Origin of Virtuality

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1. Introduction[1]

There is no doubt that the adjective "virtual" has become the epithet that accompanies great technological advances these days. It is not unusual for a reader nowadays to look up a quote in a book from a virtual library, for a teacher to grade his students on a virtual campus or for a customer to check his bank statement through his virtual bank. The adjective "virtual" has become a modern reference which can be found more and more frequently accompanying a new product that seeks its place in the market. The virtual has become fashionable.

Although it is popular, the origin of the term presents doubts. As a first step towards clearing up any confusion, you must have read that "virtual" comes from the Latin *uirtualis* and that this Latin adjective itself comes from the noun *uirtus*, which means "virtue".[2] This approach, although not incorrect, is somewhat inaccurate and leaves some unresolved questions up in the air.

If, as a curious reader, you were to look a little further into the origin of the term, you might consult some Latin dictionaries in order to find the Latin adjective *uirtualis*. To your surprise, you will realise that the term does not appear in the kind of Latin dictionaries you may have used during your high school or university years. If you were to persist in your search, you could consult more specialised dictionaries of the sort that Latinists would work with, like F. Gaffiot's Hachette dictionary, or the large *Oxford Latin Dictionary*. Yet again, you will acknowledge that the term *uirtualis* does not appear. Puzzled and desperate – you might conclude that you need resort to the large *Du Cange* dictionary of Medieval Latin. Nevertheless, to your amazement and desperation, you will notice that, even in that dictionary, the word *uirtualis* still does not appear.

[2] Thus, for instance, Wolfgang Welsch in his article "Virtual anyway?" attributes the origin of *uirtualis* to its Low Latin usage meaning "virtuous, correct": "The term *uirtualis* already existed in Low Latin; it derives from the older Latin adjective *uirtuosus* (skilled) and designates fit or apt. The Low Latin *virtualis* was later adopted in French and English." You can consult Wolfgang Welsh's article virtually, of course, at the following Internet address: http://sammelpunkt.philo.at:8080/196/1/virtual_anyway.htm

However, if *uirtualis* comes from *uirtus*, the semantic relationship between virtue and virtual remains unclear. Generally, "virtue" is understood as the disposition to do good deeds, contrary to vice and sin. Evidently, this meaning has little or nothing to do with what is understood by "virtual" these days.

The aim of this work is to shed some light on these questions that have not been clearly answered yet. In order to do so, sources of Medieval and Classic authors have been consulted. In doing so, it is necessary to refer constantly and directly to the texts of these authors, keeping to their textual words and avoiding the interpretations of others. For that reason, I hope that the explanations provided here will help to ease the difficulty of reading quotes of Classical and Medieval authors in their original language.

For this same reason, this is not intended to be a detailed study of every use of *uirtus*, *uirtualis* and *uirtual* throughout history because this would greatly exceed the present work's purpose and capacity. Although this work could serve as the starting point for a more exhaustive study, each term and author within each period deserves a more detailed study.

The first references to "virtuality" and "virtual" go back to approximately one thousand years ago, when these terms were employed in Scholastic language. The first references to "virtuality" are usually attributed to Thomas Aquinas.[3] Indeed, it is in the Medieval Latin texts of Aquinas and other Scholastics that the terms first appear. "Virtuality" comes from the Latin *uirtualitas,* while "virtual" has its origin in the Latin *uirtualis*. Today we can say that something happens "virtually" because in Scholastic Latin it was thought that something could occur *uirtualiter*.[4] These three terms (the adjective *uirtualis*, the noun

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[3] Thus, for example, Wolfgang Welsch, *ibid*., attributes to Thomas Aquinas the creation of the term to translate and clarify the du/namij of Aristotle, concluding a higher passivity in the Aristotelian concept than in Thomas Aquinas': "While Aristotle spoke of dynamis, which was literally translated as potency, Thomas Aquinas (1225-74), when renewing Aristotelian ontology in the High Middle Ages, introduced the term virtual as a synonym for potential. From then on, it became a familiar substitute for potential in philosophical language. However, there was also a slight difference between the old and the new term. Virtual accentuated the potential's driving force to become actual, it was equivalent to emanating from the force of a thing, designating an active potency, not just a passive one".

[4] Despite referring to Medieval Latin terms, we have preferred to always employ the proper spellings from Classical Latin to normalize them with the quotes from the Classical Latin authors that appear here. The reader must take into account that the Latin terms *uirtualiter*, *uirtualitas* or *uirtualis* usually appear in Medieval texts transcribed as *virtualiter*, *virtualitas* and *virtualis*. In capitals, the initial letter will always appear with a *V* shape (*Virtualis, Virtus,* etc). On several occasions, a Latin term inserted in an English translation will not be translated. The purpose of this is to avoid the risk of modifying its original meaning. All translations from Latin and Greek texts have been done by the author of this study.

uirtualítas and the adverb *uirtualiter*), are derived from the Latin noun *uirtus*. It is a noun that has a complex meaning with very diverse uses, which has allowed the derivation of new terms over the centuries. As we intend to trace a history of these Latin terms and their uses and meanings, the starting point must be the Latin term *uirtus*.

2. *Virtus* in Classical Rome

Virtus is a noun derived from *uir*, "male", "man", used in a masculine sense. This term is opposed to the generic *homo*, which refers to the human species without distinction of gender. There are known difficulties of ambiguity in the English term "man", which may refer to either species or the masculine gender, which appeared after Classical Latin. However, *uir* refers without a doubt, to the male human.

The derivation *uir > uirtus* follows the same etymology as *iuuenis > iuuentus* or *senex > senectus*.[5] Therefore, if *iuuentus* ("youth") or *senectus* ("old age") are the qualities of being young or old, *uirtus* will be the quality of being *uir* ("male").

Nowadays, it is not easy to relate the terms virtue, virtual or virile as terms that share an etymology (*uir*) because their common origin has faded away completely. On the other hand, the relationship between the original Latin terms is perfectly clear, and the classical authors demonstrate that they were aware of the fact that *uirtus* derived from *uir*.

In a well-known speech (it begins *quousque tandem abutere Catilina...*), Cicero rails against Catiline, complaining about the lack of virility in the senators of his time. He considers them faint-hearted and incapable of facing an imminent public danger. Cicero accentuates the weakness of his comrades in the Senate by comparing them to old Roman citizens who ennobled their country in the mythical olden times. Thus, when he wants to show Republican glories of yesteryear, he describes those times as a period of prestige and bravery: "*fuit ista quondam in hac re publica uirtus, ut uiri fortes acrioribus supliciis ciuem perniciosum quam acerbissimum hostem coercerent.*"[6] In this period men punished ill-behaved citizens more severely than their enemies. According to Cicero, *uirtus* was displayed

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[5] *Vid*. Ernout-Meillet *Dictionnaire Etymologique de la Langue Latine* Paris, 1932.
[6] Cicero *Catilinariae* 1,3.

by the *uiri*. Here, Cicero clearly plays with the two terms: there was great *uirtus* because there were real men, *uiri fortes*.

In another passage Cicero himself gives the etymology of the word: "*appellata est enim ex uiro uirtus, uiri autem propria maxime est fortitudo*".[7] Meaning *uirtus* is called such from *uir* because the main male feature is *fortitudo* ("force").

In the first piece which reflects upon the Latin language, Varro explains that *uirtus* comes from *uirilitas* ("virility") and therefore is derived from *uir*: "*uirtus, ut Viritus, a uirilitate*".[8]

The first meaning of *uirtus*, as we see, refers to the quality of being male or the excellence of masculinity within the Old World context. In a mainly male and bellicose world as was Ancient Rome, it was fairly common to find this term in war-like narrations to refer to military worth. It was interpreted as the main – or at least the most admired – attribute of masculinity.

Let us look at a few examples.

Cornelius Nepos dedicated his work *De uiris illustribus* to describe, as its title indicates, the life of great men in history. Among them, there are some prominent generals known for their military exploits. In one of them, Miltiades is well known for being the hero in the battle of Marathon, in which the Athenians defeated the powerful Persian army. Nepos presents the greatness of Miltiades' character with the account of a battle in which Miltiades beat the enemies thanks to "*uirtute militum*". Immediately afterwards, he behaved with equanimity and justice: "*nam cum uirtute militum deuicisset hostium exercitus, summa aequitate res constituit atque ipse ibidem manere decreuit*". In this quote, Nepos said that Miltiades defeated his enemies thanks to the warlike courage of his soldiers and that he didn't abuse their military superiority.[9] We can see how *uirtus* means military worth, warlike force, and strength of character, that is not exempt from a certain aggressiveness that could have been used to commit unfair deeds.

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[7] Cicero *Tusculanae* 2,43.
[8] Marcus Terentius Varro *De lingua Latina* 5,73.
[9] Cornelius Nepos *Miltiades* 2.2.

This also occurs when Livy puts words of encouragement in the mouth of a general for his soldiers. He says that, thanks to their courage, they have seized a public square and they will find an exit. In this context, the term employed to designate this military valor is *uirtus*: "*uirtute cepistis locum, uirtute hinc oportet euadatis*."[10] The real meaning of *uirtus* is a good personal disposition for combat, as well as courage and bravery.

Apart from the first meaning, *uirtus* was interpreted in Classical Rome to have an abstract meaning not strictly connected to warlike courage but also to superior male attributes. It refers not only to warlike courage, but also to male moral excellence applied to other aspects which were not exclusively military. This meaning is perhaps the most approximate to the English "virtue".

In this sense, when Cicero designates Cato to be the first above all in *uirtus*, he does not refer to his warlike courage, but rather to his moral value: "*omnium gentium uirtute princeps*".[11]

Cicero himself provides a description of what is meant by *uirtus* and he connects it with honesty: "*uirtus est animi habitus naturae modo atque rationi consentaneus*", thus *uirtus* is a habit of the spirit, *raison d'être* of nature.[12] Therefore, *uirtus* is not only useful to come out victorious in war, but also to live justly, according to the rules of nature. For that reason, Cicero, when referring to the good sought by the Stoics, defines it briefly as follows: "*quod honestum, quod rectum, quod decorum appellamus, quod idem interdum uirtutis nomine amplectimur*". In other words it is what we call honest, correct, fair, everything implied by the word *uirtus*.[13] Therefore, *uirtus* must be interpreted as the presence of ethical and moral values. Thus, when someone so un-warlike as Seneca considers that he cannot be happy without *uirtus*, he does not refer to any kind of warlike bravery but to the moral values needed to live correctly: "*ego sine uirtute nego beatam uitam posse constare*."[14] We can be sure that it wasn't Seneca's intention to include aggressiveness or violence in his statement.

[10] Titus Livius *Ab urbe condita* 7,35.
[11] Cicero *Philippicae* 13,30.
[12] Cicero *De inuentione* 2,159.
[13] Cicero *Tusculanae* 2,30.
[14] Seneca *De beneficiis* 4,2.

In this sense, the use of *uirtus* is extended, as it refers not only to men but also to women, even though it is etymologically contradictory. Quintilian already plays with this contradiction and considers that *uirtus* is more admirable – but equally possible – in a woman than in a man: "*admirabilior in femina quam in uiro uirtus.*"[15]

This author defines the concept of *uirtus* by the negation of its opposite. If the antonym of the first meaning of *uirtus* is cowardlyness, the opposite of *uirtus* as a moral value is a moral defect or *uitium*. Therefore, Quintilian, from this opposition, defines *uirtus* as the absence of defects: "*uirtus est fuga uitiorum.*"[16]

Next we see an abridged passage of one of Lucilius' satires in which an ample description is given of the author's interpretation of *uirtus*. As we will see, it refers to the second meaning of moral excellence mentioned above:

> "*uirtus*, Albinus, is to be able to pay the debt to people we live with for the things that we owe in life;
> *uirtus* is to know what it is meaningful for the human being;
> *uirtus* is to know what is correct, useful and honest, what is benign, perverse, useless, embarrassing, dishonest for the human being;
> *uirtus* is to know the aim and the way of achieving something;
> *uirtus* is to be able to assess the value of wealth;
> *uirtus* is to assign recognition according to worth;
> it is to be a rival and an enemy of ill-behaved people or bad customs;
> and, as well, to be the defender of good people and customs;
> it is to value and appreciate them, to be a friend to them;
> it is to focus firstly on the needs of the country, secondly on those of the parents and thirdly on oneself."[17]

Next to these two meanings a third value of *uirtus* can be stressed.

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[15] Quintilianus *Institutio oratoria* 5,11,10.

[16] Quintilianus *Institutio oratoria* 9,3,10.

[17] Lucilius *Satirae* 1326-1338:

> Virtus, Albine, est pretium persoluere rerum
> quis in uersamur, quis uiuimus rebus potesse;
> uirtus est homini scire id quod quaeque habeat res
> uirtus, scire homini rectum, utile, quid sit, honestum,
> quae bona, quae mala item, quid inutile, turpe, inhonestum;
> uirtus quaerendae finem rei scire modumque;
> uirtus diuitiis pretium persoluere posse;
> uirtus id dare quod re ipsa debetur honori;
> hostem esse atque inimicum hominum morumque malorum,
> contra defensorem hominum morumque bonorum,
> hos magni facere, his bene uelle, his uiuere amicum,
> commoda praeterea patriai prima putare,
> deinde parentum, tertia iam postremaque nostra

Due to a false etymology, Latin authors associated the term *uir* ("male") with the term *uis* ("force, violence"). They are very similar in origin and form, and therefore the authors understood not only that force was the main masculine feature, but also that the terms were related. We have already seen that Cicero relates masculinity to force ("*uiri autem propria maxime est fortitudo*").[18] Although some nuances differentiate the false etymology and the use of one of its meanings changes the term *uirtus* into the synonym of *uis* ("force"). The term *uirtus* is not usually negative, but *uis* can and usually is. Its meaning implies the violence in situations in which it does not matter whether the cause is fair or not. A good example of this meaning is the verb *uiolare* ("violate"), which is quite explicit.

Lactantius, Christian author of the 3rd century A.D., relates the three terms as derivatives of the same etymon: "*uir itaque nominatus est, quod maior in eo uis est, quam in foemina; et hinc uirtus nomen accepit*". He understands that the male (*uir*) received this name because he has more force (*uis*) than the female; hence the origin of the noun *uirtus*.[19] The relationship between the male, force and virtue is therefore established.

A later author, such as Isidore of Seville, also defines *uirtus* as a derivative of *uis* in his Etymologies: "*uirtus est inmensitas uirium in labore et pondere corporis uocata*".[20] That is to say that *uirtus* is the accumulation of forces (*uirium*) when it refers to effort and burden.

From the moment in which *uirtus* is interpreted as force, the term can be applied to animals. Horace attributes it to young bulls and colts as a feature inherited from their parents: "*est in iuuencis, est in equis patrum uirtus.*"[21] Cicero himself denounces the abuse of the term *uirtus* to refer to beings such as a tree or a horse, thus it must have been quite frequent to use this term in reference to animals or plants: "*nec arboris nec equi uirtus quae dicitur, in quo abutimur nomine.*"[22] In short, *uirtus* also means force or vigour, even of animals or plants.

Generally speaking, it could be summed up that *uirtus* is a term derived from *uir*, "male", and that it refers to masculinity understood as warlike courage or as a moral value. In

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[18] Cicero *Tusculanae* 2,43.
[19] Lactantius *De opificio Dei* 12,16.
[20] Isidorus *Etymologiae* 18,22.
[21] Horace *Carmina* 4,4.
[22] Cicero *De legibus* 1,45.

its relationship with *uis*, it refers equally to the force of both genders or to physical force in general.

Here, the explanations about the meaning of *uirtus* in Classical Latin come to an end.[23]

The term *uirtus* didn't produce any derivatives in Classical Latin.

3. *Virtus* and *uirilitas*

When creating an adjective refering to *uirtus*, the classical authors were aware that the noun *uirtus* itself was already a derivative of *uir*. Therefore, if a derived adjective were desired, it had to come from the original noun *uir*. Consequently, in Classical Latin one cannot find any direct derivative of *uirtus*, but rather of *uir*. Everything related to *uir* could be qualified under the adjective *uirilis*, or could have the feature of *uirilitas*. *Virilitas* is, therefore, masculinity understood as a natural feature, without the psychological or physical attributes implied by *uirtus*.

Virilitas was employed as a technical term referring to the male gender. For this reason, *uirilis* was used to designate a male adult's objects, (those of a "husband" in opposition to the "wife" or "child"). The best known example is the *toga uirilis*, a "manly robe", worn by male Roman citizens during their adulthood.

The adjective *uirilis* can also be used to refer to physical masculine features. Thus, the noun *uirilia*, designates the male sexual organ. And when Apuleius mentions a sea animal which he defines as *uirile marinum,* he calls it so because of its phallic form.[24]

There are some examples of the use of the adjective *uirilis* which show some ethical and moral features. In these cases, *uirilis* must be understood as related to *uirtus*, not to *uirilitas*. Such cases are limited to those in which the adjective *uirilis* qualifies a noun referring to psychological features like *animus*, *ratio* or *sententia*. Nevertheless, some

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[23] For more information about uirtus in Classical Rome, consult, among others, Hamblenne P. "Cura ut uir sis... ou une uirtus peu morale" *Latomus* 43, 1984 pp. 369-388; Werner Eisenhut *Virtus romana; ihre Stellung im römischen Wertsystem*, Munich, 1973; and Myles McDonnell *Roman Manliness: "Virtus" and the Roman Republic* Cambridge University Press 2006.

[24] Apuleius *De magia* 33,6.

examples of the use of *uirilitas* show a sense similar to *uirtus*. Valerius Maximus, who praised Roman virtues of the 1st century A.D., attributes to the Romans the fame of their *uirilitas*: "*uirilitas propria Romanae gentis nota esset.*"[25] Even so, such examples are neither very clear nor very frequent. Perhaps the term employed by Valerius Maximus should be interpreted as referring to the "maturity" of the Romans rather than to their "virility". Generally, it could be said that *uirilitas* was a mere technical term that never reached the semantic fields that *uirtus* did. We could distinguish *uirtus* and *uirilitas* in Classical Latin by understanding that *uirilitas* is given by nature, by gender and age and is not chosen. On the other hand, *uirtus* depends on the particular features of each person and his or her own will.

4. *Virtus* and *uirtuositas*

As mentioned above, the noun *uirtus* by any of its definitions didn't produce any derivatives in Classical Latin. It wasn't until the period of Late and Medieval Latin, that new concepts were created in the Latin language. The first of them was already produced in Late Latin, which allowed the creation of a new adjective, this time derived from *uirtus*: it is the adjective *uirtuosus*.

Virtuositas is a concept derived from the second definition of *uirtus*, previously mentioned as the moral quality attributed to the male, but also applicable to human beings in general. Therefore, *uirtuositas* is the possession of moral quality rather than courage or force.

The creation of this new term doesn't seem to be a mere morphological derivative. If *uirtuositas* and *uirtus* coexist it is because the concepts, although similar, are not synonyms. A first obvious difference is that *uirtuositas* doesn't share the polysemy of *uirtus*. In other words, the purpose of *uirtuositas* is to specify only one type of *uirtus*: the one referring to moral value. There is also another more important reason, which is the new concept of *uirtus* is strongly influenced by Christianity. *Virtuositas* belongs to the Christian concept of *uirtus*.

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[25] Valerius Maximus *Factorum et dictorum memorabilium* 4,2.

The effect that Christianity has had on the meaning of many concepts from Classical Latin is well known. Nowadays, the effect of transforming and adapting the concepts to new Christian values is observed very clearly in many etymologies of current romance languages. If in Classical Latin we translate *fides* as "fidelity", "honour", or as keeping one's word, the Christian influence has adapted it semantically to produce the Spanish "fe" or Italian "fede", with has a religious sense.

Something quite similar occurs with *uirtus*. In Classical Latin it is designated to moral value or integrity, but Christianity converted it into a Christian virtue. Precisely due to the ambiguity of the concept of *uirtus,* the use of the plural increases to clarify the new Christian values. If in Pagan Rome *uirtus* was generally one, ambiguous but singular, in Christian Rome the *uirtutes* will be plural.

Despite the semantic change, the relationship between *uirtus*, *uir* and *uirtuositas* remained clear throughout the Middle Ages.

When Lucius II, pope in the middle of the XIIth century, denounced the obvious signs of the imminent arrival of the Antichrist, he considered the lack of *uirtutes* and *uirtuosi* as clear proof: "*egestas siquidem uirtutum, et uirtuosorum hominum*."[26] That is to say, that the *uirtutes* and the *uirtuosi* were one and the same.

Bernold of Constance, Benedictine of the XIth century, upon narrating the court intrigues and the rivalries among Franc kings, considers that virtuous citizens are the object of the jealousy of the depraved: "*et quia prope modum naturale est, semper ciues uitiosos uirtuosis ciuibus inuidere*."[27]

Equally, in the XIIth century, abbot Gottfried of Admont showed that *uirtutes* and virtuous acts are the same thing. He said that temptation comes from "*de uirtutibus et uirtuosis actibus*" and that one must recognize oneself as poor "*in uirtutibus*" and weak "*in uirtuosis iustitiae actibus*".[28]

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[26] Lucius II *Epistolae et priuilegia* 105. *PL* vol. 179 [936a].
[27] Bertholdus Constantiensis *Annales* 1077. *PL* vol. 147 [389b].
[28] Godefridus Admontensis *Homiliae dominicales 12. In dominicam 4 adventus prima. PL* vol. 174 [83c].

If *uirtus* is the antonym of *uitium*, *uirtuosus* will be the opposite of *uitiosus*. For this reason Gottfried of Admont considered that divine graces have the capacity of converting a sinful and vicious man into someone just and virtuous: "*dona ista sunt diuersa gratiarum munera, quae omnipotens Dominus suis tribuit fidelibus dum hominem peccatorem et uitiosum, hominem facit iustum et uirtuosum.*"[29] If the opposite of a sinner is a just man, the opposite of *uitiosus* is *uirtuosus*.

Virtuosus, therefore, is one who has no moral defects (*uitia*), and who behaves with a sense of justice. It is not strange to find the adjective *uirtuosus* referring to women.

In a description about how a bishop must treat the nuns, it is explained that the female gender is weak and fragile although it has got a strong character. Therefore, if not enough attention is given to women, it is easy for them to turn their backs to divine purposes. As Eve demonstrated, "*debilis est nimium sexus quem geritis, ac fragilis, ac mobilis, si suo relinquatur arbitrio: et si uirtuosus sit animus, tamen nisi regatur, nisi dirigatur continue, cito deiicitur a sancto proposito; hoc in Eua scitis expertae.*"[30] Note that female rebellious behaviour is called *animus uirtuosus*, which shows that this adjective could perfectly describe women. It is important to acknowledge that what is virtuous in this text is a negative trait because it is applied to women. Perhaps the problem lies in using an adjective of masculine origin in reference to the female gender. This happens because, despite the new meaning of *uirtuosus*, *uirtus* has always been linked to masculinity.

Gottfried of Admont understands that there is nothing feminine in the nature of Jesus and that only he, Jesus, deserves complete consideration and the name of *uir*. He only accepted *uirile et uirtuosum* in his work, his words and his thinking: "*praeter ipsum solum nunquam homo super terram uiri nomine in ueritate potuit uel poterit appellari, cum omnes homines sicut in iniquitatibus concepti et geniti, nonnunquam per peccati pollutionem reddantur effeminati. Ipse autem Dominus noster Iesus Christus iure uir unus dici debuit, quia solus in hoc mundo inter homines ita conuersari potuit, quod nunquam cogitatione,*

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[29] Godefridus Admontensis *Homiliae festivales. Homilia 49 In festuam Ascensionis Domini secunda*. *PL* vol. 174 [871a].
[30] *Regula Monachorum* XVII *De iurisdictione episcopi in sororores PL* vol. 30 [0406b].

uerbo uel opere aliquid admisit, nisi quod uirile et uirtuosum fuit."[31] Thus, the relationship between *uir*, *uirtus* and *uirtuositas*, is obviously present in the figure of Jesus.

This old relationship is also observed in a passage of Radulfus Ardens, who was especially interested in questions of masculinity. He described *beatus* as someone who is *uirile* and *uirtuosus*: "*Quis est beatus? uir scilicet qui non est mollis nec effeminatus, sed potius uirilis et uirtuosus .*"[32] It should be noted that the opposites of *mollis* ("soft") and *effeminatus* ("effeminate") are *uirilis* and *uirtuosus*. What is masculine implies force and virtue, as opposed to feminine softness.

The same author, in another passage, describes some characteristics of the Lamb of God. Ardens stresses the fact that the lamb is "male" (*masculus*), and explains this attribute as *uirilis et uirtuosus*. These characteristics consist of being perfect in *uirtus* and *sapientia*: "*qui fuit et masculus, id est uirilis et uirtuosus, uirtute et sapientia perfectus.*"[33] Once again, virility, virtue and virtuosity are related.

Still, *uirtuosus* can be interpreted exceptionally as a derivative of *uirtus* in the primitive sense of warlike courage. Orderic Vitalis described as *uirtuosi* some soldiers that accompanied Raymond of Poitiers in his campaigns against the infidels. Obviously, *uirtuosi* can refer to the soldiers' moral values, but seems more likely that the term refers to brave soldiers, not virtuous: "*Et Raimundus Antiochiae princeps, aliique uirtuosi milites, necessitate fratrum comperta, illis subuenire festinauerunt.*"[34]

Another example, also meaning "brave", of *uirtuosus*, also exceptional, can be found in the work of Suger of Saint Denis. In his chronicle of the King Louis VI, he narrates that the monarch was affected by terrible diarrhea that hardly let him stay on his feet. For this reason, doctors prescribed him some potions and powders that were so bitter and nasty, that only strong and healthy persons could hardly have tolerated them (*incolumes et uirtuosi*). Here, the term *uirtuosus* must obviously be understood as "strong", and not as "virtuous": "*cum autem de die in diem graui diarrhaea turbaretur, motus tantis et tam molestis medicorum*

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[31] Godefridus Admontensis *Homiliae dominicales. Homilia 60 In dominicam I post Pentecosten secunda. PL* vol. 174 [401d].
[32] Radulfus Ardens *Homiliae*. *PL* vol. 155 [1538c].
[33] Radulfus Ardens *Homiliae*. *PL* vol. 155 [1843a].
[34] Ordericus Vitalis *Historia ecclesiastica* 13,15. *PL* vol. 188, [964a].

potionibus, diuersorum et amarissimorum puluerum susceptionibus ad restringendum infestabatur, ut nec ipsi etiam incolumes et uirtuosi sustinere praeualerent."[35] Therefore, one can see that *uirtuosus* comes from a Christian adaptation of *uirtus* in a moral sense, but that on some occasions it could also refer to the other meanings of *uirtus*.

5. *Virtus*, *uis* and *uirtus Dei*

As we have seen, the false etymological relationship between *uirtus* and *uis* comes from Classical Latin, and the adjective *uirtuosus* is used on some occasions with the sense of "strong". In Classical Latin *uirtus* used to have a more positive value than *uis*, although in Medieval Latin, this nuance seems to have been lost and the terms become equal. This meaning of *uirtus*, like that of *uis*, has varying levels of positivity. The negative meaning of *uirtus* can be found, for example, in the Salic Law, a legal code promulgated in the VIth century, by the Franc king Clovis I. In this code a sexual aggression is defined as the situation in which a male abuses a woman *per uirtutem*, ("by force"). It is understood that *uirtus* is an unjust force, a violent act, a rape: "*si quis cum ingenua puella per uirtutem moechatus fuerit.*"[36]

Virtus, understood as a positive force, can also be found in religious lexicon to designate divine force.

Thus, Bruno of Cologne, founder of the Carthusian Order, narrates that God has punished the Jews, dispersing them throughout the world. He used his arm full of *uirtus*, or, in another words, his *uirtuosus* arm: "*tu dispersisti, id est disperges, inimicos tuos Iudaeos per totum mundum in brachio uirtutis tuae, id est, in brachio tuo uirtuoso, ut ita dicam, scilicet in forti potentia uirtutis tuae.*"[37] The *uirtuosus* arm is that which has got *uirtus* ("force").

This sense of *uirtus* carries over to supernatural situations caused by divine power. Thus, *uirtus* can be understood as a synonym of "miracle". This sense appears in the Vulgate Bible of Saint Jerome. When Mark the Evangelist narrates one of the scenes of Jesus'

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[35] Sugerius Sancti Dyonisii *Vita Ludovici regis* 20,6. *PL* vol. 186 [1336b].
[36] *Lex Salica. The ten Texts with the Glosses and the Emmendata.* XXV *De adulteris ancillarum.* Ed. Hessels-Kern, London 1880.
[37] Bruno of Cologne *Expositio in Psalmos* 88, *PL* vol. 152 [1107c].

healings, the Latin version presents: "*et non poterat ibi uirtutem ullam facere nisi paucos infirmos impositis manibus curauit*".[38] That is to say, that Jesus couldn't do any *uirtus* and that he had to resort to curing some ill patients by the imposition of his hands. Here, the sense of *uirtus* is a miraculous act.

Saint Jerome referred to Sextus Julius Africanus and Theodorus as authors of miracles: "*uiri apostolicorum signorum atque uirtutum.*"[39] Similarly, Rupert of Deutz, Benedictine abbot of the monastery at Deutz refers to *miracula* as events that occurred *uirtuose*: "*propter praedicationem sanctae Trinitatis, et propter miracula quae uirtuose fiebant.*"[40] The meaning here of *uirtuose* is clearly referring to a "miraculous way". In fact, *uirtus*, alongside *signum*, *mirabile* or *miraculum*, is a very frequent term referring to miraculous works in Medieval Latin.

Therefore, the three general meanings of *uirtus* in Classical Latin have been extended in Medieval Latin.   As an example of the polysemy of this term in Medieval Latin , the following passage reflects what Alain de Lille understood *uirtus* to be in the XIIth century. The fragment is reproduced below, with the omission of the examples he gave:

> "*Virtus proprie. Dicitur humana Christi natura, (...)*
> *Dicitur robur corporis, (...)*
> *Dicitur potentia diuina, (...)*
> *Dicitur potestas saecularis, (...)*
> *Dicitur ordo angelicus, (...)*
> *Dicitur Euangelium, (...)*
> *Dicitur miraculum, (...)*
> *Dicitur Apostolus siue praedicator, (...)*
> *Dicitur etiam effectus rei, (...)*
> *Dicitur perfectio uirtutis, (...)*
> *Vel uirtutes dicuntur ibi uirtuosi; uirtus etiam aliquando dicitur fortitudo, secundum quod distinguitur inter prudentiam, temperantiam, uirtutem et iustitiam.*"[41]

As the reader can see, the polysemy of *uirtus* is extremely rich. According to what is shown in the example of Alain de Lille, *uirtus* can refer to: the human nature of Christ, the robustness of the body, divine power, earthly power, types of angels, the Gospel, miracles, the Apostles or preachers, the effects of things, vigour and virtues.

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[38] Mark 6,5.
[39] Saint Jerome *Epistolae ad magnum de scriptoribus ecclesiasticis* 84.
[40] Rupertus Tuitensis *Commentaria in Apocalypsim* 15. *PL* vol. 169 [1113b].
[41] Alanus de Insulis *uirtus* apud *Distinctiones dictionum theologicalium*. *PL* vol. 210 [1007a]

In this context, the concept of virtuality was born.

6. *Virtus* and *uirtualitas*

In the XIIth century, a new term derived from *uirtus* appeared: the adjective *uirtualis*.

As we know, Christianity favoured the appearance of *uirtuositas* from one of the old meanings of *uirtus*. We can deduce that there was also a new factor that favoured the appearance of the new term *uirtualis*. This new factor is Scholasticism.

Scholasticism is well known for its capacity to create Latin neologisms, as in the case of *quidditas*, (the essence, the "what" of something), derivative of *quid*. The adjective *uirtualis* will be one of these cases, although it is not for several centuries that this term becomes popular.

The virtual is, therefore, what is composed of *uirtus* or what refers to it. This seems obvious, but, which type of *uirtus*? Moreover, how does it differ from *uirtuosus*?

The Englishman John of Salisbury, disciple of Peter Abelard and member of the School of Chartres, described the human soul as something totally virtual –*quoddam uirtuale totum*– because it is made of *uirtutes*: "*anima, est quoddam uirtuale totum, ex illis comprehendendi uirtutibus compositum*".[42]

Arnold of Bonnevalle asserted that philosophers used to compare the soul to fire because it has two virtual properties; one harmful and the other one harmless: "*in diffinitionibus philosophorum animam ipsam ignem, licet inuisibilem, nuncupari. Ad quod probandum duas uirtuales proprietates ignis dixerunt, unam scilicet mulcebrem, alteram uero peremptoriam asserentes*".[43]

The Scottsman Richard of Saint Victor also considered that the soul has *uirtuales* parts. He recommended knowing them before delving into greater inquiries: "*cogita ergo*

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[42] Iohannes Saresberiensis *De VII septenis* 4. *PL* vol. 199 [952c].
[43] Ernaldus Bonaevallis *Commentarius in Psalmum CXXXII*. *PL* vol. 189 [1579c].

uirtuales animae partes, et sic forte facilius inuenies quantum sit, uel quale eiusmodi omnia a terrenorum contactu suspendere, spirituales saltus formare".[44]

According to these authors, it seems clear that virtual is something belonging to the human soul or, at least, something belonging to the elements of the soul.

Hildebert of Lavardin (also known as Hildebert of Tours), bishop of Le Mans, employed the adjective *uirtualis* to refer to a definite type of union that affects human beings. In his analysis he divided such unions in 8 different types: "*sunt autem unitates octo: Prima, carnalis; secunda, naturalis; tertia, moralis; quarta, uirtualis; quinta, personalis; sexta, socialis; septima, spiritualis; suprema, substantialis, uel supersubstantialis.*"[45] These unions (carnal, natural, moral, virtual, personal, social, spiritual and substantial/supersubstantial) can be respectively found in: the sexual union, the uterus, at home, the world, Christ, Paradise, the soul and the kingdom. Each one of these unions makes us be or behave differently. From the sexual union we are descendants; in the natural union we are incipient; in the moral union we are social; in the virtual union we are brothers; in the personal union we are faithful; in the social union we are citizens; in the spiritual union we are celestial; in the substantial union we are heirs. Therefore, Hildebert understood that the virtual union is present in the world, and makes us brothers because we are connected by the feeling of charity. The virtual connection is therefore charity, not because it is a *uirtus*, but because it looks like *uirtutes*: "*haec dicitur uirtualis, non quia charitas uirtus sit, sed quia est forma uirtutum.*"

Bernard of Clairvaux also classified the types of human unions 8 denominations, (almost identical to those of Hildebert of Lavardin), including among them he includes the virtual union: "*est unitas naturalis, unitas carnalis, unitas uirtualis, unitas moralis, unitas spiritualis, unitas socialis, unitas personalis, unitas principalis.*"[46] These unions refer, respectively, to the union between; the body and the soul; a man and a woman; a man and himself; a man and others; a man and God; among angels; a man and Christ; and within the Holy Trinity. Therefore, the virtual union connects the human being with himself in a way that doesn't extend to other things: "*unitas uirtualis est quae hominem sibi ipsi coniungit.*" In an attempt to analyse virtues and defects, he classified them as nice/nasty, or

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[44] Richardus Sancti Victoris *Adnotationes mysticae in Psalmos 113*. PL vol. 196 [338c].
[45] Hildebertus Cenomanensis *In quadragesima. Sermo nonus.113*. PL vol. 171 [477a].
[46] Bernardus Claraevallensis *Sermo 80, De multiplici unitate*. PL vol. 183 [698d].

positive/negative. He formulated the equation: positive and nasty correspond to continence, patience and discipline; negative and nice correspond to pleasure, curiosity and vanity; negative and nasty are jealousy, sadness and laziness; and finally, nice and positive are integrity, charity and purity: "*De iucundis et non bonis peruenitur ad non bona et non iucunda. Bona et non iucunda sunt continentia, patientia, disciplina. Iucunda et non bona, uoluptas, curiositas, et uanitas. Nec bona nec iucunda, inuidia, tristitia, acedia. Bona et iucunda, honestas, charitas et puritas.*"[47] The last part is the most interesting if one wishes to save his or her soul. In order to attain these virtues, the *uirtualis* union is necessary. The "virtual" link is jeopardized by abandonment and inconstancy: the former causes one to abandon good purpose and the latter causes one to adapt it: "*Ad hoc bonum et iucundum obtinendum necessaria est unitas uirtualis, et unitas moralis. Primam disturbant pusillanimitas et leuitas. Pusillanimitas facit propositum relinquere, leuitas mutare.*" This "virtual" union, yet again, refers to an ethical virtue, not to valor or force.

Radulfus Ardens, in one of his homilies, advised his brothers to apply themselves in the practice of the *uirtus* of mercy: "*tunc enim, fratres mei, uirtutem misericordiae recte tenemus, quando nec inhumane duri sumus erga naturam proximi indigentis, nec indiscrete compatimur uitiis delinquentis.*"[48] In this sense it seems clear that he understood *uirtus* in a moral sense, as an antonym of *uitium*: "*cum enim misericordia et iustitia uirtuales sint, misericordia erga naturam, et iustitia contra uitium, exercenda est.*"[49] That is to say, the *uirtus* of mercy is a moral virtue. Precisely because of that, mercy – and justice – are "virtual".

The adjective *uirtualis* is, therefore, a technical term, created by Scholastic language, to refer to anything related to *uirtus*. It was understood as the characteristic of the human soul or its forms of relating. Earlier on, we inquired about the difference between *uirtuosus* and *uirtualis*. This difference doesn't refer to the type of *uirtus* from which it comes, but to its use. It seems that *uirtualis* is a Scholastic creation from the XIIth century that is exclusively used for philosophical or theological concepts. If we review the previous examples, the terms to which the adjective *uirtualis* have referred are *anima*, *proprietas*, *partes animae*, *unitas*, *misericordia*, *iustitia* or *affectus*. That is to say, they are concepts taken from theology and

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[47] Bernardus Claraevallensis *Sermo 80, De multiplici unitate*. PL vol. 183 [699b].
[48] Radulfus Ardens *Homilia 42. In festo omnium sanctorum*. PL 155 [1480b].
[49] *Ibid*.

philosophy. The adjective *uirtuosus* has been used to refer to any term, no matter its level of vulgarity. In the same way that *uirtuosus* usually refers to the virtues of the soul, and can also signal courage or force, the adjective *uirtualis* will undergo, occasionally, the same polysemy. This is because it can also refer to *uirtus* in the sense of "force".

The work *De Spiritu et anima,* of unclear authorship, is a XIIth century precursor of current self-help books because it defends the principle of self-control and the famous maxima of "if there is a will there is a way". In this work the human faculties are compared to a city, in which reason corresponds to the soldiers who protect it, the city is the soul, and the peasants correspond to the senses: "*Rationales sunt tanquam milites, qui hostes, puta concupiscentias, impugnant per arma iustitiae. Animales seu sensuales sunt tanquam rustici et artifices, qui corporalibus rudimentis insistunt, et corpori necessaria ministrant.*" [50] According to the following text*,* philosophers call these three parts of the soul (intellectual, rational and sensual) "virtual", because they have force: "*hanc triplicem uim animae, id est, sensualem, rationalem, et intellectualem, philosophi partes uocauerunt, non integrales, sed uirtuales: quia potentiae eius sunt.*" Note that the adjective *uirtualis* is related to *uis* ("force"). The "triple force of the soul" (*triplicem uim animae*) is called "virtual" because there are "forces" (*potentiae*) at work.

Vis and *potentia* are, more or less, Latin synonyms. As we have seen, Alain de Lille defines one of the meanings of *uirtus* as *potentia diuina*. It is for that reason that the English Isaac of Stella considers as synonyms the adjectives *uirtuales* and *potentiales*. He explains the virtual is all that has *uis*, "force": "*habet enim uires siue potentias naturales, secundum quas uirtuales seu potentiales dicitur habere partes.*"[51]

From all this, we can gather that the neologism *uirtualis* appears in the XIIth century as a result of the studies of certain authors. The majority of them settled down in France, although several of them were of British origin. These authors assigned to the human soul the attribute of being virtual, or of being able to relate to other elements in a virtual way.

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[50] *De spiritu et anima*. *PL* vol. 40 [0808].
[51] Isaac de Stella *Epistola ad quemdam familiarem suum de anima*. *PL* vol. 194 [1876c].

These are the immediate precedents for the use of the adjective just before Saint Thomas Aquinas. This is the context in which Aquinas will adopt the term in order to use it in his work.

7. Saint Thomas Aquinas

Thomas Aquinas divided the concepts *uirtuositas* and *uirtualitas*, not only by their use but also by their meaning.

Virtuosus corresponds to the person who has *uirtus* in an ethical and moral sense and it is applicable as much to human beings as to their works. Thus, for example, a way of defining what is good is that which seeks *uirtuosus*: "*illud est bonum, quod uirtuosus appetit.*"[52] It is positive for human beings to be virtuous and wise: "*bonum hominis est esse uirtuosum uel sapientem.*"[53] *Virtuosus* is defined, finally, as someone who enjoys the works of Christian virtues, or "uirtutes": "*est enim bonus et uirtuosus qui gaudet in operibus uirtutum.*"[54]

The opposite of *uirtuosus* is, obviously, *uitiosus*. It depends on our habits to lead us to one sort or the other: "*puta hoc quod est habere uirtuosum habitum uel uitiosum est in potestate nostra.*"[55] Logically, he who lacks of *uirtus* deserves more merit for his actions than the virtuous man, because the latter is by nature less inclined to commit a sin: "*uirtuosus in quo est minor mobilitas ad peccandum esset minus laudabilis in actu suo, quam carens uirtute et bonum operans.*"[56]

Thus, Thomas Aquinas clearly considers in opposition the terms *uirtus* and *uitium*: "*uitium contrariatur uirtuti.*"[57] The sense that Thomas gives to *uirtus* as "moral virtue" is very clear, and he states that *uirtus* is the opposite of *uitium*: "*uni enim uitio contrariatur et uirtus et uitium oppositum.*"[58] However, the ambiguity of the term is also found in the work of

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[52] *Scriptum super sententiis* 1,17,1.
[53] *Summa Theologiae* I,25,6.
[54] *Summa Theologiae* I-II,34,4.
[55] *Scriptum super sententiis* 2,25,1,1.
[56] *Scriptum super sententiis* 2,7,1,1.
[57] *Summa Theologiae* I-II,71,1.
[58] *Commentarium in libros de caelo et mundo* 1,4.

Aquinas. He says that *uirtus* comes from *uis*: "*nomen uirtutis a ui sumitur.*"[59] He also admits that *uirtus* can mean "force" or "violence", and that its use can designate the imposition by force: "*nomen uirtutis secundum sui primam impositionem uidetur in quandam uiolentiam sonare.*"[60] He also considers that *uirtus* and *uiolentia* are synonyms: "*dicitur quod motus accidentalis, id est uiolentus, est qui est a uirtute, id est a uiolentia, non cum auxilio naturae.*"[61]

Perhaps the most curious thing is that the adjective *uirtualis* doesn't derive from any of the meanings we have seen of *uirtus*. It comes from the concept of *uirtus* understood as force, not as a negative and destructive force, but rather the capacity to become something else. Thus, this concept of *uirtus* refers to the beginning of everything: "*semper uirtus nominat principium alicuius*".[62] It is the root of every action, even if it is independent of that action: "*uirtus dicitur, secundum quod est principium actionis et tenet se ex parte.*"[63]

The adjective *uirtualis* in the work of Thomas Aquinas refers generally to a type of quantity or contact. According to Aquinas, the virtual quantity is opposed to the dimensive quantity: "*quantitas autem dicitur dupliciter: quaedam uirtualis, quaedam dimensiua.*"[64] Virtual quantity refers to a quantity whose essence cannot be divided: "*uirtualis quantitas non est ex genere suo quantitas, quia non diuiditur diuisione essentiae suae.*"[65] Thus, virtual quantity refers to *uirtus*, understood as the force or quality of a characteristic that cannot be divided into smaller quantities. As an explanation, Aquinas employs the simile of heat: "*Sed alia est quantitas uirtutis, quae attenditur secundum perfectionem alicuius naturae uel formae, quae quidem quantitas designatur secundum quod dicitur aliquid magis uel minus calidum, inquantum est perfectius uel minus perfectum in caliditate.*"[66] Aquinas understands that the quantity of *uirtus*, is valued according to the perfection of some nature or form, for example, when it is said that something is hotter or less hot, in the sense that it is more or less perfect in relation to heat. This definition is opposed to the quantity of mass or dimensive quantity, which exists only in corporeal things,

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[59] *Scriptum super sententiis* 3,23,1,3.
[60] *Scriptum super sententiis* 3,23,1,3.
[61] *Scriptum super sententiis* 3,23,1,3.
[62] *Scriptum super sententiis* 4,1,1,4.
[63] *Summa Theologiae* I,2,P.
[64] *Scriptum super sententiis* 1,17,2,1.
[65] *Scriptum super sententiis* 1,17,2,1.
[66] *Summa Theologiae* I,42,1.

In a different passage, virtual and dimensive quantities are respectively compared to extension or intensity: "*est autem duplex quantitas: scilicet dimensiua, quae secundum extensionem consideratur; et uirtualis, quae attenditur secundum intensionem.*" [67] The example of heat could also be applied here. The quantity of "heat" doesn't refer to the volume of heat but to its intensity, that is why it is a "virtual quantity".

Aquinas also employed the adjective *uirtualis* to classify the types of unions or contacts, as in the works of previous authors.

Contact, therefore, is divided into "virtual" and "corporeal". Corporeal contact is the physical contact between two bodies, for instance, when someone touches another person. Virtual contact affects states of being and provokes the change of features in the bodies. Aquinas employs the example of sadness, because the sad person can transmit his sadness to another: "*Ad primum ergo dicendum quod duplex est tactus, scilicet corporalis, sicut duo corpora se tangunt; et uirtualis, sicut dicitur quod contristans tangit contristatum.*"[68]

This Thomistic concept of *uirtus* or virtuality refers to the origin of everything ("*semper uirtus nominat principium alicuius*")[69] and, more precisely, indicates the beginning of an action ("*uirtus dicitur secundum quod est principium actionis*").[70] Aquinas clearly defines this concept of *uirtus* as the beginning of a movement or an action: "*uirtus significat principium motus uel actionis.*"[71] For this reason, the human body is "virtually" inside semen ("*corpus humanum in semine est uirtualiter*")[72] because semen has the capacity to become a physical being. Likewise, in the root of the tree there resides virtually the whole tree: "*radix uirtute dicitur esse tota arbor*".[73] Therefore, every cause has a virtual effect. This is because in each cause there is virtually the capacity to produce an effect: "*effectus enim uirtute praeexistit in causa.*"[74] All that exists in an original and virtual form can become a reality: "*id quod est in eis originaliter et uirtualiter, (...) in actum educi potest.*"[75]

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[67] *De veritate* 29,3.
[68] *Summa Theologiae* I,105,2.
[69] *Scriptum super sententiis* 4,1,1,4.
[70] *Scriptum super sententiis* 4,46,1,1.
[71] *Summa Theologiae* I-II,26,2.
[72] *De potentia* 3,9,9.
[73] *Summa Theologiae* II-II,19,7.
[74] *Summa Theologiae* I-II,20,5.
[75] *De veritate* 11,1,5.

8. *Virtualitas* and *dýnamis*

It is obvious that the Thomistic concept of *uirtus* comes from the Aristotelian concept of du/namij (*dýnamis*), which, as is well known, is combined with the e)ne/rgeia (*enérgeia*). They form the famous Aristotelian dichotomy that is usually translated into Latin as *potentia* and *actus*, and into English as "potency" and "act".

It should be asked therefore whether *uirtus* is the Thomistic form of translating the Greek du/namij, as it seems to be in the previously mentioned quotes of Aquinas. It doesn't seem to be the most appropriate term to translate the Aristotelian concept, given that the Latin *uirtus* is polysemic (as it is in the work of Aquinas). Thus it could mean "ethical virtue", "force", or "warrior´s courage"/"bravery". These three ideas appear in the work of Aristotle: a)reth/ (*areté*) is ethical virtue; du/namij (*dýnamis*) is force; and a)ndrei/a (*andreia*) is bravery. The latter is derived from a)nh/r (*anér*), "man", in the same way that the Latin *uirtus* derives from *uir*. We will now look at the way in which these concepts were commonly translated into Latin.

In the collection of translations entitled *Aristoteles Latinus,* the Medieval translators who transformed the Aristotelian text into Latin unanimously translated a)ndrei/a as *fortitudo* ("human force"/"valor"). Upon avoiding the use of the term *uirtus*, they also avoided the ambiguity of the Latin term.

In the same way, a)reth/ ("ethical virtue") appears frequently in the work of Aristotle. For example, it refers to the virtues that contain irrational terms: dokou=si ga\r tw=n a)lo/gwn merw=n au(=tai ei)=nai ai(a)retai/.[76] Burgundio of Pisa, Professor at the University of Paris during the XIIth century, translated the previous passage as follows: "*uidentur autem irracionabilium parcium, hee esse uirtutes*."[77] At the beginning of the XIIIth century, the Franciscan Robert Grosseteste translated it almost identically: "*uidentur enim irracionalium parcium, hee esse uirtutes*."[78] William of Moerbeke left Grosseteste's words unaltered. It can be seen, therefore, that the Aristotelian a)reth/ (*areté*) was commonly translated into Latin as *uirtus*.

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[76] *Ethica Nicomaquea* 10,1 (BK 1117b24).
[77] *Ethica Nicomachea: Aristoteles Latinus* XXVI, ed. R.A. Gauthier, 1972.
[78] *Ethica Nicomachea: Aristoteles Latinus* XXVI ed. R.A. Gauthier, 1972.

In the same work, Aristotle said that truth is a different virtue from justice: le/gomen ou)d'o(/sa ei)j a)diki/an h)\ dikaiosu/nhn suntei/nei, a)/llhj ga\r a)\n ei)/h tau=t'a)reth=j.[79] Robert Grosseteste translated it as follows: "*dicimus, neque quecumque ad iusticiam uel iniusticiam contendunt, alterius enim erunt huius uirtutis.*"[80] Once again, William of Moerbeke did not alter the translation.

In a fairly famous statement of Aristotle, he declares that honour is the prize of virtue: to\ ga\r th=j a)reth=j a)=qlon.[81] Grosseteste and Moerbeke translated it as "*uirtutis enim premium*".[82]

Thomas Aquinas wasn't an exception and followed these models, translating these three passages taken directly from Aristotle with the term *uirtus*: "*huius modi uirtutes Deo attribui non possunt*"; "*ueritas secundum Philosophum est quaedam alia uirtus a iustitia*"; and "*praeterea honor est proprie praemium uirtutis, ut Philosophus dicit*".[83] Therefore, during the XIth and XIIth centuries, the Aristotelian a)reth/ is translated unequivocally into Latin as *uirtus*.

The most interesting translation to Latin is the term du/namij (*dýnamis*). This concept is one of the cornerstones of Aristotle's work, which appears in opposition to e)ne/rgeia (*enérgeia*). In *Metaphysica* Aristotle explained that an "act" is better than any "potency": o(/ti de\ kai\ belti/wn kai\ timiw/tera th=j spoudai/aj duna/mewj h(e)ne/rgeia, e)k tw=nde dh=lon.[84] This was translated into Latin by William of Moerbeke as "*quod autem et melior et honorabilior studiosa potentia actus, ex hiis est palam*".[85] As we can see, *dýnamis* was translated as *potentia*. An anonymous translator from the XIIth or XIIIth centuries translated the same passage in the following manner: "*quia ergo prius est actus potestate et omni principio mutabili, palam*".[86] This translator preferred the term *potestas*. Aquinas also made a reference to this passage of Aristotle: "*praeterea secundum Philosophum qualibet potentia*

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[79] *Ética nicomaquea* 7,7 (BK 1127a34).
[80] *Ibid.*
[81] *Ética nicomaquea* 9,3 (BK 1099b16).
[82] *Ibid.*
[83] *Summa Theologiae* I,21,1; *Scriptum super sententiis* 3,35,1 and *Summa Theologiae* III,25,1 respectively.
[84] *Metaphysica*, 8,9 (BK 1051a4).
[85] *Metaphysica: libri I - X, Aritoteles Latinus* XXV.3, pars secunda, ed. G. Vuillemin-Diem, 1995.
[86] *Ibid.*

melior est eius actus."[87] As one can see, the du/namij ("potency") and the e)ne/rgeia ("act") of Aristotle are translated by all, including Thomas, as *potentia* –or *potestas*– and *actus*.

Aquinas draws from Aristotle's conclusions that moves this from potency to act: "*unde post verba praemissa, philosophus concludit quod in his quae sunt composita ex materia et forma, nulla est alia causa nisi movens ex potestate ad actum*".[88] This idea refers to the following passage of the *Metaphysica*, where he translated du/namij as *potestas*: w(/ste ai)/tion ou)qe\n a)/llo plh\n ei)/ ti w(j kinh=san e)k duna/mewj ei)j e)ne/rgeian.[89] An anonymous translator employed the same term: "*quare causa nulla alia nisi ut quod mouens ex potestate ad actum*".[90] Moerbeke translated it as *potentia*: "*quare causa nulla alia nisi id quod ut mouens ex potentia ad actum.*"[91] Yet again, Aristotle's du/namij is translated by all, including Thomas, as *potestas* or *potentia*.

Around 1130, Jacobus of Venice translated *De anima* by Aristotle. In this work there is a well-known description of the soul as the act of a physical body that has potential life: dio\ yuxh/ e)stin e)ntele/xeia h(prw/th sw/matoj fusikou= duna/mei zwh\n e)/xontoj.[92] The Venetian translator presented it as: "*anima est actus primus corporis phisici potentia vitam habentis*".[93] It is the same way that Aquinas had rendered this Aristotelian passage: "*dicit enim Philosophus, in II De Anima, quod anima est actus corporis physici potentia vitam habentis.*"[94] Once again, the correlation between the Aristotelian Greek *dýnamis* and the Thomistic Latin *potentia* is clear, as it is in many other examples that could be added.

It is true that, though, that occasionally Aquinas translated *dýnamis* as *uirtus* in some quotes of Aristotle: "*et ideo dicendum est, secundum Philosophum in I De Generat., quod formae elementorum manent in mixto non actu, sed uirtute,*"[95] which is translated from the Greek text: e)pei\ d'e)sti\ ta\ me\n duna/mei ta\ d'e)nergei/a? tw=n o)/ntwn.[96] Even though

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[87] *Summa Theologiae* I,25,1.
[88] *Summa Theologiae* I,75,3.
[89] *Metaphysica* 7,6,8 (BK 1045b21).
[90] *Metaphysica: libri I - X, Aritoteles Latinus* XXV.3, pars secunda, ed. G. Vuillemin-Diem, 1995.
[91] *Ibid.*
[92] *De anima* 1,5 (BK 412a27).
[93] *De anima, Aristoteles Latinus Data Base*, ed. J. Brams.
[94] *Summa Theologiae* I,76,4.
[95] *Summa Theologiae* I,76,4.
[96] *De generatione et corruptione* 10,5 (BK 327b22).

there are some examples of *dýnamis* translated as *uirtus*, in the case of Aquinas and the majority of translators that happened very rarely.

There is one important question we should ask to understand the use of *uirtus* in some passages of Aquinas. Why were the terms *uirtus*, *uirtualis* or *uirtualiter* used to refer to some concepts of Aristotelian origin, when Aquinas usually translated these concepts as *potentia*, *potentialis* or *potentialiter*?

9. *Virtualitas* and *potentia*

Aquinas himself explained the idea when he differentiated *potentia* from *uirtus*. According to him, *uirtus* is a potency. It differs from *potentia* in that it is a self-sufficient potency with which something can act by itself (a complete or perfect potency): "*inde tractum est nomen uirtutis ad significandum omnem potentiam perfectam, siue qua potest aliquid in seipso subsistere, siue qua potest operari.*"[97]

The ambiguity of the term is resolved by connecting two senses of *uirtus* understanding that one sense ("force"), includes the other ("moral virtues"). Thus, "force" will be the principal virtue necessary for the rest of virtues: "*nomen uirtutis sit commune omnibus uirtutibus, uidetur quod fortitudo sit generalis uirtus.*"[98] This idea was attributed to Boethius: "*sed nomen uirtutis secundum Boetium ad alias uirtutes a fortitudine deriuatur; unde et Sap. 8, per uirtutem fortitudo intelligitur, ergo fortitudo est principalior inter omnes alias uirtutes.*"[99]

Aquinas employed different terms for translations of Aristotle's works (using *potentia*), than those employed in his own works (using *uirtus*). It seems he wanted to differentiate the translation of a Pagan Greek philosopher from the philosophical concept of a Dominican theologian. This religious factor was is vital in the choice of terms.

From what I have seen, the translation of the Bible undertaken in the IVth century by Saint Jerome, known as the Vulgate Bible, was a very important precedent for the translation

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[97] *Scriptum super sententiis* 3,23,1,3.
[98] *Summa Theologiae* II-II,123,2.
[99] *Scriptum super sententiis* 3,33,2,5.

of du/namij as *uirtus*. Saint Jerome always translated du/namij as *uirtus,* referring to the sense of "force"/"power", but always in a religious sense. This translation, based on the original Hebrew and Greek texts, always made reference of *uirtus* as the power of God. Saint Jerome himself claims to understand *uirtus* with the meaning of "force". In his work entitled *De nominibus Hebraicis* in which, he explained the translation of some Hebrew terms, including *fortitudo* and *uirtus*, which he considers to be equivalent: "*booz, in fortitudine, siue in quo uirtus.*"[100] Therefore, following the model of Saint Jerome, the translation of du/namij as *uirtus* by Aquinas was completely justified.

The term du/namij also appears in the New Testament and in the Patristic Greek texts with the sense of divine force or miracle.[101] Jerome's translation also accepted this sense of *uirtus* and, as we have seen, it is a commonplace term in Medieval Latin referring to a miraculous fact. Therefore, the correlation between the Greek du/namij and the Latin *uirtus* is the same in the New Testament and in the Patristic Greek and Latin texts. Probably this fact influenced Aquinas when he chose the term *uirtus*.

The employment of *uirtus* to translate the du/namij of Aristotle has got the advantage of being able to link the Aristotelian lexicon to the Patristics. Moreover, it links what Aristotle considered "potential" with what the authors of the Patristics considered "miraculous". That is to say, that the Aristotelian *dýnamis* is, actually, a *uirtus* which, ultimately, depends on the divine will that decides whether "potency" becomes an "act". The existent potency is actually a factor subject to God, and this important nuance can be only preserved with the use of the term *uirtus*. The word *potentia*, a valid translation of the Aristotelian du/namij (accepted by Aquinas), would have lost all this religious meaning. It is especially clear when the term *potentia* appears in the Vulgate only to designate human power and never the divine. In that sense, the translation of Aristotle's du/namij with a denomination of the Latin Patristics, manages to link Greek philosophy to Christian theology. Thus, it joins the Greek Classical tradition with the Patristics. Without the tradition of both sources, virtuality, as Aquinas understood, would not have been born. In this sense, the selection of *uirtus* is a perfect within the context of Scholasticism.

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[100] Saint Jerome *De nominibus hebraicis PL*, vol. 23 [0809]
[101] Vid. du/namij apud G. W. H. Lampe *A Patristic Greek Lexicon* Oxford 1961.

Once the equivalence between du/namij and *uirtus* is clear, it is also evident that the adjective dunamiko/j must be translated as *uirtualis*. From the work of Saint Thomas onwards, the meaning of "virtual" has been definitively established and defined.

10. After Aquinas

In the work of Aquinas the noun *uirtualitas* ("virtuality") had not yet appeared, but the concept had already been established and defined by the adjective *uirtualis* and the adverb *uirtualiter*.

We must not think that the later authors unanimously employed the adjective *uirtualis* in the same sense that Aquinas did. The ambiguity of the term went beyond that of Aquinas and in some later authors it is still possible to find the adjective "virtual" referring to ethical virtues. For example, in the XVIIth century we still found references to "virtual laws" ("laws about morality") and virtuality as a synonym of morality: "*moralitatibus seu uirtualitatibus*."[102] However, these cases are less frequent and, after the work of Saint Thomas, "virtual" generally coincided with the Thomistic concept of the term. This concept of virtuality was transmitted through the XXth century and it is included in the current and modern language of computing. It mainly refers to that which has the capacity of functioning as something, although it might not really be that thing: something that, without being real, would produce the same effect as if it were.

It seems clear that the current meaning of the term "virtual", which is related to the Internet and advanced computer technology, comes from the expression "virtual reality". It was established by the computer scientist Jaron Lanier in the early 1980's. Due to the fact that this expression is still very recent, it competes with other expressions of similar or identical meaning, such as "artificial reality" or "cyberspace".

In 1965, the American computer scientist Ivan E. Sutherland published the article, "The ultimate display", in which he lays down the basis of virtual reality.[103] According to Sutherland, with a good computer program, one could recreate a reality like the one imagined

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[102] *Pandoxion Physico-Ethicum*, 1668.
[103] "The ultimate display" *IFIP Congress*, pp. 506-508, 1965.

in *Alice in Wonderland*: "*with appropriate programming such a display could literally be the Wonderland on which Alice walked*." Despite describing in a clear way the future virtual reality, Sutherland doesn't establish any denomination for this phenomenon.

The denomination of "artificial reality" is often attributed to the computing artist Myron Krueger, who in 1982 published his book *Artificial Reality*.[104] The term "cyberspace", still in use, was coined by the Canadian novelist William Gibson in 1984, in his famous novel *Neuromancer*.[105]

Although these are relatively recent and contemporary authors, Antonin Artaud provided a clear precedent in his 1938 work *Le théâtre et son double*. He described drama as a virtual reality: "*Tous les vrais alchimistes savent que le symbole alchimique est un mirage comme le théâtre est un mirage. Et cette perpétuelle allusion aux choses et au principe du théâtre (...) doit être entendue comme le sentiment (...) de l'identité qui existe entre le plan sur lequel évolue les personnages, les objets, les images, et d'une manière générale, tout ce qui constitue la réalité virtuelle du théâtre (...).*"[106]

The popularisation of the adjective "virtual" has changed its meaning in recent times. It has become a denomination which usually refers to all that is managed through the Internet or through a sophisticated computer. The popular equation proposes that if a "virtual reality" is the one managed by powerful computers, then that which is virtual will also be managed by these computers. This meaning is the dominant one that has become popular, as it has been progressively registered in dictionaries. The "virtual" is that which is managed by computers connected in a network.

This popular new use of "virtual" contradicts the Thomistic meaning. Nevertheless, this new semantic change can produce somewhat grotesque situations. For instance, there is a certain contradiction in the expressions "virtual library" or "virtual education". Although nowadays these terms mean "accessible through the Internet", the virtual adjective could mean that the library and the education are not existent, although they might appear to exist. Thus, he who has access to a virtual education, in fact, should receive a "nonexistent

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[104] Myron Krueger *Artificial Reality*, Addison-Wesley, 1983.
[105] William Gibson *Neuromancer*, Gollancz, London, 1984.
[106] Antonin Artaud *Le théâtre et son double*, Paris 1938.

education" that nevertheless seems to exist. It is a curious form of making public an educational method accessible through new technologies.

The paths of the semantic evolution of words are inscrutable. From the masculine *uir* to "virtual reality" the trajectory has been long and unpredictable, and never ceases to change. We are witnesses of a recent semantic change in the long evolution of words, as was *uirtuositas* among the Christian authors or *uirtualitas* among the Scholastics. The last change, the last meaning of "virtual", can surely be found on a daily basis on this same on which you are about to finish reading this article.

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