This solution is meant to provide exemplary answers to the exam questions. Students were not expected to write such a detailed text; instead, students were expected to have recognized core aspects of the questions and to have expressed their thoughts in an informed and coherent manner.

Note: In the original exam text, there was a typo in para. 1. Instead of “deęp”, it was written “deęp” (see highlight below). We apologize for this mistake and have taken it into account in the correction.

Please read the following excerpt from Pardo/Patterson’s Minds, Brains, and Law (pp. 56-58) referring to Joshua Greene’s work as discussed during the course, and answer the questions.

The initial study and follow-up papers had explicitly descriptive aims and were cautious about normative conclusions. Nevertheless, Greene has since drawn more bold and wide-ranging normative conclusions about moral judgments based on the distinction he draws between emotional and cognitive processes. He argues that the distinction undermines deontological judgments and vindicates utilitarian judgments. Deontological judgments, he argues, are produced by the “emotional” psychological process rather than the “cognitive” process, and utilitarian judgments are produced by the cognitive process. The cognitive process is more likely to involve “genuine moral reasoning,” as opposed to the “quick,” “automatic,” and “alarm-like” deontological judgments produced by emotional responses. This, Greene argues, undermines deontology as “a rationally coherent moral theory”; an “attempt to reach moral conclusions on the basis of moral reasoning”; “a school of normative moral thought”; and as reflecting any “deęp, rationally discoverable moral truths.” Rather, deontology is characterized as merely an attempt to rationalize our emotional responses, which are based on, and may have developed evolutionarily because of, nonmoral factors. By contrast, he contends that utilitarian principles “while not true, provide the best available standard for public decision making.”

Legal scholars have followed Greene down this path, drawing normative implications for aspects of the law from Greene’s studies. Many of the references to the Greene studies in the legal literature cite them for the (unobjectionable) proposition that emotions play some role in moral judgments. Most troubling from our perspective, however, is the inference that the studies show that the “emotional,” deontological judgments are incorrect or unreliable. Consider two examples. In a recent article discussing international criminal law, Andrew Woods relies on the studies and contends that “(h)ow moral heuristic failure occurs has been shown using fMRI scans of the brain.” According to Woods, when subjects “felt an emotional surge” in Footbridge, they relied on moral heuristics (for example, “Do no harm”), and when they did not feel this surge they engaged in utilitarian reasoning. Woods maintains this is relevant to international criminal law because “strong emotional intuitions may guide decision makers to outcomes that do not maximize utility.” Similarly, Terrence Chorvat and Kevin McCabe contend that the studies are relevant to jury decision making at trial because juries will tend to make more “rational” decisions and “socially optimal choices when they keep the subject of the decision at a distance.” Therefore, the law has an interest in “depersonalizing” jury decision making. They suggest that evidentiary rules ought to be designed with this consideration in mind.

1 Please sum up the text. (10 %)

Possible answer

In the first paragraph, Pardo/Patterson discuss Joshua Greene’s work on moral decision-making. They state that Greene’s work initially sets out as a descriptive endeavor, by describing the various emotional and cognitive processes involved in different moral decision making scenarios in the so-called trolley cases. Pardo/Patterson contend that Greene then starts to infer unsound normative conclusions from his empirical findings: first, he draws a distinction between emotional and cognitive processes in moral cognition; secondly, Greene claims that whereas emotional processes are at the origin of “deontological” moral judgments, cognitive emotional processes would instantiate “utilitarian” moral judgments. Finally, he characterizes utilitarianism as more likely to involve “genuine moral reasoning” and
therefore “while not true” – to be the best moral theory and standard for public decision making”. Deontological judgments, in contrast, are irrational, “quick, automatic and alarm-like” produced by emotions.

In the second paragraph, Pardo/Patterson critically discuss the reception of Greene’s findings in the legal discourse. They conclude that most lawyers use his findings to underscore the uncontroversial statement that emotions play a role in moral judgments. However, they observe a problematic tendency to accept Greene’s (normative) claim that so-called “emotional” deontological judgments are inferior to utilitarian ones, as they are inherently incorrect or unreliable. They cite two examples, where the authors have drawn this conclusion.

2. The text describes a theory of morality. Is this theory convincing? What is, in your view, the best analytical, descriptively adequate theory of morality? Please outline differences between your view and the theory described in the text. Is there common ground, too? (30 %)

Possible answer
Preliminarily, it seems useful to differentiate between what is meant by a theory of morality, and moreover, an analytical, descriptively adequate theory of morality.

A theory of morality could denote a specific set of more or less coherent moral principles that, as a whole, constitute a theory of morality – such as utilitarianism or deontology. Alternatively, it could also refer to a more abstract concept of theory: namely, the systematic study and theoretical reflection of morality. Lastly, a theory of morality, especially if read with the adjectives “analytical, descriptively adequate”, could be understood to mean the empirical study of what morality is and how it is instantiated; such a theory’s (descriptive) aim is to investigate and explicate human moral cognition and its functioning. However, these different concepts of “theory of morality” often overlap – and, as illustrated below, are not always easy to separate.

The theory referred to in the text is Greene’s Dual Process model. Greene’s model, which represents only one variant of the so-called Two-system (or: Dual process)-models of the mind.

The main arguments of Two-system models of the human mind could be summarized as follows: The human mind and consequently, human decision-making are characterized by a fundamental dichotomy of two systems – a fast and a slow system, which are each respectively responsible for different modes of decision-making. Fast thinking, associated with quick (emotional) intuitions, is based on heuristics, biases and framing. It is in charge of the efficient management of everyday life tasks and challenges, but is not able to produce accurate and reliable answers. This somewhat “corrective” task is performed by the deliberate slow thinking of the second, i.e. slow system, which is said to be based on conscious (rational) reasoning. “Errors” in decision-making, or in our context, moral judgments, occur when our fast thinking system is not controlled by the slow thinking system.

In Greene’s Dual Process model, there is equally a dichotomy between emotional and cognitive processes in the course of a moral judgment.¹ That such a clear-cut distinction between emotional and cognitive processes also entails a normative dimension and thus implies important methodological questions illustrate the need for a broader critical analysis of Greene’s claims. For instance, it should be stressed that brain imaging studies do not “by themselves” prove the point, given the theory dependence of data and the problem of reverse influence.

Hence, what distinguishes Greene’s Dual Process model from other similar theories is the fact that he weaves his initially explicitly descriptive empirical findings into a broader normative theory of morality, as Pardo/Patterson have rightly observed.

According to Greene, utilitarianism is the superior theory of morality (in relation to deontology²). He justifies this by referring to his empirical findings that would show that utilitarian judgments are the

¹ Greene’s findings are based on the evidence derived from his fMRI studies and experiments with various “trolley scenarios”: The trolley problem refers to a thought experiment intended to identify people’s moral intuition about the preconditions of permissible killings by confronting them with a choice between the death of one person and the deaths of five persons.

² Some have also argued that Greene’s fixation on the “deontology versus utilitarianism” debate would obstruct the view of other moral theories.
products of slow and proper rational thinking. Therefore, utilitarianism, as the seemingly more rational option, would constitute the “best available standard for public decision making”.

Likewise, Greene’s definitions of utilitarianism and deontology are not convincing. He reduces deontological judgments to quick emotional, primitive hard-wired responses. At best, deontological arguments are conceived as a simple ex-post-rationalization of such judgements. Greene also doesn’t offer any other substantial definition of deontology as a moral theory. Similarly, his view that utilitarian moral reasoning consists in choosing the option of causing “less harm is equally reductionist. Furthermore, such a claim doesn’t in itself provide a reason for assuming utilitarian thinking to be generally “correct”. It is thus not evident why utilitarianism should be a more adequate description of moral evaluation than practical reasoning.

Ultimately, utilitarianism is itself based on certain preconditions, namely the equality of all human beings, meaning equal treatment and that the happiness of everybody ought to count equally. This foundational principle (of equality) cannot be justified by utilitarianism itself. Utilitarianism has thus non-consequentialist, deontological preconditions.

Following this argument, there remain two possible conclusions: (1) If deontological thinking is fast thinking, then utilitarian thinking must be fast thinking, too, since it is based on the former; or (2) utilitarian thinking is slow thinking, but then, deontological thinking has to be slow thinking as well as it is the basis of utilitarianism. In both cases, the theory leads to internal contradictions. It is thus not clear why utilitarianism should be any more “rational” than deontology.

Consequently, as illustrated, it is necessary to have some concept of practical reason – even if one adopted a utilitarian approach. Moral reasoning is not just reducible to a narrow concept of instrumental rationality or utilitarian calculus. The construction of concrete moral norms becomes only possible on the basis of fundamental normative principles like altruism and justice.

Understood in this way, the empirical evidence of widespread bias, heuristics, framing effects only underscores the importance and necessity of critical normative reflection.

An alternative, more coherent explanatory approach to moral cognition would be the mentalist theory of a universal moral grammar (UMG), where certain foundational principles such as justice and altruism are thought to exist within the cognitive system of every human being. Only such principles might provide a stable ground for the formulation of norms.

Universal moral grammar means an inborn, universal and uniform moral faculty across the species, which contains a set of principles that can generate an infinite number of moral judgements. The hypothesis of a universal moral grammar starts with an adequate description of a phenomenon, e.g. altruism, justice or agency.

It is an analogous construction to Chomsky’s theory of universal grammar of language (also called “generative grammar”), which is based on the assumption that there is a cognitive structure, i.e. a system of rules and principles, that generates languages, the language faculty. Evidence may be given by cases of brain lesion or second generation effects establishing a more complex language, as in the example of linguistic creolization. Crucial for the theory is the poverty of stimulus argument. It states that what cannot be learned must be inborn. Inborn in this sense means not necessarily fully present at the time of birth but not acquired through study, repetitively as a conscious effort. E.g. the complex volitional consequences of moral judgments like the meaning of an “Ought” or rights and duties are not taught to children, who are nevertheless able to differentiate between moral and conventional norms from a very young age. It is therefore not plausible to conclude that all these complex findings are learned in the traditional concept, instruction through parents and relatives or rules grown historically and culturally. Further evidence may be derived from cases of brain lesions like the case of Phineas Cage. This issue may suggest that the human mind can be divided into modules, which contain specialized faculties. In

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1 E.g. in the switch case, when one chooses the death of one person over the death of more people.
2 Yet another approach that could have been argued for (or against) would be neuroethical emotivism. The core thesis (as regards legal theory) is that argumentative claims of rationality and reasonableness are nothing but post-hoc rationalisations. Moral judgments are essentially identified with emotional reactions of aversion/approval.

Seite 3/6
addition, we have some analogous findings in the sphere of vision: In the case of the Ouchi shapes we are not trained to see these movements thus the vision abilities have to be inborn. The nevertheless existing variety of moral judgments by human beings can be explained by various facts: First, the distinction between competence and performance can explain different results due to memory capacity, distraction or shift of attention. Second, judgments can be biased by emotions or interests. Third, there could be a lack of awareness of all facts of the case. Forth, there is a possibility of competing values, which could have an influence on the result. The empirical variety is thus no disproof of a universal moral grammar.

In summary, the differences between the UMG and Greene’s theory of morality lie e.g. in the different role of emotions in moral cognition, a different descriptive account of concrete moral principles (cf. the interpretation and analysis of the trolley cases), different underlying moral concepts and finally, in the different normative consequences for our moral behavior.

On the other hand, there is a large common ground for both approaches in their common interdisciplinary outlook and interest. Both theories seek to critically reflect and integrate new empirical (i.e. neuroscientific) knowledge into our traditional understanding and reflection of moral theory and moral judgments. Such a distinct methodological stance therefore constitutes a very ambitious project, as it touches on the very foundations of human morality, decision-making and thinking.

Finally, and relatedly, one could also argue that both theoretical projects are confronted – in one way or another – with the question of naturalistic fallacy. The problem of naturalistic fallacy typically arises if a (normative) theory seeks to operate with (any kind of) empirical assumptions and data: i.e., when a conclusion from “is” to “ought” is drawn. Apart from the problematic nature of this kind of inference, a main concern is that not everything “natural” must necessarily be morally good – one may think of the “naturalness of aggression”.

However, there is a priori no naturalistic fallacy involved if we consider new empirical insights about the human mind and its structure to be relevant for a theory of morality. Being part of the structure of human mind does not yet normatively justify such substantive principles. Justification presupposes normative theory. This is exactly where Greene’s theory could be argued to fall short. Presupposing such a normative theory, and from a view of constructivist scepticism, it could then actually be reasonable to assume their legitimacy as long as no valid, principled objections against them can be identified. While such principles can figure as foundational starting points, additional constructive work by normative theory is required in order to arrive at concrete formulations and interpretations of moral and legal norms.

3. The text describes some concrete consequences for the law that some scholars justify by the findings of neuroscience and moral psychology. Are these conclusions justified? Please discuss one of the examples mentioned in the text (20 %)

Possible answer

An example for a “concrete consequence for the law” is the proposition made by Chorvat/McCabe. Their suggestion based on Greene’s work is to depersonalize the jury decision making process because Greene’s findings show that jury decision making at trial tends to be more “rational” and leads to more “socially optimal choices” when juries “keep the subject of the decision at a distance.” Chorvat/McCabe therefore argue that evidentiary rules should be (re-)designed taking this circumstance in account.

In casu one may argue that such a conclusion seems not (yet) warranted. As Pardo/Patterson observe, the use of Greene’s findings may not be adequate for several reasons. First, one may criticize the methodological framing of his study. Indeed, the very interpretation of, and categorization of neural activity into “emotional” and “cognitive” activity have been critiqued and contested. Some scientists argue that it is more adequate to think of complex neuronal networks with dynamic patterns.

Another counter-argument to Greene’s interpretation purports that the different evaluations of the trolley problems decisions (be they more emotional-deontological or cognitive-utilitarian) may rather be traced back to the distinction between directly intended and foreseen effects. In addition, one may question whether the “group setting” of a jury at trial has implications for the (individual) moral or legal evaluation of each jury member. Greene’s results may therefore not be 1:1 transferrable to jury trials, as
they are derived from a morally solipsistic study design. Relatedly, Greene’s study were explicitly framed around moral – and not legal – decision-making scenarios. It would thus be important to analyze in what ways these decision-making processes may differ. Hence, it could be argued that Chorvat/McCabe’s proposal doesn’t tackle the focal issue at stake, i.e. the structural set-up of a moral decision-making situation, or for that matter, of moral or legal judgments. Moreover, Chorvat/McCabe seem to uncritically accept all of Greene’s further normative claims, which – as argued here and above in 2) – are not justified by his empirical findings. Neither Greene nor Chorvat/McCabe provide arguments as for why emotions in decision-making are as such a) morally not desirable, and b) prevent socially optimal choices (or in Greene’s words: “the best available standard for public decision making”). In fact, the three authors seem to conflate these two questions: it is one thing to argue that rational decisions are morally better than “emotionally impaired” ones, and yet another thing to say that such rational decisions are socially more optimal. While emotions certainly can have a negative impact on moral decision-making, it is important to understand that some emotions are themselves the products of moral evaluation (e.g. fear, shame, joy). Emotions play a crucial role in human empathy and the theory of mind (i.e. attributing mental states to others and oneself), where they operate as a heuristic tool. Consequently, the role of emotions in moral judgments needs to be differentiated.

Furthermore, it needs to be clarified on what grounds a “depersonalizing” of jury trials may be justified in light of potentially contradicting fundamental procedural rights of the subject of the decision that ought to be “kept at distance”. There is the danger of an is/ought fallacy here. It is also questionable whether such a “depersonalizing” evidentiary law reform will actually lead to more rational, i.e. less emotional judgments.

The analysis of Chorvat/McCabe’s proposal to change the law and its underlying theoretical and normative assumptions shows that the exploration of the intersections of neuroscience and law is very complex and theoretically enriching. Neuroscience thus challenges and aids the law in many ways (and vice versa), as the law itself is a creation of the human mind and the human mind is a product of brain functions.

4. Is the theory of evolution important for the understanding of ethics and law? (20 %)

Possible answer

As law and ethics are both distinctly human phenomena, it might indeed be very insightful to take a closer look at the evolutionary origins of human beings and the human mind. Human beings are products of natural history and as such part of it. Also, ethics and law are mental phenomena and could therefore be amenable to evolutionary analysis.

There are various strands in evolutionary theory with different theoretical assumptions and objects of study. It is therefore important to have a differentiated outlook on what the potential of theories of evolution may hold for a deeper understanding of ethics and law.

E.g. the main focus of evolutionary psychology lies on natural selection, namely the hypothesis that properties of an organism derive from certain genes; genes with the highest reproductive inclusive fitness are evolutionarily favoured, and organisms are said to only possess so-called adaptive traits (thesis of adaptationism). Accordingly, evolutionary psychology seeks to identify certain social behavioural patterns as a product of evolution. It is argued that it is evolutionarily useful to engage in social cooperation, e.g. care for relatives in order to reach the ultimate goal of reproduction. Small group morality and altruism towards one’s kin are therefore ways to augment the chances of survival of one’s genes, even if the primary bearer should die. This is the core of the idea of kin selection. Thus, the perceived tension between humankind’s selfishness and (small group) moral behaviour is resolved.

According to other influential approaches in evolutionary theory, a multi-factorial analysis of evolutionary processes is said to be more descriptively adequate. They hold that natural selection constitutes only one (potential) factor for evolution. Some of the existing traits apparently do not increase the chance of reproduction of genes. There are non-adaptive mutations and adaptive mutations with non-adaptive side effects. Likewise, there are not only micro-mutations but also rapid changes are possible where small genetic changes may have far-reaching effects, c.f. the evolution of
the eye. Also, exaptation, i.e. the co-option of existing traits for a new function, may underlie certain traits. Furthermore, evolution depends on other factors, such as architectural constraints, certain development paths or natural laws.

For the evolution of cognition, particular difficulties exist. Distant relatives may have more in common with a particular species than more closely related organisms. Often, there are certain traits which derive from a common ancestor, but are dissimilar in their functionality (homologous structures) or which are functionally similar just because of comparable environmental requirements (analogous structures). Moreover, it is unclear who the exact predecessors of human beings were and how their mental capacities can be classified; furthermore, human beings lack close living evolutionary relatives. These problems are particularly pertinent for cognitive abilities because their exercise does not leave trails. There are e.g. no artefacts that could document the linguistic abilities of early human beings.

Another important point of criticism holds that evolutionary psychology suffers from functionalist fallacy, which consists in jumping from the adaptive function of a trait to the conclusion that an organism must in fact possess that trait. It overlooks that one first has to establish what properties an organism indeed has (e.g. what, if any, ethical principles of humans can plausibly be taken to be inborn) before one can try to explain how these properties evolved. Thus, one instance of such a functionalist fallacy could be seen in the argument that “morality evolved for cooperation”.

Finally, it seems more plausible to assume a theory of evolutionary pluralism underlying the evolutionary development of organisms and to acknowledge the stochastic, non-deterministic nature of the evolutionary process. Within such a theory and in light of the above considerations, a wide array of possibilities exist, how human cognition could be structured. This includes the possibility of a human moral faculty that underlies principles of justice and altruism.

5. Given the theories about the structure, origin and evolution of moral cognition that you know – what is, in your view, ultimately the role of moral understanding in human life and legal culture? (20 %)

Possible answer

As alluded to above, human morality is a unique phenomenon to human life and thus, our legal culture. The many ways in which morality and our various legal cultures are interrelated and seemingly interdependent, becomes only understandable if one acknowledges that human beings as inherently moral creatures.

The very reality of moral conscience and its practical relevance for our behavior and therefore legal cultures are key to a better understanding of who and what we are to each other.

The role of moral understanding and reflection is to formulate, analyze and explicate such substantive questions as e.g. what justice is, or what we owe each other, and on what normative grounds etc. Such an analysis would also include the normative basis of (moral and legal) ideas of human dignity, autonomy, liberty, equality, solidarity or freedom.

The relationship of moral understanding and legal culture is thus most evident in the foundational role of moral principles for the law, as moral legitimacy is arguably essential for the justness of law. Furthermore, moral parameters are necessary for the application and identification of legal norms and law more broadly. Moral reflection is thus relevant for the whole of law, independent of disciplinary boundaries: e.g. the sanctions regime in criminal law, or the importance of private autonomy within private law, or the protection of human freedom in public law.

Incidentally, these insights into the complex relationship of moral understanding, human life and legal cultures further make a strong case for a new humanism that asserts – strengthened by the interdisciplinary approaches to moral cognition – common universal moral principles and ideas. By consequence, it could become more difficult to argue, in the vein of post-modern theories, that human beings are essentially malleable and mere objects of some grand social structures. Such an observation would be indeed very valuable for the project of human rights and global justice.