

The sensuous music aesthetics of the Middle Ages
Discussing Augustine, Jacques de Liège and Guido of Arezzo

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The title of this article might be provocative for two reasons. First, how can one possibly talk about ‘aesthetics’ in the Middle Ages, since there was no such thing (as has often been remarked). Surely, the answer depends on the definition of the term ‘aesthetics’. In the Middle Ages aesthetics did not exist as a discipline. Also, most discussions of beauty (*pulchritudo*) were placed in metaphysical contexts that cannot be interpreted with regard to art – neither in the modern sense nor in the medieval sense of *ars*.¹ In order to give this non-aesthetical discipline a name, some people use the word ‘kallistics’, a term already mentioned by Georg Wilhelm Friedrich Hegel.² This, however, does not mean that medieval authors did not ask questions such as ‘Which consonance sounds well?’ or ‘Does a certain device contribute to the beauty of a piece of music?’. In this text, questions that concern the sensual quality of sound and the experience of listening shall be called aesthetical. These questions are rarely dealt with in the foreground of the texts, but the pieces of evidence that are found reveal a far-reaching consciousness of aesthetical questions.

Second, on what grounds may it be asserted that medieval music aesthetics was sensuous? This question will be the central concern throughout this article. The opinion or prejudice is still encountered that the music theory of the Middle Ages was opposed to sensual perception, that it was blending aesthetical aspects with mathematical and theological ideas and did not match musical practice. Certainly, these stereotypes cannot usually be found in more recent scholarship, but they have not been replaced by a new model of how medieval authors approached aesthetical questions and are, therefore, still common in popular texts as well as in the consciousness of scholars not specialised in the field. A very prominent case of

¹ For a general account of this problematic, see the collection of essays edited by Günther Binding and Andreas Speer: *Mittelalterliches Kunsterleben nach Quellen des 11. bis 13. Jahrhunderts* (Stuttgart-Bad Cannstatt, 1993).

² *Vorlesungen über die Ästhetik*, vol. 1, ed. Eva Moldenhauer and Karl Markus Michel, Werke 13 (Frankford, 1986), 13.

such a popular text is Umberto Eco's *Art and Beauty in the Middle Ages*, a revised version of which was published in 1987.³

In this tradition, a supposed medieval music aesthetics had been constructed that never really existed. Its construction was based on apparent evidence that, however, only by mistake could be taken as evidence for aesthetical thought. The result was a strange, even bizarre music aesthetics that defined mathematical ratios as the substance of music. At the root of such an interpretation lies a category mistake: evidence that did not at all belong to aesthetical thought has been read as if conveying a music aesthetics. The impression of difference, otherness or strangeness was the outcome of an anachronistic perspective. Statements were related to aesthetical experience where such a relation was entirely out of place, while evidence that really throws light upon aesthetical thought seemed to be marginal. Interestingly, if the perspective is shifted into a more adequate angle, medieval music aesthetics then loses its apparently bizarre outlook. At the same time, the significance of the seemingly marginal evidence becomes intelligible.

With regard to late medieval and early modern times, Rob C. Wegman has drawn more attention to listening practices and also their sensual aspects.⁴ However, needless to say, much more research has to be done until a richer idea of medieval approaches to listening practices and musical pleasure can be developed. The goal of this article is to shed more light on this issue by using three examples that demonstrate how sources from music theory of the Middle Ages relate to aesthetical practice and thought.

The article aims at an interpretation of medieval music theory. It does not take into account other sources such as theological treatises, literary works or iconographical documents and so on.⁵ It has never been questioned that such sources, however scattered they are, reveal some facts about the everyday musical experience of the Middle Ages. The goal of the following pages is to demonstrate that there is no contradiction between such sources and treatises of music theory and that these treatises do not at all exclude a sensuous approach

³ The original version stems from 1959 under the title *Sviluppo dell'estetico medievale* (Milan: Marzorati editore). An English translation was published by Yale University in 1986 as *Art and Beauty in the Middle Ages* (second edition in 2002). Only after the English translation had been published, Eco revised the book substantially and borrowed the title from the English translation of the earlier version: *Arte e bellezza nell'estetica medievale* (Milan: Bompiani, 1987); the chapter on music is to be found on pp. 41-44. This book is repeatedly re-edited and, obviously, read. The latest edition of the German translation appeared in 2007 (Munich: Hanser). The 1987 version has not been translated into English.

⁴ *Musical Quarterly*, 82 (1998), Special Issue: *Music as Heard*, ed. Rob C. Wegman.

⁵ Such sources have, for example, been used by Christopher Page, *The Owl and the Nightingale: Musical Life and Idea in France 1000-1300* (London, 1989), or by Björn Tammen, *Musik und Bild im Chorraum mittelalterlicher Kirchen 1100-1500* (Berlin, 2000).

towards music.⁶ If one reconstructs the original meanings behind treatises of music theory it becomes intelligible that those pieces of evidence from other sources and disciplines or from in-between the lines must indeed be considered aesthetical statements in their own right.

I. Augustine

On first sight, one would probably not expect anyone to choose Augustine (354-430) out of all the medieval authors on music theory in order to point out the sensuous aspect of music theory. Some of the apparently most typical judgments stem from Augustine – confirming those prejudices just mentioned. Augustine disapproved of sensual qualities in music in two respects: firstly in the direct aesthetical sense that the Beautiful pleases through number, and secondly in the moral sense that one has to stay away from sensuous pleasure. Augustine could not be clearer, it seems. The formulation ‘the Beautiful pleases through number’, in fact, is a literal translation from his *De musica*: ‘pulchra numero placent’.⁷ As to the moral aspect, Augustine emphatically asked: ‘What, then, is easy? To love colours, voices and cake, roses and soft bodies?’⁸ Here, Augustine compares the love of God with the sensuous love of corporeal things. I will deal with both statements separately.

⁶ Here and there some evidence for sensuous elements in music theory have been collected: Richard Crocker, ‘Discant, Counterpoint, and Harmony’, *Journal of the American Musicological Society*, 15 (1962), 1-21; Fritz Reckow, ‘Rectitudo – pulchritudo – enormitas. Spätmittelalterliche Erwägungen zum Verhältnis von materia und cantus’, *Musik und Text in der Mehrstimmigkeit des 14. und 15. Jahrhunderts*, ed. Ursula Günther and Ludwig Finscher, Göttinger Musikwissenschaftliche Arbeiten, 10 (Kassel et al., 1984), 1-36; *id.*, ‘Processus und structura. Über Gattungstradition und Formverständnis im Mittelalter’, *Musiktheorie* 1 (1986), 5-29; *id.*, ‘Pictoribus atque poetis licet incipere quod volunt: Interdisziplinäre Voraussetzungen für das Verständnis mittelalterlicher Musik’, *Zusammenhänge, Einflüsse, Wirkungen*, ed. Joerg O. Fichte et al. (Berlin and New York, 1986), 117-129; Sarah Fuller, ‘Delectabatur in hoc auris: Some Fourteenth-Century Perspectives on Aural Perception’, *Musical Quarterly*, 82 (1998), 466-477 (cf. above, n. 4).

⁷ *De musica* VI, xiii, 38. – The most recent critical edition of book six is Martin Jacobsson, *Aurelius Augustinus: De musica liber VI*, Acta Universitatis Stockholmensis. Studia Latina Stockholmensia 47, (Stockholm, 2002). Until an entire critical edition is published, the edition by Guy Finaert and F.-J. Thonnard should be used for the remaining five books: *La musique, De musica libri sex*, Bibliothèque augustiniennne. Œuvre de Saint Augustin 7/4 (Paris, 1947). Jacobsson’s edition also contains an English translation of book six. For the first five books see Augustine, *On music*, translated by R. Catesby Taliaferro, Annapolis 1939.

⁸ *De musica* VI, xiv, 44 Quid ergo facile est? An amare colores et voces et placentas et rosas et corpora leniter mollia?

1. 'The Beautiful pleases through number.'

In *De musica*, Augustine investigates rhythm. In order to understand the assertion, 'the Beautiful pleases through number', it is therefore necessary to address some of the basic ideas of Augustine's theory of rhythm. Augustine asks why there are rhythms everybody seems to like while there are others where this is not the case. And he observes that wherever we like a rhythm it is bound to a certain equality. Rhythms are, so to speak, extensions of equality, i.e. of the fundamental relationship of rhythmical durations, namely the repetition of a rhythmical unit. Basically, this means that rhythms are pleasing inasmuch as they can be reduced to equality. Therefore, Augustine concludes that equality is essential for rhythm and its perception.⁹

Since rhythms are composed of countable units they can easily be expressed through numbers. A rhythm consisting of two equal entities can be expressed by the ratio 1:1; a rhythm consisting of two entities whereby the first lasts twice as long as the second can be expressed by the ratio 2:1 and so on. When saying 'The Beautiful pleases through number' Augustine refers to that insight. This interpretation in itself would suffice to conclude that the assertion that Augustine wrote about mathematics rather than aesthetics misses the point. Put simply: Augustine's theory can be applied to almost all common music even as practiced today. Such music adheres to regular metres and pleases through the rhythms within those metres, and therefore it pleases through number (expressions such as 'four-four time' make this evident). At no point does Augustine suggest that a listener is meant to analyse rhythm in terms of number when he or she is listening to music. This is not what he said, meant or implied; he merely attempted to understand the aesthetical effect of rhythm.

However, this misunderstanding has deeper roots.

a) The summary of Augustine's theory of rhythm given so far does not take into account the intention of the text. There is no doubt that Augustine was easily moved by music, and we will come back to that aspect shortly. His fondness of music, however, was not the motivation for writing *De musica*. It might have been decisive for choosing music as the subject but that is all. Much more precisely, Augustine was looking for a subject that was suitable for

⁹ Augustine discusses rhythms by means of ratios in *De musica* I, vii, 13-I, x, 17. The idea of equality remains implicit but in fact provides an important criterion for the classification of ratios. In book six Augustine clearly states the significance of equality and gives examples of how equality controls metrical feet (*De musica* VI, x, 26-27).

introducing young or less educated readers to a more complicated philosophical matter. Behind his work lies the idea of convincing the readers of neo-platonic metaphysics (as mingled with the Christian doctrine).¹⁰ And if Augustine could show that the experiences with which most people are well acquainted can be traced back to purely immaterial grounds, an important step would have been taken.¹¹

Augustine develops the following argument: the analysis of our perception of beauty as represented by rhythm leads to numerical ratios that are ultimately rooted in equality. However, equality does not exist in actual sense perception. The problem is well known from geometrical figures: an exact circle exclusively exists as an idea, it does not exist materially since any material representation of a circle is strictly speaking uneven. The same is true with equality.¹² So, the question is: where do we have it from? How can it possibly rule our aesthetical experience if we cannot even know it, because it has never occurred in our empirical reality?¹³ The answer is that it must exist outside the sensually perceptible world and that there must be an innate ability of human beings to recognise it.¹⁴ In principle, this argument was known from Plato while Aristotle knew the problem but was proposing another

¹⁰ For an account of the pedagogical context, see Henri-Irenée Marrou, *Saint Augustine et la fin de la culture antique* (Paris, 1958), Robert J. O'Connell, *Art and the Christian Intelligence in St. Augustine* (Oxford, 1978), Ilsetraud Hadot, *Arts libéraux et philosophie dans la pensée antique*, Études Augustiniennes, (Paris, 1984); *id.*, 'Erziehung und Bildung bei Augustin', *Internationales Symposium über den Stand der Augustinus-Forschung vom 12. bis 16. April 1987 im Schloß Rauischholzhausen der Justus-Liebig-Universität Gießen*, ed. Cornelius Mayer and Karl Heinz Chelius (Würzburg, 1989), 99-130.

¹¹ We do not know how the sixth book would have looked like because it only survived in a version that Augustine revised twenty years later. The book was requested by an otherwise unknown bishop called Memorius for whom Augustine might have revised the book, but there does not seem to be any way of reaching a reliable conclusion. Cf. Marrou, *Saint Augustine*, 580-583; O'Connell, *Art*, 178-188.

¹² *De musica* VI, x, 28; VI, xii, 34; VI, xiv, 44.

¹³ *De musica* VI, xii, 34: Aequalitatem illam, quam in sensibilibus numeris non reperiebamus certam et manentem, sed tamen adumbratam et praetereuntem agnoscebamus, nusquam profecto appeteret animus, nisi alicubi nota esset; hoc autem alicubi non in spatiis locorum et temporum, nam illa tument, et ista praetereunt. Ubi ergo censet? Responde, quaeso, si potes! Non enim in corporum formis putas, quas liquido examine aequales numquam dicere audebis, aut in temporum intervallis, in quibus similiter, utrum sit aliquid aliquanto quam oportet productius vel correptius, quod sensum fugiat, ignoramus. Illam quippe aequalitatem quaero, ubi esse arbitreris, quam intuentes cupimus aequalia esse quaedam corpora vel corporum motus, et diligentius considerantes eis fidere non audemus. (We cannot find exact and enduring equality in sensible numbers, we only recognize it as suggested and transitory. Therefore, the mind would definitely never strive after equality were it not known from somewhere. That 'somewhere', however, does not exist in space or time because space expands or shrinks and time passes. So where do you assume [does it exist]? Answer, I ask you, if you can! You certainly do not expect it in corporeal forms which after accurate scrutiny you would never dare to call equal, neither do you expect it in time intervals where we cannot know whether something is faster or slower than it should be. For this escapes sensory perception. Thus, I ask where do you think equality exists, which we desire if we observe that certain bodies or corporeal motions are equal, although we do not dare to trust them if we consider it carefully.)

¹⁴ *Ibid.*: Ibi puto, quod est corporibus excellentius, sed utrum in ipsa anima an etiam supra animam, nescio. (I think in a place more excellent than the corporeal sphere. Whether, however, in the soul itself or even beyond the soul I don't know.)

solution.¹⁵ Nevertheless Augustine's version of the argument is remarkable because of its clarity and simplicity.

Augustine, therefore, often emphasized the goal of his *De musica* – as of other texts – with the words: ‘to proceed from the corporeal to the incorporeal’.¹⁶ With that goal in mind, it should not come as a surprise that Augustine figured out an aspect of the aesthetical experience that easily allowed such a way of argument. *De musica* is not a text on aesthetics but a book on metaphysics using an aesthetical example for reasons of comprehensibility and pedagogical strategy.¹⁷ Augustine proceeds even further in that he does not only demonstrate the existence of Platonic ideas but the existence of God himself. He actually deduces a proof of the existence of God from his rhythmical observations. He argues that since we have an idea of equality without ever having encountered equality in real life, there must be a God that provided us with that idea.¹⁸

The point here is that Augustine had always these conclusions in mind when writing his *De musica*. He therefore never aimed at explaining music aesthetics in its entirety, he only used it to demonstrate something that went far beyond musical interest. This is why one could never conclude that music only meant arithmetical, metaphysical or even theological speculation for Augustine. Nowhere did he imply this, he merely used a certain aspect of aesthetical experience to demonstrate something very different. It is not the music itself that has anagogical elements; only the science of music, a theoretical reflection which is not an aesthetical reflection, has an anagogical function. Moreover, as far as we can deduce from his *Confessions*, Augustine himself did not think of these things when he was listening to music, as will become evident later.

b) So much can definitely be said about the apparently over-rational aesthetics of Augustine. Stepping on somewhat weaker ground, one may even go one step further. The interpretation of the sentence, ‘the Beautiful pleases through number’, is difficult in another respect. The sentence makes perfect sense within the pedagogically motivated context of *De*

¹⁵ These things are well known; cf. for instance Plato, *Phaidon*, 74asqq., and Aristotle, *Posterior Analytics*, 77a5sqq., respectively.

¹⁶ For example, *De musica* VI.II.2: ut a corporeis ad incorporea transeamus.

¹⁷ While it has usually been acknowledged that medieval texts on music theory were pedagogically motivated, it was only recently that Max Haas – using *Musica enchiridias* as an example – has demonstrated how deep the resulting impact could really have been: *Musikalisches Denken im Mittelalter* (Bern et al., 2005), 279-344. In the case of Augustine, the pedagogical impact is less strong because the text did not address young children. Yet it still clearly determines the intention and the consequent manner of argumentation.

¹⁸ *De musica* VI, xii, 36: Unde ergo credendum est animae tribui, quod aeternum est et incommutabile, nisi ab uno aeterno et incommutabili deo? (From where else, however, should we believe that the soul is offered what is eternal and immutable, if not from the one eternal and immutable God?)

musica and it tempts the reader to take the sentence in a rather general way. However, this might be a misinterpretation. The general meaning would suggest that beauty pleases through number and only through number. The sentence then implies a certain reversibility: Whatever is not founded in numbers does not please aesthetically.

In *De ordine*, however, written shortly before *De musica*, Augustine makes an intriguing observation. He unfolds his pedagogical concept of the liberal arts and asks which subjects were apt for the education he was envisioning.¹⁹ Discussing some sensual objects to this end, he differentiates between aspects that are rational and those that are not. He says:

Neither do we usually name rational what calls our attention to colours, nor do we do so with regard to the sweetness of the ears, i.e. when a string is struck and it sounds so to say smooth and pure. It remains to admit that in the enjoyment of those sensations [only] that belongs to reason where a certain dimension or measurement can be found.²⁰

That is to say, elements such as the timbre of sound – in this case: *liquiditas* and *puritas* (however they might be adequately translated) – are not rational. Only elements that possess a certain *dimensio* or *modulatio*, i.e. elements that are subject of measurement, pertain to the rational aspect of sensual perception. Augustine’s vocabulary is well chosen: the word *dimensio* is related to *metior*, *mensura* and the word *modulatio* is related to *modus* which also means measurement. The definition of *musica* as ‘scientia bene modulandi’²¹ takes up the same idea, thereby emphasizing the element of measurement and rationality. When Augustine said the Beautiful pleases through number he was referring to a special kind of beautiful objects – ‘haec ... pulchra’ –, namely rhythmical beauty which can be counted.

Understood in the context of *De ordine*, this means that the science of music concentrates on the measurable elements of music excluding the other elements. However, it does not imply that the other elements do not exist or are of minor importance aesthetically: Augustine’s work on music excludes certain aesthetical aspects because they are not rational.

¹⁹ *De ordine*, ed. William MacAllen Green, Corpus Christianorum. Series Latina 29, pars II, 2 (Turnhout, 1970), II, ix, 26-48; for different interpretations of the structure of *De ordine*, cf. Marrou, *Saint Augustine*, 185, Adolf Dyroff, ‘Über Form und Begriffsgelt der augustinischen Schrift *De ordine*’, *Aurelius Augustinus, Festschrift der Görres-Gesellschaft zum 150. Todestage des Heiligen Augustinus*, ed. Martin Grabmann and Joseph Mausbach (Köln, 1930), 15-62, here 34-43, Josef Rief, *Der Ordo begriff des jungen Augustinus* (Paderborn, 1962), 17-18.

²⁰ *De ordine* II, xi, 33: Sed neque in pulchris rebus, quod nos color inclit, neque in aurium suavitate, cum pulsa corda quasi liquide sonat atque pure, rationabile illud dicere solemus. Restat ergo, ut in istorum sensuum uoluptate id ad rationem pertinere fateamur, ubi quaedam dimensio est atque modulatio.

²¹ *De musica* I, ii, 2.

This makes perfect sense with regard to his intention. And more importantly, it means that Augustine was very much aware of other elements which are of aesthetical relevance, but he did not investigate them because they would not fit his goal and intention and because they were not suitable for rational, i.e. scientific research. This is why one must not read his *De musica* as an aesthetical text, although it may be read as a text that reveals a considerable amount about his aesthetical ideas.

The way Augustine develops the subject of *musica* as a liberal art in the sense described in *De ordine*, therefore, makes perfect sense. Augustine introduces the subject of *musica* starting with poetry. If one first abstracts the meaning of the words, then the sound of the letters, something remains that deserves investigation in itself. This is the rhythm, and it is music theory (*musica*) that deals with it.²² Augustine abstracts meaning as well as the individual sound of letters because these depend on conventions and are therefore subject to arbitrary change. Whether, he explains, you pronounce the ‘a’ in *Italia* long or short is not a matter of science, since science deals with truth that is neither dependent on convention nor subject to change.²³ For similar reasons, Augustine excludes timbre from music theory because it cannot be dealt with rationally, i.e. scientifically. Consequently, in *De musica* Augustine remains silent about them.

In the light of this observation, another silent aspect in *De musica* becomes more understandable. There seems to be a problem inherent in Augustine’s theory that he simply does not address: if the ideal of beauty is equality, then the mere repetition of one duration would best reproduce it in sound although the result would aesthetically be as unattractive as can be. Beauty necessarily presupposes deviation from equality. Indeed, the aesthetical principle of variation was well known in antiquity, and a closer look reveals that in remote passages Augustine does in fact imply the idea of variation even though it is no topic with which he deals explicitly.²⁴ The human inclination to variation cannot be explained by numbers.²⁵ Augustine would probably have counted it together with the other features that do

²² *De musica* I, i 1.

²³ *De musica* VI, xii, 35.

²⁴ Some of those passages were brought together in an earlier article of mine: ‘Sinnlichkeit und Vernunft in Augustins *De musica*’, *Wissenschaft und Weisheit* 57/2 (1994), 189-200; at that time, however, I did not yet see how this element would fit into Augustine’s theory of rhythm or his pedagogical concept.

²⁵ Of course, it is not difficult to imagine rather complicated rhythmical constellations that can principally be reduced to equality; cf. Philipp Jeserich, *Musica naturalis: Tradition und Kontinuität spekulativ-metaphysischer Musiktheorie in der Poetik des französischen Spätmittelalters* (Stuttgart, 2008), 139-140. But that is not the point. The problem lies in the fact that the aesthetical inclination to complexity and alteration itself cannot be explained by equality or number. Yet it seems to be the very divergence from equality that is an essential part of aesthetical pleasure.

not fall under the subject of music as he developed it. However, to conclude that this was not evident to Augustine would miss the point. And to conclude that it had no place in his aesthetics would be false because there are no aesthetics in that sense. I think that on the one hand the point was too obvious to Augustine (as the quotation from *De ordine* suggests) and on the other hand it did not make sense to discuss this in the pedagogical and philosophical context in which he was writing. Augustine's definition of the science of music – 'Musica est scientia bene modulandi' – cannot be translated as 'teaching of good composition or music making'.²⁶ It only refers to the rational and mathematical, i.e. scientific aspect of rhythmical structures that Augustine had singled out as being useful for his metaphysical and pedagogical concept.

Later, in book six of *De musica* Augustine seems to contradict his earlier statement from *De ordine*.²⁷ Now he asserts: 'In the entire field of sensual perception there is nothing that does not please us by way of equality or sameness.'²⁸ This sentence, however, is ambiguous. It may either mean that any pleasure we receive in the field of sensual perception results from equality (more likely from a grammatical perspective), or it might just mean that in the field of sensual perception equality always pleases. If we take it in the weaker (latter) sense it does not change a thing. If we take it in the stronger sense, the reversibility of the assertion quoted above – 'haec ... pulchra numero placent' – would indeed follow. This reading is also supported by the fact that Augustine in *De libero arbitrio*, written between *De ordine* and *De musica*, made such a statement more clearly: 'You will see that whatever physical objects please you and whatever seduces you through corporeal senses is founded on number.'²⁹ But still, this does not imply any kind of 'mathematical' aesthetics;³⁰ rather, it just implies that Augustine had become an ideologically more consistent Neo-Platonist because the assertion expresses his belief in the fact that everything is ontologically built on number.³¹ Even experiences that seem to be irrational are ultimately founded on number. In evident

²⁶ Cf. Albrecht Riethmüller, 'Stationen des Begriffs Musik', *Geschichte der Musiktheorie 1: Ideen zu einer Geschichte der Musiktheorie*, ed. Frieder Zaminer (Darmstadt, 1985), 59-95, here 87.

²⁷ On inconsistencies in Augustine's 'aesthetics' see O'Connell, *Art*, p. 17-18.

²⁸ Nihil enim est horum sensibilium, quod nobis non aequalitate aut similitudine placeat (*De musica* VI, xiii, 38).

²⁹ *De libero arbitrio*, ed. Johannes Brachtendorf, Augustinus: Opera. Werke 9 (Paderborn, 2006), II, xvi, 41: Ut, quidquid te delectat in corpora et per corporeos inclit sensus, videas esse numerosum.

³⁰ For this reason the frequently quoted interpretation by Werner Beierwaltes seems to misrepresent Augustine's 'aesthetics': 'Aequalitas Numerosa. Zu Augustins Begriff des Schönen', *Wissenschaft und Weisheit*, 38 (1975), 140-157. Also, Beierwaltes does not take into account that there are contradictions within Augustine's theory and that his theory might have been developed or changed in the course of time.

³¹ The constancy of this ontological view has been demonstrated by Wolfgang Horn: 'Augustins Philosophie der Zahlen', *Revue des Études Augustiniennes*, 40 (1994), 389-415.

contradiction to his dictum of *De ordine*³² this means that Augustine later thought that any element that gives rise to sensual pleasure, explicitly including taste and the sense of smell,³³ can principally be attributed to ‘numerability’ (*numerositas*).

Be that as it may, it is clearly not stated that the epistemological or metaphysical analysis of what is happening when someone feels aesthetical pleasure is part of this pleasure. This assumption would obscure the very point of Augustine’s argument for which the difference between aesthetical pleasure and epistemological or ontological reasoning is of the utmost importance – because his intention is to lead from aesthetical pleasure to metaphysical insights (which means to lead away from aesthetical pleasure). When we enjoy a glass of wine or a piece of music we do not need to know about the metaphysical reasons why this is the case. Such an ‘aesthetical’ judgment is accepted as an empirical and self-sufficient fact. Augustine simply unfolds his neo-platonic explanation for this fact but the explanation does not belong to what might be anachronistically considered his aesthetics. Augustine very clearly emphasizes the ability to correctly judge music by way of intuition, i.e. without knowing the reasons for the pleasure.³⁴ Sensuous pleasure is the very goal of music itself, only Augustine was not concerned with music’s goal (which differs from the goal of music theory as a liberal art); rather, he was using an easily accessible object to unfold a metaphysical idea. Augustine might have chosen the taste of wine but then the project would have been much more difficult, just as it would have been the case with the timbre of sound. Rhythm, on the other hand, allows an easy illustration of an ontology that is founded on number. For such an analogical concept it is of no relevance that music is an art. In fact, Augustine at one point refers to the regularity of pulse, heartbeat, scratching and eating motions as an example of the inborn inclination towards rhythmical equality.³⁵ The connection between numerology and ‘art’ is accidental; Plato used a piece of wood to show the idea of equality that leads from the sensual world to a transcendent idea.³⁶

³² As far as I know, statements that seem to be in contradiction to the number ontology such as the one from *De ordine* have never been collected and interpreted.

³³ *De musica* VI, xiii, 38. – In the early fourteenth century Nicholas Triveth made the same claim that any sensual pleasure results from ratios within the sensual matter like colour, odour and taste. See Quodlibet XI, q. 19: ‘Utrum corpora caelesta per suum motum causent aliquam harmoniam’, ed. Mary L. Lord, ‘Virgil’s Eclogues, Nicholas Trevet, and the Harmony of the Spheres’, *Mediaeval Studies*, 54 (1992), 267-273, here 269-270.

³⁴ *De musica* I, iv, 5.

³⁵ *De musica* VI, iii, 4 and VI, viii, 20.

³⁶ *Phaidon*, 74a-b.

2. ‘What, then, is easy? To love colours, voices and cake, roses and soft bodies?’

So far I have been dealing with only one layer of Augustine’s text that is relevant here, the metaphysical one. However, there is also an ethical layer. It has been demonstrated that Augustine’s *De musica* must not be read in the sense that it was meant to explain music aesthetics in any comprehensive way. The investigation of aesthetical phenomena was subordinate to a pedagogical and philosophical goal. Augustine was very well aware of the fact that there was much more involved in aesthetical experience than those aspects that he was dealing with in *De musica*. And if there was awareness of the sensuous pleasure of music – what attitude did Augustine have towards it? This question, indeed, will lead to an answer that hints at Augustine’s ambivalent relation to musical experience. There are two aspects to be discussed; the first is secular, the other religious.

a) Augustine already raises ethical issues in the first book. One of his thoughts remains a secondary point of no further consequence. Augustine defines musical knowledge as the knowledge of ‘right’ rhythmical measuring. But during the explanation of the term ‘measuring’ (*modulatio*) he realises that to speak about a measured motion implies that it is ‘rightly’ measured. Therefore, he gives another explanation: one has to add ‘rightly’, he explains, because if someone is singing the most sweet melody and is dancing in the most beautiful way while the occasion requires gravity – that would not be right.³⁷ The term suddenly receives an ethical meaning. That thought, secondary as it is, nevertheless shows that Augustine not at all condemned sweet singing and beautiful dancing. Only the music has to fit the situation. And Augustine probably did not give much thought to this for two reasons: first, it does not contribute to his argument, and second, the point is too obvious to be discussed at any length.

There is another secular point which Augustine discusses more extensively because it contributes to his greater argument. He states that music has to be autonomous. Music theory deals with motion – not so much any motion, but motion that is performed for itself and therefore pleases through itself.³⁸ Music has no other purpose, that is, than to please through

³⁷ *De musica* I, iii, 4: Ut, si quis suavissime canens et pulchre saltans velit eo ipso lascivire, cum res severitatem desiderat, non bene utique numerosa modulatione utitur. (For example, if someone likes to be exuberant by singing sweetly and dancing beautifully while the occasion demands gravity, he [or she] absolutely does not use numerical measurement in the right way.)

³⁸ *De musica* I, ii, 3: Ergo scientiam modulandi iam probabile est esse scientiam bene movendi, ita ut motus per se ipse appetatur atque ob hoc per se ipse delectet. (Thus, the science of measurement is likely the science of right motion, provided that the motion is desired for its own sake and therefore pleases through itself.)

its motion that affects the senses. While it is the goal of *musica* as liberal art to ‘proceed from the corporeal to the incorporeal’, music itself has no other purpose than to please sensually.

Here, another ethical aspect comes into play. The investigation of motion that pleases through itself reveals the role of numbers with respect to rhythmical phenomena, and once it has been established that music aesthetics may lead one to numerical insights, there is a moral pressure to follow that path. This has to do with the idea of the human being and its destination. Human beings are gifted with rational abilities that alone differentiate them from other animals. Hence, if that is the case and a nightingale makes music, too,³⁹ it is some kind of obligation for human beings to investigate the grounds of those phenomena rationally. In *De ordine* Augustine therefore explained:

For it must occupy us in a special way how the human being has been defined by the wise ancestors: the human being is the rational mortal animal. Here we see two distinguishing marks added to the posited genus which are meant, I believe, to admonish the human being to where he or she should always return and what he or she should flee.⁴⁰

Augustine places this statement, well-considered, at the beginning of the exposition of the liberal disciplines.

Music, of course, is a perfect example for showing how human beings may flee from an animal-like activity by turning to a rational analysis of that very activity, namely to the investigation of sound and rhythm and its effects. That is why Augustine leads the argument towards this aspect – it is not that he thought ‘true’ music perception would imply this knowledge. It just means that once it is found that music is based on numbers and its investigation may, therefore, lead to higher knowledge as an end in itself, the philosophical conscience demands that this path should be followed. The general premise is that human beings have to strive for knowledge as an end in itself. Thus, Augustine’s main argument in *De musica* is that any professional musician who makes music in order to gain money cannot possibly have understood the value of music. Had they done so, they could not continue with that profession but would have to become philosophers. Hence, rather than to suggest that the true perception of music implies numerical and philosophical thought, he argues that everybody who understands the arithmetical background of music, i.e. its potential of leading

³⁹ *De musica* I, iv, 5-6.

to higher knowledge, should stop being a professional musician.⁴¹ Indeed, this was perfectly in concurrence with his pedagogical system in which music is one of the preparatory disciplines. The investigation of music thus leads to something substantially different which, once it is recognized, deserves attention more than music.

If then, one might argue, Augustine does not sketch over-rationalised aesthetics, he at least condemns music. But again, this is not quite true. It is true that Augustine, in this context anyway, does not allow his readers to stay musicians once they have understood how to receive that supposedly higher knowledge. However, Augustine – being not only a great philosopher but also a great writer – composed his treatise as a dialogue between teacher and disciple. His dialogues are mostly drawn from real discussions that Augustine had with his friends,⁴² no matter how fictional they are. The disciples often have names of real persons. With respect to *De musica*, however, scholars have sometimes complained that the disciple has a somewhat poor character without idiosyncrasy. Be that as it may, it is the disciple who gives us the clue to an even farther reaching understanding of Augustine’s argument. The teacher argues that not one single professional musician exists who possesses musical knowledge in the way described, because if that were the case they would not sell their knowledge for fame and money.⁴³ Indeed, when the teacher exposes the goal of his demonstration, the disciple tersely answers: ‘I shall be astonished if you happen to succeed.’⁴⁴

The teacher uses an analogy to convince his disciple in arguing that someone who owns a gold coin and gives it away for only ten cents does not understand what a gold coin is. And just like this person, someone who makes music in order to receive money does not really understand music. This is certainly a weak argument, and the disciple instantly and cleverly retorts:

The seller of the coin does not seem to be comparable with the musician, since after receiving applause or some amount of money given to him, he does not lose the science if he is in possession of it and has used it to please the people. Rather, enriched with money and delighted because of the approval, he returns home with the entire

⁴⁰ *De ordine* II, xi, 31: Nam illud nos mouere maxime debet, quod ipse homo a ueteribus sapientibus ita definitus est: homo est animal rationale mortale. hic genere posito, quod animal dictum est, uidemus additas duas differentias, quibus credo admonendus erat homo, et quo sibi redeundum esset et unde fugiendum.

⁴¹ Cf. *De musica* I, vi, 11-12.

⁴² Literature on the Augustinian dialogues can be found in Therese Fuhrer, *Augustinus* (Darmstadt, 2004), 186.

⁴³ *De musica* I, vi, 11.

⁴⁴ *De musica* I, vi, 11: Mirum, si hoc effeceris.

knowledge unscathed. He would be stupid if he were to despise these advantages: Without them he would be much less famous and rich, but *with* them he would not be even slightly less informed.⁴⁵

To any reader who approached Augustine's text with prejudices intimated at the beginning of this article, it would probably come as a surprise that the teacher has no argument against the point of his disciple. Rather, the teacher suddenly makes an empirical turn and says: 'If you convince me or prove that there is at least one musician who has not exclusively gained his musical skills and does not exclusively execute them publicly in order to earn money or to meet with approval, then I will accept that someone may know the science of music and be a professional musician at the same time.'⁴⁶ This is certainly a victory of the disciple – who in the end is Augustine himself, too.

It is central to understand that the question is not whether you combine music with some kind of aesthetical mathematics – an idea entirely alien to Augustine's concept of music; rather, the question is whether making music which is always an essentially sensual matter distracts a person from being a philosopher or not. Therefore, even looking at musical practice from another perspective does not posit a problem: great persons may always use music to relax from their exhausting activities in order to recover their stressed souls.⁴⁷ Augustine only mentions this in passing, not because he found that problematic, but – I would suggest – because this fact was generally accepted while in the specific pedagogical context of *De musica* it deserved to be explained to young or less educated people that they should not waste their time by devoting themselves to nothing but sensuous pleasure.

b) There remains the theological aspect developed in book six which is actually quite quickly discussed because there is no way of demonstrating that Augustine did not mean what

⁴⁵ *Ibid.*: Nam ille venditor solidi cum isto comparandus non videtur, non enim accepto plausu aut qualibet sibi largita pecunia scientiam, si quam forte habet, qua populum delectavit, amittit, sed onustior nummo et laude hominum laetior cum eadem disciplina incolumi atque integra domum discedit. Stultus autem esset, si commoda illa contemneret, quae non adeptus multo esset ignobilior atque pauperior, adeptus autem nihilo esset indoctor.

⁴⁶ *De musica* I, vi, 12: Quando igitur mihi vel persuaseris vel ostenderis quemlibet histrionum non ideo illam, si quam habet facultatem, vel assecutum esse vel exhibere, ut populo placeat propter quaestum aut famam, concedam posse quemquam et musicae habere scientiam et esse histrionem.

⁴⁷ *De musica* I, iv, 5: Non est, quod putas. Nam magni viri, etsi musicam nesciunt, aut congruere plebi volunt, quae non multum a pecoribus distat et cuius ingens est numerus, quod modestissime ac prudentissime faciunt (sed de hoc nunc disserendi locus non est), aut post magnas curas relaxandi ac reparandi animi gratia moderatissime ab iis aliquid voluptatis assumitur. Quam interdum sic capere modestissimum est, ab ea vero capi vel interdum turpe atque indecorum est. (It is not as you think. For either great men, even though they have no knowledge about music, wanted to please the crowd that does not differ very much from cattle and that is extremely numerous. (They did so very prudently and reasonably, though; but here is not the place to go into this.) Or they very moderately use some enjoyment in order to relax after serious worries and to recover mentally. It is very prudent to employ music occasionally in this way; however, to be swept away by music, even only occasionally, is ugly and shameful.)

he seems to say. At least after his conversion he actually held the opinion that sensuous pleasure like the one through music has entirely to be avoided and that the life has to be devoted to God. As described, Augustine deduces a proof of the existence of God in the sixth book. And this becomes the starting point for another moral excursus which turns out to occupy the large last section of this book.⁴⁸ All activities shall be aimed at fulfilling god's will. And when the teacher – who by now is Augustine himself without any literary ambiguity – asks his disciple whether he does not agree, the disciple has lost his subversive energy and has changed into a weak sinner that answers: 'Yes. However, as fast as this goal is understood, as difficult and laborious it is to be reached.' And Augustine replies, as the reader should expect by now: 'What, then, is easy? To love colours, voices and cake, roses and soft bodies?'⁴⁹ The religious dogmatism no longer allows any sophisticated handling of views and opposing views which Augustine so brilliantly mastered in the first book in the first book.

Of course, that quotation does not contain any sort of aesthetical statement and it was not supposed to do so. Thus, one would have to conclude that his aesthetics as it can be extracted from his *De musica* is a sensuous aesthetics. However, it must be added that Augustine did not permit such aesthetics anymore once he became a theologian and clergyman. Still, however, one should not mix up two aspects: the music aesthetics and the ethical or theological ideals imposed upon them. And the answers of the disciple, even the one in book six, make it clear that the opinion that it is advisable to abstain from music cannot be taken as any generally accepted opinion of that time – the contrary, of course, has to be assumed; for otherwise there would not have been the necessity to unfold the ethic problems in such detail.

Indeed, Augustine himself did not match his ideals. In his *Confessiones*, fluctuating between autobiography and theologically motivated fiction, he admitted that he always was more subject to sensuous pleasure than he would allow himself:

The delights of the ear drew and held me much more powerfully, but thou didst unbind and liberate me. In those melodies which thy words inspire when sung with a sweet and trained voice, I still find repose; yet not so as to cling to them, but always so as to be able to free myself as I wish. But it is because of the words which are their life that they gain entry into me and strive for a place of proper honor in my heart; and I can hardly assign them a fitting one. Sometimes, I seem to myself to give them more respect than is fitting, when I see that our minds are more devoutly and earnestly inflamed in piety by the holy words when they are sung than when they are not.

⁴⁸ *De musica* VI, xiii, 37sqq.

And I recognize that all the diverse affections of our spirits have their appropriate measures in the voice and song, to which they are stimulated by I know not what secret correlation. But the pleasures of my flesh--to which the mind ought never to be surrendered nor by them enervated--often beguile me while physical sense does not attend on reason, to follow her patiently, but having once gained entry to help the reason, it strives to run on before her and be her leader. Thus in these things I sin unknowingly, but I come to know it afterward.⁵⁰

II. Jacques de Liège and musical rhetoric

Augustine was living and writing at the very beginning of ‘the’ Middle Ages if he should be considered a medieval author at all. With Jacques de Liège we jump one thousand years through history into the future of Augustine. The main subject of music theory (meaning *musica theorica* as opposed to *musica practica*) was then basically consonance theory.⁵¹ Starting from the Pythagorean *tetraktys*, this included in its unfolded version the theory of tetrachords, hexachords, modes, octave species and the like. However, at the root of these sub-theories there was the discussion of consonances. Robert Grosseteste even called musica the ‘science of consonances’ (*scientia consonantiarum*).⁵² Therefore, it is necessary to investigate the role of sensual pleasure in relation to consonance theory as the core of those texts.

Jacques established an order of consonances that was characteristic for his time. The basis of putting them in order was the numerical ratios that expressed consonances. The criteria were equality and simplicity. That is to say, the simpler a consonance, i.e. a ratio was and the more it was related to equality, the more perfect it was. This premise was drawn from Boethius’ *De musica* and philosophically relied on the idea that the Simple is of higher value than the Composed and that equality is of higher value than inequality.⁵³ Such reasoning led Jacques to the rule that ratios whose numerator is a multiple of the denominator – like 4:2, 6:3, 9:3 and so on (*multiplikes*) – are better than others and that of the remaining ratios those are of higher value whose numerator and denominator differ by one – like 3:2, 4:3 and so on

⁴⁹ *De musica* VI, xiv, 44: Quid ergo facile est? An amare colores et voces et placentas et rosas et corpora leniter mollia?

⁵⁰ *Augustine, Confessions*, newly translated and edited by Albert C. Outler (Philadelphia, 1955), 370.

⁵¹ Still one of the best surveys on this tradition is Barbara Münxelhaus, *Pythagoras musicus. Zur Rezeption der pythagoreischen Musiktheorie als quadrivialer Wissenschaft im lateinischen Mittelalter* (Bonn, 1976).

⁵² *Commentarius in Posteriorum Analyticorum Libros*, ed. Pietro Rossi, *Corpus Philosophorum Medii Aevi. Testi e studi* 2 (Florence, 1981), I, 12, p. 194, 134.

⁵³ In the Pythagorean tradition arithmetics included qualitative elements of evaluation (cf. Marrou, *Saint Augustine*, 1958, 259) that were still common in the Middle Ages.

(*superparticulares*).⁵⁴ In the end Jacques has established an hierarchical order that begins with the octave (2:1), is followed by the twelfth (3:1), then the double octave (4:1), the double octave plus fifth (6:1), then the fifth (3:2), the fourth (4:3) and finally the whole tone (9:8).⁵⁵ For the mathematically more remote consonances where the ratio between numerator and denominator is more complex (*superpartientes*) Jacques restrained from giving any value judgment since the mathematical facts did not allow an unambiguous evaluation of the consonances. Jacques therefore arranged them according to their size.⁵⁶

Consonances in such more complex ratios (*superpartientes*) were considered of minor value compared with the aforementioned.⁵⁷ This meant that the whole tone was more valuable than the third or the sixth which would only come later in the hierarchy because their ratios do neither belong to the *proportiones multiplices* nor to the *proportiones superparticulares*. But Jacques was happy with his argument, when he declared: ‘Quite aptly we can deduce an order of perfection of the consonances from their ratios since the ratio belongs to the *causa formalis* of the consonances.’⁵⁸

Again, as in the case of Augustine we encounter an apparently non-sensuous and even non-sensual judgment as the starting point of music theory. Yet I intend to argue that Jacques’ theory comprised the most aesthetical and sensual freedom. Jacques achieved this by unfolding and articulating many aspects which were only implicit and maybe unconscious in the texts of his colleagues from the thirteenth and fourteenth centuries as well as by introducing unrivalled terminological clarity.

If the clue is to be found in precise terminology, one obviously has to ask how Jacques defines consonance. Jacques explains – and this deserves to be read carefully: ‘We call consonance [...] the mixture of any distinguishable equal or unequal sounds, be it that the

⁵⁴ Cf. *Speculum musicae*, ed. Roger Bragard, Corpus Scriptorum de Musica 3 (s.l., 1955-1973), II, ix, 7, p. 28 and IV, xxvii, 12-13, p. 67.

⁵⁵ *Speculum musicae* IV, xxviii, 12, p. 73. For a more detailed account of Jacques’ argument see Frank Hentschel, *Sinnlichkeit und Vernunft in der mittelalterlichen Musiktheorie. Strategien der Konsonanzwertung und der Gegenstand der musica sonora um 1300*, Beihefte zum Archiv für Musikwissenschaft 47 (Stuttgart, 2000), 44-65.

⁵⁶ Jacques called this order the order of generation and matter: ‘via generationis et materiae’ (*Speculum musicae* II, ix, 5, p. 28).

⁵⁷ *Speculum musicae* IV, xxvii, 27, p. 70: Sicut autem proportiones multiplices superparticularibus sunt perfectiores, sic superparticulares superpartientibus. (Just as *proportiones multiplices* are more perfect than *proportiones superparticulares* so *proportiones superparticulares* are more perfect than *proportiones superpartientes*.)

⁵⁸ *Speculum musicae* IV, xxvii, 28, p. 70: Non inconvenienter igitur videtur posse taxari perfectionis ordo inter consonantias ex ipsarum proportionibus, cum proportio ad causam ipsarum formalem reducat.

mixture is sensually pleasant or not, while it has to be reducible to a numerical ratio.’⁵⁹ Of course, what is of utmost importance here is the statement that it does not matter for the term and concept of ‘consonance’ in its general and absolute sense (*communiter et absolute*) whether the mixture is sensually pleasant or not.

While this explains why the whole tone may be more valuable than the third, it does not seem to make sense aesthetically. But that is, on the one hand, no wonder simply because it is not an aesthetics and Jacques is therefore not articulating an aesthetical judgment, and on the other because it gives way to an aesthetics that is free from numerical constraints.

Before it is possible to explain the aesthetical and indeed sensuous freedom of Jacques’ music theory, it is necessary to explain the mathematical term of consonance, since the central problem of understanding Jacques’ text is related to its terminology that is confusing to modern readers. As mentioned earlier, the subject of music theory in its most narrow sense was consonance, but this consonance was not the object which is signified by the term today. This does not mean that medieval theorists of the thirteenth and early fourteenth centuries had not yet understood that subject or had not fully grasped the acoustics that underlie consonances. Rather, it means that music theory of that time was simply dealing with another subject. This subject came into being when Boethian music theory was interpreted by means of Aristotelian theory of science. For Boethius, music was a discipline of the so-called Quadrivium with arithmetic, geometry, astronomy and music theory.⁶⁰ And he differentiated between these disciplines by differentiating between their subjects. Arithmetic is concerned with number as such, geometry is concerned with magnitudes as such, music theory is concerned with number in relation to another number, and astronomy is concerned with moving magnitude. Arithmetic and music theory, it has to be added, are restricted to whole numbers.

Here, music was a purely mathematical science, although it was actually mostly concerned with sound. And there was obviously an uncertainty as to whether the subject is a natural or mathematical entity and what role is played by the sensual aspect of the consonance. On the one hand, Boethius defines consonance as the ‘mixture of two sounds that

⁵⁹ *Speculum musicae* II, iv, 9, p. 17: Consonantia [...] dicitur de mixtione sonorum omnium distinctorum aequalium vel inaequalium, sive illorum mixtio dulciter et concorditer auditui se faciat, sive non, dum tamen ad certam reducibilis sit proportionem in numeris.

⁶⁰ The most recent and comprehensive account of Boethius’ *De institutione musica* and its philosophical background is Anja Heilmann, *Boethius’ Musiktheorie und das Quadrivium. Eine Einführung in den neuplatonischen Hintergrund von ‘De institutione musica’*, Hypomnemata 171 (Göttingen, 2007).

strike the ear in a soft and uniform way'.⁶¹ On the other hand, Boethius treats consonances in his argumentation exclusively as arithmetical ratios.⁶² (Jacques was not only to quote the definition but also to take this ambiguity as the starting point of his extensive consonance theory.⁶³) In Boethius, this ambiguity produces a tension because if he defines consonance by way of its sensual effect then the arithmetical hierarchy does not seem to make sense.

The apparent contradiction between the explicit sensual and the implicit arithmetical definition of consonance cannot entirely be solved. It is, however, possible to reconstruct a concept of consonance that silently underlies all argumentation in Boethius' text. This concept is not identical with the description of consonance given by Boethius himself as quoted above. It can be found if we ask the following question: do arithmetical ratios 'represent' consonances as sensual phenomena (as suggested by the explicit description), or are consonances arithmetical entities, number relations, that are only accidentally related to sensual matter? Put differently: Does Boethius, with the term consonance, refer to a sensual entity that can be 'explained' through numbers? Or does he refer to a numerical entity that can be made audible?

If there is a substantial argument in *De institutione musica* which only works with one of these concepts, excluding the other, this must be Boethius' concept of consonance. And indeed there is one.⁶⁴ Boethius says that the whole tone cannot be divided into two equal halves because its ratio 9:8 cannot be divided into two equal ratios that can be expressed in whole numbers.⁶⁵ In other words: there is no geometrical mean between 9 and 8 which can be expressed in whole numbers. The argument does not catch the reader's eye easily because in its result it is correct in the sense that the Pythagorean tuning, in fact, does not have an equal semitone as is well known. However, Boethius' argument seems nevertheless to be absurd. For if the numbers serve to explain natural matter, namely consonances, the argument does not make sense. It is inept to argue that an object does not exist only because some theory of nature does not provide the means to explain it.

⁶¹ *De institutione musica*, ed. Gottfried Friedlein (Leipzig, 1867, reprinted Frankfurt, 1966), I, 8, p. 195, 6-8: Consonantia est acuti soni gravisque mixtura suaviter uniformiterque auribus accidens. *Ibid.*, IV, 1, p. 302, 2-4: Consonae quidem sunt, quae simul pulsae suavem permixtumque inter se coniungunt sonum. – For a terminological discussion of the word *suavis* in the Middle Ages see Mary Carruthers, 'Sweetness', in *Speculum* 81/4 (2006), 999-1013.

⁶² See for instance the order Boethius develops in *De institutione musica* I, 5-7.

⁶³ Cf. especially *Speculum musicae* II, iiiii-vi, p. 16-23.

⁶⁴ Of course, it might be possible that there is an argument that only works with the other concept on consonance. In this case, the apparent inconsistency could not be solved. However, I have not come across any such passage.

⁶⁵ *De institutione musica* II, 1.

Certainly, one would underestimate Boethius were it to be argued that he simply made a mistake. He had, after all, translated most of Aristotle's works on logic and the theory of science into Latin. Therefore, one should rather try to make sense out of the argument. Thus, if Boethius' argument is unfolded into a complete syllogism then the answer to the question asked above is automatically received:

- a) 'Superparticular' ratios (i.e. ratios whose numerator and denominator differ by one as is the case with 9:8) cannot be divided into two equal halves (allowing only whole numbers).
- b) The whole tone *is* such a ratio.
- c) Thus, the whole tone cannot be divided into two equal halves.

This reasoning is correct if, and only if, one accepts the second premise which postulates an identity, namely the identity of whole tone and numerical ratio. And as such it has to be understood: as a numerical ratio. This is to say that Boethius uses the second concept of consonance. For Boethius, then, consonance is a numerical ratio that can be made audible – and not something audible that can be explained through number. The numerical ratio is the essence or the *causa formalis* of the consonance (as Jacques would later clarify the matter),⁶⁶ i.e. the consonance is identical with the numerical ratio.

While this interpretation allows Boethius' *De institutione musica* to be read basically as a consistent text, it nevertheless fails to solve the latent contradiction between the sensual description of consonance that remains without significance for the text as a whole and the identification of consonance with the numerical ratio that directs the reasoning and argument of the entire text. Moreover, this interpretation raises the question as to whether any numerical ratio is a consonance. Boethius implicitly gives an answer by restricting consonances to a handful of ratios⁶⁷ but he does not explain on what grounds he does so. There are, for example, many 'superparticular' ratios that are not counted among the consonances. The sensual description of consonance leads to the assumption that the sensual aspect comes into play here. However, it remains open in what way these two elements, the arithmetical and the sensual, may be integrated within a consistent theory.

This was the starting point for Jacques de Liège. And one of the foremost goals he was obviously aiming at was to establish a consistent theory of consonances from the Boethian text. Thus, his task was to conciliate the sensual and the arithmetical aspect of consonance.

⁶⁶ *Speculum musicae* IV, xxvii, 5, p. 66.

⁶⁷ *De institutione musica* I, 7.

Jacques was writing his *Speculum musicae* after Aristotelian philosophy had become the basis of philosophy during the thirteenth century. In this context, the subject of music theory was reconsidered as well. The special position of disciplines such as astronomy and music theory whose subjects were mathematical but were at the same time concerned with physical entities was more explicitly discussed using Aristotelian philosophy of science. The relevant theoretical concepts regulating the interaction between mathematical and natural entities and methods were *scientia media* and *subalternatio*.⁶⁸ While arithmetic and geometry were considered to be purely mathematical, music theory and astronomy were considered to be both mathematical and physical. Hence the expression middle sciences, *scientiae mediae*, sciences between mathematics and physics. This new model made clear that the subject of music theory was obviously more complicated than it seemed to be. The term *subalternatio* indicates the hierarchical relationship between the two disciplines that regulates which of the two disciplines provides the methodological tools.

Such a richer theory of science made it possible to explain the subject of music more clearly. However, the authors still could have chosen both possibilities, i.e. either the sensual or the arithmetical concept of consonance. They chose the one that dominated Boethius' music theory, namely the arithmetical one. There are at least two possible reasons for this: first, Boethius' theory would not have worked otherwise, and second, the tradition of considering music theory a mathematical discipline was so old that it was easier to define the subject so as to avoid a complete re-invention of music theory.

Since the newly defined *musica* was subordinate to arithmetic its subject had to be some kind of number and the methodological tools were restricted to arithmetical tools which meant that exclusively whole numbers could be investigated. This also explains why the exact half of the whole tone did not exist. The subject of music was now called 'number related to sound' (precisely specifying the relation between mathematics and physics) or shortly *numerus sonorus*. This thing was defined as an entity with its own existence: namely as a number that produces, when related to another number and applied to physical matter, a

⁶⁸ The concept of *scientia media* is well explained by Carlos A. Ribeiro do Nascimento, 'Le statut épistémologique des 'sciences intermédiaires' selon s. Thomas d'Aquin', in *La Science de la nature: théorie et pratique*, Cahiers d'études médiévales 2 (Montreal and Paris, 1974), 33-95. With respect to music see Max Haas, 'Musik zwischen Mathematik und Physik: Zur Bedeutung der Notation in der *Notitia artis musicae* des Johannes de Muris (1321)', in *Festschrift für Arno Volk* (Cologne, 1974), 31-46; Eva Hirtler, 'Die musica im Übergang von der scientia mathematica zur scientia naturalis', in *Musik – und die Geschichte der Philosophie und Naturwissenschaften im Mittelalter. Fragen zur Wechselwirkung von musica und philosophia im Mittelalter*, ed. Frank Hentschel (Leiden, Boston and Cologne, 1998), 19-37.

harmonic mixture. If the matter is sound, the result is called consonance.⁶⁹ Thus, if it happens that you relate 9 to 8 and apply this ratio, for example using the monochord, to physical matter, you receive a mixture of sound. And whether this sound pleases your ears or not, it is, by way of definition, a consonance. Hardly any author, though, stated this as clearly as Jacques de Liège, who was striving for the utmost consistency and clarity.

It is precisely in that sense that Jacques developed his order of consonances, drawing exclusively upon arithmetical features. He called it the ‘order according to Nicomachus’⁷⁰ (who was the author of the Greek book Boethius had basically been translating). In fact, the order of Boethius was not as elaborate as Jacques’ own one by far. Only the principle of the latter was drawn from Boethius. Yet, there was a more important difference between Boethius’ and Jacques’ orders: the latter gave the theory a consistency which was lacking in the Boethian version. At the same time, Jacques achieved a free and sensual view on music aesthetics by clarifying the subject of music theory as well as explaining its methods and limits.

Jacques manages to solve the problems inherent in Boethius’ text by establishing a consistent theory whose subject was ‘consonantia’. It now becomes clear that this term cannot simply be translated as consonance. Using the Aristotelian philosophy of science Jacques fully articulates the subject of music theory and its consequent methods. The result, of course, is that Jacques needs to eliminate any sensual element from the definition of the subject *consonantia* which is – as we have seen – the ‘mixture of any distinguishable equal or unequal sounds, be it that the mixture is sensually pleasant or not, while it has to be reducible to a numerical ratio.’ This definition removes any inconsistency from Boethius’ theory and makes the application of purely arithmetical methods for the ordering of *consonantiae* perfectly plausible.⁷¹

However, if this solves the problems inherent in Boethian consonance theory, one might argue, it exorcises sensual qualities from music altogether. But, of course, precisely the opposite is true: Jacques separates the two elements that were combined by Boethius, producing a tension in terms of theoretical consistency. By separating these two elements he

⁶⁹ Evidence for this is provided in my book *Sinnlichkeit und Vernunft*, 137-146.

⁷⁰ *Speculum musicae* II, ix, 7, p. 28: Tenebimus autem ibi ordinem Nicomachi.

⁷¹ Ideological vestiges can still be detected in Jacques’ theory. He uses exclusively the numerical ratios of the Pythagorean tuning as ratios that constitute *consonantiae* while he cannot explain why other numerical ratios do not make up *consonantiae*. In order to eliminate that problem he introduces the concept of *modulatio harmonica* which means that only some numerical ratios produce a sound mixture if applied to sound. On *modulatio harmonica* see Hentschel, *Sinnlichkeit und Vernunft*, 51-57.

gains independence for each element in itself. This means that by separating *consonantia* from sensual elements Jacques also separates arithmetical constraints from the sensual object. Jacques simply constructs an independent object which he actually defines through its sensual qualities, following the sensual description of *consonantia* Boethius had given. Only he awards it a different name: *concordia* or *concordantia*: ‘Perfect consonance – *perfecta concordia* – is a pleasant, uniform and delighting sound of diverse, but mixed and blended tones that reach the ear.’⁷² (The English ‘consonance’ is exclusively an adequate translation for *concordia*, not for *consonantia*.)

This definition is purely sensual. Jacques has separated the aesthetical subject almost completely from the mathematical one. This separation allows him to apply entirely different criteria to the evaluation of sensual consonances. Indeed, he implies that to judge consonances is more the work of a rhetorician while the mathematician seeks for reasons. To deal with consonances is, therefore, not a purely mathematical thing.⁷³ Rather, there is an entirely different and (more or less) independent aspect to it which, however, is not the mathematician’s business, and that is to say not Jacques’s business. And he openly admitted that:

It doesn’t seem easy to me to give the reasons for consonance and dissonance and why this one is better, the other one worse. For practice and art (*ars*) have shown that every human being best understands by performing. However, I myself have never played an instrument which, together with the *ars musica*, would have provided not insignificant experience in order to judge generally more securely and truly about *consonantiae*, i.e. which are more consonant, which are less consonant and equally about dissonances. Even though performing musicians

⁷² *Speculum musicae* IV, xxxii, 1, p. 93: Perfecta concordia est sonorum distinctorum sibi permixtorum unitorumque veniens ad aurem dulcis et uniformis iucundaque melodia.

⁷³ *Speculum musicae* IV, xlvi, 15, p. 115: Sufficiat autem superficialiter de hac loqui materia et de dictis quas poterimus assignare rationes. Oportet enim, secundum quod permittit subiecta materia, procedere proportionalitate. Non enim rationes sufficerent mathematico quae sufficiunt rhetorico. *Proximum enim est mathematicum persuadentem acceptare et rhetoricum demonstrationes expetere*. Haec autem materia non videtur pure mathematica. (Suffices it to talk just superficially about this matter and to determine the reasons of what has been stated. For it is necessary to proceed with commensurability according to what is permitted by the subject matter because the reasons that suffice for the rhetorician would not suffice for the mathematician. *It is evidently equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician demonstrative proofs*. This matter, however, does not seem to be purely mathematical.) – The sentence that I put in italics is a quotation from Aristotle’s *Nicomachean Ethics* (1094b25) and only becomes intelligible if its context is taken into account. In the translation by W. D. Ross and J. O. Urmson it reads: ‘for it is the mark of an educated man to look for precision in each class of things just so far as the nature of the subject admits: it is evidently equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician demonstrative proofs’ (*Nicomachean Ethics*, The Complete Works of Aristotle. The Revised Oxford Translation (Princeton, 1984), ed. Jonathan Barnes, vol. 2, p. 1730). The idea of something being ‘evidently equally foolish’ as Ross and Urmson translate had in the original text elliptically been condensed to one single word: ‘paraplésion’. In Robert Grosseteste’s Latin translation this word is literally translated with ‘proximum’.

who are restricted to practice judge about these things well and fast, they are not able to tell the reasons unless something is found through *ars*.⁷⁴

That is why – despite his clear interest in musical practice – he does not speak about these matters at such length compared with his discussion of *consonantia*. Jacques admits his lack of a certain kind of knowledge, he accepts in a certain field the priority of practice and he acknowledges that the reasons for consonances are not exclusively mathematical.⁷⁵ (This, of course, does not keep Jacques from making strong aesthetical judgments in the, albeit explicitly satirical,⁷⁶ seventh book of his *Speculum*.) Again, we are facing knowledge and a potential aesthetics that explicitly lie beyond Jacques' main focus. Therefore, it is necessary to search for the actual medieval aesthetics in some area where hardly any theorising in written form took place.

The mathematician like Jacques himself knows everything about the subject of music theory, namely *numerus sonorus* and *consonantia*. He claims to know the exact order of these entities but he does not claim to have the knowledge about consonances as musical material because it is not his field, and therefore he does not claim to have authority. This, of course, also implies that medieval texts were silent about the aesthetical aspects of consonance and music in general because it was not their subject. And it was not their subject because music theory was a mathematical discipline that dealt only with a certain mathematical subject and restricted itself in accordance with Aristotle's theory of science to mathematical demonstrations only. This is entirely legitimate and it would be a fundamental misunderstanding to consider this anti-sensual aesthetics for it was not aesthetics, and Jacques shows that he was not only clearly aware of this fact but he also gave room for an aesthetics that he did not unfold because it was not his, the mathematician's field. It is perhaps possible

⁷⁴ *Speculum musicae* IV, xli, 1, p. 106: Concordiarum et discordiarum in vocibus et quare hae meliores, illae minus causas assignare facile mihi non est. Usus enim et ars docuit quod sapit omnis homo maxime in practicis. Ego autem musicis artificialibus instrumentis usus non sum, quorum tamen usus, una cum arte musicae, non modicum praebet experimentum ad securius et verius iudicandum communiter de consonantiis quae maioris concordiae sunt et quae minoris, et similiter de discordiis. Sed practici musici, solum usum habentes, etsi de his bene iudicent et prompte, causas tamen assignare nesciunt, nisi per artem invenitur. (The strange turn to the singular in the end of the quotation needed to be checked in the manuscript.)

⁷⁵ This means neither that the senses are the cause for consonance (*concordia*) nor that they are able to give an explanation for the sensation which would still be the intellect's task. Cf. *Speculum musicae* I, xxix, p. 86-90 and IV, xxxi, 8-9, p. 93 where Jacques refers to Aristotle's well-known differentiation between 'quia' and 'propter quid' – i.e. the 'fact' and the 'reason why' (cf. Aristotle, *Analytica Posteriora* I, xiii, 78a21sq.; *Posterior Analytics*, trans. Jonathan Barnes, *The Complete Works of Aristotle. The Revised Oxford Translation* (Princeton, 1984), ed. *id.*, vol. 1, p. 127). The senses recognize the fact of consonance (*concordia*) while the intellect would have to find the reasons for this sensation.

to detect a feeling in Jacques' thoughts for the necessity of a discipline that deals with aesthetical matters. In fact, such a discipline did not exist. However, to conclude from that fact that medieval music listeners and authors of treatises of music theory did not accept sensuous pleasure would be an error.

Once this difference has been accepted, then medieval texts start to tell much more about the sensual and, indeed, sensuous quality of their author's musical perception. The few hints Jacques gives us as to who would be a good aesthetical judge astonishingly resemble thoughts that may be found in aesthetical treatises of the enlightenment, for instance in David Hume's essay *Of the standard of taste*. Jacques says that 'the ear has to be in good condition and that the judge should have musical knowledge'. Also, the judge needs to be healthy; especially fever distorts auditory experience.⁷⁷ These were empirical observations on musical judgments – entirely free from mathematical speculations because they did not belong here. Jacques was aware of individual likes and dislikes with regard to musical perception, he even was aware of the fact that one person is not always affected by music in the same way (depending on his or her mood). He thought that persons react differently to music depending on their cultural origin, i.e. to which *gens* they belong, as well as depending on their age.⁷⁸ Also, the fact that this is simply a matter of taste implies an essentially individual element of aesthetical liking: 'As not all palates are pleased by the same dish, so not all ears are delighted if one and the same mode of sound is produced.'⁷⁹ Jacques' mathematical theory did not exclude these observations – it made them possible.

The same is true for many other music theoreticians; only the sensuous aspects remain even more implicit. If one looks into more practical texts from around Jacques' time (ca. 1250 to 1350) in particular, many references to aesthetical qualifications are found. Anonymous IV

⁷⁶ See Frank Hentschel, 'Der Streit um die Ars nova – nur ein Scherz?', in *Archiv für Musikwissenschaft*, 58 (2001), 110-130.

⁷⁷ *Speculum musicae* II, vi, 13-14, p. 22: Ad iudicandum tamen et discernendum inter concordantias quae bona et quae melior, multum facit auditus, et maxime si est bene dispositus et in musicae scientia sufficienter instructus. Febricitans non bene iudicat de saporibus, et canis neque in consonantiis quantumcumque bonis, neque in cantibus delectatur propter cerebri paucitatem et capitis debilitatem qui ad discernendum odores melius est dispositus. (With regard to judgment and distinction of consonances, [i.e. the question] which one is good and which one is better, the sense of hearing is important, especially if it is in good form and sufficiently informed by speculative music theory. Anybody who is feverish does not judge well about taste, and a dog does not enjoy consonances however good they are, nor does it enjoy music because of the poorness of its brain and the weakness of its head that is better conditioned for distinguishing odours.) – The punctuation has been slightly modified as against Bragard's edition.

⁷⁸ *Speculum musicae* IV, viii, 3-5, p. 16; IV, xxvii, 31, p. 71; VI, lxxiv, 1-11, p. 214-216.

⁷⁹ *Speculum musicae* VI, lxxiv, 9, p. 216: Sicut enim non omnium ora eodem capiuntur cibo, ita profecto non omnium aures eodem soni modo oblectantur.

appreciates the many beauties in Perotin's *organa*;⁸⁰ and many authors such as John of Garland, Franco of Cologne, and the anonymous author of the *Quatuor principalia* declared that in many situations dissonances, parallel motion and the like are permitted in order to achieve beauty – 'propter pulchritudinem'.⁸¹ In accordance with Jacques' assertion that the decision about the use of consonances resembles the work of the rhetorician, many authors used terms that stem from rhetoric when they described compositional practices that were against the rules. In Anonymous of St. Emmeram the use of such terms is abundant.⁸²

There are more examples for decidedly rhetorical formulations of aesthetical qualities. Possibly the most impressive stems from Jerome of Moravia who differentiated between stylistic registers. There was a 'gradus pulcher', a 'gradus pulchrior' and a 'gradus pulcherrimus'. What is more, there was even a 'gradus turpis' (ugly), 'gradus turpior' and a 'gradus turpissimus'.⁸³

Certainly, aesthetical habits varied according to time and space. Jacques knew this. He observed that 'modern singers do not restrict the concept of consonance too much, they do not limit it so strictly'. And he plainly accepted that:

They confirm this with regard to more equal as well as unequal sounds and their mixtures, whether they are sweet to the sense of hearing or not; and they do so not all without reason if it is true what we state. For is it any wonder that the term consonance has changed its content? At the beginning, when mankind used only a simple and moderate music, only four consonances and four strings were in use. But now, since music has been extended in view of pitches, instruments, modes, consonances and songs – is it any wonder that the word consonance refers to more sounds and mixtures as in those times? For the reference of names uses to broaden and shift according to the diversity of time.⁸⁴

⁸⁰ Anonymous IV, ed. Fritz Reckow, *Der Musiktraktat des Anonymus 4*, vols.1-2, Beihefte zum *Archiv für Musikwissenschaft* 4 + 5 (Wiesbaden, 1967), vol. 1, p. 82, 6.

⁸¹ Johannes de Garlandia, *De mensurabili musica*, ed. Erich Reimer, Beihefte zum *Archiv für Musikwissenschaft* 10 (Wiesbaden, 1972), X, p. 74, 22; Franco de Colonia, *Ars cantus mensurabilis*, ed. Gilbert Reaney and André Gilles, *Corpus Scriptorum de Musica* 18 (s.l., 1974), XI, p. 73, 31; *Quatuor principalia*, ed. C.-E. de Coussemaker, *Scriptores de musica medii aevi*, vols. 1-4 (Paris, 1864-76, reprinted Hildesheim, 1963), IV, ii, xx, vol. 4, p. 281.

⁸² Important terms are *ornatus*, *purpurare* and *variare*; see *Anonymus cod. s. Emmerami (quem ed. Sowa)*, ed. Jeremy Yudkin (Bloomington and Indianapolis, 1990), I, 1, p. 96, 38-40; I, 1, p. 108, 39-41; I, 2, p. 170, 36-40, II, p. 206, 22-38; II, p. 208, 30-31; II, p. 222, 15-17; V, 1, p. 272, 15-19; VI, p. 282, 5-6).

⁸³ *Tractatus de musica*, ed. Simon M. Cserba, *Freiburger Studien zur Musikwissenschaft* 2. Reihe, 2. Heft (Regensburg, 1935), 176, 15 – 179, 21.

⁸⁴ *Speculum musicae* II, x, 26-27, p. 32: *Moderni autem cantores nomen consonantiae non sic <arctant>, non sic restringunt. De pluribus sonis tam aequalibus quam inaequalibus, de ipsorum mixtionibus tam suavibus auditui quam non, ipsum verificant, et non omnino sine ratione, si vera sunt quae diximus. Cum enim musica paulatim sit augmentata, quid mirum si consonantiae nomen sit dilatatum? In principio enim, cum sola musica simplici et modesta uterentur homines, consonantiis quattuor et quattuor chordis utebantur. Nunc autem, ampliata multum musica in chordis, in instrumentis, in modis, in consonantiis et cantibus, quid mirum si consonantiae nomen ad plures sonos et mixtiones quam tunc sit extensum?*

Thus, even if something has been true in the time of Guido of Arezzo, it does not need to be true for modern times.⁸⁵ In the same vein, Johannes Boen noted historical and regional differences between musical habits.⁸⁶ And it is interesting that he only referred to this fact because he needed an argument within a remote context. Had he not been in need of such an argument he probably would not have told us. There seem to have been many aspects in medieval music theory that we miss in the sources just because they were too self-evident for medieval authors.

The sensual and indeed sensuous aspects of music were not at all denied, they were silently accepted since they were self-evident. They played a minor role in the explicit and written discourses about music probably because sensual as well as emotional elements escaped scientific reasoning and had little to do with the subject of music theory as it was understood then. The fact that we need to scrape together those texts with explicit statements about sensual aspects does not mean that the matter itself was unimportant or even unknown, but only that it did not have its place in *musica theorica*. This seems to be at least one of the reasons for the relative silence about aesthetical questions and about sensuous effects of music.

III. Guido of Arezzo

In turning towards Guido of Arezzo we are focussing on a person living approximately in the middle of the period that separates Jacques from Augustine. Guido is much less a systematic philosophical thinker than the other two authors discussed so far. Therefore, the following comments will be more selective, highlighting independent aspects.

⁸⁵ *Speculum musicae* IV, xi, 7, p. 22: Hoc autem, etsi pro tempore ipsius Guidonis verum erat, non tamen pro moderno tempore.

⁸⁶ Johannes Boen, *Musica*, ed. Wolf Frobenius, *Johannes Boens Musica und seine Konsonanzlehre*, Freiburger Schriften zur Musikwissenschaft 2 (Stuttgart, 1971), II, p. 45, 25-26: Secundum diversitatem temporis et regionum multa nova et inaudita poterunt suboriri, sicut forte pronuntiatio commatis et trium semitoniorum minorum ac multorum similium, que, licet hactenus non audita sunt, forte tractu temporis per nova instrumenta et vocum habilitates posterius audientur, sicut nec ante Pitagoram fuit tanta subtilitas in cantu, quanta hodiernis temporibus est in usu, nec talem nos, qualem Anglici, Gallici vel Lombardi in cantu facimus fracturam. (According to the diversity of time and place, much that is new and unheard might develop, such as perhaps the articulation of the comma and of three or more equal semitones which, though they have not been heard so far, may in time be heard with the help of new instruments or future vocal abilities, just as during the time of Pythagoras there was not such subtlety in singing as is the case nowadays. Also, we [the Alemanni] do not use such a rhythmical complexity as the Anglici, Gallici or the Lombardi.)

1. Music and the praise of God

The music theory of the period between, say, 800 and 1200 mainly focussed on plain chant, i.e. functional, liturgical music. It would hardly be surprising to find evidence here in support of the cliché that medieval music theoreticians did not have open ears for sensuous pleasure and were searching for the meaning of music in the praise of God rather than in joy. Indeed, when Guido in his *Micrologus* considered the effect of music referring to the story of David and Saul, where David exorcises a demon by which Saul had been overcome, he expressed his astonishment at such an impact by pointing out that ‘only divine wisdom understands such power. However, we who only see as in a mirror want to use this power for the praise of God’.

By using a quotation from the Bible (1 Cor. 13,12) and especially by defining music’s function as ‘praise of God’, medieval reality seems to follow the nineteenth- and twentieth-century clichés of the Dark Ages. In fact, Rosario Assunto used this quotation in his *Die Theorie des Schönen im Mittelalter* in order to characterise the religious foundation of Guido’s treatise.⁸⁷ An investigation of the text transmission, however, turns out to be instructive at this point. The quotation was taken from Raymund Schlecht’s nineteenth-century edition of the *Micrologus* that followed the text established by Martin Gerbert in his *Scriptores ecclesiastici de musica sacra potissimum*, where it reads: ‘Quae tamen vis solum divinae sapientiae ad plenum patet. Nos vero quae in aenigmate ab inde percepimus, in divinis laudibus utamur.’⁸⁸ Smits van Waesberghe’s edition differs at this passage significantly from the earlier one in that it omits the last phrase: ‘But this effect is fully clear only to Divine Wisdom through which we only receive a pale reflection.’⁸⁹ Unfortunately, the edition lacks an explanation of the editorial principles. Which of the 77 listed manuscripts were used in establishing the text, and according to which methodical decisions this was done, remains

⁸⁷ Rosario Assunto, *Die Theorie des Schönen* (Cologne, 1963, 2nd ed. *ibid.*, 1987), 92. The book was once again reprinted in 1996.

⁸⁸ ‘Micrologus Guidonis de disciplina artis musicae in deutscher Übersetzung von Raymund Schlecht’, in *Monatshefte für Musik-Geschichte* 5/10 (1873), 135-177, here 152 (cf. Martin Gerbert, *Scriptores ecclesiastici de musica sacra potissimum*, vols. 1-3 (St. Blasien, 1784, reprinted Hildesheim *et. al.*, 1963), vol. 2, 14).

⁸⁹ *Guidonis Aretini Micrologus*, ed. Joseph Smits van Waesberghe, *Corpus Scriptorum de Musica* 4 (*s. l.*, 1955), XIV, 18-19, p. 161.

obscure.⁹⁰ In any case, the editor registers only six manuscripts that contain the ‘praise of God’ phrase (none of which stems from the eleventh century – unlike the oldest manuscripts). In another manuscript the phrase ‘ab inde percepimus’ has been erased and replaced by ‘in divinis laudibus utamur’.

These observations may be used as the starting point for the most diverse speculations concerning the question as to why in some manuscripts the topos occurs. However, without new source evidence such speculations would not be very reasonable. Yet one conclusion cannot be ignored: The topos obviously was so secondary that the text worked with or without it. It was not part of the line of thought or the essential argumentation. A statement that seemed so characteristic because it so neatly matched the modern stereotypes of medieval music aesthetics and that had been quoted in Assunto’s influential book thus turns out to have played a minor role for the medieval author and his readers.

2. Reason

As the earlier text analyses have demonstrated, aesthetically relevant statements were made only in passing. Therefore, a biased reading of the sources especially tends to overlook them. Yet Guido’s text is full of aesthetical considerations. Only the fact that this did not fit a certain picture of the Middle Ages may explain why they have not become much better known. One is aware of Guido as the inventor of the hexachord, the inventor of solmisation; one is aware of the so-called Guidonian hand or Guido’s contribution to the history of notation. However, one is hardly aware of Guido as the theorist of aesthetics. It is true that there are only two chapters in the *Micrologus* that are dedicated to aesthetical considerations, but more important than the quantity is their quality as documents of aesthetical thought in the Middle Ages.

Again, at first sight readers may be guided in a wrong direction when they realize that one of the central aesthetical terms in Guido’s treatise is *rationabilitas*. ‘Those,’ Guido says, ‘who compose a chant put together discrete and diverse melody formulas in a rational way.’⁹¹ On first sight the term *rationabilitas* again seems to support an interpretation of medieval

⁹⁰ Cf. Leo Schrade’s review, in *Musical Quarterly*, 43 (1957), 115. – A preliminary stemma of the text tradition has been established by Christian Meyer: ‘La tradition du *Micrologus*’, in *Revue musicologique*, 83 (1997), 5-31. It does not, however, shed new light on the passage discussed here.

music theory that was fixated on mathematics and especially number ratios. However, this would be almost the opposite of what Guido means. In his description of *discretio rationabilis* he gives us a first clue. It reads as follows: ‘A separation is called rational if it produces a moderate variety of melody formulas and sections so that nevertheless melody formulas always correspond with melody formulas and melody sections with melody sections in some harmonic way, i.e. so that there emerges a dissimilar similitude – like in the beautiful Ambrosian [chant].’⁹²

An amalgamation of the classical definition of harmony underlies this statement: unity in diversity on the one hand and the classical rhetorical rule *variatio delectat* on the other – applied to melodic structures. The question, however, as to what actually constitutes that *rationabilitas* has not been answered so far. However, another passage found earlier in the same chapter adds extremely important information. Guido had already alluded to rational variety there. The musician does not need to stick to the rules as strictly as the poet because his art ‘changes itself completely (*in omnibus*) with respect to the disposition of the notes in compliance with rational variety’.⁹³ It is certainly impossible to solve all questions that are raised by an interpretation of this difficult passage. What is important here is that Guido introduces the term *rationabilis* at this point and adds an explanation that is not a definition but a comment which is both more and less than a definition: ‘Even though we often do not comprehend this *rationabilitas*,’ he observes, ‘we consider rational whatever pleases the mind in which reason (*ratio*) is located.’⁹⁴

In stating that we are often unable to comprehend the *rationabilitas*, Guido even allows an opening for empiricism. It is not so much some preconceived rational norm that is decisive for the aesthetical quality of music. Rather, it is the other way round: whatever pleases musically is predicated to be rational.⁹⁵ Now, since one knows what pleases aesthetically, by way of experience, i.e. empirically and sensually, Guido manages to call the empirical and sensual judgment rational. This remains implicit, of course, but his wording is

⁹¹ *Micrologus*, XV, 40, p. 172: Qui cantum faciunt, rationabiliter discretas ac diversas neumas componant. – An English translation is available in Warren Babb, *Hucbald, Guido, and John on music* (New Haven et al., 1978).

⁹² *Micrologus*, XV, 41-43, p. 171: Rationabilis vero discretio est, si ita fit neumarum et distinctionum moderata varietas, ut tamen neumae neumis et distinctiones distinctionibus quadam semper similitudine sibi consonanter respondeant, id est sit similitudine dissimilis, more praedulcis Ambrosii.

⁹³ *Micrologus*, XV, 19, p. 167: quia in omnibus se haec ars in vocum dispositione rationabili varietate permutat.

⁹⁴ *Micrologus*, XV, 20, p. 167: Quam rationabilitatem etsi saepe non comprehendamus, rationabile tamen creditur id quo mens, in qua est ratio, delectatur.

⁹⁵ Here, my interpretation clearly diverges from Karlheinz Schlager’s more traditional reading (‘Ars cantandi – ars componendi. Texte und Kommentare zum Vortrag und zur Fügung des mittelalterlichen Choral’, in *Die*

so refined that however irrational an element of the aesthetical experience may be, it can be called rational. *Rationabilitas*, in fact, is an aesthetical imperative but it does not restrain the freedom of sensual judgment because whatever the senses judge to be pleasant deserves the attribute ‘rational’.

In Guido’s description, the faculty that realizes aesthetical pleasure is called *mens* (I have translated it using the word ‘mind’). Whatever pleases *mens* is rational since *ratio*, the faculty of reason, is located in *mens*. This term, however, was extremely ambiguous: mind and character (I almost tend to say: mentality) rank among the semantic fields that are associated with *mens* in the *Micrologus*.⁹⁶ And it would probably not be advisable to pin down its meaning on one narrow concept because this broad meaning is precisely the point of Guido’s wording. Guido could easily have written *ratio* instead of *mens* had he aimed at reducing aesthetical pleasure to rational recognition. His formulation is an obvious indicator of the fact that he accepted that it is a more general faculty than reason alone which experiences aesthetical pleasure. The term *mens* covers all kinds of mental and spiritual processes, including irrational and sensual experiences.

To be sure, Guido’s wording might suggest two things. Firstly, he seems to have believed in the rational explicability of aesthetical pleasure even where we do not understand its mechanisms. Secondly, he might have assumed that aesthetical experiences are somehow mediated through an unconscious rational activity of some kind. However, neither the epistemological optimism nor the idea of an unconscious rational activity would restrict the aesthetical freedom. Rather, they would only imply that a rational explanation exists principally for any empirical and sensual aesthetical judgment, whether we know of it or not.

IV. Orality (Conclusion)

Guido enumerates some musical features which may be understood as compositional rules. For example, he demands repetitions of melody sections or their variation which, however, should not deviate too much from their model. Also, attention should be paid to the similitude

Lehre vom einstimmigen liturgischen Gesang, ed. Thomas Ertelt and Frieder Zaminer, *Geschichte der Musiktheorie* 4 (Darmstadt, 2000), 217-292, here 233.

⁹⁶ *Epistola*, 14, p. 82 (mind/soul); VIII, 24-25, p. 127 (mind/intellect); XIV, 5, p. 159 (character/mentality); XVII, 39, p. 194 (character/mentality).

of ascending or descending melody sections.⁹⁷ If a melodic formula jumps downwards, another one should respond by soaring upwards – which is analogous to looking down into a pond while our mirrored face looks up to us.⁹⁸ Moreover, melodies should correspond to the emotional content of the words so that grave melodies accompany sad (*tristis*) texts, lovely (*iocundus*) melodies accompany tranquil (*tranquillus*) texts, cheering (*exultans*) melodies accompany happy (*prosper*) texts and so on.⁹⁹ Yet, Guido admonishes, that which has been explained may not be carried out too often or too seldom, but with sensitiveness (*discretio*).¹⁰⁰

All these features – one has to expect – are to be subsumed under the idea of *rationabilitas*. However, Guido remains silent about any details. He doesn't even try to explain why variations, similitude and correspondences please and what role reason plays within the processes of aesthetical experience. This silence corresponds to the silence we have encountered in the writings of the other authors – when Augustine did not wish to talk about musical aspects that cannot be reduced to numerical reasoning and when Jacques did not feel competent about aesthetical judgment and instead committed it to the rhetorician. Obviously, the motivations for the respective silences differ in each case: Jacques was not a practicing musician and wanted to leave the topic to them or to rhetoricians while Augustine only dealt with subjects that were best suited to serving his pedagogical and philosophical goal. The reason for Guido's silence is less easily found. For one thing, the questions might simply have been too difficult. Even though some rules are known from practice, this does not imply that the reasons for them are also known. Also, Guido was giving a practical introduction into chant and so there was no need to delve into hypotheses of the reasons for practical rules. Be that as it may, all three authors had in common that they were clearly aware of elements that were of aesthetical relevance yet did not belong to their specific fields and texts.

Moreover, in all three cases the silence starts where the irrational might have come into play. In two cases, subject matter that does not seem to be mathematical is excluded either because the non-mathematical is not suitable for pedagogical purposes (Augustine) or because it is considered to be the subject of another discipline which does not exist: a rhetoric for musicians (Jacques). In the third case the causes of aesthetical pleasure are accepted as obscure; the irrational is touched insofar as the author has to admit that he cannot explain aesthetical phenomena (Guido). To remain silent about a subject that does not belong to one's

⁹⁷ XV, 22-25, p. 168.

⁹⁸ XV, 27-29, p. 169.

⁹⁹ XV, 50-51, p. 174.

¹⁰⁰ XV, 61, p. 177.

task or that cannot be dealt with rationally, should rather be considered a scholarly virtue. And one must not conclude from the absence of more explicit documents that aesthetical thinking did not take place.

Only the discipline of aesthetics or a tradition of writing about such matters seems to be missing in the Middle Ages. I suppose that such matters were not considered to be apt for written discourses while they were certainly dealt with orally. In fact, immediately after having made the point that the *rationabilitas* of our aesthetical judgment often surpasses our comprehensibility, Guido gives invaluable evidence of the assumption that aesthetical thinking mainly took place outside the writings of music theory: ‘This, however, and the like can be shown much better by discussing (*colloquendo*) than by writing.’¹⁰¹

Here, I think, we find a key to understanding the silence in medieval texts with respect to the aesthetical experience of music. My assumption would be that the irrational, subjective, individual, culturally relative element inherent in aesthetical experience was on the one hand considered to be too self-evident and on the other it was considered not to be suitable for a scholarly discipline. This is certainly different for each author. While we found a statement in Augustine’s *De ordine* where he seemed to suggest that in colours and certain aspects of sound there is something principally irrational, Jacques de Liège rather argued that he as a non-musician and non-rhetorician was not able to give reasons for aesthetical features. Finally, Guido of Arezzo – by using the term *rationabilitas* – intimated that he assumed some, albeit unconscious, rational activity which he could not explain. These authors did not use an expression like ‘Je ne sais quoi’ as French authors of the seventeenth and eighteenth centuries did, but they behaved like people who knew they ‘did not know’. It therefore was not written about, but rather talked about.

Historians of the nineteenth and twentieth centuries such as Rosario Assunto or Umberto Eco obviously could not stand the silence of medieval authors, it seems, so they took components from an entirely different area – *musica theorica* – and crafted one themselves. The supposed aesthetics of the Middle Ages was an invention of modern scholars. Of course medieval people did accept and enjoy the sensuous and emotional qualities of music. A quotation such as the following from the anonymous *Compendium de musica* (fourteenth century) should therefore not amaze modern readers:¹⁰²

¹⁰¹ *Micrologus*, XV, 21, p. 167: Sed haec et huiusmodi melius colloquendo quam vix scribendo monstrantur.

¹⁰² For date and authorship of the treatise see Hentschel, *Sinnlichkeit und Vernunft*, 268-270.

Here, then, [in the mathematical ratios] we have the order of reason and nature. Practice, however, which seeks sensuous pleasure and is saturated too quickly by the simple, likes to mix more complex ratios into the composition. It does not follow the order of reason nor does it follow the order of nature but it produces, so to speak, like a weaver intertwining different kinds of wool and threads an elaborate cloth that is charming to see and that deserves to be preferred to simple cloth. Also, a painter who transforms natural colours into an artwork mixes many pleasant kinds of colours into the simple ones. Also, an Epicurean cook achieved tastes as pleasant for the palate as possible through a variety of spices and, so to speak, through a certain alienation. And hence, without doubt the ear is delighted by mixtures of sounds as is the eye by mixtures of colours and the palate by mixtures of flavours. Still, the result is that everything corresponds to each other in a firm order.¹⁰³

The precise fact that music does not always follow reason and nature causes the specific aesthetical pleasure. It also explains why this aspect did not become the subject of scientific or scholarly literature. Conversely, it means that there was no contradiction between music theory on the one hand and compositional practice and its teaching on the other. This is not to say that there were no frictions or border crossings that led to obscurities; in fact, hardly any theoretician of the thirteenth and fourteenth centuries was arguing as precisely as Jacques de Liège. However, the two fields were for the most part clearly separated and had entirely different but not at all contradictory subjects and methods. A clear consciousness existed of the difference between mathematical or scientific investigations in the nature of number and sound on the one hand and aesthetical and practical experience and demands on the other.

Put simply and pointedly, one may draw two fundamental conclusions from the above analyses: first, the primary goal of music (*cantus*) was sensuous pleasure; only this was not discussed in writing because it was too obvious and, moreover, it did not seem possible to discuss related matters in any scientific way. Second, the sources from music theory of the Middle Ages cannot be interpreted as aesthetical texts because an medieval aesthetics would otherwise be constructed that never really existed. These results also allow a reversion of a customary view: perhaps the strange thing is not why ‘aesthetics’ as a discipline did not exist

¹⁰³ *Compendium de musica*, ed. Joseph Smits van Waesberghe, Eddie Vetter and Erik Visser, *Divitiae artis musicae* A.9 (Buren, 1988), III, iv, 7-8, p. 120-121: Hic ergo rationis ordo est et naturae. Usus vero peramplius lasciviam perpendens simplicibus iam satur mixturis gaudet etiam ad sui opus, superpartientes sonos praedictis immiscens, nec rationis aut naturae tenet ordinem, sed, ut ita dicam, in modum textoris lanas simul commiscens et fila texendo, gratiosum aspectui panni profert artificium, simplici texturae panno praeeligibile. Sed et pictor naturales colores artificio transferens, innumera coloris genera placabilia simplicibus commiscet. Sed et Epicureus cocus aromatum varietate et, ut ita dicam, quadam alienatione saporum quamplurimos gutturi retinuit dulcissimos. Itaque nimirum sonorum mixturis auris gaudet, ut oculus colorum vel guttur saporum. Expediit tamen ut omnia rato sibi respondeant ordine. (Cf. Jacques de Liège, *Speculum musicae* IV, i, 4, p. 5). Following the manuscript Brussels, Bibliothèque Royale Albert 1^{er}, 10162-66, fol. 54v, the word *naturae* has been added to the expression: ‘nec rationis aut naturae tenet’. Also ‘oculus’ has been replaced by ‘oculus’ (a facsimile of the manuscript can be found in the edition itself).

in the Middle Ages but why such a discipline had been established by the end of the eighteenth century although the epistemological problems possibly sensed by medieval intellectuals have never really been solved.