiment 2, which pictures prime facilitated the processing of institutional concepts for law experts compared to non-experts?

- 1) Experts performed better than non-experts in all conditions
- 2) **Experts performed better than non-experts when primed by linguistic-social and social cooperative situations**
- 3) Experts performed worse than non-experts in all conditions
- 4) Experts performed better than non-experts when primed by linguistic-textual situations.

Josep Aguiló, *University of Alicante*

Presumptions, legal argumentation and cognitive sciences

1. The presumptions generally show the following three elements: a) one or some base facts (the indications, signs or clues), a presumed fact (what is assumed or conjectured) and c) a connection between these two facts.

True
False

2. There is no difference in “nature” between the so-called hominis presumptions and legal presumptions.

True
False

3. Fallacies are always the violation of rules: of inference rules in formal fallacies; of methodological rules in material fallacies; and of fair play rules in pragmatic fallacies.

True
False

4. Presumptive reasoning can always be defeated.

True
False

Conceptions of legal argumentation and cognitive sciences

1. Which are the main approaches to neuroethics?
 - a) descriptive, prescriptive and theoretical.**
 - b) descriptive and theoretical.
 - c) prescriptive and theoretical.

2. Which are the conceptions of legal argumentation in Manuel Atienza's theory?
 - a) Material and pragmatic.
 - b) Pragmatic and formal.
 - c) Formal, material and pragmatic.**

3. Why is neuroethics a kind of ethical naturalism?
 - a) Because it is descriptivist, realist, reductionist and empiricist.**
 - b) Because it is reductionist and realist.
 - c) Because it is descriptivist and empiricist.

4. What approaches are proposed to analyse braincentrism?
 - a) Braincentrism as fashion, as myth and as ideology.**
 - b) Braincentrism as fashion and as ideology.
 - c) Braincentrism as fashion and as myth.

Non-Western perspectives: Cognitive sciences and Islamic law

1. What information about science and knowledge is given in the Quran?

- a) there is nothing about science or knowledge, only revelation
- b) that people shouldn't develop science
- c) that people should seek knowledge and science should be respected**
- d) that knowledge brings people closer to God**

2. Is neuroscientific data used in islamic law?

- a) never, islamic legal specialists only use theology and rules of law
- b) it may be taken into account before a relevant legal opinion (fatwa) is issued**
- c) neuroscientific proofs are used in islamic courts
- d) only when official country regulation is prepared

3. Is brain stem death accepted as death in Islam?

- a) it's accepted by some jurists, others disagree**
- b) yes, its totally accepted
- c) no, brainstem death was never accepted
- d) it was accepted, but is not anymore

The psychology of legal decision-making: The role of stereotypes

1. Which one of the following statements on stereotypes is the most accurate?
 - a) some people do not have any stereotypes
 - b) stereotypes are always negative representations of people, places, nations etc.
 - c) people usually do not have as many stereotypes about other social groups as they have about their own group
 - d) the first step to prevent stereotypes to influence one's decision-making is to be aware of them**

2. Which one of the following statements is true?
 - a) Only negative prejudice is dangerous in legal decision-making
 - b) Only positive prejudice is dangerous in legal decision-making
 - c) Both positive and negative prejudice can be detrimental in legal decision-making**
 - d) No prejudice can affect legal decision-making as legal professionals always neutralise it in legal reasoning.

3. The presented study results showed that:
 - a) Slovenian judges are heavily affected by stereotypes and prejudice in their decision-making
 - b) Slovenian judges are not affected at all by stereotypes and prejudice in their decision-making
 - c) Judges decisions differed too much for researches to establish measurable impact of stereotypes and prejudice**

Cognitive structure of legal institutions

What is an institutional fact?

- 1) It is a kind of legal fact
- 2) It is a set of constitutive rules
- 3) It is a fact made possible by a set of constitutive rules**
- 4) It is a fact whose constituent elements are defined by a set of regulative rules
- 5) It is a fact that is real only because it is believed to be a fact

Why is a “theory of mind” or full-fledged perspective-taking necessary to understand institutional facts?

- 1) Because only when I understand the structure of my beliefs I can attribute a status
- 2) Because only when I understand that others may have intentions different from mine we can negotiate an institutional arrangement
- 3) Because only when I understand that others have beliefs, and hence that they can believe something that is different from what I believe, we can jointly attribute a status**
- 4) Because only when I understand that I can have different views I can share a rule with others

The development of the cognitive underpinnings of institutional facts in humans coincides with that of:

- 1) Pretend-play, instrumental objects, and conflict resolution
- 2) Semantic understanding, artifact conceptualization, pretend-play, and perspective-taking**
- 3) Game-playing, construction of tools, artifact conceptualization, and perspective-taking
- 4) Conflict resolution, perspective taking, cooperative breeding and group-hunting
- 5) Pretend-play, normative behaviour, joint attention and emotion detection

Which among the following assertions on the cognitive foundations of legality is true:

- 1) Authority and validity are based on cognitive features that are rooted in the emotional brain
- 2) Authority and validity are based on cognitive features that are more recent from an evolutionary perspective than those that ground sanctions and punishment**
- 3) Anger-based sanctions and revenge cannot foster cooperation
- 4) Prototypes theories of categorization cannot explain the formal features of the legal system

Marco Brigaglia, *University of Palermo*

Cognitive biases in adjudication. An introduction

PROBLEM 1. What the Judge Ate for Breakfast

Task. One of these statements is false. Which one?

- (a) In the study by Danziger et al, researchers found that judges' decisions to reject parole took longer than decisions to grant it.**
- (b) In the study by Danziger et al, researchers found that the percentage of favorable decisions decreased according to the time elapsed since the latest food break
- (c) In the study by Danziger et al, researchers speculated that judges' decisions partly depended on judges' tendency to choose in favor of the maintenance of the *status quo*

PROBLEM 2. Heuristics and Biases

Task. One of these statements is false. Which one?

- (a) Heuristics are cognitive shortcuts that, although they deviate with respect to acknowledged standards of rational thought and decision-making, usually lead to good enough conclusions or decisions
- (b) Heuristics lead to systematic errors
- (c) Heuristics are systematic errors consequent on the use of cognitive shortcuts**

PROBLEM 3. Anchoring

Task. One of these statements is false. Which one?

- (a) Anchoring is the procedure consisting in making estimates by starting from an initial value that is adjusted to yield, and influences, the final answer
- (b) Anchoring is triggered even by numerical values that are clearly irrelevant to the problem at hand
- (c) Anchoring is triggered only by numerical values not too distant from a reasonable solution of the problem at hand**

PROBLEM 4. Anchoring in Adjudication

Task. One of these statements is false. Which one?

- (a) The experiments reviewed suggest that prosecutors' demands anchor judges' decisions; this effect, however, is usually counterbalanced by defense attorneys' demands**
- (b) The experiments reviewed suggest that prosecutors' demands anchor judges' decisions, even when judges are well aware that these demands come from someone devoid of any legal expertise, or are even determined by pure chance
- (c) The experiments reviewed suggest that even irrelevant and patently unreasonable values may significantly anchor judges' decisions



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ANNEX 4

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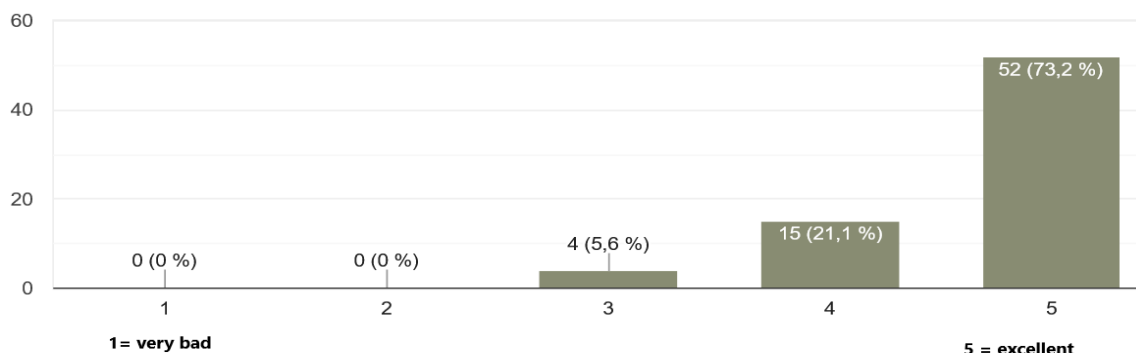
(e) Self-evaluation questionnaire

72 answers

1. How would you evaluate the organization of the event (number of the talks, schedule, communication before and during the event, etc.)?



71 odgovorov



2. How could we improve the organization of the Intensive Study Program?

1. I think it was organised perfectly
2. Maybe the "round table" among the speakers could be better at the end of the day instead at the beginning
3. no need
4. Involve the students themselves in the organization and preparation of seminars.
5. The ISP shows a very good organization
6. Maybe it would better for the audience to have more time to answer the questionnaire of the workshop.
7. Maybe a more detailed description about the course in the introductory email.
8. NO NEED
9. more interactive is necessary
10. Make more programme
11. Provide all the slides that the expositor presented and maybe improve the audio
12. There is a good balance in the organization
13. the organization is excellent
14. the sound of the speakers is sometimes a little problematic, therefore it's difficult to follow the seminars.
15. Sessions were quite great. If every session lectures becomes like Mojca ma'am and Michele sir than it will be more great. More understandable properly.
16. very good organization....
17. Details in Power Point Presentation little bit more.
18. Engaging more participants
19. Presharing the powerpoint presentation, so they can be downloaded.
20. More space to questions from the audience
21. perhaps encouraging greater interaction between participants
22. Reviewing one topic repeatedly before moving onto another topic. Reading and rereading a text. Highlighting or underlining important concepts in a text and then reviewing.
23. Involving more universities to this project
24. Best no need to improve.
25. It's good. I really like discussions.

26. More interactive topics
27. There were some seminars that appeared at a determinate time on the schedule, and then they happened an hour later or an hour before.
28. I found the course very well organized and every session excellently moderated
29. To involve students in communication and discussion, this this element was unfotunately absent.
30. Maybe leave a bit more time for discussion and questions after each speaker
31. Perfect
32. I do not have any serious complaints. Yet, I believe it might be a good thing to provide students with a couple of "readings" so that they are more familiar with the topics.
33. Nothing major is coming to my mind. Overall well done :)
34. Maybe I would split the seminars between morning and afternoon (it is a little tiring to follow all morning).
35. I would suggest asking for all the speakers to use powerpoint presentations during their talks. Although I don't think that is necessary when the presentations are in person, I found difficult to concentrate on the (online) talks that didn't use visual tools.
36. Organization was perfect
37. Nothing coming to my mind
38. Maybe require from all speakers (especially the italians) to speak understandable english
39. The organization is excellent
40. I do not have any suggestions, because it was really well organised and prepared. Well done!
41. I think the organization was great.
42. Maybe creating a more coherent programme
43. I think it would be nice if all of the speakers had some kind of, even if not a presentation, a graphic mind map. There were cases of such seminars without any graphic representation where I would lose my focus and could not get back into the pace of lecture.
Other than that, I'd wish some of the speakers could act more formal as the situation calls for it, but I guess it's not a fault of organization really.
Beside those two aspects, I was truly impressed with the ISP and wish there were more projects like that one.
44. I really think the organization was perfect.
45. More time for questions and discussion
46. Honestly cannot think of anything that could have been done better.
47. I think the organization was excellent, maybe it can be specified that is addressed mostly to students (more than lawyers, etc.)

3. Please point out up to five topics you have found the most interesting.

1. The impact of morality on "legality"; the cognitive biases; the interactive questionnaire
2. disgust as part of decision-making, lunch breaks of the judges, anchoring
3. Organisation, commitment to the topic, workshop, engaging those present in the conversation.
4. Heuristics and biases; anchoring; disgust; ego depletion; interdisciplinarity.
5. Heuristics and biases / How judges can be influenced by prosecutors demands and meals' breaks / how the results of this empirical research may be used to improve the organization of judges' work / the impact which disgust may have on legal reasoning / the role of cognitive sciences in legal education
6. argumentation covering up decisions based on disgust
7. Workshop on cognitive bias
8. workshop from today
9. cognitive bias and cognitive science
10. Legal interpretation
Cognitive bias
Law as a part of social facts
Result of the experiment
Moral relativism and moral universalism
11. Legal reasoning; individual psychology and social reality; cognitive biases; the judge as human being;

- anchoring.
12. Legal reasoning and rule of law; Legal reasoning, rhetoric, and ideology: some perspectives from both traditional legal theory and the cognitive science;
 13. the best seminar of day two in my opinion was the psychology of legal decision-making: cognitive bias (workshop). i find this topic very interesting. mojca's presentation was brilliant and so were the questioners.
 14. I have found Interpretation and Cognitive science interesting.
 15. biases in law, heuristics, anchoring
 16. Stereotypes, Psychological, Discrimination
 17. Psychology topics
 18. Presumption
Stereotypes
Cognitive distortion
 19. 1.presentation of recognise and related discussion
2.
 20. Cognitive distortions - heuristics and base rate neglect, stereotypes and the research on Slovenian judges, discrimination and rule of law
 21. Statistics data, practical issues
 22. I really appreciated the workshops because they were very engaging and interesting;
I liked the "experiments" especially those of "The psychology of legal decision-making: cognitive bias";
The seminar "The psychology of legal decisions: the role of stereotypes" was very interesting;
The speakers speak clearly and easily understandable;
Overall everything very well organized.
 23. 1. Experiment in legal philosophy 2. Legal reasoning & rule of law 3. The psychology of legal decision making 4. Discrimination by courts 5. Psychological issues in evaluation of legal evidence.
 24. The future of legal education; legal reasoning and the rule of law; Non western perspectives cognitive sciences and islamic law
 25. Cognitive science
AI
Science in Islam
Legal reasoning
Rules of law
 26. It was good today
 27. The psychology of legal decision-making: cognitive bias ,and the role of stereotypes. Legal reasoning and the rule of law.
 28. Is legal mind righteous mind?; Legal reasoning and the rule of law; The psychology of legal decision-making: cognitive bias; Discrimination by courts: A psychological perspective; The psychology of legal decision-making: The role of stereotypes
 29. Legal argumentation, objective and social facts, systems of thought behind judging and the unity of practical reason in post positivism.
 30. Discrimination and bias in law and legal decisions was the most interesting presentation for me
 31. Organization, very interestingly presented topics, involving young students in presenting the topic, incredibly interesting topics, and connecting different universities.
 32. Workshops by Miha Hafner, Mojca Plesničar and Katja Šugman Stubbs
 33. I really enjoyed the topics of legal decision making, discrimination, legal reasoning, Islamic law and the responsibility of AI
 34. All
 35. Indeed, I liked very much the seminar by Manuel Atienza on Constitutionalism, and the one by Corrado Roversi. These two really made me rethink some of my beliefs. And, of course, every single seminar was rather game changing and I would like to thank all of the speakers and organizers for making such an event possible
 36. 1) Is legal mind a righteous mind workshop. 2) Discrimination by courts seminar 3) Psychological issues in evaluation of legal evidence seminar 4) Non-Western perspectives: Cognitive sciences and Islamic law seminar 5) The psychology of legal decision-making: cognitive bias
 37. The three topics of the first day - Legal reasoning, rhetoric, and ideology: Some perspectives from both traditional legal theory and the cognitive science - Non-Western perspectives: Cognitive sciences and Islamic law.
 38. Legal reasoning and the rule of law; cognitive biases; discrimination by courts; cognitive structure of legal institutions; responsibility of AI.
 39. Acts and responsibility of AI, CS and Islamic law, the role of stereotypes. All of the presentations were excellent, but I would like to point out the presentation of Cognitive structure of legal institution by



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(f) Certificate of attendance template

Ljubljana Intensive Study Programme

Certificate of Attendance

This certificate of attendance is presented to

*in recognition of her/his attendance at the
Intensive Study Programme organised by the Recognise Project in Ljubljana from 31st of January to 4th of
February 2022.*

*Assist. Professor Aleš Novak
Head of the Organisation Committee, ISP Ljubljana*

*Professor Marco Brigaglia
Head of the Recognise Project*

Project Recognise - Legal Reasoning and Cognitive Science was co-funded by the Erasmus+ Programme of the European Union under the project number 2020-1-TT02-KA203-079834.



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ANNEX 5

2nd ISP – Palermo 2022

(a) Call

Call

for the Second Intensive Study Programme (ISP) on

LEGAL REASONING AND COGNITIVE SCIENCE

27 June – 1 July 2022

Palermo, Law Department

This intensive study program (ISP) is part of the [RECOGNISE project](#), a strategic partnership for higher education of six European universities (University of Palermo, University of Ljubljana, University of Bologna, Jagiellonian University of Krakow, Maastricht University, and University of Alicante) and is sponsored by the Erasmus+ Programme.

The ISP will consist of 17 seminars and 2 workshops (for details see below), organized in 6 sessions:

- Session 1. Cognitive science in court (Monday, June 27th, morning)
- Session 2. AI and legal theory (Monday, June 27th, afternoon)
- Session 3. Cognitive science and legal theory (Tuesday, June 28th, all day)
- Session 4. Free will and criminal responsibility: Philosophical and legal cultures (Wednesday, June 29th, morning)
- Session 5. Law and AI (Thursday, June 30th, all day)
- Session 6. Rule-based decision making (Friday, July 1st, morning)

The study activity is suitable for law students, legal researchers and legal practitioners.

The ISP will be hosted by the University of Palermo, Law Department. It will be realized in a blended modality: both in presence – at the Law Department of the University of Palermo (Piazza Bologna 8) – and online, on Microsoft Teams. A link to the event will be sent to participants upon registration.

It will be possible to attend online all events, with the exception of the 1st workshop. Participants attending online will be able to interact only through the chat.

The event will host up to 50 participants in presence and 200 participants online. Priority will be given to members of the partner organizations, as well as to lawyers enlisted in the bar associations of Palermo, Bologna and Ljubljana, and then on the basis of the moment of registration. Places in presence are limited, and most of them

are reserved for trainers and trainees of the Partner Institutions. If candidates want to be considered for attendance in presence, they must explicitly apply for it when filling the registration form.

The **registration is free of charge** and can be made [on this online form](https://docs.google.com/forms/d/e/1FAIpQLSfak5ssblTxdySJApksltxJlfbBYGn8ecS8QQB7EmrqpYzr9g/viewform) by 24 June 2022. If you don't have an updated browser, you might want to try copying the link directly into your browser:

<https://docs.google.com/forms/d/e/1FAIpQLSfak5ssblTxdySJApksltxJlfbBYGn8ecS8QQB7EmrqpYzr9g/viewform>

Participants who attend at least 10 seminars/workshops, fill the corresponding self-evaluation tests, and complete the final evaluation form will be awarded a **certificate of attendance**.



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ANNEX 5

2nd ISP – Palermo 2022

(b) Program

INTENSIVE STUDY PROGRAM ON LEGAL REASONING AND COGNITIVE SCIENCE

2ND EDITION

27TH OF JUNE

- H 10.00** **LAURA LORELLO** | COORDINATOR OF THE LAW DEGREE COURSE, UNIVERSITY OF PALERMO
Welcome address
- H 10.15** **MARCO BRIGAGLIA** | UNIVERSITY OF PALERMO
Presentation of the ISP

SESSION 1: COGNITIVE SCIENCE IN COURT

- Chair** **KRISTINA ČUFAR** | UNIVERSITY OF LJUBLJANA
- H 10.15-11.15** **MIHA HAFNER** | UNIVERSITY OF LJUBLJANA
Is justice blind to stereotypes and prejudice? Some findings from empirical research
- H 11.30-12.30** **MICHELE UBERTONE** | UNIVERSITY OF BOLOGNA
The division of cognitive labor in law

SESSION 2: ARTIFICIAL INTELLIGENCE AND LEGAL THEORY

- Chair** **MICHELE UBERTONE** | UNIVERSITY OF BOLOGNA
- H 14.30-15.30** **DYANCO BONSIGNORE** | UNIVERSITY OF ALICANTE
Too human to be fair, too cold to be just. Legal realism, artificial intelligence and the shrinking space between
- H 15.45-16.45** **ANTONIA WALTERMANN** | MAASTRICHT UNIVERSITY
The dual challenge from cognitive science and AI

28TH OF JUNE

SESSION 3: COGNITIVE SCIENCE AND LEGAL THEORY

- Chair** **MIHA HAFNER** | UNIVERSITY OF LJUBLJANA
- H 09.30-10.30** **JAAP HAGE** | MAASTRICHT UNIVERSITY
The relation between 20th century legal theory (Kelsen, Ross, Hart and Dworkin) and the way in which the cognitive sciences help explaining social reality
- H 10.45-11.45** **CORRADO ROVERSI** | UNIVERSITY OF BOLOGNA
The cognitive structure of legal institutions
- H 12.00-13.00** **MAREK JAKUBIEC** | JAGIELLONIAN UNIVERSITY KRAKOW
Legal philosophy and cognitive science: A troublesome naturalization
- H 15.00-16.00** **KRISTINA ČUFAR** | UNIVERSITY OF LJUBLJANA
Constraining definitions: Reason, emotions and social hierarchies

29TH OF JUNE

SESSION 4: FREE WILL AND CRIMINAL RESPONSIBILITY: PHILOSOPHICAL AND LEGAL CULTURES

- Chair** **GIUSEPPE ROCCHÈ** | UNIVERSITY OF PALERMO
- H 09.30-10.30** **ANDREA BRIGAGLIA** | UNIVERSITY OF NAPOLI "L'ORIENTALE"
Free Will in Islamic Thought
- H 10.45-11.45** **EWA GÓRSKA** | JAGIELLONIAN UNIVERSITY KRAKOW
Neuroscience, Free Will and Criminal Responsibility in Islamic Law
- H 12.00-13.00** **ALESSANDRO SPENA** | UNIVERSITY OF PALERMO
Free will and criminal responsibility in Italian criminal law

29TH OF JUNE

1ST WORKSHOP

- H 15.00-17.00** **BARTEK KUCHARZYK** | JAGIELLONIAN UNIVERSITY KRAKOW
Introduction to experimental research (for lawyers)

30TH OF JUNE

SESSION 5: LAW AND ARTIFICIAL INTELLIGENCE

- Chair** **ANTONIA WALTERMANN** | MAASTRICHT UNIVERSITY
- H 9.30-10.30** **TERESA NUMERICO** | UNIVERSITY OF ROMA TRE
Automated decision making and legal regulation
- H 10.45-11.45** **NATHALIE NEVEJANS** | UNIVERSITY OF ARTOIS
On the future regulation of AI. Legal and ethical aspects of the AI Act
- H 12.30-13.00** **GUIDO SMORTO** | UNIVERSITY OF PALERMO
A risk-based approach to AI regulation
- H 15.00-16.00** **ARIANNA ROSSI** | UNIVERSITY LUXEMBOURG
Online privacy decisions, manipulation and dark patterns

1ST OF JULY

SESSION 6: RULE-BASED DECISION MAKING

- Chair** **MARCO BRIGAGLIA** | UNIVERSITY OF PALERMO
- H 9.00-10.00** **JAAP HAGE** | MAASTRICHT UNIVERSITY
The psychology of rule application
- H 10.15-11.15** **RAFAEL BUZÓN** | UNIVERSITY OF ALICANTE
An approach to the concept of defeasibility

2ND WORKSHOP

- H 11.30-13.30** **KRISTINA ČUFAR** | UNIVERSITY OF LJUBLJANA
GIUSEPPE ROCCHÈ | UNIVERSITY OF PALERMO
MICHELE UBERTONE | UNIVERSITY OF BOLOGNA
Can disgust predict legal decision making? Research perspectives on moral psychology and legal responsibility

SCIENTIFIC ORGANIZATION: MARCO BRIGAGLIA, GIUSEPPE ROCCHÈ

ORGANIZATIONAL COMMITTEE: PAOLO CAPRIATI, ADRIANA GAIA FASCELLA

JUNE 27TH – JULY 1ST
ROOM "LUIGI STURZO"
GROUND FLOOR, PIAZZA BOLOGNI 8
DIPARTIMENTO DI GIURISPRUDENZA



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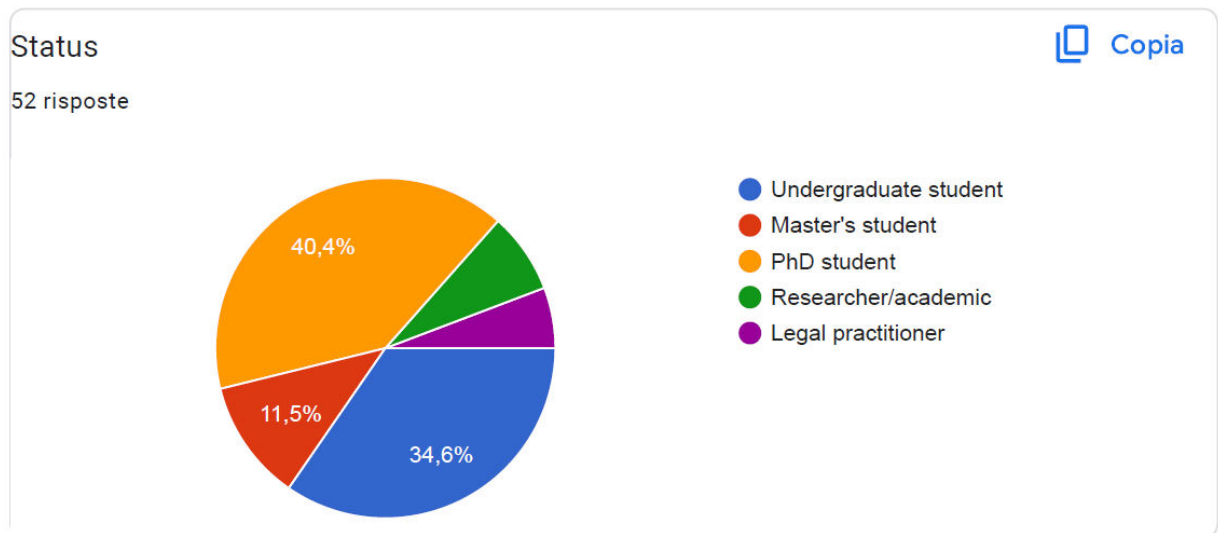
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(c) Participants' data

RECOGNISE REGISTRATION FORM

52 registrations.



Status of the attendants:

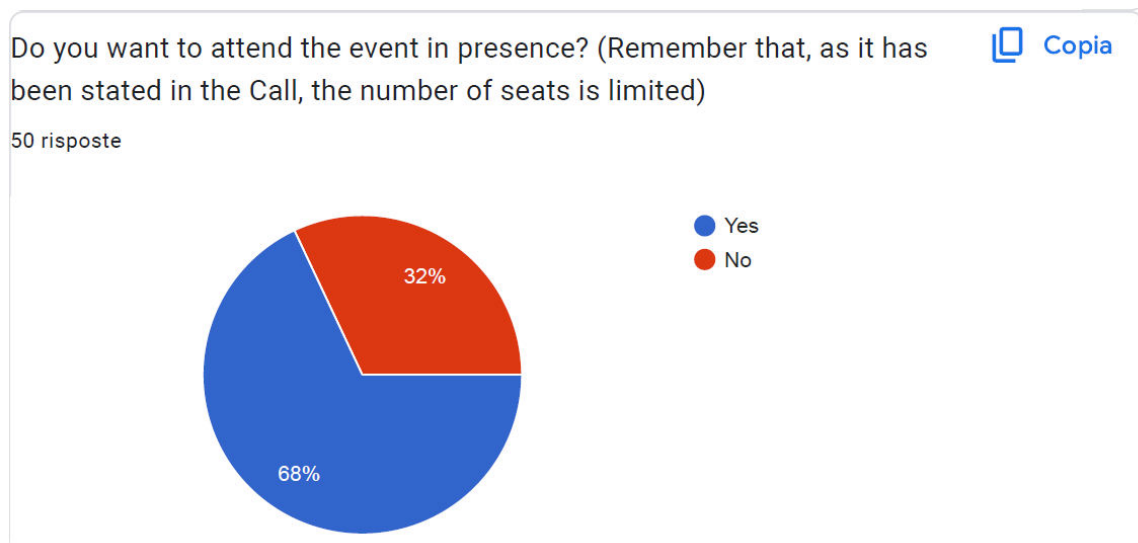
34,6% of undergraduate students,

11,5% Master students,

40,4% PhD Students,

7,5% Research/ Academic

6% Legal Practitioner.



29 people attended the program from 27th of June to 1st of July,
4 people attended the program only on the 1st of July.

Affiliation

34,5% University of Palermo (18)

3,8% Bar association of Slovenia (2)

1,9% Higher Court in Ljubljana (1)

1,9% Institute of Criminology at the Faculty of Law of Ljubljana (1)

13,5% University of Ljubljana (7)

15,4% Jagiellonian University (8)

7,6% University of Alicante (4)

1,9% University of Roma Tre (1)

1,9% University of Macau (1)

9,5% University of Bologna (5)

5,8% University of Maastricht (3)



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(d) Self-evaluation questionnaire

2nd ISP, Palermo
Self-evaluation Questionnaire

Miha Hafner

Is Justice Blind to Stereotypes and Prejudice? Some Findings from Empirical Research

1) Which statement holds most true?

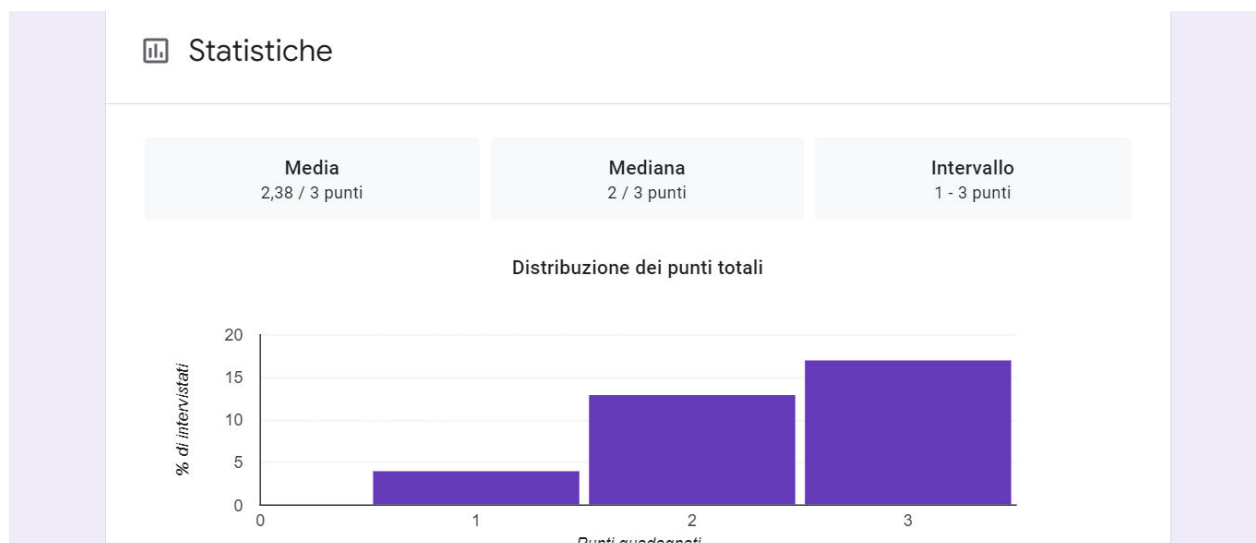
- ☐ Empirical research on the effect of prejudice/bias in legal decision making is difficult because mock juries are not easy to find.
- ☐ Empirical research on the effect of prejudice/bias in legal decision making is not complicated because there are not many variables in a typical legal decision.
- ☒ Empirical research on the effect of prejudice/bias in legal decision making is difficult because it is hard to discern the effect of prejudice/bias from other factors influencing a particular decision.

2) Choose the correct statement. Previous research suggests that the following groups of people are subjected to negative bias in the criminal justice:

- ☐ Women, people with higher social status, ethnic minorities, and less attractive individuals.
- ☒ Men, people with low social status, ethnic minorities, and less attractive individuals.
- ☐ Women, people with higher social status, ethnic minorities and more attractive individuals.

3) Which of the following statement is the most correct regarding the presented Slovenian study?

- ☒ The study could not confirm any influence of prejudice/ bias in the judges' decisions.
- ☐ The study revealed that the state prosecutors are more impartial in their decisions than the judges
- ☐ The discovered "noise" in the results is a clear indication that the groups of respondents were very biased.



Michele Ubertone

The Division of Cognitive Labor in Law

1) What is the illusion of explanatory depth?

- ☒ It's the illusion that we understand the world better than we actually do.
- ☐ It's the illusion that we understand the world worse than we actually do.
- ☐ It's the illusion that we cannot explain things that we understand.

2) According to the nudge theory

- ☐ Sanctions are the best way to influence people's behaviour.
- ☐ Legislators should write laws on the presupposition that citizens are perfectly rational.
- ☒ Policy makers should influence people's behaviour relying also on their unconscious and irrational predispositions.

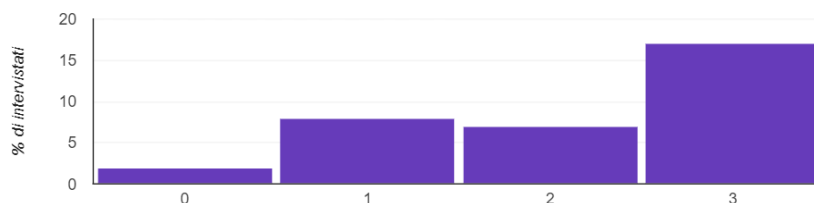
3) According to the educational model of expert evidence ...

- ☐ Fact-finders (judges or jurors) should be allowed to use expert opinions in their decision-making process even if they don't understand the arguments that support them.
- ☒ Fact-finders (judge or jurors) shouldn't use expert opinions in their decision-making process unless they understand the arguments that support them.
- ☐ The state should hire scientists as judges or jurors.

Statistiche

Media 2,15 / 3 punti	Mediana 2 / 3 punti	Intervallo 0 - 3 punti
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Distribuzione dei punti totali



Dyango Bonsignore

Too Human to Be Fair, Too Cold to Be Just. Legal Realism, Artificial Intelligence and the Shrinking Space between Them

1) What's the main implication of legal realism in the context of the lecture?

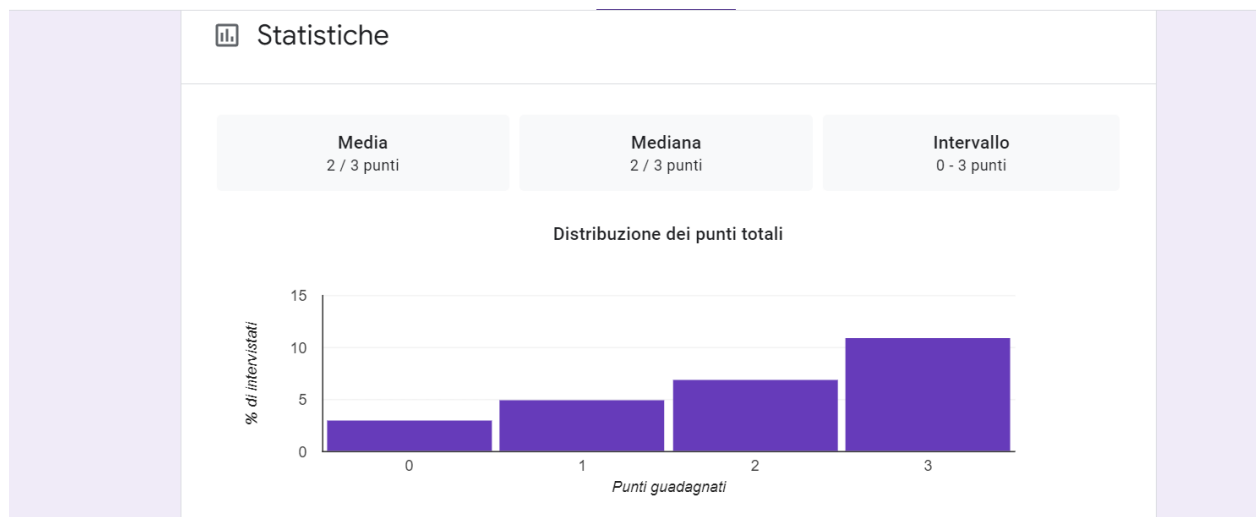
- ☐ Legal realism argues that rules and principles are what drive legal professionals
- ☐ Legal realism was a XX century movement that has since disappeared
- ☒ Legal realism proposes that, aside from the law, other variables can have sizeable influence in legal decision makers
- ☐ Judges are arbitrary in nature and justification in sentences is aimed at masking this fact

2) With regards to biases and decision-making...

- ☐ They are widespread but are mainly internal, they have no behavioral consequences.
- ☐ Judges are better prepared to be unbiased than average population.
- ☒ Judges are just as susceptible to biases as anyone else, although with proper caution they can compensate for their influence.
- ☐ None of the above.

3) The idea of a Judicial AI

- ☐ Can be coherent with a legal realism perspective.
- ☐ Can be seen as contradicting realist accounts of judicial decision making.
- ☐ Is the only way AI can be useful to legal matters.
- ☒ A and B are both correct.



Jaap Hage

The Relation Between 20th Century Legal Theory (Kelsen, Ross, Hart and Dworkin) and the Way in Which the Cognitive Sciences Help Explaining Social Reality

1) The different view of the nature of law of Kelsen and Ross can be explained from the fact that

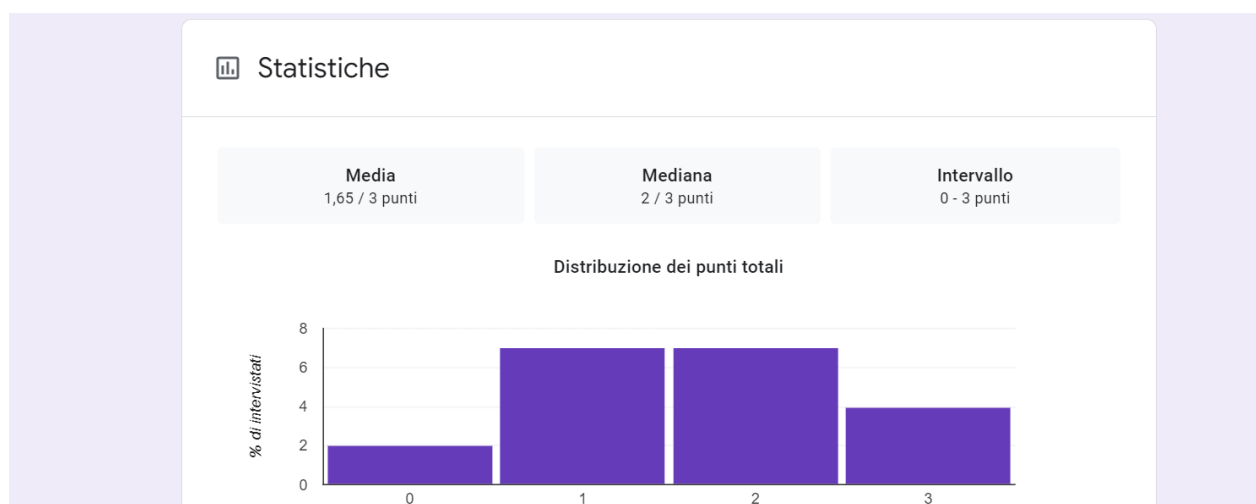
- ☐ Ross identified the Grundnorm and the validity of legal rules, while Kelsen strictly distinguished these two.
- ☒ Kelsen recognised a separate sphere of the legal ought, while Ross reduced this to a feeling of bindingness.
- ☐ Kelsen believed that the conclusion of an applicable rule follows without any condition, while Ross was of the opinion that all legal conclusion can be seriously questioned.

2) The different view of the nature of the law of Hart and Ross can be explained from the facts that

- ☐ Ross assumed a strict separation between Is and Ought, while Hart believed that the Rule of Recognition of a legal system connected that Is of rule conditions to the Ought of rule conclusions.
- ☐ Ross assumed that the bindingness of legal rules is essentially a feeling of those who must apply the rules, while Hart thought that this bindingness depends on the foundation of legal rules in legal principles.
- ☒ Hart founded the validity of legal rules in a social practice in the form of a rule of recognition, while Ross based the bindingness on individual psychology of judges.

3) The different views of the nature of law of Hart and Dworkin can be explained from the fact that

- ☒ Hart assumed that a social rule determined what rules count as legal rules, without regard to the content of the rule, while Dworkin argued that next to social rule the internal quality of the rule (is it just or not?) can also play a role
- ☐ Hart assumed that law consists of social rules, while Dworkin believed that law consists of rule-based rules
- ☐ Dworkin assumed that law consists of social rules, while Hart believed that law consists of constructivist rules



Corrado Roversi

The Cognitive Structure of Legal Institutions

1) What is an institutional fact?

- ☐ It is a kind of legal fact.
- ☐ It is a set of constitutive rules.
- ☒ It is a fact made possible by a set of constitutive rules.
- ☐ It is a fact whose constituent elements are defined by a set of regulative rules.
- ☐ It is a fact that is real only because it is believed to be a fact.

2) Why is a "theory of mind" or full-fledged perspective-taking necessary to understand institutional facts?

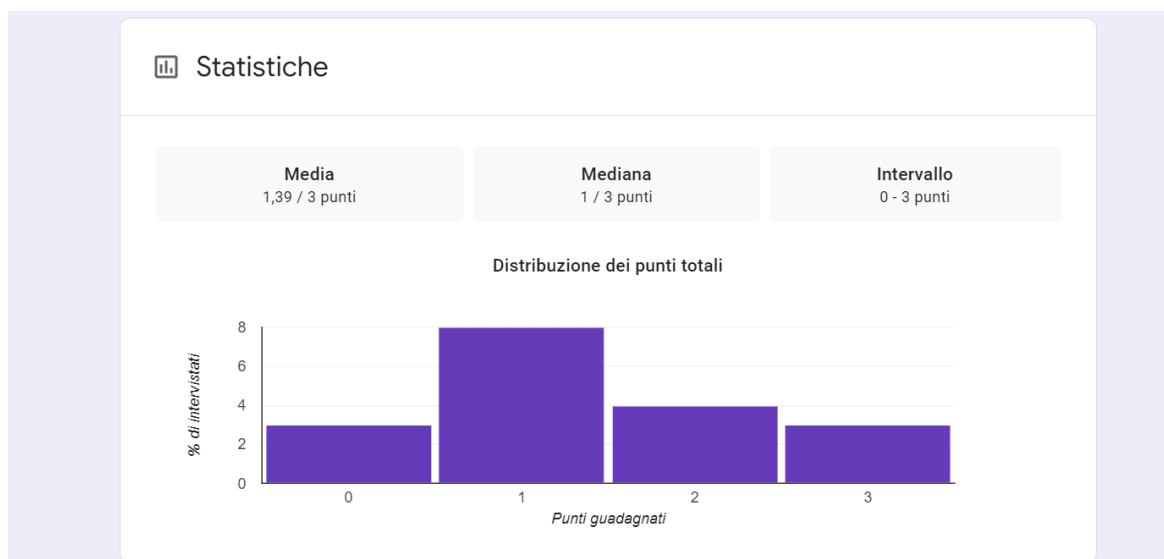
- ☐ Because only when I understand the structure of my beliefs I can attribute a status.
- ☐ Because only when I understand that others may have intentions different from mine we can negotiate an institutional arrangement.
- ☒ Because only when I understand that others have beliefs, and hence that they can believe something that is different from what I believe, we can jointly attribute a status
- ☐ Because only when I understand that I can have different view I can share a rule with others.

3) The development of the cognitive underpinnings of institutional facts in humans coincides with that of:

- ☐ Pretend-play, instrumental objects and conflict resolution.
- ☒ Semantic understanding, artifact conceptualization, pretend-play and perspective-taking.
- ☐ Game-playing, construction of tools, artificial conceptualization, and perspective-taking.
- ☐ Conflict resolution, perspective taking, cooperative breeding and group-hunting.
- ☐ Pretend-play, normative behaviour, joint attention and emotion detection.

4) Why is a "theory of mind" or full-fledged perspective-taking necessary to understand institutional facts?

- ☐ Authority and validity are based on cognitive features that are rooted in the emotional brain.
- ☒ Authority and validity are based on cognitive features that are more recent from an evolutionary perspective than those that ground sanctions and punishment.
- ☐ Anger-based sanctions and revenge cannot foster cooperation.
- ☐ Prototypes theories of categorization cannot explain the formal features of the legal system.



Marek Jakubiec

Legal Philosophy and Cognitive Science

1) Naturalisation of law is:

- ☒ application of the theories developed within cognitive science in law
- ☐ application of the medieval natural law theories in the contemporary legal theory
- ☐ a way of acquiring citizenship
- ☒ application of the advances of social sciences in legal theory

2) Legal concepts are:

- ☐ merely abstract
- ☐ merely concrete
- ☒ both abstract and concrete
- ☐ always metaphorical

3) According to the theories developed with the embodied cognition research program:

- ☐ legal concepts are amodal mental representation
- ☒ abstract legal concepts are metaphorical
- ☐ there are no legal concepts
- ☒ legal concepts are modal mental representations

4) The tension problem:

- ☐ is just an illusion
- ☒ is a difficulty for naturalistic legal theory
- ☐ is an argument against naturalisation of law
- ☒ poses a methodological challenges

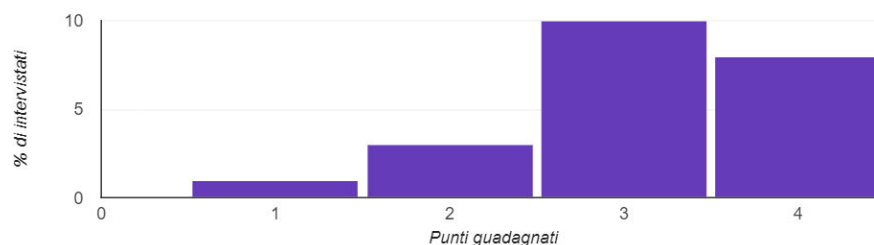
Statistiche

Media
3,14 / 4 punti

Mediana
3 / 4 punti

Intervallo
1 - 4 punti

Distribuzione dei punti totali



Kristina Čufar

Constraining Definitions: Reasons, Emotions and Social Hierarchies

1) Traditionally, decision-making was perceived as a practice of reason that ought not involve emotions. Is this view compatible with contemporary theories of emotions?

- ☐ Yes. Emotions are subjective elements that have no place in objective decision-making.
- ☒ No. While emotions still aren't fully understood, they seem to be integral to reasoning and decision-making.
- ☐ Yes. Contemporary theories of emotions reinforce the assumption that reasoning is a cognitive process, while emotions are physiological response to the environment.

2) What is central to critical (deconstructionist) approach to binary definitions (e.g., reason-emotion)?

- ☐ Binary definitions are problematic because they limit every issue to two extreme poles and thus contribute to polarization. Binary definitions ought to be destroyed and removed from (legal) theory.
- ☒ Binary definitions entail a hierarchy of a devaluated and celebrated element. Rather than destroying the binaries, they ought to be destabilized and the political prejudice maintaining them exposed.
- ☐ Binary definitions are neutral and objective descriptions of reality. Critique of binary definitions is limited to rare instances where binary definitions no longer correspond to the objective reality.

3) According to critical legal theories, what are some of the consequences of the reason-emotion binary employed in legal ordering?

- ☒ Certain social groups (women, people of color, etc.) were long perceived as more emotional and less reasonable. These groups were subsequently excluded from full enjoyment of political rights (e.g., the right to vote), economical rights (e.g. right to property) and full participation in the public sphere.
- ☐ Most legal orders create separate regimes of legal responsibility depending on the reasoning faculties of individuals. People with regular reasoning faculties have no issues managing their emotions and are treated differently than those unable of reasoning (e.g. when it comes to criminal responsibility).
- ☐ The law is a product of reasonable deliberation and application of rules. Emotions and emotional responses are the opposite of reason and cannot be legally regulated. Subsequently, emotional disputes are settled in the private sphere by the individuals involved.

Statistiche



Andrea Brigaglia

Free Will in Islamic Thought

1) Thanks to an overview of the Islamic theological / philosophical debate on "free will" and "predestination", we are able make valid predictions about the legal practices of contemporary Muslim-majority states.

- ☐ True.
- ☒ False.
- ☐ Partly true.

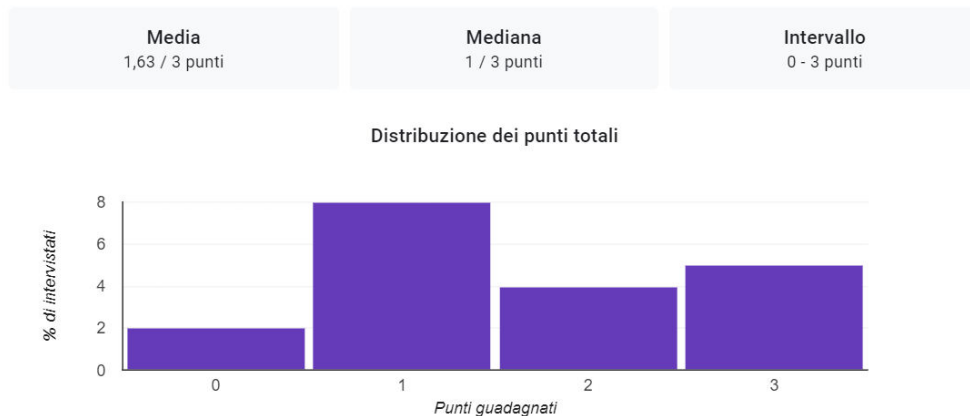
2) Relevant texts in the foundational sources of the religion of Islam (Quran and Hadith) suggest...

- ☐ That human beings have no free will at all.
- ☐ That nothing is predestined, and that human beings freely construct their own destiny.
- ☒ That human free will is negotiated by human within a narrow space defined by God's omnipotence.

3) Tick the correct statement among the follow:

- ☒ No clear consensus has emerged, in the history of Islamic theology, around the solution to the problem of "human free will" and "divine predestination"
- ☐ Historically, the consensus of Muslim theologians states that in acting, human beings exercise a "free will" granted to them by God.
- ☐ Historically, the consensus of Muslim theologians states that human beings are "compelled" by God to act in a certain way.

Statistiche



Eva Górski

Neuroscience, Free Will, and Criminal Responsibility in Islamic Law

1) Choose a true statement:

- ☒ Scientific proofs and expert witness testimony are treated as circumstantial evidence in Islamic law
- ☐ Muslim countries are not interested in including neuroscientific evidence, they prefer classical sharia evidence types
- ☒ Juristic preference and judges discretion will often be decisive when it comes to admissibility/evaluating power of scientific evidence

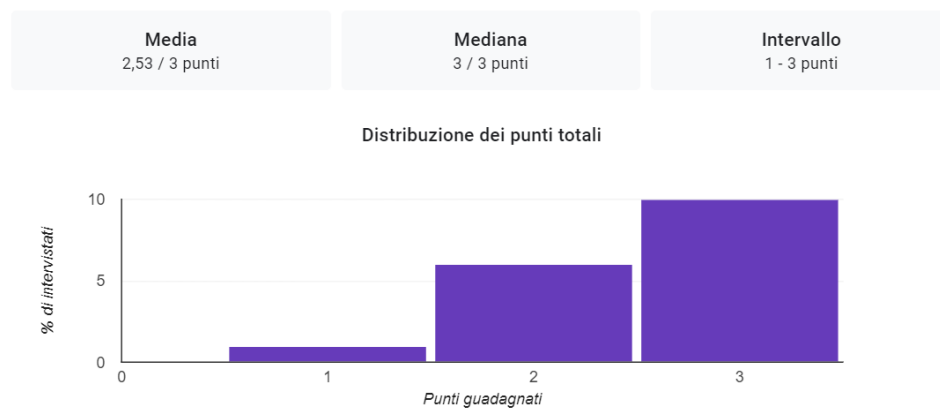
2) Neuroscientific evidence in Islamic justice systems:

- ☐ Is always treated as the most decisive evidence
- ☐ Would never be allowed, as only witness testimony and confession can be treated as legal evidence
- ☒ Would usually be treated as circumstantial evidence

3) Criminal responsibility in islamic law:

- ☒ Is based of principle of individual responsibility based on belief that people have ability to choose between right and wrong
- ☐ Does not take into account any exclusions and there are no exemptions to criminal liability
- ☐ Is based only on verses of Qur'an

Statistiche



Natalie Nevejans

On the Future Regulations of AI. Legal and Ethical Aspects of the AI Act

1) What approach does the AI Act rely on?

- ☐ An approach based on the rights to be protected
- ☒ A risk-based approach
- ☐ Both an approach by the rights to be protected and by the risks

2) What are the risks covered by the AI Act?

- ☒ Risks to human health
- ☒ Risks for the safety of persons
- ☒ Risks for the fundamental European rights of natural persons
- ☐ Economic risks for companies

3) Where are the AI Ethics aspects in the AI Act?

- ☐ The AI Act does not in any way mention the ethical aspects of AI
- ☐ The AI Act only addresses ethical principles in its Title XII on user rights
- ☐ The AI Act discusses ethical principles in depth in numerous articles throughout the text
- ☒ The AI Act refers to other texts for ethical aspects, such as the Charter of Fundamental Rights
- ☐ The AI Act systematically refers to codes of conduct for ethical aspects

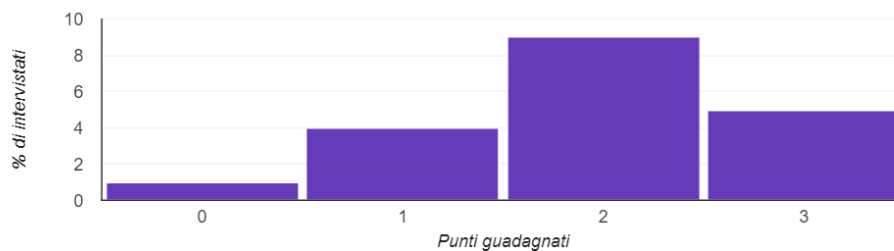
Statistiche

Media
1,95 / 3 punti

Mediana
2 / 3 punti

Intervallo
0 - 3 punti

Distribuzione dei punti totali



Guido Smorto

A Risk-based Approach to AI Regulation

1) What does a “risk-based approach” to AI Regulation entail?

- ☒ A regulation that addresses the risks associated with certain uses of AI
- ☐ A regulation that prohibits any form of AI as risky
- ☐ A regulation that allows any form of AI as riskless

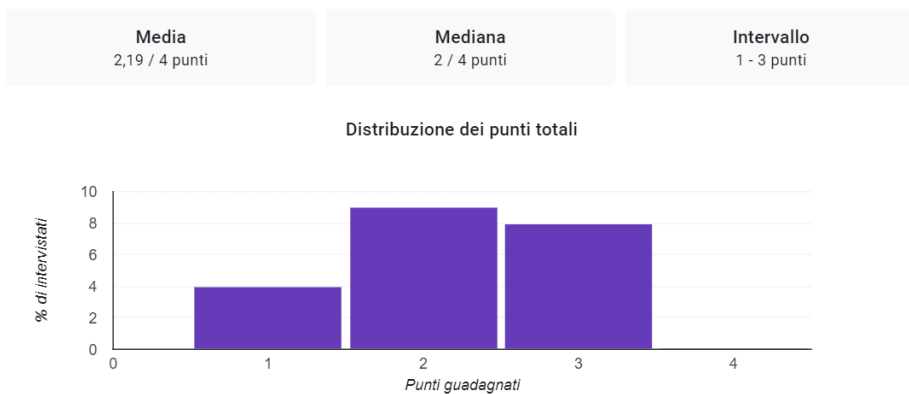
2) When an AI system is deemed as “high-risk”?

- ☒ When AI systems pose significant risks to the health and safety or fundamental rights of persons
- ☐ When AI systems pose significant risks to the health of persons
- ☐ When AI systems pose significant risks to the fundamental rights of persons

3) Which of these AI practices are not prohibited under the EU Regulation?

- ☐ Subliminal techniques that causes physical or psychological harm
- ☒ All forms of remote biometric identification systems
- ☐ Social scoring

Statistiche



Arianna Rossi

Online Privacy Decisions, Manipulation and Dark Patterns

1) What are the dark patterns?

- ☒ Design choices that influence users of digital services into taking decisions that do not necessarily benefit them but, benefit the service.
- ☐ Design choices that influence users of digital services into taking decisions that benefit them and the service
- ☐ Engineering choices that influence users of digital services into taking decisions that do not necessarily benefit them, but benefit the service

2) Which one of the following is NOT a risk derived from dark pattern?

- ☐ Loss of trust in online services
- ☐ Privacy and financial risks
- ☒ Filter bubble

3) Which of the following better describes the clues on which human beings base their trust judgements online?

- ☒ Alleged expertise of others, professional outlook of website interface, choices of trusted people (friends, family members, colleagues, famous people)
- ☐ Alleged expertise of others, professional outlook of website interface, choices of famous people
- ☐ Certified expertise of others, professional outlook of URL, choices of trusted people (friends, family members, colleagues, famous people)

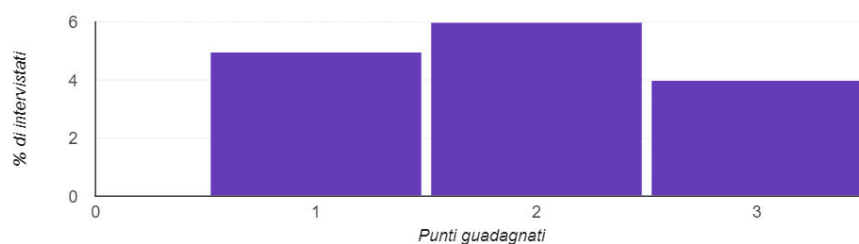
Statistiche

Media
1,93 / 3 punti

Mediana
2 / 3 punti

Intervallo
1 - 3 punti

Distribuzione dei punti totali



Jaap Hage

The Psychology of Rule Application

1) What does it mean if reasoning with rules is defeasible? It means that...

- ☐ It is always possible that an applied rule was invalid.
- ☐ Sometimes the condition of an applicable rule are not satisfied.
- ☒ Sometimes the conclusion of an applicable rule does not follow.

2) Is it possible to apply a rule unconsciously?

- ☐ Yes, but only if the conclusion is drawn consciously.
- ☒ Yes, and then it depends on later events (such as a question that is asked) whether the rule application will ever become conscious.
- ☐ No, because Kripke has shown that if it were possible to apply a rule unconsciously, it would never be possible to criticise the outcome of the rule application, and then the rule would not have existed.

3) Is it possible to have rules that are only used by one single person (private rules)?

- ☒ No, because there is always an element of normativity in rule-application and that cannot exist in private rules.
- ☐ No, because private rules would always remain unconscious.
- ☐ Yes, because every judge who single-handedly decides a case uses a private rule, or at least is able to do so.

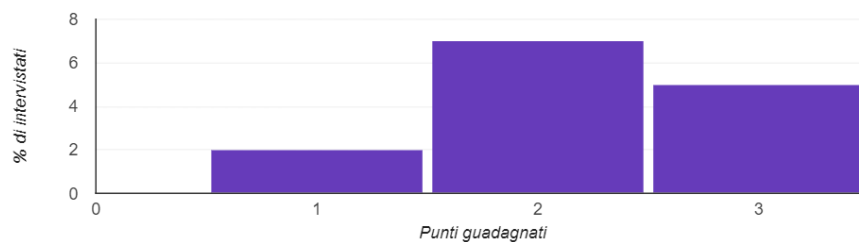
Statistiche

Media
2,21 / 3 punti

Mediana
2 / 3 punti

Intervallo
1 - 3 punti

Distribuzione dei punti totali



Rafael Buzón

An Approach to Defeasibility

1) Aguilò argues that the thesis of judicial discretion leads us to the thesis of indeterminacy of law in controversial cases while the thesis of the single right answer leads us to the _____ in hard cases:

- ☐ Indeterminacy.
- ☐ Coherence.
- ☒ Uncertainly.
- ☐ Responsibility.

2) Postpositivism has a strong idea of:

- ☐ The separation of law and morals.
- ☒ Practical reason (and of practical error).
- ☐ Indeterminacy of law.
- ☐ Discretionary activity of judges.

3) Defeating a rule always presupposes a problem resulting from _____ made by the judge

- ☒ A judgment of relevance.
- ☐ A judgment of equity.
- ☐ A judgment of intuition.
- ☐ A judgment of interest.

4) Inclusive legal positivism is that theory of law which maintains:

- ☐ The necessary connection between law and morality.
- ☐ The impossible connection between law and morality.
- ☒ The contingent connection between law and morality.
- ☐ The irrelevance of connection between law and morality.

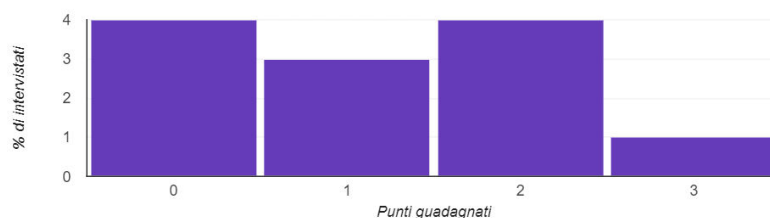
📊 Statistiche

Media
1,17 / 3 punti

Mediana
1 / 3 punti

Intervallo
0 - 3 punti

Distribuzione dei punti totali





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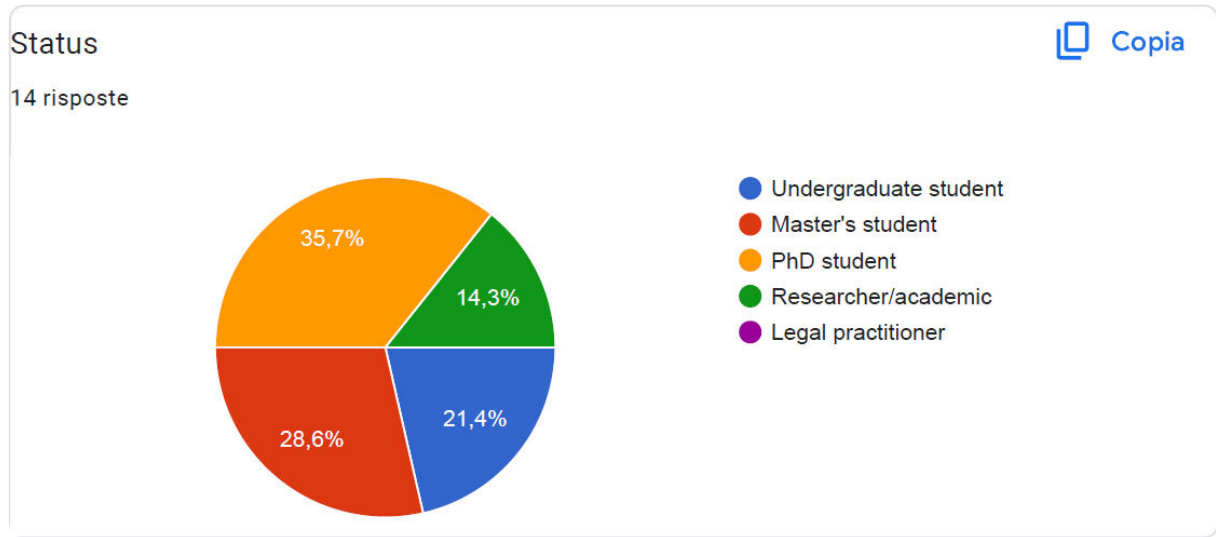
ANNEX 5

2nd ISP – Palermo 2022

(e) Satisfaction questionnaire

Final ISP Evaluation.

14 answers



Affiliation

35,7% Jagiellonian University (5)

21,4% University of Bologna (3)

14,3% University of Ljubljana (2)

14,3% University of Palermo (2)

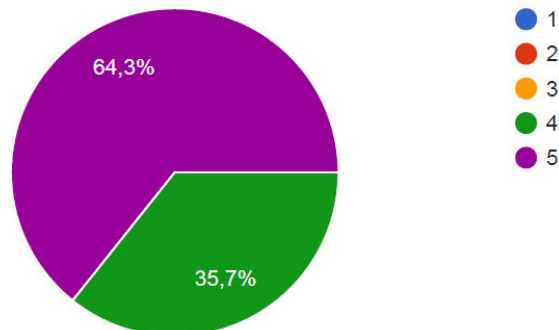
7,1% University of Maastricht (1)

7,1% University of Macau (1)

How would you evaluate the organization of the event (number of the talks, schedule, communication before and during the event, etc.)?



14 risposte



How could we improve the organization of the Intensive Study Program?

- 1) An option could be to increase the classes
- 2) Possibility of showing PowerPoint slides or providing softcopies of PowerPoint slides.
- 3) I think only by enhancing the multimedia channels, for example allow to ask questions even at distance
- 4) It was good
- 5) More in depth workshops about the topics discussed in the lectures
- 6) /
- 7) In my opinion this was seminars structured very well because at the end of all the lessons all of us could ask some questions or share his point of view.!
- 8) Organization was on point and i do not have any critique.
- 9) I think a good way could be make the lesson 10/15 minutes longer, in this way the speaker can be more precise in the exposition, without remove the possibility to do questions at the end
- 10) More interaction
- 11) I think it would be great if there was more post-class interaction between the instructors and the students, for example a joint dinner organised by the ISP organizing committee. I also lacked wi-fi connection, which made it difficult to, for example, perform the self-evaluation questionnaires right after the classes. It would also be great if the instructors shared some reading materials with us, associated with their lecture.
- 12) Do not allow teachers to take part in the presentations of other panellists
- 13) 1. Activate the students, and allow the students to be inspired by each other. This can be done through presentations, projects and experiments. 2. Provide the students with a list with mandatory reading. 3. Juxtapose different opinions on each day.
- 14) I would suggest to include introductory meeting allowing the participants and lecturers to get to know each other, their scientific interests and so on.

Please point out up to five topics you have found the most interesting

- 1) Legal defeasibility, Biases in legal decisions
- 2) Artificial intelligence
- 3) 1)Research on prejudices and stereotypes; 2) the problem of law's naturalization ; 3) The topic of free will in criminal law; 4) Cognitive science in judgments (above all the theme of nudging) 5) The use of neuroscientific evidence in Islamic law
- 4) Dark patterns, neuroscientific evidence in islamic law, legal naturalism

- 5) Judicial reasoning, disgust and morality, cognitive bias, cognitive structure of legal institutions, psychology of rule application
- 6) The division of cognitive labor in law; Legal realism and relations with artificial intelligence; Free will and criminal responsibility (in the system of Italian criminal law); the AI regulation; disgust inside decision making process.
- 7) Reason, emotion and binaries, defeasability of the rules, legal design, epistemic/semantical deference
- 8) 1. Cognitive Labor in law 2. The cognitive conditions of legal institution 3. Naturalization 4. Criminal responsibility of Islamic law 5. European approach and risks about AI
- 9) Islamic law
- 10) -1. The psychology of rule application 2. Neuroscience, free will and criminal responsibility in Islamic law 3. Free will and criminal responsibility in Italian criminal law 4. Constraining definitions: Reason, emotions and social hierarchies 5. Introduction to experimental research
- 11) Automated decision-making; Islamic culture
- 12) 1. Stereotypes. 2. Experimental design. 3. Moral reasoning. 4. Deconstruction. 5. Division of cognitive labour.
- 13) Manipulation and dark patterns with Arianna Rossi, the whole Islamic Law panel was absolutely amazing as well; the lecture of Marek Jakubiec on legal philosophy and cognitive science, the lecture of Miha Hahner on stereotypes in justice and workshop with Bartek Kucharzyk.

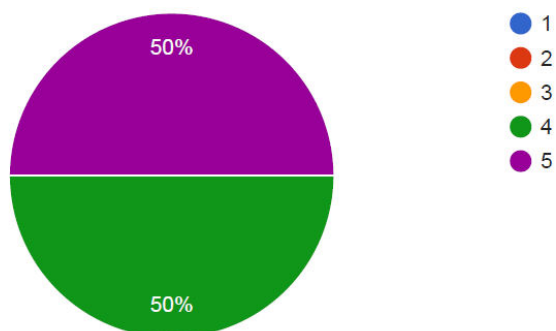
How could we improve the contents of the Intensive Study Program?

- 1) Involve more Universities and Professors
- 2) I would be Happy to attend a class that Addresses, broadly, the relationship between judicial decision making and practical reason
- 3) Increasing the matches between a lesson and another, creating the conditions to have a more general vision of the topics
- 4) More workshops!
- 5) e.g. in the case of AI ask some IT programmers to give some technological foundations of the topic (practical point of view)
- 6) More mind less law.

5. How would evaluate the overall event in terms of content?



14 risposte





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ANNEX 5

2nd ISP – Palermo 2022

(f) Certificate of attendance template

Palermo Intensive Study Programme

Certificate of Attendance

Hereby we certify that ... has attended the sessions of the Intensive Study Programme

from the 27th of June to the 1st of July 2022.

Professor Marco Brigaglia

Head of the Recognise Project, Head of the Organisation Committee, ISP Palermo

Professor Armando Plaia

Director of the Law Department of the University of Palermo

Project Recognise - Legal Reasoning and Cognitive Science was co-funded by the Erasmus+ Programme of the European Union under the project number 2020-1-JT02-KA203-079834.



Maastricht University

Universitat d'Alacant
Universidad de Alicante



Università
degli Studi
di Palermo



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



JAGIELLONIAN UNIVERSITY
IN KRAK W



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SECTION 3

Online Lessons



3.1. Presentation

As a third format, we planned to realize an e-learning course, consisting of 12-15 online lessons.

According to the initial plan, the course should have been divided into six thematic units, each consisting of two/three lessons. We quickly realized that there was too much overlap between the initially planned units, and that, given our different approaches and perspectives, the realization of a unitary course was very problematic. Furthermore, our teaching experience both with the courses within Law Degree Programs (above, Section 1) and with the ISPs (above, Section 2), made us feel that it was much more useful, rather than realizing a unitary course, to put together a series of independent lessons, which could be flexibly used as supporting teaching materials in similar courses and training events. This, then, is the path we followed, with the sole exception of a block of three lessons on the cognitive structure of legal concepts, for which it was necessary to introduce a number of preliminary notions.

In terms of format, we considered the ideal length to be 40 minutes per lesson, divided into two parts of approximately 20 minutes each.



Given the positive experience with the ISPs, we included a self-assessment questionnaire for each lesson.

We first realized three sample lectures, that were tested with the students of the course in *Legal Reasoning and Cognitive Science* at the University of Palermo. Considering feedback from students and colleagues, we then proceeded to elaborate and record the lectures (<https://www.recognise.academy/education/lectures/>).

An extra-lecture, in collaboration with the Copernicus Institute, has been recorded by Bartosz Broz

3.2. Titles and abstracts

COGNITIVE BIASES AND ADJUDICATION

Cognitive Biases in Adjudication, by Marco Brigaglia

This lecture provides an introduction to cognitive biases and their impact on judicial decision-making. A famous study on the effects of mealtimes on judges' decisions and a series of studies on the so-called 'anchoring effect' will be reported and discussed.

Mental contamination and inadmissible evidence, by Giuseppe Rocché



This lecture explores systematic distortions in legal decision-making due to our difficulty in deliberately disregarding relevant but inadmissible information. It surveys different reasons to exclude relevant information, and different psychological phenomena connected to the failure of deliberately disregarding, focusing on one of them: mental contamination.

EMOTIONS AND ADJUDICATION

Law, Reason, and Emotion: Part 1. The Philosophical Underpinnings. Part II. The World of Law, by Aleš Novak

These two lectures offer a brief examination of the interaction between law and emotions. The first one tackles the philosophical origins of the prevailing understanding of this relationship and argues that the prevailing attitude towards emotions in the legal realm has been (at least in part) shaped by the almost uniform treatment of emotions by major philosophers. The second one examines how the prevailing understanding of law and emotions is reflected in theoretical conceptualisations of law and its practical application. The predominant attitude towards emotions rests on the presupposition that law is inherently rational and that emotions need to be excluded



or at least curtailed in theoretical analysis of law and its practical application.

Reason-Emotion Binary and the Law, by Kristina Cufar

The lecture engages with the reason-emotion binary in the Western tradition and problematizes such a dualistic conception through feminist theory. The reason-emotion binary is a tool that was historically used to construct and conserve social hierarchies and ensure unequal treatment of legal subjects.

Emotion and Criminal Law, by Miha Hafner

This lecture deals with the relevance of emotion in criminal law decision-making. It reviews how (moral) emotions are integrated into the general decision-making process and how they may influence legal reasoning. The lecture also touches upon the problems of research on the role of emotions in legal decision making. Finally, it also addresses the ambiguous role of empathy therein. The second part of the lecture on emotion in criminal law discusses emotions as normative elements of criminal law norms. It illuminates how emotions represent prominent elements of many substantive and procedural criminal law rules and their



underpinnings. In conclusion, also the socio-legal perspective on emotions in criminal justice is presented.

LEGAL CONCEPTS

Of Concepts & Some Basic Legal Concepts, by Jaap Hage

This lecture deals with concepts. In the first half, the lecture addresses several aspects of concepts in general. In the second half, several legal basic concepts are discussed, such as obligations, permissions, competences, and juridical acts.

Legal Concepts and Embodied Cognition, by Corrado Roversi & Michele Ubertone

In this lecture, an overview is provided about the standard conception of legal concepts and the way in which it can be modified in view of the paradigm known in contemporary cognitive psychology as “Embodied cognition”. In the final part of the lecture, an experiment made at the University of Bologna is presented to show how experimental methodologies in embodied cognition can be used to enrich our understanding of legal concepts.



Cognitive Metaphors and Legal Concepts, by Marek Jakubiec

The lecture outlines the relevance of cognitive science research to the theory of legal concepts. In the first part, devoted to the introduction to metaphor theory the author focuses on the difference between concrete and abstract concepts in the context of legal concepts, and the idea of mapping (with a very short introduction to embodied cognition). In the second part, abstract legal concepts are depicted as conceptual metaphors, and limitations of metaphor theory in the context of legal concepts are elucidated.

DEFEASIBLE REASONING

Introduction to Defeasibility & Types of Implicit Exceptions, by Victor García Yzaguirre

This lecture provides an overview of how legal theorists have understood the notion of defeasibility, i.e., that norms possess non-enumerable implicit exceptions prior to their application. In the first conference, we will examine what constitutes an implicit exception. In the second session, we will analyze two ways of understanding the process and outcome of defeating a norm.



RESPONSIBILITY AND AI

The Dual Challenge from AI and the Cognitive Sciences, by Antonia Waltermann

This lecture offers a theoretical framework for analysing the ways in which insights about human and artificial cognition challenge existing legal (reasoning) practices. It briefly touches on possible pathways to address these challenges as well.

Free will and Responsibility, by Jaap Hage

This lecture deals with free will and responsibility. In its first half, two arguments against the existence of free will are discussed. The second half addresses the consequences of (the lack of) free will for legal responsibility.

Acts and responsibility of AI, by Antonia Waltermann

This lecture considers the relevance of the cognitive sciences for law when it comes to acts and responsibility (or liability) of artificially intelligent agents. It addresses whether we (1) can, and (2) should hold AI liable.



INTELLECTUAL PROPERTY LAW AND COGNITIVE SCIENCES

IP Law and Cognitive Sciences, by Ewa Laskowska-Litak

The lecture refers to the interconnection between intellectual property law and cognitive science(s). It presents a short summary of the historical evolution of IP law (particularly copyright law) and refers to current problems and dangers that confront the foundations of the intellectual property system: artificial intelligence, datafication and the impact of naturalisation of law.