



The Linear Metaphor as the Embodied Basis of Moral Philosophical Discourse: Changing Terms in the 17th Century

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Abstract. The paper examines the cognitive pattern lying beneath the verbal description of morality in philosophical discourse of John Locke and theological and religious texts of the previous centuries. We overview contemporary approaches to morality through the prism of theory of conceptual metaphor and embodied cognition framework. The metaphor of linearity or some straight line being the core source for conceptualizing morality is studied in dynamics in discourse though analyzing the collocations: *moral rule*, *moral rectitude* and *moral right*. Google Books and English Historical Book Collection corpora were used to gauge metaphorical conventionality and lexical versatility. Then, the obtained data were compared to their use in Locke's text "Essay Concerning Human Understanding". We reveal that, although the core metaphor remained the same, the choices made in the philosophical discourse point at a clear shift from the terms mainly used in religious discourse to the neutral ones to form a terminologically solid narrative devoid of any contradictions, unclear understandings and diverse connotations. Our findings reveal how metaphorical lexicalization changes yet being inherently the same in terms of underlying images thus marking important cultural shifts.

Keywords: moral discourse · morality · moral responsibility · John Locke · linear metaphor · embodied cognition · theological discourse · Enlightenment · academic discourse

"Morality, like art, consists in drawing a line somewhere."

G. K. Chesterton

1 Introduction

The phenomenon of morality is one of the most complex concepts in philosophy and, at the same time, a phenomenon seemingly easy to pinpoint in discourse through various linguistic markers (Sullivan, 2013). Moreover, moral responsibility of an individual towards another individual or to other larger community entities including a society is

both an inherently fundamental and a surprisingly common part of interpersonal relations deeply rooted in human “physically embodied and culturally embedded” experience (Langacker, 2014: 33). This kind of experience applies to specific philosophical communication and to everyday discourse, where we refer to some acknowledged moral norms and blame someone for not following certain moral rules. Moral discourse seems to be so pervading and panhuman that Richard Dawkins, the English evolutionist, was moved to remark: “we have a moral sense which is built into our brain, like our sexual instinct or our fear of heights” (Dawkins, 2006: 214).

Not to mention the mysterious moral sense, moral norms and rules of behavior in a certain society are partly a socio-cultural and discursive construct expressed by language, formed within language and spread with the help of it. A. Wierzbicka pointed out that the quest for moral universals turned out to be largely mediated by the English perception of the concept of moral sense thus presumably “built into our brains” (Wierzbicka, 2007: 67). Moral norms or rules provide “patterns of expectations and obligations, the structures for coordinated cooperation within a group” (Voorhees et al., 2018). They most probably arise from fundamental cognitive capacities of humans as social beings as marked by evolutionists: “Cultural rules mandating cooperation between group members could exert ordinary selection pressures for genotypes that obey cultural rules. Social selection mechanisms ... would have exerted strong selection against genes tending toward anti-social behavior (Bell, Richerson, McElreath, 2009: 17673). And these norms are shaped by language used to express them to a no lesser extent than changing norms shape the linguistic expression *in statu nascendi*.

The concept of morality is a peculiar cultural phenomenon that can only be described indirectly, through building a complex system of ideas about an individual embedded in a society. Therefore, mental representation of morality is inherently metaphorical. Lakoff (1996) revealed that contemporary American discourse is based on two wide-spread foundational conceptual metaphors: MORALITY AS STRENGTH and MORALITY AS NUTRANCE. Kövecses further explained the first one in the following way: “According to this metaphorical system of morality, evil can act on *an upright person*¹ who can either fall (become bad) or remain upright (remain good). < ... > Thus, in this view, moral “strength” is based on the notion of physical strength” (Kövecses, 2005: 152).

Fully understanding that morality is a complex phenomenon, we have to admit that the concept of physical strength is no less complex as such, inevitably requiring further scrutiny to get to the roots. To understand moral discourse in dynamics, it is crucial to delineate the already complex source domain of physical strength into the constituent parts to potentially get to some basic image schemas. Moreover, it is necessary to study the transition periods, when vocabulary of morality shifted to reflect the processes going on beneath the linguistic level – particularly in mental structures. Meanwhile, the dynamic changes in language are brought to life *by* and have a lasting impact *on* much more fundamental processes. Thus, investigating these notions and social attitudes it is necessary to harness an integrated methodology, that is the primary objective this work tries to contribute to.

In this paper, we study the linguistic repertoire used to describe the concept of morality, the discourse of which was undergoing significant changes in 16–17 centuries,

¹ Italics are the authors’.

preceding and during the period of Enlightenment. More specifically we focus on the set of words describing the abstract notions of correctness and responsibility or the absence of those as well as changes they underwent during the civilization shift. For this purpose, we have chosen the collocations describing proper behaviour including *moral rectitude*, *moral right*, *moral rule(s)* in more than 17 books in English between 1473 and 1820 from Google books, English Historical Book Collection (EHBC), extracted through Sketch Engine and John Locke's (1632–1704) "Essay Concerning Human Understanding" (1689) also processed through a corpus manager Sketch Engine as primary sources of our research.

Locke's works are remarkable for they offer both – new ways of understanding the phenomenon of morality and moral responsibility and linguistic ways of representing it in philosophical discourse. It seems important to demonstrate to what extent he relied on the texts and discursive traditions of previous centuries, and to pinpoint where Locke acts as an innovator creating his own terms, or problematizing the words already used in philosophical/religious/ethical texts earlier. J. Locke's works were chosen due to his remarkable impact on both his contemporaries and the subsequent reception of the Enlightenment as a whole². It is Locke who is rightfully considered the founder of the Age of Reason and a thinker equal in influence on science to Isaac Newton, who marked a new era in physics: "he lived to influence the intellectual climate of Europe as no other Englishman of his era save the Cantabrigian Isaac Newton" (Hargreaves-Mawdsley, 1973: 23). Moreover, Locke saw himself as providing the conceptual ground for knowledge (even taking into account natural sciences) advancement: "his task was to clear the ground, and to remove, among other rubbish, vagueness in the use of words, so that knowledge could be more easily and further advanced by the master-builders" (Yoh, 1975: 169). So, the linguistic changes occurred in this period could have an impact on future development of moral discourse in English.

In our paper we rely on the key provisions of corpus and cognitive linguistics, as well as traditional philological methods including definitional, semantic, etymological, and contextual analyses.

2 Embodied Cognition Through a Tradition of Representing Moral Vocabulary in Moral Discourse

It is most natural that concepts for simple actions of physical movement are embodied. It is less obvious however that the "so-called abstract concepts are embodied as well" (Lakoff, 2012: 774). Moreover, this close connection between embodiedness and embeddedness in each case reveals a peculiar dynamic equilibrium of cognitive mechanisms and bases to be unpacked through cognitive linguistic analysis. The dynamic character of communication involves using the units undergoing semantic changes, in

² Locke's political claims are well known to underly the United States Constitution and "The Declaration of Independence". His ideas have largely contributed to secularization of American intellectual life, because Locke's theory was "thus fundamentally incompatible with the Platonic doctrine of American Puritans" (Murphey & Flower, 1977: 68), yet a detailed discussion of mechanics behind attempts building "a more perfect union" are beyond the scope of the present research.

which the direct and transferred meanings of a word reflect embodied cognition (Lakoff, Johnson, 1999). Our bodily experience serves an anchor for abstract thought “emergent from patterns of interaction or derived from perceptual experience” (Clausner, 2005: 100–101) and further proceeds on to high-level cognitive operations. They preserve the conceptual core and allow for linguistic modifications, numerous transformations “as recurring cognitive structures which establish patterns of understanding and reasoning, often elaborated by extension from knowledge of our bodies as well as our experience of social interactions” (Sharifian, 2017: 36).

The afore discussed theoretical ideas are true for many abstract concepts, but even more so for concepts orchestrating human interaction with each other like morality, ethics, law, religion, etc. It was well formulated in Lakoff’s “Political mind”: “even our ideas of morality and politics are embodied in this rich way – those ideas are created and carried out not merely by the neural anatomy and connectivity of our brains, but also by the ways we function bodily in the physical and social world. Morality and politics are embodied ideas, not abstract ones, and they mostly function in the cognitive unconscious – in what your brain is doing that you cannot see” (Lakoff, 1996: 12). Deep beneath the thin film of rationality there lie primary metaphors linking well-being and ill-being to other embodied experience.

Research into morality followed the path of distilling the vast complexity of moral representations and verbalizations into basic elements, schemas, and oppositions, being potentially universal or at least common for some cultures. Earlier research has revealed that moral propriety could be framed by a set of metaphors emerging from a conceptual structure generated from our experiences with dirt and cleanliness, thus rendering morally good as clean vs bad as dirty and *vice versa* (Lizaro, 2012). It allowed for potentially tracing morality back to the anthropological primitive of an archaic “definition of dirt as matter out of place” and order as a source of morality (Douglas, 1966: 36) further supported by extensive psychological evidence (Körner, 2014). Subsequent research comparing English and Chinese material outlined two domains serving as sources for moral metaphors: visual (and spatial) experience. In the visual domain there were several contrastive categories: WHITE vs BLACK, LIGHT vs DARK, PURE vs IMPURE, CLEAR vs MURKY, CLEAN vs DIRTY, (Yu, 2015). The following spatial source categories were outlined to be common for two cultures: STRAIGHT vs CROOKED, HIGH vs LOW, BIG vs SMALL UPRIGHT vs TILTED, LEVEL vs UNLEVEL (Yu et al. 2016).

Interestingly, some of the dichotomies turned out to be not only the linguistic patterns embellished with surprisingly unanimous metaphorical patterns, but psychologically valid driving forces having an impact on moral judgments revealed in a series of psychological experiments. They supported aligning cleanness with morality. First, a sudden need to use antiseptic wipes correlated with a feeling signifying a threat to the moral image of participants (Fayard, Bassi, Bernstein, Roberts, 2009). Second, the moral judgments concerning abortion and pornography was harsher in the individuals feeling physically clean demonstrated (Zhong, Strejcek, Sivanathan, 2010). Third, participants reminded of physical cleansing demonstrated severe moral judgments toward violations of sexual purity (Helzer, Pizarro, 2011). Thus, the principle of embodied cognition forms the foundation of conceptualizing morality as a complex mental construct.

However, these schemas of binary oppositions being true to a large extent fail to grasp the diachronic perspective, thus potentially neglecting the complex interplay between linguistic and mental structures on those stages when these schemas were formed and enriched. We intend to remedy this oversight here, introducing a diachronic perspective on understanding the uprightness in the next section and then mapping some linguistic expressions onto this metadiscourse model in dynamics.

3 The Origins of Linearity Behind Morality

One of the most recurrent and likely universal ideas behind morality in Western culture and arguably in many Indo-European cultures is the idea of some straight line, whether vertical or horizontal. The horizontal line could be either the line, separating the right from the wrong, the us from the others, the inner from the outer world, left from right, already visible in archaic times, manifested in early fairytales and myths and uncovered through image schemas of a CONTAINER, CORE-PERIPHERY, and BORDER (Komova, Sharapkova, 2014) and in modern political discourse in left-winged/right-winged scale (Lakoff, 1996). More than that, augmenting the system of horizontal line with a vertical one most probably marks the transition from pagan antiquity to largely Christian Middle Ages.

In the philosophical tradition, as well as in art and culture, coming from antiquity, the idea of correctness is some straight horizontal line. E. Benveniste mentioned analyzing the group of words related to the royal power including the noun *rex* and the verb *regere* with profound discussion of the Indo-European meanings of the original roots. He drew the conclusion that the key idea behind the king was “ruling right” or “Regere fines” literally means to draw boundaries in the form of straight lines to demarcate the territory, that was the action needed to erect a sacred building thus separating sacred and profane, or outlining the national vs foreign territory. Thus, Latin word *regio* “did not originally mean ‘region’ but ‘the point reached in a straight line’” (Benveniste, 2016: 310). Similarly, “this is a concept at once concrete and moral: the ‘straight line’ represents the norm, while the *regula* is ‘the instrument used to trace the straight line,’ which fixes the ‘rule’ (règle). Opposed to the ‘straight’ (droit) in the moral order is what is twisted, bent. Hence ‘straight’ (droit) is equivalent to ‘just,’ ‘honest,’ while its antonyms ‘twisted, bent’ (tordu, courbe) is identified with ‘perfidious,’ ‘mendacious,’ etc. This set of ideas is already Indo-European. To Lat. *Rectus* corresponds the Gothic adjective *raihths*, which translates Gr. *Euthus* ‘straight’; further the Old Persian *rasta*, which qualifies the noun ‘the way’ in this injunction: ‘Do not desert the straightway’” (Benveniste, 2016: 311–312). Moreover, almost all European languages bear the traits of these primary metaphors: English. *Right, rule, rectitude* Germ. *Richt*, Fr. *Droit*, It. *Rettitudine*.

The idea of a correct straight posture, some static correct verticality engendered the whole field of ideas related to “rectitude, rightness, straightness, and uprightness” (Rimell, 2017: 768). And the concept of an “upright man” is not just a frequent metaphor related to physical strength that reflects the principle of embodied cognition, but also a culturally embedded being a historically significant image, as well as the basis of the paradigm for Western philosophy: “a subject who conforms to a vertical axis, which in turn functions as a principle and norm for its ethical posture” (Cavarero, 2016: 6, 129).

Similar ideas are found in the works of Plato and Aristotle on the *orthos logos* “correct mind” and then in the ideas of the scholastics’ *ratio recta* “sound mind”, further perceived and developed by religious thinkers within a moral and ethical vein. As noted by researchers, “Rectitude is a general principle” by Seneca (an analysis of examples is presented in (Rimell, 2017: 772)). Further on, the word *rectitude* was found in the texts of Anselm of Canterbury “On Truth” – “De veritate” about the correct order of things established by God: *rectitudo* and *rectus ordo* (Vale, 2018). In general, *rectitudo* pointed to the moral meaning of “justice” and “righteousness” already in Latin, and in medieval writings in Latin, the word becomes a term in moral Christian discourse of Latin texts and is widespread in talking about morality in French tradition before it was borrowed into English.

Importantly, conceptualizing the divine mainly in Cristian religion as the “most high” or “high above earth” (Lattimore, 1996) thus presupposing extending verticality to get closer to him, most clearly embodied in Gothic architecture for instance, is running through the semiotics of Christian culture. Another peculiar example is a typical Catholic Mass, where a hymn titled “Glory to God in the Highest” is read (Richstatter, 2005). Moreover, it was experimentally demonstrated that vertical perceptions are invoked when people access divinity-related cognitions and people’s memory for the vertical location of God- and Devil-like images showed a metaphor-consistent bias based on UP for God and DOWN for Devil (Meier et al., 2007).

These theoretical, historical, and experimental insights establish a context for lexical and terminological shift we could outline in the texts of John Locke.

4 The Linguistic or Conceptual Shift Behind the Lexical Frequency

Let us start with characterizing the period preceding Locke’s “Essay...” in 1689. The period of the Early Modern English language is characterized by an exponential vocabulary expansion through borrowings, mainly of Latin or French origin. They appeared not to denote any new concepts, but to enrich synonymity and stylistic variation: “providing alternative ways of saying the same thing in different registers” (Burchfield, 1992: 332). According to various estimates, up to 50 per cent of the words were borrowed within 1600–1650 (Wermser, 1976: 40); moreover, 15 per cent of the new words enriched the theological discourse and about 14 % – the discourse of natural sciences (Ibid, 114). This allowed the authors not only to diversify the style of communication, but also to point out significant lexical differences more subtly, which was crucial for the functioning of the language of science.

The potential ground for philosophical discourse in *statu nascendi* is the religious and theological discourse of the 15–17th centuries, most probably well known to Locke as a censor of moral philosophy and a man who received a classical education at Oxford University (Marshall, 1994). It is important to note that the philosophical moral discourse in English only took shape at the end of the 16th and beginning of the 17th centuries and could rely both linguistically and discursively only on the ethical texts existing before. This could be partially court ethics, where tectonic shifts in rethinking the field of words of noble origin (*noble*, *virtue*, *valour*, *gentle*, *worthy*) to describe moral behavior happened (Komova, Sharapkova, 2017) and philosophical and religious

discourse (Kuczynski, 2016). Literature of the preceding decades was concerned with questions of Christian's morality through allegorical images, like in Bunyan's *The Pilgrim's Progress* (1678) there was a village called Morality with a young man – Legality and a woman – Civility living there.

Although the English philosophical terminology, as a whole, had emerged before the Enlightenment, an independent, coherent and well-established terminological system was not formed yet. For example, such key words for the English philosophy as *understanding*, *reason*, *person*, *experience*, *memory* have already been used in the work by T. Hobbes "Leviathan", which Locke was familiar with (Lemetti, 2011). Another author familiar to Locke was Ralph Cudworth (Cudworth, 1996: xi–xii), who also used such words as *understanding* as the equivalent to the Latin *intellectus* or *consciousness*, unlike Hobbes' *conscience* understood in a moral context. He also uses the concepts of *morality* associating them with the concepts of good and evil/bad.

Since the language of science in the previous period was Latin, most of the works which J. Locke could be acquainted with, or which could theoretically influence him were written in Latin. Until the 17th century, there was a rich tradition of considering the problems of morality and moral responsibility in Latin. So, we suppose that the borrowed words from Latin or French as opposed to the words of the English origin construe the key point of tension and development.

Within the list of words, describing morally appropriate behaviour and collocating with the adjective *moral*, only the noun *right* is of Germanic origin, whereas the nouns *rule* and *rectitude* are borrowings. If *rule* was borrowed earlier – in the 13th century and was perfectly assimilated by the English language in court and legal discourse, *rectitude* appeared much later. This noun entered the English language in the 15th century in the original physical meaning of "straightness, quality of being straight or erect", derived from the 14th century Old French *rectitude* (OED). The initial idea is based on the afore-discussed embodied concept of straightness, physical non-curvature, a certain straight line, and order. These words are largely synonymous and seem to undergo the major shifts during the period of 17th century. *Moral rectitude* is much more prominent in 1620–1630, *moral right* demonstrated just a surge in 1650s, and *moral rule(s)* clearly replace those two at the end of the 17th century (Fig. 1). We believe, the role of philosophical discourse, particularly, the texts of John Locke, could have played the key role in this process.

In the following parts we would zoom into the use and pragmatics of these collocations in 15th and 17th centuries using mainly the examples from Google books and English Historical Book Collection (EHBC) corpus.

The lexeme *rectitude* in the original meaning was recorded in religious works in the 14–15th centuries with one of the earliest examples being the translation from Latin of the "Polychronicon" by the monk Ranulf Higden, made into the southwestern English dialect by John de Trevisa in 1387 (Arakin, 2001: 115), where the word *rectitude* is used to describe the strength and beauty of a human figure pointing at moral conformity. *But thauzhe the body of man was made in the begynnenge of the erthe, hit was so proporcionate to the sawle that equalite of complexion was in hit, conformite of organizacion, **rectitude of stature**, and pulcritude of figure, and so the body sholde be*

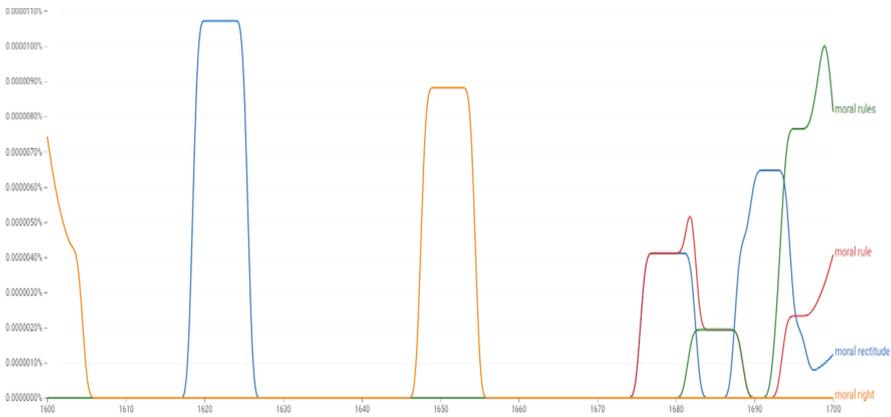


Fig. 1. The frequency of collocations *moral right*, *moral rule(s)*, *moral rectitude* based on Google Ngram viewer data in 1680 – 1700

afterwardeob temperate to the sawle with owtefzichte of rebellion, vegetable with owte-edefawte of **strenghte**, immutable with owte**corrupcion of mortalite** (MED). A similar example is recorded in the Oxford English Dictionary in 1641: J. Jackson True Evang. T. II. 153 *That which is straight shews at once both its own **rectitude**, and the crookedness of the contrary* (OED).

In its original meaning, the English word *rectitude* soon became obsolete, and the noun acquired ethical and moral associations. In the meaning of “moral straightness or uprightness; goodness, integrity; virtue, righteousness” this word starts to be used from 1530, as indicated by contexts from the Oxford English Dictionary. Moral correctness or virtue substantiates the concept of justice or possible just judgment: a 1533 Ld. Berners Gold. bk. M. Aurel. (1559) Hh ij b, *By the **rectitude** of his iustice* (OED). The reason behind this shift could be the cultural background we presented in Sect. 3. Gradually, the meaning was extended from concrete to abstract meaning.

The analysis of the use of the word *rectitude* in discourse of 15th–17th centuries based on English Historical Book Collection (6 contexts) and the Google Books service (20 contexts) reveals, that it is solely used in theological discourse, especially in disputes, sermons, commentaries to Bible, essays about faith and other kinds of texts.

For instance, reflections on morality and the oath of allegiance (oath) using the noun *rectitude* are found in the writings of R. Widdrington. The author separates the supreme law, which refers to the supernatural and church rule, moral correctness and virtue as phenomena of different levels: “*For if under a spirituall rule hee understand a supernaturall and Ecclesiasticall rule and by **rectitude** and vertue he means supernationall **rectitude** and vertue, his assertion is most true: for, to make temporall governing to bee good and virtuous supernaturally, it must of necessity be directed and guided by a supernational rule. But if he speaks only of moral **rectitude**, and vertue, it is most false, that to make temporall governing good and vertuous morally, it must of necessity be directed by a supernatural rule, but it sussiceth if it be directed by the rule of moral **rectitude** and vertue*” (Widdrington, 1613: 30). It is important to note that along with *rectitude* in this context, *vertue* is used as a word corresponding to the Latin *virtus*, which was used

to describe a whole range of concepts: strength, valor, masculinity, virtue, but this unit, which later had the form of *virtue*, was rethought to reflect the moral aspects (Taratuta, 2007). In the sense of physical strength, masculinity, this word has already undergone semantic changes in the English language in discourse, pertaining to knighthood and chivalry (Komova, Sharapkova, 2017).

A similar context is found in another work of the same period by John Salkeld. The passages discussed represented a skillful compilation from the texts of the Bible, ancient authors, church fathers, and contemporary quotations. In the following extract the relationship between physical and spiritual correctness is discussed. The metaphor of physical strength and verticality as created by God and serving the basis for spiritual uprightness is extended by similar words: upright and uprightness. “*Hence Bernard well noteth, that God made man vpright in stature, and erected towards heauen, to the end that his corporall rectitude and vprightnes of his shape, might stirre him up to preferue’ the spirituall rectitude, and righteousness of the inward man, who was made to the image of God; and that the beaute of our corporal substance, and outward proportion, and right disposition of the lineaments of our body might correct the inward deformitie of our souls, and the powers thereof*” (Salkeld, 1617). The external not only reflects, but also determines the internal, and the beauty and correctness of the physical body can make it possible to correct the deformations that have occurred in the soul. It is further development of the ideas expressed by Aristotle in his various writings, as well as in his treatise “De iuventute et senectute 468a5–9” (On youth and old age, life and death) where a person, differs from all living beings due to his **straight posture**: “*To man in particular among the animals, on account of his erect stature, belongs the characteristic of having his upper parts pointing upwards in the sense in which that applies to the universe, while in the others these arc in an intermediate position*”.³ Many ideas of the kind could be found in Aristotle’s texts that construed part and parcel of classical education in Europe perfectly known to John Locke. In another passage in “De partibus animalium” 686a27–32 Aristotle connected the straightness of a human with his God’s nature: “*For of all animals man alone stands erect, in accordance with his god-like nature and essence. For it is the function of the god-like to think and to be wise; and no easy task were this under the burden of a heavy body, pressing down from above and obstructing by its weight the motions of the intellect and of the general sense*”. So, the straightness metaphor existed in philosophical literature dating back to ancient times and was adapted in English theological discourse. Other passages in Aristotle aligning straightness with include De partibus animalium 656a10–13, where the vertical line is explained: “*his upper part being turned towards that which is upper in the universe. For, of all animals, man alone stands erect*”. Other passages where the erect position of a human as distinguishing him from other animals are: “De incessu animalium” 710b9–11; “De respiratione” 477a20–23. Thus, the metaphor of straightness as a defining feature of a human had been rather pervasive to be easily adapted into theological discourse to acquire the ethical dimension. This created the associations surrounding the words to be used further creating the folded stories around each word in discourse.

³ I refer to passages of Aristotle by the traditional pagination of Immanuel Bekker’s editio princeps; the English translation is that of Ross, W. D., Stock, G., & Solomon, J. volume III and V.

In the majority of contexts extracted from Google Books, the initial metaphor is extended and supported by other words with ethical semantics *virtue*, *right*, tying physical and spiritual into a coherent whole as in Theophilus Gale (1672): “*Yeahe makes the **Virtue**, not only of the Soul, but also of the bodie, and of every thing else to consist, in order and rectitude; For indeed the **Harmonic or Mediocritie of Virtue** is nothing else but a **rectitude of principles and acts**”.* In the first context, the unity of the physical and spiritual is clear, described by the words *in order* and *rectitude* in a religious meaning.

In another work dating to 1622 by a group of authors arguing with Protestant ideas, the following examples can be found. Again, the noun *rectitude* is combined with the adjective *moral* and is present in the same context as reason. Moreover, the authors use an anaphoric repetition to stress the major idea: “*Every action, every duty, which is deficient and bereaved eyther of due conuerfion to God, **conformity to reason**, or such **moral rectitude**, as by percept binding under mortall sinne ought to be in it, is a morall crime, and true prevarication of the Law. But every action, every duty we acheive, is (according to Protestants) deficient, and bereaved of that **conuerfion, rectitude, or conformity**, as by percept binding under mortal sinne ought to be in it. Therefore every action, every duty we accomplish is (according to them) a deadly cryme, a true breach and prevarication of the law*”. A similar example is found in a corpus: “*The origin of **moral rectitude** in humans is God: for his natural rectitude was the effect of the influx or communication of Gods Spirit: And he could have no moral rectitude without it; as there can be no effect without the chief cause*” (EHBC, 1670: № 7395).

In various works of 17th century, *rectitude* is used with the words, having the semantics of some linearity or integrity: *uprightness*, *right*, *integrity* and *rule* as in the following examples: 1633 Prynne 1st Pt. *Histrio-m. vii. Iii. 593/2 The obscene jests of Stage-players and other vanities, which are wont to soften a Christian soule from the rigour of its **rectitude and uprightness*** (OED). “The Right Government of Thoughts” (1659) by John Angel (Puritan Divine) the true rectitude is of Heavenly origin: “*Things are said to be right or just many wayes: First, that is right which hath **rectitude** from itself, and is the cause of **rectitude** in every other thing; and so God onely is **righteous***”. In a book “XXXI. Sermons... Upon several subjects and occasions” (1677) by Charles Gibbes, the metaphor is augmented by the opposition: *rectitude* is opposed to a wounded spirit, that lost integrity: “*But then it must be understood of the Spirit of a man in its **Rectitude and Integrity**, opposite to a **wounded Spirit**, as the Antithesis in the latter part of the verse shews*”. Integrity and holiness laied the ground for moral rectitude as it follows from the works of James Durham (Covenanting Divine), William Jenkyn: “*When we speak of things **Moral**, we are to distinguish between things Naturally Moral, that is such (as love to God and our Neighpour, and such like) which have an innare **rectitude and holiness** in them...*” (1677).

The most developed set of oppositions is presented in *The Middle Way of Predestination Asserted. Between the Dominicans and Jesuites, Calvinists and Arminians. Or, a Scriptural Enquiry Into the Influence and Causation of God, in and Unto Humane Actions; Especially Such as are Sinfull of 1679*, which addressed the difference between teachings of Dominicans and Jesuits, Calvinists and Arminians, devoted to views on the causality of human deeds under the influence of certain religious doctrines:

*“Harmony and Dircord, Order and Disorder, Conformity and Disconformity, **Rectitude** and **Obliquity**, Righteousness and Unrighteousness, have an Efficient Cause”.*

Drastically less frequent both in the corpus and Google books is the collocation *moral right* (1 context): “...they are not payed to the Ministers of Christ by a ceremonial right, but a **moral right**, and by a positive Law of the Nation, as was proved before” (EHBC, 13119: № 1660). No more frequent is moral rule – only 3 contexts in EHBC and 1 context in Google books before Locke’s publication not allowing to draw any generalizations. The only use is in Owen’s commentary to Aristotle’s thoughts: “From this original proper importance of the word, is its metaphorical use deduced, which is most Common; and therein it fignifies a **moral Rule**, or a measure, for diAriβor. Folrection, tryall and judgement” (Owen, 1668).

The frequency, use and distribution of these collocations in the text of Locke’s “Essay...” is drastically different signifying a shift towards another type of discourse being formed – the philosophical one, as a type of scientific discourse. The noun *rectitude* is used 12 times, mainly in the context of the final assessment (*judge/judgment/measure*) of human actions (*actions*) as corresponding to moral correctness (*moral rectitude*) or not. This collocation is supported by the others also originating from the physical metaphor of straightness: *moral pravity* or *obliquity*: “Of these **moral rules or laws**, to which men generally refer, and by which they judge of the **rectitude** or **pravity** of their actions, there seem to me to be three sorts, with their three different enforcements, or rewards and punishments” (Locke⁴, 336). Thus, this combination becomes one of the terms used to indirectly describe moral responsibility and the guiding principles of it. Moreover, it is the adjective *moral* and the noun *actions* that are the closest to *rectitude* according to the traditional collocation metrics – Tscore (*moral* – 2.83; *actions* – 1.73) and MI (11.17 and 8.65), as well as the Dice coefficient (Dice): 11.25 and 8.82, respectively.

Moral rectitude in Locke’s understanding is not granted by God, neither it is innate as he argues against any inborn rules or ideas: “To which I answer, that I doubt not but, without being written on their hearts, many men may, by the same way that they come to the knowledge of other things, come to assent to several **moral rules**, and be **convinced of their obligation**. Others also may come to be of the same mind, from their education, company, and customs of their country; which persuasion, however got, will serve to set conscience on work; which is nothing else but our own opinion or **judgment of the moral rectitude or pravity of our own actions**; and if conscience be a proof of innate principles, contraries may be innate principles; since some men with the same bent of conscience prosecute what others avoid” (Locke, 51).

The original conceptual metaphor of physical correctness, a straight line or irregularity was so recurrent in the period before Locke, that it even undergoes secondary metaphorization in his text through Locke himself was an avid opponent of metaphors in scientific discourse: “The **strength** of our persuasions is no evidence at all of their own **rectitude**: **crooked** things may be as **stiff** and **inflexible** as **straight**: and men may be as positive and peremptory in error as in truth” (Locke, 699). This context is interesting in that it reveals a contradiction inherent in the very idea of physical straightforwardness

⁴ Here and further citations are given by Locke, J.: An essay concerning human understanding. Oxford University Press, New York (2008).

as correctness and the basis of moral behavior thus turning the reader's attention on whether recurrent ideas we are so used to really true.

Moral rule(s) is used much more often in the text (17 contexts). J. Locke emphasizes the idea that the rules of morality are not innate and need proof: *Moral rules need a proof, ergo not innate* (45). Two most frequently used words in Locke's text together with collocation *Moral rule(s)* are *innate* (Tscore -1.72; MI - 7.62; Log Dice - 8.29) and *several* (Tscore - 1.72; MI - 7.31; Log Dice - 7.99). The ideas of morality being complex mental constructs are created by a person solely on the basis of scientific and philosophical reflection and communication with other individuals, which is associated with the search for truths in accordance with the understanding of their own needs and social utility: "***Moral principles require reasoning and discourse, and some exercise of the mind, to discover the certainty of their truth***" (Locke, 46). The scientist points out that people of different times and places of residence affirm the same universal truths, which are formed by their universal essence: "*I grant the existence of God is so many ways manifest, and the obedience we owe him so congruous to the light of reason, that a great part of mankind give testimony to the law of nature: but yet I think it must be allowed that several **moral rules** may receive from mankind a very general approbation, without either knowing or admitting the **true ground of morality**; which can only be the will and law of a God*" (Locke, 50). The rationality of a person or the ability to think and reflect is inherent within the nature of an individual.

Moral right is used only once in the text also within the context of discussing moral responsibility: "*Thirdly, sometimes the foundation of considering things, with reference to one another, is some act whereby any one comes by a **moral right**, power, or obligation to do something*" (Locke, 334).

It emerges from the studied contexts, that J. Locke's text was the turning point in conceptualization of morality. In his work he establishes an intricate dialogue with his predecessors and substantiates his own views on the phenomenon of moral responsibility and the formation of moral laws. Locke relied on a rich tradition of commentaries on philosophical works of antiquity and the religious and philosophical discourse of previous centuries, both in terms of vocabulary and in terms of key cognitive patterns. The very choice of words, their use and the newly revealed metaphors in Locke's texts indicate that he was familiar with many of the texts of his predecessors and had a nuanced sense of language. His treatise echoes the religious contradictions of the previous period and the conceptualization of ideas about morality characteristic of classical philosophy and theology of subsequent centuries. However, the frequency of certain words with religious associations is reduced, and words in collocations with neutral semantics that are not directly related to religious discourse are more frequent, for example, *moral rules*, *moral law* and *moral right*.

In our work we have also demonstrated that the word *moral* in combination with *rule/rules* is used more frequently in J. Locke's texts than *rectitude*. The fact that this particular combination is beginning to play an important role in philosophical discourse is indirectly indicated by Google Ngram viewer data, where it is clear that the combination of the adjective *moral* with the singular or plural form of the noun *rule/rules* noticeably exceeds the use of the collocation *moral rectitude* in the number of uses at the end of the 17th century (Fig. 1).

Our analysis indicates that J. Locke deliberately formed his moral and ethical vocabulary on the basis of rational or potentially rationalized principles and laws, adhering to the concept of “reasonableness of Christianity”, which included the ideas of liberal and tolerant philosophy. Respecting the tradition of describing morality in religious discourse (*moral rectitude*) he tries to suggest a completely new basis for an ethical system built on rational principles, and that is why he selects words for his text that do not have an explicitly religious specification (*moral right, moral rule*). But, in addition to these words, the system of moral terms includes others: *principle, discourse, action, science, matter, knowledge, rightness, pravity and obliquity*.

First and foremost, Locke understands morality rationally and brings reason to the limelight being in accord with “a further tendency towards the rationalization of religious discourse and prerequisites for the cultural secularization emerging” (Tsaregorodtsev, 2009: 103). This tendency, did not have a significant impact on English population, but some of the ideas “determined, to a certain extent, the attitude towards religion of some representatives of English Enlightenment, John Locke in particular” (Ibid). His primary objective was to separate the transcendental and human in understanding of morality to build not the ideal system of how it should be but rather of how it presumably works: “Locke separates the source of virtue, which turns out to be transcendent for a person, and the actual interest of a person in it, which by the human nature is primarily pragmatic (selfish). Meanwhile, he also shows the possibility of various grounds for a person’s turning to virtue – on the one hand, as to an object of personal interest and assignment to others (in the form of a demand to be virtuous towards himself), and, on the other hand, as to an object of personal moral responsibility” (Apresyan, 2006: 136).

5 Conclusion

In conclusion, conceptualizing morality through the metaphorical pattern of physical strength could involve a multifaceted concept of linearity. The representation of a straight line whether a horizontal or vertical one to define human correct position in the surrounding world has existed long before any profound discussion of good and evil or ground of morality. The etymology insights combined with corpus analysis demonstrate that these cognitive patterns lying beneath the variety and variability of the word use are stable and deeply embodied experience, that could be tentatively referred to as panhuman universal moral patterns or at least Indo-European predispositions. Meanwhile, the vocabulary to describe morality is influenced by a number of historical factors pertaining to cultural embeddedness. First of all, it is the change of paganism to Christianity, and then the rise of scientific discourse of philosophy.

The lexico-semantic, socio-cultural and frequency shift marks the transition from religious theological discourse to a proper scientific philosophical discourse with the creation of the terminological system in Locke. The way to describe morality, moral norms and ground for responsibility were in *statu nascendi* within the period preceding Locke. This core presented the philosophy of thinking and morality as a single science, which was able to demonstrate the sophistication and complexity of relationships in the society and the possibility of understanding the human foundations of moral responsibility for actions.

One of Locke's early biographies emphasized his enormous impact not only on understanding of certain problems, but also on changing the way of thinking about them: "Locke did not merely enlarge men's knowledge, he changed their ways of thinking" (Cranston, 1957: 482). We assume that Locke's text "Essay Concerning Human Understanding" as well as the concepts formed, problematized and terminologized in it and expressed through words and collocations have become a turning point in description of morality in English. John Locke also had enormous influence on how to talk about a particular issue. Thus, the change from *moral rectitude* having distinct religious connotations towards neutral ones in *moral rule* and *moral right* is observed in his discourse to be further transformed to philosophical discourse in general rendering rectitude outdated, while *rule* and *right* suiting the following collocation and terminological units. Moreover, the data obtained and confirmed by quantitative methods presented in Google Books and English Historical Book Collection corpora characteristics by the Sketch Engine manager, can be interpreted within the framework of ideas about the influence of a single linguistic personality on the scientific discourse of a particular field in general.

Our results on collocations *moral rule*, *moral rectitude* and *moral right* as well as evolution of the linear metaphor in moral philosophical discourse also indicate the complexity of formulating a universal definition of morality and moral responsibility. Even considering this from a very rational and generalized point of view we should take into account the realities of a particular historical period, its sociocultural and pragmatic context influencing the consciousness of a particular language personality and linguistic background.

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References

- Angel, J.: The Right Government of Thoughts. [https://www.google.ru/books/edition/The_Right_Government_of_Thoughts_Or_A_Di/mOK5h3S-6RAC?hl=ru&gbpv=1&dq=2.%09%E2%80%9CThe+Right+Government+of+Thoughts%E2%80%9D+\(1659\)+John+Angel+\(Puritan+Divine\)&pg=PA72&printsec=frontcover](https://www.google.ru/books/edition/The_Right_Government_of_Thoughts_Or_A_Di/mOK5h3S-6RAC?hl=ru&gbpv=1&dq=2.%09%E2%80%9CThe+Right+Government+of+Thoughts%E2%80%9D+(1659)+John+Angel+(Puritan+Divine)&pg=PA72&printsec=frontcover) (1659). Last accessed 20 Apr 2022
- Apresyan, R.G.: Ethical Issues in J. Locke's "Essay Concerning Human Understanding". In: History of Philosophy Yearbook, pp. 132–152. Nauka, Moscow (2006). (in Russian)
- Arakin, V.D.: The History of the English Language: Text Book. Physmatlit, Moscow (2001). (in Russian)
- Bell, A., Richerson, P., McElreath, R.: Culture rather than genes provides greater scope for the evolution of large-scale human prosociality. Proc. Natl. Acad. Sci. **106**(42), 17671–17674 (2009). <https://doi.org/10.1073/pnas.0903232106>
- Benveniste, E.: Dictionary of Indo-European Concepts and Society. Hau Books Chicago. <https://archive.chs.harvard.edu/CHS/article/display/3947.book-4-royalty-and-its-privileges-1-rex> (2016). Last accessed 20 Apr 2022
- Burchfield, R. (ed.): English in Britain and Overseas: Origins and Development. In: The Cambridge History of the English Language, vol. 5. Cambridge University Press, Cambridge (1992)
- Cavarero, A.: Inclinations. Stanford University Press, Stanford (2016)

- Clausner, T.C.: Image schema paradoxes: implications for cognitive semantics. In: Hampe, B., Grady, J.E. (eds.) *From perception to meaning: Image schemas in cognitive linguistics*, pp. 93–110. Mouton de Gruyter, Berlin-New York (2005)
- Cranston, M.: *John Locke. A Biography*. Longmans, London (1957)
- Cudworth, R.: *A Treatise Concerning Eternal and Immutable Morality*. Cambridge University Press, Cambridge (1996)
- Dawkins, R.: *The God Delusion*. Houghton Mifflin, Boston (2006)
- Douglas, M.: *Purity and Danger: An Analysis of Concepts of purity and Taboo*. Routledge & Kegan Paul, London (1966)
- Durham, J.: *The Law Unsealed: Or, a Practical Exposition of the Ten Commandments, with a Resolution of Several Momentous Questions and Cases of Conscience*. Fifth Edition, to which are Prefixed the Commendatory Epistles of Dr Owen and MrJenkyn https://www.google.ru/books/edition/The_Law_Unsealed_Or_a_Practical_Expositi/Be4G1rm9-jlC?hl=ru&gbpv=0 (1677). Last accessed 20 Apr 2022
- Fayard, J.V., Bassi, A.K., Bernstein, D.M., Roberts, B.W.: Is cleanliness next to godliness? Dispelling old wives' tales: Failure to replicate Zhong and Liljenquist (2006). *J. Art. Support Null Hypothesis* **6**(2), 21–30 (2009)
- Gale, T.: *The Court of the Gentiles Or a Discours Touching the Original of Human Literature, Both Philologie and Philosophie, from the Scriptures & Jewish Church* (1672). https://www.google.ru/books/edition/The_Court_of_the_Gentiles/nnBJCHZjzXMC?hl=ru&gbpv=1&dq=The+Court+of+the+Gentiles+Or+a+Discours+Touching+the+Original+of+Human+Literature&printsec=frontcover. Last accessed 20 Apr 2022
- Gibbes, Ch.: XXXI. Sermons ... upon several subjects and occasions (1677). [https://www.google.ru/books/edition/XXXI_Sermons_upon_several_subjects_and_o/B6qc3rAYjYAC?hl=ru&gbpv=1&dq=Sermons+...+upon+several+subjects+and+occasions%E2%80%9D+\(1677\)&pg=PA154&printsec=frontcover](https://www.google.ru/books/edition/XXXI_Sermons_upon_several_subjects_and_o/B6qc3rAYjYAC?hl=ru&gbpv=1&dq=Sermons+...+upon+several+subjects+and+occasions%E2%80%9D+(1677)&pg=PA154&printsec=frontcover). Last accessed 20 Apr 2022
- Hargreaves-Mawdsley, W.N.: *Oxford in the Age of John Locke*. University of Oklahoma Press, Norman (1973)
- Helzer, E.G., Pizarro, D.A.: Dirty liberals! Reminders of physical cleanliness influence moral and political attitudes. *Psychol. Sci.* **22**(4), 517–522 (2011). <https://doi.org/10.1177/0956797611402514>
- Komova, T., Sharapkova, A.: The conceptual and semantic shift of “noble” and its synonyms as a case of semiosis. *Lege Artis* **2**(2), 95–147 (2017). <https://doi.org/10.1515/lart-2017-0014>
- Komova, T.A., Sharapkova, A.A.: Space: from word philosophy to a myth about King Arthur. In: Manerko, L.A., Baumann, K., Kalverkamper, H. (eds.) *Terminology Science in Russia Today: from the Past to the Future*, vol. 116, pp. 369–388. Frank and Timme Germany, Berlin (2014)
- Körner, A.: *Psychological Mechanisms in Embodied Cleansing*. Dissertation, Universität Würzburg (2014)
- Kövecses, Z.: A broad view of cognitive linguistics. *Acta Linguistica Hungarica* **52**(2–3), 135–172 (2005). <https://doi.org/10.1556/ALING.52.2005.2-3.2>
- Kuczynski, M.P.: Preface: “...Beatus vitrestechyng”. In: Kuczynski, M.P. (ed.) *Prophetic Song: The Psalms as Moral Discourse in Late Medieval England*, pp. xv–xxvi. University of Pennsylvania Press, Philadelphia, PA (2016)
- Lakoff, G., Johnson, M.: *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought*. Basic Books, New York (1999)
- Lakoff, G.: Explaining embodied cognition results. *Top. Cogn. Sci.* **4**(4), 773–785 (2012). <https://doi.org/10.1111/j.1756-8765.2012.01222.x>
- Lakoff, G.: *Moral Politics*. The University of Chicago Press, Chicago (1996)

- Langacker, R.W.: Culture and cognition, lexicon and grammar. In: Yamaguchi, M., Tay, D., Blount, B. (eds.) *Approaches to Language, Culture and Cognition: The Intersection of Cognitive Linguistics and Linguistic Anthropology*, pp. 27–49. Palgrave Macmillan, Houndmills-New York (2014)
- Lattimore, R.: *The New Testament*. North Point Press, New York (1996)
- Lemetti, J.: *Historical Dictionary of Hobbes's Philosophy*. Scarecrow Press, Lanham, Toronto, Plymouth (2011)
- Lizardo, O.: The conceptual bases of metaphors of dirt and cleanliness in moral and non-moral reasoning. *Cogn. Linguist.* **23**(2), 367–393 (2012). <https://doi.org/10.1515/cog-2012-0011>
- Locke, J.: *An Essay Concerning Human Understanding*. Oxford University Press, New York (2008)
- Marshall, J.: *John Locke: Resistance, Religion and Responsibility*. Cambridge University Press, Cambridge (1994)
- Meier, B.P., Hauser, D.J., Robinson, M.D., Friesen, C.K., Schjeldahl, K.: What's "up" with God? Vertical space as a representation of the divine. *J. Pers. Soc. Psychol.* **93**(5), 699–710 (2007). <https://doi.org/10.1037/0022-3514.93.5.699>
- Murphey, M.G., Flower, E.: *A History of Philosophy in America, vol. I*. Capricorn Books, New York (1977)
- Owen, J.: *Exercitations on the Epistle to the Hebrews, Also Concerning the Messiah*. Robert White, London. https://www.google.ru/books/edition/Exercitations_on_the_Epistle_to_the_Hebr/D1k1AAAAQAAJ?hl=ru&gbpv=0 (1668). Last accessed 20 Apr 2022
- Oxford English dictionary (OED). <https://www.oed.com>. Last accessed 20 Apr 2022
- Richstatter, T.: A walk through the mass: A step-by-step explanation. <https://ininet.org/a-walk-through-the-mass-a-step-by-step-explanation.html> (2005). Last accessed 20 Apr 2022
- Rimell, V.: Philosophy's folds: seneca, cavarero, and the history of rectitude. *Hypatia* **32**(4), 768–783 (2017). <https://doi.org/10.1111/hypa.12361>
- Ross, W.D., Stock, G., Solomon, J.: *Works of Aristotle, vol. III*. Oxford University Press, London (1931)
- Ross, W.D., Stock, G., Solomon, J.: *Works of Aristotle, vol. V*. Oxford University Press, London (1912)
- Salkeld, J.: *A Treatise of Paradise, and the Principal Contents Thereof. Especially of the Greatness, Situation, Beautie, and Other Properties of that Place ... Collected Out of the Holy Scripture, Ancient Fathers, and Other Both Ancient and Moderne Writers*. https://www.google.ru/books/edition/A_Treatise_of_Paradise_and_the_Principal/mFI7AQAAMAAJ?hl=ru&gbpv=0 (1617). Last accessed 20 Apr 2022
- Sharifian, F.: *Cultural Linguistics*. John Benjamins, Amsterdam (2017)
- Sullivan, K.: *Frames and Constructions in Metaphoric Language*. John Benjamins Publishing Company, Amsterdam (2013)
- Taratuta, E.E.: *Philosophy of Virtual Reality*. St. Petersburg State University Press, St. Petersburg (2007). (in Russian)
- The Middle Way of Predetermination Asserted. Between the Dominicans and Jesuites, Calvinists and Arminians. Or, a Scriptural Enquiry Into the Influence and Causation of God, in and Unto Humane Actions; Especially Such as are Sinfull; Signed: W. M. With an Epistle to the Reader Signed: Rich. Baxter*. https://www.google.ru/books/edition/The_Middle_Way_of_Predetermination_Asser/oYtmAAAacAAJ?hl=ru&gbpv=0 (1679). Last accessed 20 Apr 2022
- Tsaregorodtsev, A.V.: On some aspects of the evolution of English Protestantism in the XVI-mid-XIX century through the prism of the problem of bourgeois ethos formation (in Russian). *CSU Bulletin* **12**(150), 99–108 (2009)
- Vale, F.: Anselm on the rectus ordo of creation. *Saint Anselm J.* **14**(1), 93–109 (2018)
- Voorhees, B., Read, D., Gabora, L.: The objectivity of moral norms is a top-down cultural construct. *Behav. Brain Sci.* **41**(E116), 31–49 (2018). <https://doi.org/10.1017/S0140525X18000213>

- Wermser, R.: *Statistische Studien zur Entwicklung des englischen Wortschatzes*. Francke, Bern (1976)
- Widdrington, R.: *A Theologicall Disputation concerning the Oath of Allegiance ... Translated out of Latin into English by the Author himselfe, whereunto hee hath added an Appendix, etc.* [https://www.google.ru/books/edition/A_Theologicall_Disputation_concerning_th/hCpkAAAACAAJ?hl=ru&gbpv=1&dq=%C2%ABA+Theologicall+Disputation+concerning+the+Oath+of+Allegiance%C2%BB+\(1613\)&pg=PA19&printsec=frontcover\(1613\)](https://www.google.ru/books/edition/A_Theologicall_Disputation_concerning_th/hCpkAAAACAAJ?hl=ru&gbpv=1&dq=%C2%ABA+Theologicall+Disputation+concerning+the+Oath+of+Allegiance%C2%BB+(1613)&pg=PA19&printsec=frontcover(1613)). Last accessed 20 Apr 2022
- Wierzbicka, A.: Moral sense. *J. Soc., Evol., Cultural Psychol.* **1**(3), 66–85 (2007). <https://doi.org/10.1037/h0099824>
- Yoh, M.: Locke the representative of an age? *The Dalhousie Rev.* **55**(1), 166–169 (1975)
- Yu, N., Wang, T., He, Y.: Spatial subsystem of moral metaphors: a cognitive semantic study. *Metaphor. Symb.* **31**(4), 195–211 (2016). <https://doi.org/10.1080/10926488.2016.1223470>
- Yu, N.: Metaphorical character of moral cognition: a comparative and decompositional analysis. *Metaphor Symbol* **30**(3), 163–183 (2015)
- Zhong, C.B., Strojcek, B., Sivanathan, N.: A clean self can render harsh moral judgment. *J. Exp. Soc. Psychol.* **46**(5), 859–862 (2010)