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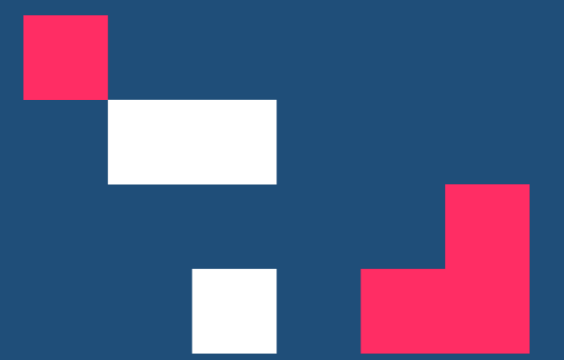
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Computational Ethics

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Universal Moral Grammar

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1. Noam Chomsky
2. John Rawls
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1. Noam Chomsky

Generative grammars as theories of linguistic competence

“Linguistic theory is concerned primarily with an ideal speaker-listener, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance.”

“We thus make a fundamental distinction between **competence** (the speaker-hearer's knowledge of his language) and **performance** (the actual use of language in concrete situations). Only under the idealization set forth in the preceding paragraph is performance a direct reflection of competence. In actual fact, it obviously could not directly reflect competence. A record of natural speech will show numerous false starts, deviations from rules, changes of plan in mid-course, and so on. **The problem for the linguist, as well as for the child learning the language, is to determine from the data of performance the underlying system of rules** that has been mastered by the speaker-hearer and that he puts to use in actual performance”

N. Chomsky, *Aspects of the Theory of Syntax*, Cambridge, Mass., The M.I.T. Press, 1965.

“A grammar of a language purports to be a description of the ideal speaker-hearer's intrinsic competence. If the grammar is, furthermore, perfectly explicit - in other words, if it does not rely on the intelligence of the understanding reader but rather provides an explicit analysis of his contribution - we may (somewhat redundantly) call it **a generative grammar**. A fully adequate grammar must assign to each of an infinite range of sentences a structural description indicating how this”.

“valuable as they obviously are, **traditional grammars are deficient in that they leave unexpressed many of the basic regularities of the language with which they are concerned**. This fact is particularly clear on the level of syntax, where no traditional or structuralist grammar goes beyond classification of particular examples to the stage of formulation of generative rules on any significant scale. An analysis of the best existing grammars will quickly reveal that this is a defect of principle, not just a matter of empirical detail or logical preciseness”.

N. Chomsky, *Aspects of the Theory of Syntax*, Cambridge, Mass., The M.I.T. Press, 1965.

“Within traditional linguistic theory, furthermore, it was clearly understood that **one of the qualities that all languages have in common is their "creative" aspect**. Thus an essential property of language is that it **provides the means for expressing indefinitely many thoughts** and for reacting appropriately in an indefinite range of new situations”.

“The grammar of a particular language, then, is to be supplemented by a universal grammar that accommodates the creative aspect of language use and expresses the deep-seated regularities which, being universal, are omitted from the grammar itself.”

“**language can (in Humboldt's words) "make infinite use of finite means"**”.

“by a generative grammar I mean simply a system of rules that in some explicit and welldefined way assigns structural descriptions to sentences. Obviously, **every speaker of a language has mastered and internalized a generative grammar that expresses his knowledge of his language. This is not to say that he is aware of the rules of the grammar or even that he can become aware of them**, or that his statements about his intuitive knowledge of the language are necessarily accurate.

N. Chomsky, *Aspects of the Theory of Syntax*, Cambridge, Mass., The M.I.T. Press, 1965.

2. John Rawls

“Some remarks about moral theory”

“It seems desirable at this point, in order to prevent misunderstanding, to discuss briefly the nature of moral theory. I shall do this by explaining in more detail the concept of a considered judgment in reflective equilibrium and the reasons for introducing it.

Let us assume that each person beyond a certain age and possessed of the requisite intellectual capacity develops a sense of justice under normal social circumstances. We acquire a skill in judging things to be just and unjust, and in supporting these judgments by reasons. Moreover, we ordinarily have some desire to act in accord with these pronouncements and expect a similar desire on the part of others. Clearly **this moral capacity is extraordinarily complex. To see this it suffices to note the potentially infinite number and variety of judgments that we are prepared to make.** The fact that we often do not know what to say, and sometimes find our minds unsettled, does not detract from the complexity of the capacity we have.”

J. Rawls, *A Theory of Justice*, Revised Edition, Cambridge, Massachusetts, The Belknap Press of Harvard University Press, 1999.

“Now one may think of **moral theory** at first (and I stress the provisional nature of this view) **as the attempt to describe our moral capacity**; or, in the present case, one may regard a theory of justice as describing our sense of justice. **By such a description is not meant simply a list of the judgments** on institutions and actions that we are prepared to render, accompanied with supporting reasons when these are offered. Rather, **what is required is a formulation of a set of principles which, when conjoined to our beliefs and knowledge of the circumstances, would lead us to make these judgments** with their supporting reasons were we to apply these principles conscientiously and intelligently. A conception of justice characterizes our moral sensibility when the everyday judgments we do make are in accordance with its principles. These principles can serve as part of the premises of an argument which arrives at the matching judgments. We do not understand our sense of justice until we know in some systematic way covering a wide range of cases what these principles are.”

J. Rawls, *A Theory of Justice*, Revised Edition, Cambridge, Massachusetts, The Belknap Press of Harvard University Press, 1999.

“A useful comparison here is with the problem of describing the sense of grammaticalness that we have for the sentences of our native language* . In this case the aim is to characterize the ability to recognize well-formed sentences by formulating clearly expressed principles which make the same discriminations as the native speaker. This undertaking is known to require theoretical constructions that far outrun the ad hoc precepts of our explicit grammatical knowledge. A similar situation presumably holds in moral theory. There is no reason to assume that our sense of justice can be adequately characterized by familiar common sense precepts, or derived from the more obvious learning principles. A correct account of moral capacities will certainly involve principles and theoretical constructions which go much beyond the norms and standards cited in everyday life; it may eventually require fairly sophisticated mathematics as well.”

*See Noam Chomsky, *Aspects of the Theory of Syntax* (Cambridge, Mass., The M.I.T. Press, 1965), pp. 3–9.

J. Rawls, *A Theory of Justice*, Revised Edition, Cambridge, Massachusetts, The Belknap Press of Harvard University Press, 1999.

3. John Mikhail



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Universal Moral Grammar

Universal moral grammar (UMG) “seeks to describe the nature and origin of moral knowledge by using concepts and models similar to those used in Chomsky’s program in linguistics”.

“Initial evidence for UMG comes from multiple sources, including psychology, linguistics, anthropology and cognitive neuroscience. Although none of this evidence is univocal or conclusive, collectively it provides at least modest support for the hypothesis that humans possess an innate moral faculty that is analogous, in some respects, to the language faculty that has been postulated by Chomsky and other linguists.”

J. Mikhail, *Elements of moral cognition: Rawls’ linguistic analogy and the cognitive science of moral and legal judgment*, Cambridge University Press, Cambridge 2011.

J. Mikhail, *Chomsky and Moral Philosophy*, in *The Cambridge companion to Chomsky*, ed. by J.A. McGilvray, Cambridge University Press, 2017, pp. 235- 253.

“First, developmental psychologists have discovered that the intuitive jurisprudence of young children is complex and exhibits many characteristics of a well-developed legal code. For example,

- 3–4-year-old children use intent or purpose to distinguish two acts that have the same result. They also distinguish ‘genuine’ moral violations (e.g. battery or theft) from violations of social conventions (e.g. wearing pajamas to school).
- 4–5-year-olds use a proportionality principle to determine the correct level of punishment for principals and accessories.
- 5–6-year-olds use false factual beliefs but not false moral beliefs to exculpate.

Second, every natural language seems to have words or phrases to express basic deontic concepts, such as obligatory, permissible, and forbidden, or their equivalents. Moreover, deontic logic is formalizable. The three primary deontic operators can be placed in a square of opposition and equipollence, similar to those for quantified and modal forms.

Third, prohibitions of murder, rape and other types of aggression appear to be universal or nearly so, as do legal distinctions that are based on causation, intention and voluntary behavior. Furthermore, comparative legal scholars have suggested that a few basic distinctions capture the ‘universal grammar’ of all systems of criminal law.”

J. Mikhail, *Universal Moral Grammar: Theory, Evidence, and the Future*, in «Trends in Cognitive Sciences», 2007, Georgetown Public Law Research Paper n. 954398.

“UMG relies on two fundamental arguments: the argument for moral grammar and the argument from the poverty of the moral stimulus.

1. **The argument for moral grammar** holds that the properties of moral judgment imply that the mind contains a moral grammar: a complex and possibly domain-specific set of rules, concepts and principles that generates and relates mental representations of various types. Among other things, this system enables individuals to determine the deontic status of an infinite variety of acts and omissions.
2. **The argument from the poverty of the moral stimulus** holds that the manner in which this grammar is acquired implies that at least some of its core attributes are innate, where ‘innate’ is used in a dispositional sense to refer to cognitive systems whose essential properties are largely pre-determined by the inherent structure of the mind, but whose ontogenetic development must be triggered and shaped by appropriate experience and can be impeded by unusually hostile learning environments.

Both arguments are nondemonstrative and presuppose a familiar set of idealizations and simplifying assumptions. Moreover, both arguments have direct parallels in the case of language.”

J. Mikhail, *Universal Moral Grammar: Theory, Evidence, and the Future*, in «Trends in Cognitive Sciences», 2007, Georgetown Public Law Research Paper n. 954398.

Appendix

Immanuel Kant

The moral cognition of common human reason

“Thus, then, we have arrived, within the moral cognition of common human reason, at its principle, which it admittedly does not think so abstractly in a universal form but which it actually has always before its eyes and uses as the norm for its appraisals. Here it would be easy to show how common human reason, with this compass in hand, knows very well how to distinguish in every case that comes up what is good and what is evil, what is in conformity with duty or contrary to duty, if, without in the least teaching it anything new, we only, as did Socrates, make it attentive to its own principle; and that **there is, accordingly, no need of science and philosophy to know what one has to do in order to be honest and good, and even wise and virtuous.** We might even have assumed in advance that cognizance of what it is incumbent upon everyone to do, and so also to know, would be the affair of every human being, even the most common”

I. Kant, *Groundwork of The metaphysics of morals*, 1785, in *Practical Philosophy, The Cambridge Edition of the Works of Immanuel Kant*, ed. by M. Gregor, Cambridge, Cambridge University Press, 1996.

“Yet we cannot consider without admiration how great an advantage the practical faculty of appraising* has over the theoretical in common human understanding. In the latter, if common reason ventures to depart from laws of experience and perceptions of the senses it falls into sheer incomprehensibilities' and self-contradictions, at least into a chaos of uncertainty, obscurity, and instability. But in practical matters, it is just when common understanding excludes all sensible incentives from practical laws that its faculty of appraising first begins to show itself to advantage. It then becomes even subtle, whether in quibbling tricks with its own conscience or with other claims regarding what is to be called right, or in sincerely wanting to determine the worth of actions for its own instruction; and, what is most admirable, in the latter case it can even have as good a hope of hitting the mark as any philosopher can promise himself; indeed, it is almost more sure in this matter, because a philosopher, though he cannot have any other principle than that of common understanding, can easily confuse his judgment by a mass of considerations foreign and irrelevant to the matter and deflect it from the straight course. Would it not therefore be more advisable in moral matters to leave the judgment of common reason as it is and, at most, call in philosophy only to present the system of morals all the more completely and apprehensibly“ and to present its rules in a form more convenient for use (still more for disputation), but not to lead common human understanding, even in practical matters, away from its fortunate simplicity and to put it, by means of philosophy, on a new path of investigation and instruction?”

I. Kant, *Groundwork of The metaphysics of morals*, 1785, in *Practical Philosophy, The Cambridge Edition of the Works of Immanuel Kant*, ed. by M. Gregor, Cambridge, Cambridge University Press, 1996.

“like the difference between the right and the left hand”

“But if one asks: What, then, really is pure morality, by which as a touchstone one must test the moral content of every action? I must admit that only philosophers can make the decision of this question doubtful, for it is long since decided in common human reason, not indeed by abstract general formulae but by habitual use, like the difference between the right and the left hand”

I. Kant, *Critique of practical reason*, 1788, in *Practical Philosophy, The Cambridge Edition of the Works of Immanuel Kant*, ed. by M. Gregor, Cambridge, Cambridge University Press, 1996.

“Morality first discloses to us the concept of freedom”

“Suppose someone asserts of his lustful inclination that, when the desired object and the opportunity are present, it is quite irresistible to him; ask him whether, if a gallows were erected in front of the house where he finds this opportunity and he would be hanged on it immediately after gratifying his lust, he would not then control his inclination. One need not conjecture very long what he would reply. But ask him whether, if his prince demanded, on pain of the same immediate execution, that he give false testimony against an honorable man whom the prince would like to destroy under a plausible pretext, he would consider it possible to overcome his love of life, however great it may be. He would perhaps not venture to assert whether he would do it or not, but he must admit without hesitation that it would be possible for him. He judges, therefore, that he can do something because he is aware that he ought to do it and cognizes freedom within him, which, without the moral law, would have remained unknown to him.”

I. Kant, *Critique of practical reason*, 1788, in *Practical Philosophy, The Cambridge Edition of the Works of Immanuel Kant*, ed. by M. Gregor, Cambridge, Cambridge University Press, 1996.

Thank you. Any questions?

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