Introduction

The question of whether or not Chinese thought, especially Chinese philosophy, follows a different kind of or even lacks logic remains a controversially debated issue. This also applies to interpretations of the Book of Mencius. Years ago, D.C. Lau published an essay in which he paraphrased criticism according to which Mencius’ arguments lack logicalness or are mere analogies.¹ Perhaps many scholars still share this opinion. In the following analysis of the Mencius, I try to show that they are mistaken, and that so-called analogical thinking should more appropriately be characterized and called implicit logical thinking. Mencius’ analogical thinking is actually logical reasoning, and to understand this thinking requires – often refined – logical reflection. Besides, so-called analogical thinking can be justified by its literary and didactic qualities.

Much can be said about the general validity of logical laws. I have done this elsewhere.² If it comes to the question of whether or not a certain argument in the Mencius, in terms of its logicalness, is equivalent to, and discernible as, a universally valid logical argument – i.e., an argument, valid for all human beings of all cultures – it suffices to show that, given the premises of this argument, everybody would arrive at the same conclusions. In other words, given identical premises, the conclusions are also identical. Or to put it in another different way: if deductively valid, logic in the Mencius is just a version of universal logic.
To provide an example:

Premise 1: Killing a tyrant and cruel mass-murder does not mean murdering a human being (but, e.g., executing or punishing a criminal).

Premise 2: A certain ruler R (e.g., Jie 桀) is a tyrant and cruel mass-murder.

Conclusion: Killing R does not mean murdering a human being.

In the *Mencius*, this argument is not only clearly formulated, but also of utmost importance. Systematically and historically, it is part of the zhengming 正名-doctrine and results from respective logical analysis. Probably this logical analysis reflects Mohist (Mojia 墨家) philosophy of logic and language, but it could also exemplify a method just shared by different schools of pre-Qin Chinese philosophy. By referring to the Mohists, I want to emphasize that logical reflection is indeed involved in the argument. In any case, and as already shown by D. C. Lau, there exist great similarities between Mohist and Mencian logical methods.

Whoever agrees with the two premises of the above example, "must" agree with the conclusion. Otherwise he (or she) would violate, or deny, the law of transitivity according to which the premises “S is M” and “M is P” demand the conclusion “S is P.” That is to say that we could also conclude that “S greater M” and “M greater P” entails: “S not greater P.” One can of course dispute the validity or soundness of the premises, but this would be a different issue and not concern the logicalness of the argument.

I shall, however, not only elaborate on the Mencian argument to justify tyrannicide, but also deal with the logical structure of Mencius’ famous argument for man’s natural goodness, Mencius’ use of the tertium non datur (law of excluded middle) and negation, and Mencius’ emphasis on the rule that, given the same premises, we have to draw the same conclusions. As said in the beginning, my main objective is to show that valid analogical thinking is actually logical thinking.
The logical structure of Mencius’ argument in justification of tyrannicide

齊宣王問曰：「湯放桀，武王伐紂，有諸？」

The king Xuan of Qi asked, saying, 'Was it so, that Tang banished Jie, and that king Wu smote Zhou?'

孟子對曰：「於傳有之。」

Mencius replied, 'It is so in the records.'

曰：「臣弒其君可乎？」

The king said, 'May a minister then put his sovereign to death?'

曰：「賊仁者謂之賊，賊義者謂之殘，殘賊之人謂之一夫。聞誅一夫紂矣，未聞弒君也。」

Mencius said, 'He who outrages the benevolence proper to his nature, is called a robber; he who outrages righteousness, is called a ruffian. The robber and ruffian we call a mere fellow. I have heard of the cutting off of [punishing] the fellow Zhou, but I have not heard of the putting a sovereign to death [murdering a ruler 弑君], in his case.' (Liang Hui Wang II 梁惠王下3, IB, Legge: 167, Lau: 68)

It is important to note that, according to the Mencius, (1) “whoever is devoid of the heart of compassion is no human being” (無惻隱之心，非人也) (Gong Sun Chou I 公孫丑上, IIA, Lau: 82), that (2) “humaneness means being a human being” (仁也者，人也) (Jin Xin II 盡心下, VIIB, Lau: 197), and that (3) zhū 誅 also means “to execute” or “to punish.” In the Teng Wen Gong II (滕文公下)-chapter (IIIIB, Lau: 113) we read that “the Duke of Zhou helped King Wu to punish Zhou” (周公相武王，誅紂). Thus, the Mencian argument could also be formulated as:

(1) A tyrant is no human being 人 (and no ruler 君), but a robber 賊.

(2) To kill a robber, is to punish or execute 誅 him.

(3) Thus, to kill a tyrant, is punishing or executing 誅 a robber (but not killing – i.e., murdering – a human being or a ruler 弑君).
The whole argument strongly resembles the Mohist argument that “although robbers are human beings (ren 人), loving robbers is not loving human beings [and] … killing robbers is not killing human beings” (Graham: 486, cf. also p. 484). The Mohists make it clear that one must not simply and schematically rely on phonetic, graphic and grammatical identities (identities in pronunciation, writing and syntactic order) to arrive at logical conclusions, but must, e.g., take into account the possibility that the same word or graph can have different meanings, and that competent speakers easily recognize the relevant meaning. That is to say that the Mohists distinguish between “killing” in the sense of “murdering” and “killing” in the sense of “executing” or “punishing,” and that they are convinced of that everybody should do this. Mencius does the same, although the Mohist notion of human being differs from his own notion in one respect. The Mencian notion of human being is a normative one. As already mentioned, Mencius’ argument can also be seen and explained in the context of the zhengming doctrine, according to which a tyrant must no longer be regarded as and called a (legitimate) ruler. Hence, killing a tyrant must not be misunderstood as killing a ruler.

Given that tyrants and/or robbers ought to be executed or punished by killing them, the Mencian argument is valid. It is only if one disputes the premises that (1) tyrants and/or robbers are no human beings and/or that (2) executing or punishing to death is no killing (in the sense of murdering) that the Mencian argument becomes untenable. Accordingly, whoever argues against the death sentence today denies the validity of at least one of the premises, maintaining that every member of the species homo sapiens sapiens is a human being and thus employing a biological notion of man (in this regard perhaps similar to the Mohists), or pointing out that the goal of any juridical sentence, as e.g. imprisonment, ought to be re-socialization, but not punishment or even vengeance. However, as I should like to emphasize again, such convictions do not render the Mencian argument logically problematic or unclear. I need not emphasize that it is no analogy and does not employ analogies.
The logical structure of the Mencian argument that human nature is something inherent in humans

In Gaozi I 告子上 (VIA, Legge: 396 f., Lau: 160-161), Mencius refutes Gaozi's proposition that human nature is not fixed and thus something external to humans. His refutation resembles Mohist reflections on logical conclusion even closer than his argument for tyrannicide. Gaozi's argument runs as follows:

1. “Life’ is what is meant by ‘nature’.” (生之謂性)

2. As “white’ is what is meant by ‘white’” (白之謂白). This is to say, that e.g., “the whiteness of white feathers or the whiteness of white snow” – of an x – “is the same as the whiteness of white jade” – i.e., of a non-x (白羽之白, 猶白雪之白; 白雪之白, 猶白玉之白).

3. As a matter of consequence, the nature of an x is the same as the nature of a non-x
   However, if this is the case, human nature is independent from being human and hence not inborn (or internal).

Gaozi’s argument can be adequately reconstructed as follows.

If p is a property of x and of non-x, then p is no function of x, i.e., then p is independent of x.

If p is independent of x, then p is external to x.

[The] nature [of man] is independent of man and hence external to man.

Mencius refutes the argument by pointing out that it rests on a confusion of symbols and grammar with logic.

Whereas whiteness is indeed a property of a white x as well as of a white non-x and thus independent of x, this does not apply to the nature of an x, for although the nature of x is a property of x, it need not be a property of (a) non-x. Pointing out that the nature of an ox (牛之性) is different from the nature of man (人之性), Mencius provides a respective (counter-)example. The nature of an x is a function of x (depends on x), as already explained by D.C. Lau (241f.).
The similarity of the whole argument to Mohist reflections is apparent from the Mohists’ passages that say that “white is necessarily white” (白者必白) (trans. Jones, p. 559), and that “the ‘circle’ of a small circle and the ‘circle’ of a large circle are the same” (小圜之圜，與大圜之圜同), but that, e.g., although “this huang (jade ornament) is jade, thinking of the huang is not thinking of jade, but thinking of this huang’s jade” (是璜也，是玉也．[意璜，非意玉也，意是璜之玉也]) (trans. Jones, p. 595).

In my opinion, Mencius’ usage of “white(ness)” and “nature” follows the same pattern and could thus be expressed as follows: If w is the whiteness of x, thinking of w, is thinking of whiteness (in general, or as such), whereas, if n is the nature of (an) x, thinking of n is not thinking of nature, but thinking of the nature of (that) x. Whether this in Chinese philosophy of the 4th and 3rd centuries BC probably more or less generally accepted view of the character of whiteness is convincing, is a again a different question.

Presupposing that what is not external, must be internal (and thus applying the tertium non datur), Mencius concludes that human nature is internal. Thereby, his notion of internality is a refined one, for Mencius not only permits for, but also emphasizes the importance of cultivating human nature (which he thus conceives of as a kind of biological disposition).
There is, however, a textual problem with the passage sheng zhi wei xing 生之謂性. Lau remarks that the first and last words sheng and xing “were probably written by the same character in Mencius’ time. This would make the statement at least tautological in written form and so parallel to bai zhi wei bai [白之謂白].” (Lau: 160, note 1, see also Lau, Introduction, pp. 34-37) In my opinion, the comparison of nature and white(ness) indeed makes sense only if 生之謂性 has the same form as 生之謂性, although it may be impossible to find out which graph was originally used for sheng/生. Further, Gaozi’s comparison of water and human nature that aims at showing that human nature is nothing fixed and thus not internal, and Gaozi’s usage of the “white is white”-pattern to prove that righteousness is not internal, would only then be consistent with parallelizing sheng zhi wei xing / “life is nature” and bai zhi wei bai / “white is white”, if sheng zhi wei xing is meant as a kind of tautology. Moreover, in interpreting the whole argument, one must distinguish between the propositions that “human nature is internal” and that “benevolence is internal” (Lau: 161). Finally, there is also a strong possibility that Gaozi and Mencius use the concept-term “nature” in different ways, for Mencius would perhaps have disputed Gaozi’s general statement that “appetite for food and sex is nature.” (Lau: 161) In this connection, it could be enlightening to compare Mencius’ and Xunzi’s notion of human nature. The hypotheses that “human nature is good” and “human nature is bad” can be easily explained by taking into account that Mencius’ and Xunzi’s notions of human nature are different, for, according to Xunzi, human nature is something that is inborn and cannot be taught, learned, or changed.\(^5\)

Even if my analysis of the passage about water, nature, white(ness) and righteousness (Gaozi I 告子上, VIA, Legge: 396 f., Lau: 160-161) seems questionable, the analysis shows that logic plays an important part in this Mencian key argument.
The logical structure of the Mencian argument that human nature is good

Simply put, Mencius tries to show that compassion must be something spontaneous and thus inborn for there are no other explanations (no external motives) for being humane (Gong Sun Chou I 公孫丑上, IIA, Legge: 201f., Lau: 82). Mencius indicates that all possible reasons or motives for being humane except for inborn compassion do not fit the facts.

If men suddenly see a child about to fall into a well, they will without exception be moved by compassion. They will feel so, not as a ground on which they may gain the favor of the child's parents, nor as a ground on which they may seek the praise of their neighbors and friends, nor yet he disliked the cry of the child. From this it can be seen that whoever is devoid of the heart of compassion is no human being, whoever is devoid of the heart of shame is no human being, whoever is devoid of the heart of courtesy and modesty is no human being, and whoever is avoid of the heart of approving and disapproving is no human being.

Although quite clear, the argument has two shortcomings. First, it uses an example or illustration without proving that this example can be generalized. Second, it is not easy to tell whether the list of possible explanations for man’s readiness to help or rescue the child, namely, force, interest in material gain, social support, fame (social prestige), aversion against the aesthetically unpleasant (as exemplified by the cries of the child), and inborn goodness, is complete. The list lacks respective combinatory systematicalness. Nevertheless, that the argument is intended to achieve its goal – i.e., to show that the reason for the readiness to help is inborn goodness (compassion, etc.) – by excluding all possible alternative explanations, is easily understood, and that such an approach is a principally correct method, is also clear. The logical structure of the argument can be simply formalized as follows:
(1) S is either $p_1, p_2, \ldots, p_i, \ldots$, or $p_n$.
(2) S cannot be/is not $p_1, p_2, \ldots, or p_n$ with the sole exception of $p_i$.
(3) Hence S must be $p_i$.

This syllogism is based on the presuppositions that the first premise includes a complete list of all possible alternatives, and that the exclusion process is a repeated application of the tertium non datur. Actually, such a way of arguing is not uncommon. Kant followed it in his *Critique of Aesthetic Judgment* when he tried to explain his notion of uninterested pleasure. Most important, however, is the insight that the Mencian argument, although using an example, is certainly easily identifiable as an – although somewhat deficient – logical argument. However, this deficiency consists solely in the lack of (unquestionable) combinatory completeness. From a logical point of view there is no necessity to show that the example can be generalized. If it is empirically correct, it proves the existence of a certain kind of inborn goodness.

Mencius’ argument that human nature is good is a complex and multifarious one. His analysis of the example of a child about to fall into a well is only one part of the argument. The refutation of the view that what is called human nature is actually something determined by external factors is another one. Most complicated but perhaps most impressive is the empirically founded proposition that, in principle, all human beings possess a dignity (tian jue 天爵) which they value higher than life, and especially mere (undignified) survival (VIA, Lau: 163f.). At least implicitly, Mencius supports this argument by repeatedly emphasizing that a junzi or daren (great man) ought to defend his self-esteem, that is to say that he ought not succumb to or be corrupted by immoral temptations. Besides, in pointing out that a great man “cannot be led into excesses when wealthy and honored or deflected from his purpose when poor and obscure, nor can he be made to bow before superior force” (IIB, Lao: 107), Mencius again uses the exclusion-method to show that only self-reliance, and in this respect something internal, can characterize humaneness.
The so-called analogical arguments are actually quite irrelevant if it comes to the question of whether Mencius’ proposition that man is by nature good is a logical and valid one. First of all, the comparisons of human nature to the nature of a willow and of water are brought forward not by Mencius, but by his opponent Gaozi who thereby wants to refute Mencius (VIA, Legge: 394 f., Lau: 160). Gaozi wants to illustrate that human nature can be molded in different ways, thus creating good or bad men, or men who are neither good nor bad. Mencius takes up Gaozi’s analogies to show that they actually fail to prove that Gaozi is right. Presupposing that nature and naturalness is something that is not forced, but rather spontaneous (and also presupposing that Gaozi and everybody would accept this premise – as we certainly do), Mencius points out that the analogies not only fail to support Gaozi’s view, but are even supportive of his, Mencius’, position. He makes it clear that if, e.g., carving cups or bowls out of the willow (which Gaozi compares to righteousness 義) means mutilating the willow, this would mean going against the nature of the willow. Mencius further emphasizes that, contrary to Gaozi’s view, the nature of water is not that it can be made to flow to the east and to the west (and even made into a spring), but that water, if not forced to behave otherwise, flows downwards. Again, these are refutations of an opponent’s arguments. It is not Mencius who is responsible for the analogies but the opponent. Only Mencius’ Ox Mountain example (VIA, Legge: 407 f., Lau: 164f.) is an analogy that he himself brings in. However, as far as the validity of his hypothesis that humans are by nature good is concerned, this analogy could even be left aside. As the other analogies, the example serves to illustrate that a certain counter-argument is probably mistaken. This argument (later defended by Xunzi) runs as follows: Look at all the human beings. Most of them are actually bad. How can you, Mencius, then claim that humans are by nature good? Mencius replies that the observed badness (which he does not deny) is the outcome of unfavorable environmental influence, just as the baldness of the Ox Mountain that was originally covered by beautiful trees that were now (almost) completely “lopped by axes.” This example indeed succeeds to illustrate that the fact that many humans are not “good,” does not imply that human nature (as a biological disposition, as understood by Mencius) is not good. Seen in the context of all respective Mencian arguments, it contributes to the plausibility of these arguments. Perhaps, it can even be integrated into the following complex argument:
(1) Human nature is inborn and good.
(2) This is proved by the fact that humans behave in a humane way if they are not exposed to detrimental (external) influences but (can) act spontaneously.
(3) However, to remain good, human beings, in the course of their live, must cope with such influences. Original human nature must be nourished, or cultivated, by respective measures, including self-cultivation and utilization of favorable external factors.

The rule that identical premises should lead to identical conclusions

Like the Mohists, Mencius emphasizes the validity of the logical law that what is the same entails the same consequences and that this law ought to be abided by. Whereas the Mohists do this again and again, generally as well as in specific cases, Mencius does this in the context of his attempts to show that all human beings possess the same natural capacity of being and acting humane. He says: “All things which are the same in kind (同類) are like to one another; why should we doubt in regard to man, as if he were a solitary exception to this? The sage and we are of the same kind.” ([故] 凡同類者，舉相似也，何獨至於人而疑之？ 聖人與我同類者.) (Gaozi I 告子上, Legge: 404, VIA, Lau: 164) In short, he maintains that, since we admit that, e.g., all animals, birds, mountains, or waters belong to same kind respectively (IIA, Lau: 80), we must also admit that all humans belong to the same kind, and that, if we admit this, we must also admit that all human beings possess the capacity of being and acting humane. As an isolated argument, this argument lacks qualification. Taken together with the child-and-well-argument, however, it could be logically valid. Pointing out that we would do everything to have corrected our physical handicaps, for we do not want to be inferior to other (namely, healthy or normal) people, but that we fail to correct our moral deficiencies, although this would be required if we would consistently follow the norm of not accepting inferiority, Mencius speaks of a “failure to see that one thing is the same in kind as another” (VIA: Lau: 167). In both cases one could of course speak of a use of analogies, but since they – to employ contemporary logical terminology – are easily discernible as exemplary (semantic) interpretations of equally easily recognizable logical structures, I prefer to speak of implicit logical arguments.
Tertium non datur and negation in the Mencius

All pre-Qin Chinese philosophical classics I know, the Mencius included, repeatedly apply the tertium non datur. The Mencius repeatedly formulates dichotomies (in other words pairs of logical contradictories) which it uses as a basis for logical conclusions. For instance, we read that Duke Mu said to Mencius that whether he (the duke) would punish (誅) certain people or whether he would not punish (不誅) them, unwelcome consequences would follow. (Liang Hui Wang II 梁惠王下, Legge: 172 f., IB, Lau: 70f.) Mencius agrees with the duke and answers that such situations could, and ought to be, avoided by humane government.

Another passage runs: „One who has the way ... (得道); one who has not the way ... (失道)” (Gong Sun Chou II 公孫丑下, IIB, Lau: 85). Lau’s translation is perhaps all too explicit. However, since the Mencius (Jin Xin I 尽心上, VIIA, Legge: 474, Lau: 192) also employs the dichotomy between you dao 有道 and wu dao 無道 (天下有道 ... ; 天下無道), and since this dichotomy is common in several pre-Qin classics, the translation is probably correct. The dichotomy is used to persuade the addressee to follow the dao. Otherwise unwelcome consequences could not be avoided.

There are also other places (e.g., Gong Sun Chou II 公孫丑下, IIB, Lau: 92) where the Mencius employs the words you and wu to express a dichotomy. Especially logically explicit is the wording: “If your acceptance was right (shi 是), your refusal must be wrong (fei 非). Master, you must accept one or the other of the two alternatives (夫子必居一於此矣)” (Gong Sun Chou II 公孫丑下, IIB, Legge: 215f., Lau: 87).” This is an almost exemplary formulation, or application, of the tertium non datur. Note that bi 必 expresses necessity and thus also refers to the character of a law.

Actually, words such as bu 不, wu 無, or fei 非 are usually used to express contradictory negations, thus also implying or formulating dichotomies, or, in other words, applying, the tertium non datur.
Paradoxes

Another point may be worthwhile noting, the more so since this point attests to a further similarity to Mohist logical methods. The Mohists refuted the Daoists by pointing out the paradoxical character of certain Daoist statements, making clear, for instance, that to criticize language use is self-contradictory, or that to criticize learning amounts to asking people to learn. The respective Mohist passage runs as follows: “Causing him to know that it is useless to learn … is teaching. If he thinks that it is useless to learn, to teach is to contradict himself.” (是使智學之無益也，是教也。以學為無益也，教誖) (Graham: 452, Johnston: 568f.) The Mencius includes the statement: “My distain to instruct a man is itself one way of instructing him.” (予不屑之教誨也者，是亦教誨之而已矣) (Gaozi II 告子下, VI B, Lau: 181)
A final word on (the usage of) analogies and on the relevance of analyzing “Mencian” logic

The term in the *Mencius* that Lau translates by “analogy” is 喻 (Liang Hui Wang I 梁惠王上, IA, Lau: 51). However, this term can also be translated as example, illustration, metaphor, allegory, or (as Lau himself does) intelligibility (Jin Xin I 尽心上, VIIA, Lau: 186). If Graham’s translations of 類 (the basic meaning of which is “kind”) by “analogy” and 辟 by “illustrating” is acceptable, this would mean that the Mohists conceived of analogies as means of explanation that employ a language different from the language of the text that is to be explained, combining this with the method of parallelizing statements. (Graham: 258, 482-483) Such an interpretation is even more plausible if one takes into account that 辟 may also be translated, as Lau does (p. 261), as analogy. Mencius probably held similar views about the methods translated as analogy. Thus, given that, e.g., the meaning of 喻 is rather broad and variable, Mencian usage so the so-called analogies could, as I believe and tried to show, indeed be best understood as a paradigmatic way of exemplifying logical relations, or as semantic interpretations of logical structures, and thus as implicit logical arguments.

That the *Book of Mencius* is an important contribution to the history of world philosophy, is out of question. Whether it is also of systematical relevance, i.e., whether it puts forward hypotheses that are (still) valid or at least worthwhile discussing, is a different issue. Problems such as whether human nature is good, do no longer deserve much attention. Answers depend on how one defines human nature, and viable ethics is decisively independent of such definitions. However, what I regard as Mencius’ concept of human dignity, and his arguments defending human dignity, including Mencius’ notions of tian jue, tian ming, and the zheng ming doctrine, certainly remains worthwhile discussing, to say the least. That this is the case, is not only a matter of mere content, but also a function of the logical methods used to formulate and justify these concepts. This, in turn, is my justification for trying to show that Mencius was, among other things, also a good logician, or, to express myself more cautiously, that the *Book of Mencius*, minor problems notwithstanding, is not less logical than most Western philosophical classics.
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4 Following Jones (p. 594, note 51) who explains: "The characters in parenthesis (brackets [ ]) are those added by CYX [Cao Yaoxiang, Mozi Jian, MZJC (Yan Lingfeng, {Wuqiubeizhai} Mozi Jicheng, 46 vols., Taipei, 1975) 17.] The Chinese is quoted from ctext.org/mozi/book-11, 18 and Jones: 594.