

# Secularized Wisdom: Girolamo Cardano on Human Nature without God

**PAUL RICHARD BLUM**

Loyola University Maryland /

Palacký University Olomouc

Křížkovského 12

779 00 Olomouc

Czech Republic

[prblum@loyola.edu](mailto:prblum@loyola.edu)

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## ABSTRACT\*

Girolamo Cardano wrote, besides his better-known treatises on natural philosophy and his autobiographies, some treatises (*Hymnus seu canticum ad Deum*, *De uno*, *De sapientia*) that define wisdom as a human skill of orientation in the world, specifically as a feature of human nature, as ethical and political means, and as the capability of dominating things and humans. The effect is that human wisdom, although apparently a divine virtue, is reduced to the capability and task of humans to secure their position, to make sense, and to make conjectures about the principles of human agency. This eventually regards religion and God: everything is a hypothesis and a tool for human secular felicity.

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— Girolamo Cardano (1501-1576) will be studied in this paper as one of the contributors to modern secularism, something which may be understudied, since he is mostly known as one of the early modern scientists and, because of his autobiographical writings, an heir to the humanist anthropocentric worldview. However, in his writings related to theology and religion he pretended to be a pious worshiper of God, the Creator. He frequently uses the language of the naive admiration of the divine in the creation. But in his wording and also in the style of his writing it becomes quite evident that he is aiming at emancipating human life in the world and, specifically, the study of nature from a blind belief in God. The traditional belief in the Creator would make the study of

nature superfluous, provided that the ascent to God and the salvation of the soul have priority.

Girolamo Cardano wrote, besides his better-known treatises on natural philosophy and his autobiography, a *Hymn to God*, a *Treatise on One*, and a study *On Wisdom*. The latter defines wisdom as the human skill of orientation in the world, specifically as a feature of human nature, as ethical and political means, and as the capability of dominating things and humans. The style is rhapsodic throughout; it does not only allude to the Renaissance topoi of human dignity, it also boasts humanistic learning and rhetorical ploys. While this may appear distracting, it is actually the message of the book: humans communicate and act in the world not by way of deductive

methodic reasoning, but from experience, be that history, anecdotes, common places, or empirical research. The preponderance of medical resources serves the same purpose. The effect is that wisdom, although apparently a divine virtue, is reduced to the capability and task of humans to secure their position, to make sense, and to make conjectures on the principles of human agency. This eventually concerns religion and God: everything is a hypothesis and a tool for human secular felicity. We can observe that first in the two shorter studies; at the end we will also look into Cardano's most famous scientific work, *On Subtlety*.

### — HYMNUS SEU CANTICUM AD DEUM: PRAISE TO THE LORD FOR ENABLING HUMANS TO PRAISE HIM

In his *Hymnus seu canticum ad Deum* every sentence revolves around the majesty of the Creator. The intentional direction of the pious exercise, however, is the assurance that admiration of nature is natural to humanity. The obligation to worship the Creator is subtly transformed into the justification of scientific research. The prayer, which is in prose in spite of the title of the text, opens with the words: "To whomever, o most splendid radiation, you imparted so much of your light [...], to them, without doubt, is the greatest share of felicity."<sup>1</sup> God is addressed as the splendor, which may be

surprising because one could expect that in the first place God rests inaccessibly in Himself. Cardano chose to praise God as the manifestation of Himself. A slight shift of emphasis with consequence, as I will argue. The author then prays to God, praising Him for endowing him with the capability to investigate his secrets and to share his knowledge with the other mortals.

The enjoyment is all on the human end of the relationship: "What is more dignified, that is, in congruence with Your Majesty, than to report about the magnitude of your power, wisdom, and generosity?"<sup>2</sup> Thus, Cardano raises the rhetorical question about the dignity that comes from speaking of God's major attributes of power, wisdom, and love or goodness. Whose dignity, however? That of humans. Praising God in exploring his workings is good – good for humans. The metaphysical explanation lies in Cardano's adaptation of the Neoplatonic theory of hypostases.<sup>3</sup> If everything is in some degree derived from the first principle of everything, in Christian language from God, then the worship of the Creator and the acknowledgment of the creation is also derived from God. Indeed, we read that "From

illis felicitatis partem adesse haud dubium est." – All translations are mine.

1 Cardano's works are cited (unless indicated otherwise) from Cardano (1663). Here vol. 1, 695a: "Quibuscuncque, o lubar splendidissimum, tantum tui luminis impertiisti, ut quemadmodum sitientes ad limpidissimum fontem, ita ad centemplandam laudandam Divinitatem tuam amore rapiantur, maximam

2 *Hymnus* (696a): "Quid enim suavius mihi esse potest, quam arcana tua posse non solum abs te assequi, sed etiam aliis mortalibus explicare? [...] Quid enim dignius, aut tantae Maiestati congruentius quam simul referre magnitudinem potentiae, sapientiaeque ac liberalitatis tuae?"

3 On Cardano's adaptation of Neoplatonism for his concept of God, see "Introducción" in Cardano (2009, XIV–XLIII).

you [God] flows [*manat*] the entire love to generate, to raise, educate, and also to instruct the youth. But towards those whom you love more also flows [*manat*] love for virtue and virtue itself and, from there, the bright strife for truth and, eventually, wisdom itself.<sup>4</sup> We will see what wisdom means for Cardano; here, it could be the insight into the divine majesty, but it is aligned with virtue, which we might believe is the pious devotion to the origin of life. It will turn out that virtue is the sum total of the human capacity to orient oneself in the world and to organize life. In short, the hymn in praise of the Lord praises His gifts to humanity.

Indeed, after acknowledging the dignity of praising God's power, wisdom, and goodness, he adds:

To you alone, I repeat, to you alone – I confess – I owe and render as much gratitude as I can for that reason that through such a dignified action and so laudable work in so high a realm, you appointed me to pronounce this hymn, this canticle.<sup>5</sup>

Praise to the Lord for enabling humans to praise him. Or the other way round: the only reason for God displaying His power is to garner applause. In either reading, praise coincides with conceit. Maybe, Cardano had the proverb in mind, attributed to Horace and Abaelard, among many: *artificem commendat opus* – The work praises the creator.<sup>6</sup> Even when Cardano exercises modesty, he points to himself as the resource of God's veneration: Certainly, the created world – as immense as it is – is incomparable with the greatness of God; and yet, it depends on the divine inspiration if God wishes His secrets to be shared.<sup>7</sup> God created the human souls so that they may participate in His dignity and felicity, though to a lesser degree.<sup>8</sup> In the conclusion of the hymn:

If you had not effused in me your light, I could not know what is yours nor know whether you love the blood-stained man who claims to do that on your mandate. It is unknown to me whether it is acceptable to punish the wicked and those who despise your law.<sup>9</sup>

4 *Hymnus* (699b): "Ex te foecundus ille amor generandi, sobolem fovendi, educandi, atque etiam instituendi, totus manat: sed ad eos quos etiam magis diligis, etiam virtutis amor, atque ipsa denique virtus; inde etiam praeclarum veritatis studium, ac demum sapientia ipsa manat."

5 *Hymnus* (696a): "Quamobrem ego tibi soli, inquam tibi soli, etiam vel ob id tantum, quantas possum gratias debere confiteor, agoque, quod huic tam digno negotio, tam laudabili operi, tam excelsae provinciae, ut per me hymnus hic, hoc canticum dicatur, me praefeceris."

6 For sources see Singer (2002, 78–79).

7 *Hymnus* (697b): "Etenim non in producto hace est immensitas, sed in te ipso. Auge in nobis lumen divinitatis tuae, si tua arcana vis ut pandam?"

8 *Hymnus* (700b): "Creasti illas [animas]: ut enim remotiores a te, eo dignitatis ac felicitatis minoris participes fore necesse fuit."

9 *Hymnus* (701c): "Nisi effuderis in me lumen tuum, non possum scire quae tua sunt, neque dicere an sanguinarium virum diligas, qui asserat se ob mandatum tuum haec facere. Ignotum enim mihi est, an humana manu placeat vindicta improborum, et legem tuam contemnentium."

This is the conclusion of the hymn. Evidently, the glory of the Lord exposes the dignity of the human being. The fact that it ends with reference to the defense of the divine command with human violence shows that for Cardano, reflection on the greatness of God and the dependency on His power and clemency leads to reflection upon the capability of humans and therefore eventually serves the purpose of reflecting on the limits of humans as humans.

### — DE UNO: THE IMPERFECT CONTRIBUTES TO PERFECTION

As we have seen, Cardano is well acquainted with Neoplatonic patterns of thought. Therefore it is interesting to check how he applies this to the concept of God qua One, a major distinguishing feature of Renaissance Platonism. In his short treatise *De uno* we observe that the pinnacle of the hypostases does not stay in a contrast of value against the lower hypostases. As in many of his writings, Cardano appears to endorse the Neoplatonic theory of the One and the hypostases, which implies a hierarchy of beings. As opposed to most Neoplatonists, such as Marsilio Ficino, he derives from that a continuum from the immaterial down to the material substances, centered on the personal experience.<sup>10</sup> Some Platonists tend to use the negative theological understanding of the One as that which is in any ontological and epistemological way distinct and beyond everything that human thought perceives as dependent, to the extent that

any attempt at comparing and relating the finite to the infinite endangers the status of the absolute. Cardano, instead, emphasizes that the existence of the finite cannot degrade the infinite, since it emanates from it. On the contrary, the lower levels are ‘upgraded’ thanks to the existence of the One and by considering its role in the ontological schema. The question of why it is important to Cardano remains. Why does he avoid a hiatus between the accessible and the inaccessible, as emphasized by many Renaissance Platonists, such as Ficino? It appears that for Cardano speculating the One justifies interest in the manifold. Since the One is all and within all, the singular and particular – while being derived from the One – represents the One. The effect, not expressed literally by Cardano, is that studying the world of the finite includes engagement with the ultimate origin and is thus warranted. What he clearly argues is that the world and humanity converge in some sort of panpsychism, in which the ensoulment of the world is the condition of the possibility of understanding its construction (Kießler 1994; Nejeschleba 2018).

The treatise *De uno* opens with the almost commonplace statement: “One is good, but many is bad.”<sup>11</sup> The logical argument is this: if many exist the one cannot be in any other and, consequently, not in every particular; now, since the good and the one are convertible (now reading the statement as saying: the one is the good), the one would not be

10 On examples of turning Platonism into personal experience: Prins (2020).

11 Cardano (1663, vol. 1, 277a; 2009, 2): “Unum bonum est; plura vero, mala.”

absolute goodness.<sup>12</sup> However, Cardano continues, all particulars may be reduced and restored (*rediguntur*) to unity and, thus, perfected, since everything strives and extends to the one (*ad unum tendunt*). Among the implications of this consideration follows that plurality actually constitutes oneness. On the one hand, we learn, a plurality of one, which is good, would make a plurality of good things and build up something perfect, whereby the contributors would be less perfect. Another possible implication would be that one and many are identical, which would create superfluous goods. So it appears there is only one and only one goodness. But Cardano does not stop here. He thinks that if there were only one good, something essential in reality would be missing: ornament, beauty, and the appearance of goodness (*boni species*). If the good did not share, it would be thrifty. Therefore, “it was – and is – indication of the highest art of the first maker to create those goods without being diminished (since, being diminished, he would not be infinite nor the perfect first good).”<sup>13</sup>

Nevertheless, the singular creations are not the good as such. One argument is that it is part of God’s perfection to create imperfect creations, an argument that is frequently used elsewhere, for instance, in discourses on theodicy. These created particulars had to be imperfect and therefore also constitute a unity that consists of plurality. Multitude, then, requires matter, according to the scholastic doctrine that individuation is tied to the material principle. Multitude as such, Cardano states, is not a real thing, not a being, but a concept of the mind.<sup>14</sup> What remains is a plurality of deficient creations, which compose in their totality the created reality. Again, we notice the implications of theodicy: the imperfect contributes to perfection.

In the human horizon, the badness and deficiency of the multitude is remedied through order. “Hence, multitude is not bad but occasion and indication for the bad, provided it is not ordered. [...] In everything one has to move speedily towards that which is in itself good, for that is order. One has to try to restore everything to order as such and to the one principle.”<sup>15</sup> Cardano’s intention in saying that is to draw the perspective

12 Cardano (1663, vol. 1, 277a; 2009, 2): “Si enim bonum perfectum est, nihil extra se relinquit; cum vero plura sunt, unum est non in alio, ideoque illius non est bonitas absoluta.” In the background is the Neoplatonic question about the relation of being and oneness as debated between Marsilio Ficino and Giovanni Pico della Mirandola.

13 Cardano (1663, vol. 1, 280a/b; 2009, 18/20): “Rursus, si unum tantum fuisset bonum, defuisset decor, pulchritudo, et boni species [...]. Quibus cognitis, dii hi seu personae etsi plures sint, cum alter ex altero pendeat, in unum coeunt, et ordinati sunt; summae autem artis primi opificis fuit, estque, bona haec procreare, et nihil imminui; nam si

imminueretur, non esset nec infinitum, nec perfectum primum bonum.”

14 Cardano (1663, vol. 1, 281a; 2009, 22): “Sed nec multitudo ipsa est ens, sed ab intellectu fingitur.”

15 Cardano (1663, vol. 1, 281b; 2009, 24): “Non ergo multitudo mala, sed mali argumentum est, atque indicium certum, si ordinata non sit [...]. [...] in omnibus ad illud quod bonum est per se properandum est; est autem, ut dixi, ordo. Conandum est igitur ut omnia ad ordinem ipsum redigantur, atque ad unum principium [...].”



from the absolute One down to the multitude and plurality as the object of human research. For his assessment of multitude as in need of order opens the scientific program: What the scientists do, observing and classifying, finding patterns in chaotic appearances, is therefore emulating creation. This order is equivalent to the perfection of the imperfect. “Everything is related to the One, which is the conservation.”<sup>16</sup> So, the first principle, which in Christian language is the Creator, rather than being remote from its derivatives, is metaphysically their conservator. This thought implies the omnipresence of the one in the many, which then cannot be too bad. Conservation, Cardano continues, regards three areas: the noblest part, the whole, and the self. Without unfolding this division, the author gives some examples, of which the concluding one is this: laughter comes from surprise and hilarity and misery comes from surprise and sadness. A puzzling conclusion that does not gain more meaning by the explanation Cardano offers: by being of similar substance we are all one and directed to the one.

### — DE SAPIENTIA: FELICITY THROUGH GLORY

Both texts just discussed have unexpected endings: The *Hymn to God* concludes with reference to human violence and the limits of human capabilities as a result of reflection upon the divine;

and the treatise on *The One* closes with an enigmatic consideration about laughter and misery. Just in case any reader was expecting uplifting meditations, especially about God’s majesty and support, Cardano draws them back down to the earthly reality of strife and suffering. The same experience is conveyed by Cardano’s *De sapientia*.<sup>17</sup> The book *On Wisdom* concludes the just-summarized message with the following considerations.

We have to place whatever wisdom is granted to us in secure satisfaction. Secure satisfaction, then, is that which has present delight and undoubted hope for the future without punishment for the past.<sup>18</sup>

Humans can safely enjoy their share of wisdom, including delight in the present, optimism for the future, and protection against punishment for the past. Now comes a twist: only those who have always been wise have no regret about the past. How can humans achieve that? By imitating what is best in the gods. Best means, here: to need nothing, to know everything, to live very long, and to feel safe. It is the strength and the uprightness of the mind that grants security. But to be sure: if one could have

16 Cardano (1663, vol. 1, 283b; 2009, 36): “[...] videntur cuncta ad unum spectare, scilicet conservationem; ea autem triplex est: nobilioris partis, et totius, et suiipsius.”

17 On *De sapientia* see Canziani (1992, 46–52); Bracali (2003); ‘Introduzione’ in Cardano (2008).

18 Cardano (1663, vol. 1, 582b; 2008, bk. 5, 290): “Collocandum est ergo quicquid nobis ipsius [i.e., sapientiae] concessum est in voluptate firma. Est autem firma voluptas quae praesentium delectationem habet, futurorum indubiam spem absque praeteriti poenitentia.”

divine wisdom, then strength would not be needed. The final verdict sounds like this: “intellect is always a particular intellect and reason is reason of a mind (*rationis ratio*), and so is the wisdom of wisdom.”<sup>19</sup> While we are still pondering the meaning of this paradoxical pronouncement, Cardano refers to a saying by Pietro d’Abano, which he refuses to quote because, allegedly, he had already quoted it elsewhere.<sup>20</sup> This is not the fulminant summarizing closing of a treatise on wisdom readers would expect.

So far about the ending of *De sapientia*. Cardano’s endings remind me of the end of Francis Bacon’s *The New Atlantis*: “The rest was not perfected” – which obviously does not mean that the author did not complete his book but that the project of the academy of Atlantis remains imperfect but ongoing. In the same way, any lofty speculation on the part of the Italian scientist is referred back to human experience and thus open for future inquiry.

As to the meaning of this conclusion of *De sapientia*, we may observe the focus on human experience and existence: satisfaction, expectation, recapitulation. Hence comes the struggle to leave the

past behind, provided the future was well organized. The perspective on the future reflects upon the carefree present and safety. The human perspective is inevitably broken into the awareness that perfection is elsewhere. If one had divine wisdom, strength would not be necessary, whereby strength does not mean power as a divine attribute but the ability to fend for the future. To be human, then, means to know that there is a superior, transcendent wisdom as an ideal, a spiritual resource, but not at the disposal of humans. What is virtually accessible to humans is the future, and therefore Cardano introduces the component of time into human existence.

From the very beginning, wisdom is presented as a practical virtue. *Sapientia* is composed of maxims as they are typical of prudence. The text overflows with quotations from all sorts of texts. Therefore, it resembles the *Adagia* of Erasmus of Rotterdam, a humanist frequently cited in the book. While the dedicatory letter promises a new treatise on wisdom as the *magistra* of manners and virtues, of laws and arts, the treatise opens with the modest claim only to recall to memory what is known about wisdom. The divine context of wisdom is granted by the fact that wisdom is the link between God and man: as wisdom and immortality are only in God, thus the human soul, which is immortal, is the metaphysical link between God and humanity. As evidence, Cardano refers to the tree of knowledge in Paradise, where man ate the Fruit of Wisdom and was ejected so as not to eat again from the Tree of Life, which would have made

19 Cardano (1663, vol. 1, 582b; 2008, bk. 5, 290f): “Fortitudo animi et probitas securitatem praestant [...]. Sed si sapientiam divinam habueris, nec fortitudine opus erit. [...] ut enim intellectus est aliquis intellectus et rationis ratio, sic sapientiae sapientia.”

20 The critical edition (Cardano 2008, 291) does not say which quotation from Pietro d’Abano was meant, because Cardano’s text cited by himself is not available, which makes the conclusion even more ominous. On Pietro d’Abano in Cardano see Siraisi (1997, 46–52).



him similar to God.<sup>21</sup> This is not quite the Christian interpretation of the Biblical event. Cardano takes it as a matter of fact that Adam and Eve really acquired wisdom and would have succeeded in achieving divinity.

In the way wisdom is described in the following pages, one could almost say that God is the hypothesis required to make human wisdom operable. Referring to Aristotle's *Nicomachean Ethics*, he says:

There exists in humans something highly divine, separate from mind and from any corporeal restriction, to which divine wisdom tends.<sup>22</sup>

As a result, wisdom – while being, and aiming at the divine – provides human felicity.<sup>23</sup> Divine wisdom is the aim or, in modern language, the ideal-type of human endeavors that are always struggling with limitations. Human wisdom is a derivative of the divine and a substitute for it. Quoting from Aristotle's *Metaphysics*, Cardano endorses the view: “The life of the gods is optimal, as it occurs even to us for a very short time.”<sup>24</sup> Wherever

the distance between the divine and the human could be disappointing, Cardano emphasizes that human wisdom and felicity is achievable, not in spite of but thanks to the divine optimum because “human felicity is comprehended in divine wisdom,” so that the definition of wisdom is, consequently, asymptotic rather than metaphysical: “The true definition of divine wisdom is observance of the law and fear of the transcendent.”<sup>25</sup> ‘Divine wisdom’ constantly and deliberately oscillates in this book between the property of God and the divine endowment of humans, for that is the main thrust of Cardano's argument.

One interesting feature of the treatise is the abundance of medical examples. We know, of course, that Cardano was an authority on medicine, but that is not an explanation. What his examples suggest is the train of thought in which there is no factual difference between the spiritual conditions and the physical. Wisdom is about happiness, and happiness is both physical and mental.

As an example we may look at glory. This is interesting also because fame and glory are important features of the humanistic worldview and anthropology. The individual is defined by the pursuit and enjoyment of fame. To Cardano, glory is a feature of life and thus comparable to propagating life.

For the wise person, glory and life are stronger than the propagation of the species; first, because glory is the

21 Cardano (1663, vol. 1, 493a; 2008, bk. 1, 10): “[...] cum comedisset homo fructum scientiae, eiectus est de Paradiso, ne comedens rursus de vitae ligno similis Deo efficeretur.”

22 Cardano (1663, vol. 1, 498b; 2008, bk. 1, 26): “Ergo aliquid est in humanis divinissimum a mente atque id ab omni corporeo impedimento seiunctum, ad quod divina sapientia tendit.”

23 Cardano (1663, vol. 1, 499a; 2008, bk. 1, 27): “Dixeramus iam sapientiam foelicitatis parentem esse, eamque potissimum divinam.”

24 Cardano (1663, vol. 1, 499a; 2008, bk. 1, 27): “Vita autem Deorum optima est, qualis nobis etiam brevissimo tempore contingit.”

25 Cardano (1663, vol. 1, 499b; 2008, bk. 1, 28): “Est igitur vera sapientiae divinae diffinitio legis custodia timorque excelsi.”

very image of the soul, the son that of the body; but the body is either no part of the human being (as Socrates said) or by far more vile than the mind; second, because this propagation of the species is most difficult to maintain and it is not to us or in our power to observe it after death; third, since we see many wise people abstain from having offspring while barely one or two abstain from glory or love of life; finally, because propagation has a means of substitution in siblings, relatives, or adoption, but not so life nor glory.<sup>26</sup>

If glory is an image of the mind and a mirror of having offspring, Cardano compares the spiritual and immaterial realm to that of natural processes. One implication of glory that follows from its relation to life is *diuturnitas*, duration. Duration overcomes the corporeal condition, and duration is the perspective on the future and the temporal condition of life (Cardano 1663, vol. 1, 510a; 2008, bk. 2, 63). Glory as a concept entails deeds, writings, and memory; yet

another version of this observation is that natural, human wisdom manages aims, namely, what is necessary, what is useful, or what is enjoyable (Cardano 1663, vol. 1, 511a; 2008, bk. 2, 65). Later in the same book, after discussing the education of the young, Cardano returns to the importance of glory, defining it thus:

It is highest when many people love and trust us and find us worthy of admiration and honor; and this is the premium of human wisdom and ends with death. Solid glory, however, which arises from natural wisdom, is the accordant praise of the good people and the untainted vote of those who judge about excellent virtue. [...] For, ambrosia is virtue and nectar the glory itself; whoever has tasted it (as the ancients thought it out) becomes a god, that is, free of mortality and infelicity. Hence, to say the truth, the highest felicity of humans, the *summum bonum*, is to have tasted perfect glory.<sup>27</sup>

To this follows a quotation of the popular verse of Vergil: “Felix qui potuit

26 Cardano (1663, vol. 1, 510a; 2008, bk. 2, 62f): “[...] satis est manifestum, scilicet sapienti gloriam ac vitam potiore esse generis propagatione, tum quod gloria ipsa animi imago est, filius corporis; at corpus aut hominis nulla pars est, ut Socrates dicebat, aut longe vilior saltem quam animus, tum quod difficillime haec continuatio generis servari potest, nec nostrum est aut in nobis, ut eam post mortem tueri possimus, tum quod plurimos sapientes a suscipienda prole abstinuisse videamus, vix vero unum aut duos a gloriae ac cupiditate vitae, tum vero, quod vicariam habet rationem propagatio vel in fratribus vel in propinquis vel in adoptione, vita nec gloria non habent.” (I added a comma after “adoptione”).

27 Cardano (1663, vol. 1, 529b; 2008, bk. 2, 125): “At vero summa est, cum multitudo diligit et fidem habet, cumque cum admiratione nos honore dignos putat; et haec quidem sapientiae humanae praemium est et in morte finitur. Verum solida, ac quae ex naturali sapientia exoritur gloria est consentiens laus bonorum et incorrupta vox bene iudicantium de eccellente virtute. [...] Est enim ambrosia virtus ac nectar gloria ipsa, quam cum quis gustaverit, ut antequam finxerunt, Deus fit, hoc est, mortalitatis et infoelicitatis expers. Ergo ut verum fatear, summa hominis foelicitas, summum bonum est perfectam gloriam degustasse.”

rerum cognoscere causas ...” (Georg. II 490), which dramatically qualifies the preceding praise of immortal glory. Whereas Cardano appears to describe degrees of glory and happiness, from the temporary reputation via the applause from the experts up to heavenly and immortal glory, he then suddenly turns the perspective, as we have noticed on more than one occasion, and points out that felicity comes from the scrutiny of nature, which is the means to overcome the terrors of earthly life. While catering to the expectations of a Christian audience that aspires to the eternal and transcendent, Cardano makes it clear that human wisdom characterizes and coordinates the many ways in which humans are unstable, imperfect, conditioned, and self-determined.

The main purpose of the entire text is to assess, describe, and make manageable the fact that humans are not divine and have to fend for themselves so that God remains the origin and the ideal, but the focus remains on earth. An interesting example is Cardano’s reference to negative theology. It is no wonder that God’s name is ineffable, he says, and the reason is that in every language there is something that cannot be expressed in others, especially what is not needed in those. The background is the diversity of languages, which is due to the diversity of understanding that varies from people to people as it does between individuals. Languages, in Cardano’s exposition, are testimony to the commonality and difference among persons and peoples and to the possibility of transition from one to the other (Cardano 1663, vol. 1,

528b; 2008, bk. 2, 120f). The idea that all languages might have their origin in one, possibly sacred, language is alien to him. In the context of our question about the validity of religious ideas for secularism in Cardano, this is a case in point. Among those subjects that do not require any language are, indeed, the divine and supercelestial subjects, of which God’s name is the highest, which is evident in Hebrew, where the misuse of the names is punishable.<sup>28</sup> From the ban on pronouncing the name of God, Cardano infers that this is not constitutive of language. If we ask about the concept of God, linguistic or not, we may conclude that it comes from people who form their theological language, together with the idea of a god in general. But they don’t have to be religious. I picked this example from the context of the book that deals with education; it is here that Cardano theorizes about language and God. No reader will be surprised when the author assumes that princes promote religion, “not only because thus people are held in the state of admiration, but also because God wishes to be venerated in any way; and even if He would not wish that, it still would be owed to Him.”<sup>29</sup> His evidence for this Machiavellian understanding of

28 Cardano (1663, vol. 1, 528b; 2008, bk. 2, 121): “Ergo nimirum est Dei nomen ineffabile esse; cum enim singulis linguis aliquid sit quod per illas exprimi non potest, multa etiam quae nullis esse necesse est.”

29 Cardano (1663, vol. 1, 540a; 2008, lib. 3, 161): “At vero circa religionis cultum princeps sollicitus esse debet, non solum quod ex hoc populus in admiratione contineatur, sed quia ipse Deus quoquo modo coli vult se; et si adhuc hoc non desideraret, debetur hoc

religion is the cathedral of Siena, which is decorated throughout, which testifies to the *sapientia* of the citizens. This sort of wisdom trumps piety.

The book *On Wisdom* is designed to discuss three sorts of wisdom: divine, natural, and human, to which he adds books on ‘demonic’ wisdom and measures against errors. All kinds of wisdom are based on the struggle of humans, the mutual interaction, and the time dimension of human experience (Cardano 1663, vol. 1, 496a; 2008, bk. 1, 19). Later in the book we learn that divine wisdom comes from virtue and trust (*a virtute et fide*), natural wisdom through training and endeavor, and human wisdom is gained through practice and from orators and poets.<sup>30</sup>

“Anyone expecting to find a clear and organized train of thought in these writings will be disappointed. [...] even his philosophical writings are, as it were, biographical in nature” (Fierz 1983, 57). One peculiarity of the discourse about wisdom should be mentioned: the most frequently used conjunctive word is “ergo.” *Ergo*, usually rendered as ‘therefore,’ can have a logical meaning as in Descartes’ famous “cogito ergo sum,” where it indicates that being is logically and factually implied in the act of thinking. But in Cardano, the *ergo* is always the introduction to statements that draw lessons from stories,

quotations, and anecdotes. These intertextual references make up the bulk of the text, and the reader has to find the next occurrence of ‘therefore’ in order to get the message intended by the reference. Whereas humanist narratives suggested their instruction through the composition of the scenes, and whereas scholastic philosophers would state their definitions, premises, and inferences, Cardano learns from instances. Earlier I mentioned the frequent use of medical examples. Not only is there no difference between the spiritual and the physical, there is also no difference between hearsay, poetry, history, observation, and authorial teaching. Everything is displayed on the one plane of human experience. Be it the worship of God, speculation about the One, or the pursuit of wisdom, Cardano’s humanity is in constant struggle and has to find its way through trial and error. His logic is strictly inductive, if not anecdotal.

### — DE SUBTILITATE: DIVINE ATTRIBUTES IN HUMANS

At this point it may help to have a look into Cardano’s most famous work, the *De subtilitate*, an encyclopedia (Schütze 2000, 34) of natural studies. It is clear from the first page that ‘subtlety’ is shorthand both for nature as the object of study, which in and of itself is subtle in the sense of finely structured, and for the intellectual prowess of differentiated observation and assessment needed to understand nature: “Subtlety is a kind of means, by which in difficult ways sensual objects are comprehended with senses and intelligible objects by the intellect.”

tamen illi.” On Machiavelli and Cardano see ‘Introduzione’ in Cardano (2008, XXIV–XXVII).

30 Cardano (1663, vol. 1, 553b; 2008, bk. 3, 200): “Ergo ut a virtute ac fide, divina, a disciplina et studio, naturalis, sic ab exercitatione et rhetoribus ac poetis humana sapientia habetur.”

The term subtlety marks the meeting point of the reality that is extremely differentiated and volatile (examples mentioned are thin air, human hair, blood, and gold) with the inventiveness of the human intellect that understands these with its proper methods.<sup>31</sup> With this in mind, we can only expect in the whole work varying attempts at proving the hypothetical identity of reality and understanding. Already in the opening paragraph, Cardano rejects the authority of oracles, because he defines them as something that has to be trusted without proof. Even more, oracles were no oracles if they were not ambiguous (Cardano 1663, vol. 3, lib. 1, 357a; cf. lib. 15, 588b; lib. 19, 657b). This means drawing a clear line between his method of science and anything based on non-scientific, even on non-empirical authority.

To be sure, all substances are subtle in this usage (regarding bodies, a term that is frequently used is *tenuis* and its derivatives), and that includes incorporeal substances, of which the highest instantiation – being the only one that is independent from other substances – is God (Cardano 1663, vol. 3, lib 1, 357b; 2004, lib. 1, 55). Cardano hastens to promise at the beginning to discuss God at the end of the work, and so we find it in the concluding book 21. Again we are in for a surprise as the bulk of that

book deals with further natural features, beginning with weather phenomena as part of the whole of nature and of “hidden principles” (Cardano 1663, vol. 3, lib. 21, 663a). He considers procreation and extension in nature as a means to achieve infinity where factual infinity is impossible, so that the more perfect a thing is, the less it regenerates (Cardano 1663, vol. 3, lib. 21, 669a-b). Then follow speculations about time and eternity, which then leads to the concept of God as perfect and, hence, eternal and outside of time. But the discourse returns to nature: the distinction of the impacts of change (body on body), influence (incorporeal on body), and *afflatus* (inspiration). Now is the point to speak about God, because “no order in the universe can persist without a leading guide.”<sup>32</sup> God, in this view, does not just exist as an absolute being but is involved in the “construction” (*constructio*) of the world and in the conscience and order of societies, and His omniscience is an argument against fate and chance, as well as against demonic magic. Therefore, Cardano observes, from admiration of nature one can move over to imitating it, for example from observing a multicolored butterfly to reconstructing one with artfulness and sagacity, as happened recently. The highest artisan (*opifex*) takes care of the most minute beauties, but without practical skill (*sine arte*).

So you see how the image of the universe shines in these [details]. For

31 Cardano (1663, vol. 3, lib 1, 357a; 2004, lib. 1, 53): “Est autem subtilitas, ratio quaedam, qua sensibilia a sensibus, intelligibilia ab intellectu, difficile comprehenduntur.” The examples of air etc. lib. 2, 383a / 166; intellectual capacities lib. 1, 357a. / 53 – The Milano 2004 edition covers only books 1-7; the rest will be quoted from the 1663 edition.

32 Cardano (1663, vol. 3, lib. 21, 669b–670a): “Nam neque ordo Universi constare posset, nullo rectore gubernante.”



as the many come from one, from equals the unequal, from accidental the skillful, from orderless the ordinate – thus from the one God, the highest and stable artisan, emerge so many things with reliable equality.<sup>33</sup>

If we are still wondering why Cardano so constantly veers away from his aim (defining God in nature) by talking about nature – here is the reason: any description, investigation, and understanding of natural objects contributes to shining light on the “image of the universe” and from there on the Creator. And so again he narrates examples from his research. After that, Cardano raises the problem of theodicy, not in the form of why there is evil at all, but why bad things are faster and more frequent and efficient than the good ones. Similarly to his response in *De uno*, mentioned above, the answer is that the shortcomings facilitate perfection, which in human life is pleasure out of suffering and perpetuity of the creation (Cardano 1663, vol. 3, lib. 21, 671a-b). That this argument is hard to swallow is obvious to Cardano, and therefore after theodicy (which is inscrutable) he again has recourse to negative theology. Since God is beyond human intellect, if “you ask me what He is; if I knew I would be God; for nobody knows God.”<sup>34</sup>

33 Cardano (1663, vol. 3, lib. 21, 670b): “Ergo vides ut in his imago reluceat universi: ut enim multa ex uno, et ex aequali inaequalia, ex fortuitis artificiosa, ex inordinatis ordinata: ita ex uno Deo omnium opifice summo et constanti, facili quadam aequalitate tam multa prodeunt.”

34 Cardano (1663, vol. 3, lib. 21, 671b): “Deus tamen non est intellectus, sed aliquid intellectu longe melius, beatius, potentius,

In the history of theology, there have been more elaborate discussions of the unintelligibility of the divine. But Cardano is not even a lay theologian. He pays lip service to the expectations of his Christian readers and relegates God to the realm of shoulder shrugging. All this inevitably comes with a dose of affected modesty: I’m just a scientist, and my research is service to the Creator as far as it goes. So his *De subtilitate* concludes with a thanksgiving to the one who directed him “like a worm in the shadow of science” and to whom everything that is correct in this book is owed. And since God does not need anything and nothing can be added to His creation, gratitude for all His benefits is all the author can offer.<sup>35</sup> The ‘worm’ is quite content to dwell in the shady area of natural research, where the divine – if not coextensive with the laws of nature – does not play any role. With a number of rhetorical gestures, Cardano manages to secularize the study of nature and to deliver it effectively into the hands of humans. Once the divine power of construing the world is severed from religion and theology, the meta-scientific

digniusque. Quaeris quid ergo sit? Si scirem, Deus essem: nam Deum nemo novit.”

35 Cardano (1663, vol. 3, lib. 21, 672a-b): “[Deus] qui me velut terrae vermem in umbra scientiae direxisti, cui quicquid veri hic scriptum est, debeo: errores, ambitio mea, temeritasque ac celeritas pepererunt; ignosce mihi [...]. Cum vero tu nullis indigeas, nec quicquam addere possim, quod coeli, coelorumque potestates, quod materia, terraque faciunt, universaque ipsius mundi partes, gratias perpetuas pro immensis erga me beneficiis ago.” As is well known, Cardano was accused of heresy, but this is not the place to pursue that. See Regier (2019, 672a-b); Regier (2021).

question can be formulated, namely, the coordination, if not identity, of the laws that make up the world and the structure of human intelligence and understanding. Subtlety was the shorthand for this question, and the answer to that lies in the nature of human intelligence, an intelligence that is not pictured as a hypostasis of the absolute intellect but as a tool at the disposal of humans whose ‘wisdom’ is dealing with the world and with humanity itself.

As opposed to the celebrated humanist ‘dignity and excellence of man’

that assures the readers that the double nature of humans as divine and animal empowers them to elevate themselves to the status of angels while exploiting their dominance of nature, for Cardano the divine power of wisdom takes effect only as the capability and task of humans to secure their position, to make sense, and to make conjectures concerning the principles of human agency. Self-consciousness, self-perpetuation, dominance, power, order, and intelligence – all these truly divine attributes apply to humans, are valid in the human world – and remain there.

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