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LIBERAL ARTS AND MIXING METHODS: GOOD REASONS TO EDUCATE CITIZENS AND POOR PILGRIMS AS FREE MEN

LAS ARTES LIBERALES Y EL MIXING METHODS*: BUENAS RAZONES PARA FORMAR CIUDADANOS Y POBRES PEREGRINOS COMO HOMBRES LIBRES*

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ABSTRACT: Mixing methods is a well-known innovative methodologic proposal for research in the second half of the 20th century social sciences. Reading literature about it, I observed the aspect that justifies this paper: Authors of theoretical contributions on mixing methods recognized that this was known to be a practice already in use many centuries ago. Some of them even have re-examined the whole history of the scientific method to search precedents. They are however individual and theoretical precedents. I add in this paper the practical projection of these and other methodological theories on people's training from Greek classical times. My hypothesis is that liberal arts was the basic syllabus in Western -and westernized- education for more than a millennium in such a way that results of their training precisely involved to mixing methods. In return, to understand the liberal arts in the light of mixing methods shows new aspects of their historical interest. I study the theoretical basis of this syllabus from Cicero to Alcuin. More important for future research, I conclude that Alcuin's thesis about the correspondence between the gifts of the Holy Spiritu and the seven liberal arts can be extended to the Aristotelian dianoethics habits and to Dilthey's 20th-century sciences of mind.

RESUMEN: *Mixing methods* es una innovadora propuesta metodológica que se ha ido extendiendo en las ciencias sociales desde las últimas décadas del siglo XX. Al leer la bibliografía sobre ella, se observa el aspecto que justifica este estudio: los autores de contribuciones teóricas sobre "mixed methods" reconocen que es una práctica conocida ya hace siglos. Algunos de ellos han reexaminado incluso la historia entera del método científico para hallar precedentes; pero sólo han resaltado casos individuales y de orden teórico. En este estudio, se añade la proyección práctica de esa y otras teorías metodológicas sobre la formación de los jóvenes desde la Grecia clásica. Mi hipótesis es que las artes liberales fueron el plan de estudios básico en Occidente -y en las regiones occidentalizadas- durante más de un milenio precisamente porque su conocimiento implicaba mezclar métodos. Como contrapartida, comprender las artes liberales a la luz de la "mezcla de métodos" contribuye a poner de relieve nuevos aspectos de la importancia histórica de aquel plan de estudios. Estudio sus bases teóricas desde Cicerón hasta Alcuino. Más importante para futuras investigaciones es la correspondencia que afirmó el propio Alcuino entre artes liberales y dones del Espíritu Santo y la posibilidad de extenderla -esa correspondencia- a los hábitos dianoéticos de Aristóteles por un lado y a las ciencias humanas y sociales articuladas por Dilthey en el siglo XX.

Liberal arts and mixing methods: Good reasons to educate citizens and poor pilgrims as free men

LIBERAL ARTS AND MIXING METHODS

13th-century Santiago de Compostela was already one of the most important centers of pilgrimage. Pilgrims needed food and spiritual attention, and Franciscan and Dominican friars set up two *studia* (schools) where poor people could study the liberal arts. They explicitly argued that although these arts and other connected matters were profane, they were a prerequisite for the study of theology, and that profane sciences in any case are good for anyone from a purely religious point of view. They open a way of approaching God through His natural creation (García Ballester, 1996). Since at least the 5th century the liberal arts had been grammar, rhetoric, dialectics, arithmetic, geometry, astronomy, and music. This was the knowledge considered necessary for an understanding of all sciences since these liberal arts were the fertile ground on which to sow the seed of all higher fields of learning. We could say that the whole of these seven arts entailed a mixing that became a method, a new and unified method.

The purpose of this essay is to prolong the thesis supported in other paper published in 2015 in relation to "mixing methods", the well-known innovative methodologic proposal for research in the second half of the 20th century social sciences. My essay of 2015 on Leibniz's works to create a universal system of justice tried to test empirically whether the highest level in human sciences – "humanism"– can avoid mixed methods (Andrés-Gallego, 2015). In this second paper, I wonder whether not only this highest level but also the basic academic foundation of scientific knowledge requires mixing methods.

As in the case of Leibniz, I take a historical perspective. Reading literature about mixing methods, I observe that authors of theoretical contributions on this matter recognized that this was known to be a practice already in use many centuries ago (thus, Denzin, 2010a; Denzin, 2010b). Some of them as Mertens *et al.* in 2016, even have re-examined the whole history of the scientific method to search precedents. They are however individual and theoretical precedents (Mertens *et al.,* 2016, pp. 223-224). I add in this paper the practical projection of these and other methodological theories on people's training from the Greek classical times. My hypothesis is that liberal arts was the basic syllabus in Western -and westernized- education for more than a millennium because results of this way of training precisely involved to mixing methods. I conclude how, in any time, human knowledge needed and need mix methods to solve complex problems.

In view of this, experts in mixing methods might argue that this metaphor of the "pilgrimages to Santiago" is inadequate; this is a highly directed and purposeful pilgrimage. I do not agree. Most of us practice mixing methods to resolve very specific problems, and this goal needs precisely a highly directed and purposeful effort. Each age has its own specific problems that need the work of experts to resolve them. Many people travelled to Santiago as a penitence, considering themselves to be sinners and wanting to expiate their sins. Many others did so –and still do– for different reasons, whether religious, cultural, and even for esoteric motives. This has always been so; these options have been documented from the very beginning, and in any case pilgrimages continually raise new problems whose solutions often need mixing methods (see Vázquez de Parga*,* Lacarra and Uría Ríu, 1992).

QUAN AND QUAL TODAY AND YESTERDAY

Practitioners of mixing methods could argue that "mixing methods" is a very specific concept, newly coined in the 20th century, to describe a new way of research, especially in social sciences. They think that it would therefore be more sensible to start by tracing the origins of combining quantitative and qualitative methods within social science in our time. I saw however that other scholars do not think in such a way. They tell that this is an oversimplification. To mixing methods may consist in reconciling qual and quan methods but also different qualitative methods, and different quantitative ways to research (thus, Allwood, 2012; Guba and Lincoln, 1989). But, even so, the question is that this combination –that of "quan and qual"– was already related to Roman liberal arts. In the 5th century the great theoretician of liberal arts and Roman African lawyer Martianus Capella explicitly justified the presence of arithmetic among the seven liberal arts in this task, that of enunciating all qualitative and quantitative natural elements in mathematical terms. He sentenced that this arithmetical formulation was what enabled people to understand these both aspects of nature (Martianus Capella, 1836, chapter 7).

According to this precedent, we could even think that combining quan and qual is certainly a key in the history of mixing methods, but in the 5th century at least. If we look at Capella's story in terms of mixing methods, we can see how a man like him –an African Roman citizen– could understand perfectly well the possibility –in fact, the necessity– of this type of mixture, without using this expression.

His story describes Mercury's search for a suitable wife after his failed attempts to marry Miss Wisdom, then Miss Prophecy, and Miss Psyche, before winning the love of Miss Philology. Mercury's ultimate aim was to mix methods in the most intimate and fertile way possible. He finally married Philology, and all the Olympic gods gathered to see their wedding.

The god Mercury is very strong, agile, and fast and travels through the skies, but especially through the seven signs of the Zodiac to learn the best way for people to find fortune in their dealings and to act as a messenger for the other gods. This explains why his main devotees were merchants, and they considered him the god of markets, merchants, and earnings. Merchants work in a similar way to Mercury. They thought to have taken their name from the same root as Mercury for this reason (*merc-ator* and *Merc-urius* in Latin). In 16th-century France local rulers used to call "mercuriales" the rates for the different commodities in local markets (for example Dupâquier, Lachiver and Meuvret, 1968), and this same word appeared in the daily French press of the first half of the 20th century to describe contemporary market prices.

We could deduce from this that Mercury is who mix "quan" and "qual" —at least, arithmetic and rhetoric— methods to achieve so good results, but in his own wedding, there was an example more directly concerned with this type of mixture. Capella explains that when other of the seven liberal arts, Miss Dialectics, appeared before the gods, she was sporting a very complex layered hairstyle, and the divinities did not doubt the reason for this: Miss Dialectics was also called Miss Logic, and each layer of her hair corresponded to a different type of knowledge or science that people tried to obtain with her help. She was therefore a master in method —and a living mixing of methods. However, it is more important for our task to note the way Miss Arithmetic was dressed and how she explained her own nature to the gods. The toga covering her lingerie appeared to be in total disarray, but it in fact concealed all the numerical relationships connecting all the elements in the natural world, both qualitative and quantitative, again this distinction which is so familiar to present practitioners of mixing methods.

As we saw, Capella explicitly observed in his satire that all qualitative and quantitative natural elements could be enunciated in mathematical terms, and this was what enabled people to understand both aspects of nature. The disorder of Miss Arithmetic's toga revealed however the difficulties this entailed; she did

so through the enormous complexity of her lingerie, suggesting that if someone dared to undress her —Capella observed–, it would require long years of study and reflection, reasoning, and calculation.

When at the wedding, Zeus asked her to explain her art, she replied that her main instrument was the number one, because it has sacred properties. Number one was the origin of the divinity, Zeus himself as supreme god and father of all other gods. This was why Zeus was called "the beginning", and from this, we can deduce "the creator" of all things and all living beings, including gods as children of Zeus.

In short, number one denoted the only omnipotent god and the only universe, but could also be expanded by repeating itself, thus becoming a line, which is the most essential instrument of Miss Geometry and the most elemental expression of the first even number. The first even number —Miss Arithmetic explained– was the origin of all other numbers and hence of the numerical codes of all the "quan" and "qual" elements in nature.

HOW TO BECOME YESTERDAY AND TODAY A REALLY FREE MAN

It is impossible to list here the accumulation of mixing methods and knowledge that Capella displayed in his symbolic narrative. We can only observe that this 5th-century African Roman lawyer conceived his work an entertainment for his son in order to explain the scope and complexity of systematic human knowledge. He may have intended to write "a load of old rubbish" to amuse his son —as he himself declared in his work—; he displayed however a good knowledge of the historical roots of different sciences, whose origins he placed in Egypt, Mesopotamia, Greece and Rome respectively. He could not predict that his so-called "satire" on the wedding of the god Mercury and Miss Philology would became one of the most widely read explanations of the practical and theoretical bases of the formal historical development of science and knowledge. Above all he provided a very substantial explanation of each of the liberal arts by anthropomorphizing each one in a different way. The main result was that as far as the 13th century many people knew perfectly well Capella's work, which was a very important reference book for many centuries (See Conrad, 2014; Crawford, 1913; Parker, 1890; Smith, 1987; Stahl, 1965).

In 2003, Maxcy justified mixing methods as a pragmatic means of solving social problems, whilst Mertens (2011) worked to obtain inclusion and eman-

cipation for underprivileged in her society. Mertens' references to emancipation and inclusion are closely tied to historical origins of the liberal arts. In classical Latin, *liberalis* denoted everything to do with freedom (see *Thesaurus Linguae Latinae*). Liberal arts may have been so called because they were linked to the classical Greek ideal of the truly free man –an ideal inherited by the Romans. For Plato and Aristotle, all of us tend towards freedom, but to become genuinely free it was vital not to have needs –therefore, the possibility to forget about the worries of our basic needs. They believed necessity precluded freedom. Only a male with his needs previously covered could guarantee to think freely to decide what is best for everyone in the community (including himself, of course).

A merchant –even if he earned money without the need to– could not become a truly free man, because he could "have" more, but not "be" more. A politician or a general became "more" because they were forced to reason about the best course of action, and became a better person in the process of seeking the best for the whole community (see Marín,1993).

From this criterion, there were very few the men who were free really in classical Greece: perhaps a quarter of the inhabitants of Athens at the time, who could be less than 300,000, as Christaki remembers. Experts estimate that the number of citizens in Athens was between around 35,000 and 50,000 in the 5th and 4th centuries BC, and that only half of them ever sat in the city assembly. In around the year 411, some calculated that over 5,000 Athenian citizens –of the populati-on of the day– had never been met to debate on any important subject, according to Dahl (see Christaki, 2015; Dahl, 1989, pp. 344-345).

We speak about men (see Sinclair, 1991; Sotelo Martínez, 2007). Women could also be truly free, if they did not have to concern themselves with their needs, but they could neither govern the community nor fight in the army. The Greeks thought that women's natural occupation was the care of the family, except for a minority dedicated to religious cults as female priests. Women are a half of the free people, Aristotle argues, and the rulers of the city come up from the children (*Politics,* 1, section 1260b [available on line in http://data.perseus.org]).

HUMAN PROBLEMS, FRIENDSHIP, LEISURE, GOOD LIFE AS PRIORITIES

All this is essential to understand two things: first, liberal arts never were a "patrimony" of powerful male people. Women and any other person could also achieve the greatest level of knowledge in the liberal arts, but this was insufficient to be free really. There were even serfs who learned liberal arts and worked as teachers. Paradoxically, women and serfs even prosper under tyrants, and favour democracies, Aristotle argued in his *Politics* (5, section 1313b [available on line in http://data.perseus.org]; see also Pringle, 1993, p. 140; about serfs and liberal arts, Meital and Agassi, 2007). Knowledge of the liberal arts did not guarantee freedom. They only guaranteed to have good dispositions to reason well.

Second, as a form of "prehistory" of mixing methods, the arts also implied proper methods, and in the current practice of mixing methods it is often impossible to distinguish between methods and techniques. For Greeks and Romans however this was not important. Certainly, as is well-known, Greeks distinguished between knowledge in the general sense (*gnosis*) and each science in particular (*episteme*). They used the word *gnosis* to express the broadest concept of "knowledge", while *episteme* (science) referred to a specific circumscribed knowledge. Instead, the concept of "art" (*téchne*) underlined the idea of pragmatism. In practice, however, the distinction was not always clear. A trade implied an "art", but there were arts whose mastery was considered what people would call a "profession" in the 20th century. The Greek word *téchne* had a gradation of meanings covering the sequence of trade, profession, industry, cunning, astuteness, and even machination.

For Greeks and Romans however, no knowledge was interesting per se, and much less something that could be acquired without interacting with other people. They believed that all knowledge, even philosophy, had a practical and inter-relational character. They placed much more emphasis than us on the importance of friendship when resolving problems –even scientific problems. To solve problems in classical Greece (and in any country and at any time), it was necessary for people to explain themselves and argue convincingly. They thus talked, shared experiences and knowledge, and together searched for solutions or improvements –in short, proposed mixtures of methods if necessary to solve problems–, and acting in this way they often became friends. They had to pool their knowledge in a truthful and reliable way without self-deception and with mutual trust (see Borck, 2010; Eikeland, 2008).

In other words, the main concern of Greek philosophers was not to mix methods to solve problems, but

to solve problems, regardless of whether it involved mixing techniques or methods or by any other means. It could be said that they mixed ways –anyway– in order to obtain solutions.

Now it should be recalled that Maxcy in 2003, Mertens also in 2003, 2007, and 2011, Biddle and Schaftt in 2014, and many other theoreticians of mixing methods invoked a similar pragmatism at the beginning of the third millennium when they justified mixing methods in the pursuit of better social behaviour and the creation of knowledge within the context of the community and the social good. They only said explicitly what –according to Aristotle– any upright person does when they seek to know more about something to solve it.

In neither classical Greece or Rome did all this need a man to be free really. It was only necessary –including for slaves– to have leisure, which could be a form of freedom. Leisure implied having free time, and learning liberal arts was not considered work in the strict sense; it was considered precisely leisure (or, rather, something that would require leisure).

It is important, therefore, to underline the strength of the concept of *otium* in classical Latin. If we have no alternative but to translate it as "leisure", we must note that *otium* could have the same meaning that it has in English expressions like "life of leisure" or "people of leisure" and similar. In its best sense, however, *otium* was the enjoyment of free time to engage in valuable and enriching pursuits from the point of view of a person's inner spiritual life. In this way, *otium* was understood neither as a work, a job, a trade, or a business nor as ostentation or a "dolce far niente" (Hernández de la Fuente, 2012; Korstanje, 2008; Mañas Viniegra, 2010).

This is easy to understand in classical Latin because conditions to work, job, and especially trade and business could be "negotiated", and the English verb "to negotiate" is an anachronism derived from the negation of *otium*, that is from the *nec-otium* (*negotium* in Latin).

True freedom, leisure as *otium*, friendship, could finally create the best conditions to conclude that the liberal arts were the seven we know, and that these arts had to be especially focused on numbers and letters, ultimately on arithmetic and grammar.

We heard the reasons of Miss Arithmetic when Mercury and Philology's wedding, but not those of Miss Grammar –who is the basic art to speak well. In

his 5th-century Roman satire, Capella presented her as an old woman who had lived in Greece for most of her life before moving to Rome. Here, the Senate obliged her to dress in the Roman rather than the Greek style.

Grammar was a pure mixture of methods and techniques. She carried the instruments and the potions necessary to cure people, and particularly children, of any disease or malformation affecting speech. This obviously tended to be in the mouth, throat, trachea, and lungs. She had originally been concerned merely with ensuring people read and wrote well, but in the 5th century she had to supervise the correct understanding of read and spoken material and display erudite criticism of anything expressed in words. These preoccupations had aged her considerably and she did not always realise the importance that other arts had come to acquire over time. She was too talkative, and sometimes such essential arts as Rhetoric and Dialectics could not make themselves heard to the extent necessary for people to express themselves well.

Grammar was insufficient however to exchange knowledge and resolve problems. If the exchange of opinions had to be mutual, people had to be fluent in their language, of course. Grammar was the main vehicle for effective expression, as Aristotle already noted (Covarrubias, 2001-2002; Zagal and Aguilar-Alvarez, 1996). But if to solve problems required mutual trust and faith –friendship–, anyone with more knowledge of a subject should share it with those who knew less, without being bound by strict reciprocity. Strict reciprocity works against living well together –in classical Greece and today, as Habermas (1990) argued–, and living well together was the main criterion to solve problems.

This was the question –perhaps the final question for Greeks and Romans. The Greek concept of "good life" was intimately related to knowledge, and had a social character. For Greeks, knowledge –any knowledge– was a sine qua non for "living well", but living well did not consist in know more. For many people, "living well" especially depended on three conditions: staying on good terms with the gods, being virtuous, and having friends, and in the first place, all this was not a methodological but a vital question (see Atwill, 2009, pp. 162-189 about the social character of "good life"; Choza, 1990; Navarro, 2012; Russell, 2005 about the three conditions to "living well").

Certainly, this threefold classification is too rigid; the Greek philosophers wrote much more to ex-

plain the idea of "good life". Thus, there were many Greeks who preferred more general descriptions or who introduced very important subtleties into this concept. Aristotle, for example, pointed out that "living well" also needed being fortunate, so that the original meaning of "good life" implied being lucky, being fortunate, blessed (see Oishi, Graham, Kesebir and Galinha, 2013).

To a certain extent, the Greek concept of a "good life" was a forerunner of the "common good", as defined by Saint Paul (see Lienhard, 1980, p. 508). "Living well" or "good life" was an idea less evolved than "common good". This last –the "common good"– best expresses the communal nature of "living well".

INCLUSION, EMANCIPATION, SOCIAL JUSTICE VERSUS GOOD LIFE AND POLICY, TODAY AND YESTERDAY

Greek "good life" and Christian "common good" are linked to other forms of speech that two millennia later, became characteristic of those who practiced mixing methods. As Maxcy (2003) justified mixing methods as a pragmatic means of solving problems as it pursues the greater social good, "living well" was the best social good for the Greeks. Anyone had to be in conditions to live well as far as possible. A similar purpose seems to appear in Mertens" proposal of a "transformative paradigm" (2011), which highlighted the importance of the three concepts of inclusion, emancipation, and social justice as the best reason to mix methods, and this could be also considered another way of saying "living well" and "common good".

Greek idea of "good life" as the later concept of "common good" involved however the correct organisation of one's own community, and thus, the practice of policy. As is well-known, this other word, the English "policy", derives from *polis*, city in Greek, but through to word *politeia,* and this is a too ambiguous expression. It used to mean the "civil way of living", but also the form of governance of a *polis,* and sometimes a concrete form of government that was called in this way, the *politeia* par excellence- (Bates Jr., 2002, pp. 102-121; Bates Jr., 2013; Bates Jr., 2014).

In any case, Greeks believed that "policy" was more important than "politics" The first expression entailed all the necessary functions for the running of any community, including the interrelation between all arts, crafts, trades, and professions –and all human activity.

This enumeration is sufficient to prove that organising one's own community correctly necessarily implied mixing. Greeks did not use any concept equivalent to "mixing methods", as in the 20th century and later. Nevertheless, they described these interrelations of arts, crafts, and more as a constitutive aspect of ordinary human life. This was decisive to let a man to be free really. Nobody could get this either in a village or in an isolated family, where there could not be the diversification of vital functions that is necessary to be free really. Only the division of labour made possible some male people to live without concern about their needs, to search the best law, and to govern people rightly – "politically".

LIBERAL ARTS AS A SYLLABUS

As the aim was to solve problems –any problems– and as any ordered community has a wide range of different skills and needs, it was necessary to merge fields of knowledge and establish priorities. It is likely that a similar problem was addressed in Alkebullan, in the Nile valley, between 4,400 and 4,000 years before the Christian Era, giving rise to something that is today considered similar to "liberal arts". It is even thought that the Greeks Thales and Pythagoras were educated in that tradition in the Egyptian Mystery School, and may have introduced it into Greece on their return. But this possible origin of the liberal arts does not concern us here. It is sufficient to remember that Greek and Roman knowledge tended towards the encyclopaedic, that is, towards overall synthesis, and this was the first step to select methods and mixing them.

Baltasar de Céspedes (Andrés, 1965) declared in 1600 that the classical age ended with Saint Isidore of Seville. This was the author of the widely-read *Etymologies*, the first known encyclopaedia in history and an astonishing achievement due to the topics it covers, from how to build a wall to the Holy Trinity. In fact, Isidore's work provides not only a good example of mixing methods but also other evidence: mixing methods involves mixing knowledge, different fields of knowledge, and this also requires criteria. In fact, Actually, the process of selecting which arts were "liberal" and their painstaking articulation into a true syllabus was slow. The debate as to which arts really were liberal often mixed sciences and arts. Cicero, for example, gave great importance to poetry, literature, politics and ethics, without considering whether they were arts or sciences. The philologist Varro included architecture and medicine among the liberal arts, and the physician Galen considered medicine as the most important art, although he also added law. In his *De pallio,* Tertullian believed that teaching people

to read, speak, count, be a good rhetorician, sophist, doctor, poet or even an astrologer or interpreter of the flight of birds –all listed in this way–, all this teaching was a "liberal art" (arts in Cicero, Maryks, 2016, p. 88-100; in Varro, Tristano, 2009, p. 1-21; in Galen, Pendrick, 1994).

He noted expressly that all this knowledge was inferior to others such as law, but did not offer a clear criterion to distinguish between mere art and true science. He said revealingly however that the arts he described as "liberal" were taught by men who only wore the mantle (*pallium* in Latin) and not the toga.

We must understand this sentence in the context of Valerius Maximus's advice about the need to keep clear the superiority of the toga on the pallium. Roman people considered the pallium a Greek cloth, and even Roman people who assured the full continuity between the Greek and the Roman culture proclaimed the need to make a difference –according to the author of *Memorable deeds and sayings* (Wallace-Hadrill, 1998, pp. 81-82; Wilson, 2006).

Tertullian lived in the second and third centuries, and the seven definitive liberal arts were established later and became the widely-accepted syllabus in Europe in the 12th and 13th centuries and thereafter. But Tertullian's distinction persisted (namely that those wearing a mantle were not the same as those wearing a toga in matters of knowledge). From the start, the universities taught four well-known fields: liberal arts, theology (philosophy), law and medicine. Liberal arts, however, became straight away a previous requisite to study in some of the other faculties, which thus became considered "superior" (Aguirre, 2008; González González, 2008).

Probably in the 4th century –Kenyon (2013, p. 107) believes-, and certainly in the 5th, educated Romans already considered there to be seven liberal arts, beginning precisely with Grammar, then Dialectics, Rhetoric, Arithmetic, Geometry, Astrology and Harmony (understood by many at that time as Music, which Cassiodorus in the 6th century defined as "spoken numbers").

As we saw, according to Aristotle, although women could also be truly free, their task was not exercise authority. Centuries later, for Christians, if exercising authority must be a service, this service was a male matter. Easier said than done, certainly. As is well-known, there is many a slip twist the cup and the lip. As Roman began to consider the seven lib-eral arts as the best syllabus to educate future authorities from the 5th century at least, Christians inherited the same way to train future priests and princes'councilors from late the 8th. It is well known that Charlemagne commissioned the monk Alcuin of York to organize classical studies in Aachen, and Alcuin introduced the seven liberal arts as the syllabus of his new school. It became the main syllabus in the whole Christianity until 19th century. Our secondary education system today is the result of the development and adaptation of liberal arts.

A decisive step was their adoption by Roman Christian or Romanised educators (Capella was not Christian). In the previous century –the 4th–, Saint Augustine had advanced a deeper reason in favour of the liberal arts. He believed them to be formalised versions of human activities that gave unity to knowledge and helped us understand our everyday experiences, and developed our capacity as rational beings (Migne, 1844-1855, 32, 1015). With a more clearly religious intention, Cassiodorus wrote in *Institutiones saecularium litterarum* in the 6th century that the liberal arts prepared the human mind to understand the holy scriptures.

It is often said that their implementation in the Palatine school in Aachen by Alcuin of York led to the definitive organisation of the studies of the liberal arts into trivium and quadrivium. The second term, quadrivium, had already been used by Boethius in the 6th century, and trivium was added in the 8th. Alcuin himself probably used both, although I have not found it in his writings. In any case, trivium and quadrivium were words that were used formally in Latin when speaking of roads or routes in both the literal and metaphorical sense, for example in astronomy. "Bivium is a double path, trivium a triple one", quadrivium a quadruple one, explained Johannes de Garlandia in the 11th century (his *Opus synonymorum,* in Migne, 1844-1855, 150, 1588 D).

ARTS, HABITS, VIRTUES, HUMAN AND SOCIAL SCIENCES

Guillaumin (2012) notes that bivium has frequently been documented in 4th-century Latin texts, particularly to refer to two contradictory paths, one right and the other wrong, appearing as options in people's lives. He suggests that Boethius, who was very familiar with classical literature, may have chosen the word "quadrivium" in contrast to the Pythagorean concept of "bivium". Boethius saw it as a confluence of four different routes with a single goal –to gain knowledge, and from it, true philosophy.

This is not the place to explain which philosophy Boethius considered to be the true one. I am more interested in pointing out that years ago I was surprised to read some pages by the philosopher Jacinto Choza (1990) where he highlighted the similarity between the Thomist classification of the dianoethic habits mentioned by Aristotle and the Diltheyan taxonomy of the sciences of the spirit (which would come to be known as "sciences of the mind", and today "human and social sciences") (Dilthey, 1910/2006; examples of the different translation of *Geisteswissenschaften* in Dilthey, 1942, and Dilthey, 1944). Table 1 shows the correspondence observed by Choza.

Table 1. Correspondence between Aristotelian Dianoethic Habits and Diltheyan Sciences of the Mind, according to Choza (1990)

Aristotle	Dilthey
Wisdom	Art [Aesthetics]
	Religion
	Philosophy
Intellect	
Science	Sciences
Art [Technics]	Pedagogy
	Economy
Prudence	
Justice	Law
	Policy
Fortitude	Social life
Temperance	

Fuente: Choza (1990).

The reason for my surprise was above all the differences in the period, method and convictions between these three philosophers: Aristotle, the classical Greek in the 4th century BC; Aquinas, the 13th-century Italian friar; and Dilthey the agnostic "vitalist" of the 19th and 20th centuries. This factual –it can be said phenomenological– correspondence between the three seemed to me to be an indicator of their correctness: if three such different people, with parallel solutions, solve problems that are also anthropological, then it can be assumed that human beings were, are and will probably always be this way, as they perceived.

The presence of Dilthey equates this practice even more closely with mixing methods. It would acquire particular importance in the 20th century in the social sciences, and the origin of "social sciences" concept could be specifically Diltheyan.

This similarity between both classifications -Aristotelian dianoethics habits and social sciences of Dilthey- concern the liberal arts; Alcuin of York related in the 8th century the gifts of the Holy Spirit and the seven liberal arts, and in the 13th Aquinas showed the correspondence between Aristotelian dianoethic habits and the gifts of the Holy Spirit (see Migne, 1844-1855, 101, 853; also, d'Alverny, 1946; Dales, 2013).

It is important to remark that Table 2 compare taxonomies established over more than two millennia. Thus, we must wonder all this: (i) this could be the way human beings really are in any time; (ii) the liberal arts were perfectly adapted to the way humans are (iii) as were the human and social sciences mentioned by Dilthey. In short, we could ask whether mixing methods –in the past, present and certainly in the future– is in fact the result of the practical nature of reason.

GOOD REASONS TO TEACH LIBERAL ARTS TO POOR PILGRIMS IN SANTIAGO WAY

The last question requires more space to explain all these and other singular taxonomical correspondences. As a sample, I only add in Table 2 a first possibility of extending: that of Boethius' gnoseology (see Masi, 2006). Now, we can only note that the liberal arts also served to educate really free men in Charlemagne reign and for centuries. As in classic times, they were available however to poor people too. The Pseudo-Turpin chronicle of the 12th century recounts a story that pretends to be the historical explanation of this. According to it, the pilgrimages to Santiago originated with the Muslim occupation of Spain. Muslims conquered Hispania in the early 8th century with the result –the Pseudo-Turpin argues– that many people in Galicia and a large part of Hispania became Muslim, and forgot that it was precisely in Galicia that the apostle Saint James was buried. One night, Charlemagne saw in the sky a path of stars –perhaps, the Milky Way– rising out of the sea at Friesland and continuing through Germany, Italy, Gaul, and Aquitania, across Wasconia, Navarre and Hispania, to Galicia. The king gazed at the path of stars for several nights until finally Saint James appeared to him in dreams and chided him for not seeing what was going on. He commanded him

Table 2. Correspondence between the Gifts of Holy Ghost, Dianoethic Habits, Liberal Arts, and Sciences of mind

Gifts	Habits	Knowledge	Arts	Habits		Sciences of mind
Jerome	Aristotle	Boethius	Alcuin	Aquinas		Dilthey
Wisdom	Wisdom	Metaphysics	Grammar	Intellectual	Speculative	Religion
						Art [Aesthetics]
Understanding	Intellect	Philosophy of mind	[Dialectics]			Philosophy
	Knowledge				Practical	Sciences
	Art [Technique]					
Counseil	Prudence	Philosophy of language	Rhetoric			Pedagogy
		Magnitude in Motion	Astronomy			Economy
Science	Justice	Magnitude at Rest	Geometry	Apetitive	Rational	Law
Strength	Courage	Number itself	Arithmetic			
Godliness	Temperance	Relative number	Harmony / Music		Sensitive	Policy
	Liberality					
	Magnificence					Social life
Fear of God	Greatness of Soul					

Fuente: Elaboración propia.

to gather a large army to conquer the whole of Hispania, and to go in pilgrimage to his tomb in Galicia and prepare the way for the thousands of pilgrims that would follow. The apostle repeated twice more his visit and Charlemagne began his task (Hebers and Santos Noia, 2001, chapter 1).

Experts in "chansons de geste" conclude that the Pseudo-Turpin chronicle is very unreliable as a historical document, but for our purpose it is more important to relate this story to the relevance that Charlemagne gave to the liberal arts. The Pseudo-Turpin (Hebers and Santos Noia, M., 2001, chapter 22.2) also recounts that he ordered to paint the seven liberal arts on the walls of his palace, in Aachen, and the 12th-century chronicler described what each one was for in such a way that we can only conclude that they themselves –the liberal arts– needed mixing methods to resolve endless social problems.

The Pseudo-Turpin is the fourth part of famous *Codex Calixtinus* of Santiago de Compostela cathedral, and experts consider this *Codex* an instrument to foster pilgrimages to Santiago in the whole Europe (see Diaz y Díaz, 2010). There are several copies in different countries (Hebers and Santos Noia, 2001).

Certainly, most people did not travel to Santiago to study liberal arts, and poor pilgrims could make the pilgrimage as a penitence, but simultaneously to ask for alms. For this very reason, however, was most certainly wise to respond to this situation with such a directed and purposeful educational project as creating schools and teaching liberal arts. This enabled to beggars to become ordained as priests or dedicate their lives to teaching or to any other useful profession, rather than living on charity.

In the end, as they founded their schools of liberal arts in the 13th-century Santiago de Compostela, Dominicans and Fransciscans tried to solve this very serious social problem, and social reasons were adduced to mixing methods also at the beginning of the third millennium.

In 13th century Santiago de Compostela, teaching liberal arts to poor pilgrims could be a good contribution to the division of labour by mixing methods.

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