

This blows: social and cultural perceptions of
ancient Roman brass instruments and
musicians.

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DECLARATION

I, Rodney Cross, certify that this thesis has not been submitted for a higher degree to any other university or institution.

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THESIS SUMMARY

This thesis evaluates the uses and sociocultural perceptions of the four main ancient Roman brass instruments: *bucina*, *cornu*, *lituus* and *tuba*, across a range of contexts including: gladiatorial games, religious festivals, funerals and the Roman army. The omission of an origin myth and their strong association with violence and death implies a general negative perception of these instruments in the ancient Roman world (Ziolkowski, 1999). These negative connotations are further supported by primary literary evidence. The positive symbolic use in relation to Roman concepts of *imperium* (power), and *auctoritas* (authority), especially within triumphal processions, on the other hand, complicates this view. This thesis will attempt to reconcile these two conflicting perspectives through highlighting their distinct function within Roman society, which heavily influenced their presentation within the primary source tradition. This thesis will also raise a number of key issues within the broader disciplinary area of study, including issues of: disciplinarity, terminology, and methodology. The present work is divided into four main parts: I) a literature review and a proposed methodology, II) a discussion of relevant disciplinary, terminological, typological and iconographical issues, III) an overview of the contextual uses of Roman brass instruments and IV) an evaluation of the perceptions, power and symbolism that were associated with them.

Keywords: *tuba*, *cornu*, *bucina*, *lituus*, *aenatores*, brass instruments, ancient Rome, aural perception, sociomusicology.

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For Uncle Bill.

This blows: social and cultural perceptions of ancient Roman brass instruments and musicians

"...iam nunc minaci murmure cornuum perstringis auris... iam litui strepunt,
iam furgor armorum fugacis terret equos equitamque voltus..."

"...e'en now with trumpets, threatening blare, you thrill our ears;
the clarion brays; the lightning of the armour scare the steed and daunt the
riders gaze..."

Horace, *Carminae*, 2.1.18.¹

PREFACE

The sounds of the ancient Roman “trumpets of war” were synonymous with the violence and clamour of the ancient Roman battlefield. The instruments themselves, while serving an important role in communication and organisation of the Roman army, had the capacity to change the tide of warfare through the sheer power and intensity of their sound. This dreadful, awe-inspiring sound could psychologically intimidate and overwhelm an enemy of superior size sending the enemy to flight in fear,² and literally turn the enemy upon themselves.³ By their basic design and physical methods of performance, brass instruments are the most audible, and therefore most powerful, pitched instruments within the modern orchestra. Combined with Judeo-Christian views regarding brass instruments, our own modern perceptions strongly associate them with power and authority, be they divine or otherwise. The perceptions of these instruments, and indeed, the musicians that play them, vary distinctly across cultures; this is especially the case within ancient Roman culture. The difficulty in analysing the presentation and subsequent perception of brass instruments within ancient Roman society is our own predisposition to approach the material with anachronistic views of power structures and hierarchical stratification.

These preconceived notions of power appear to have led to an under-emphasis of the importance of brass instruments to Roman society through the misinterpretation of the

¹ **Horace**, *Carminae*, 2.1.18., *The Odes and Carmina Saeculare of Horace*, J. Conington, trans., (London: George Bell and Sons, 1882).

² **Frontinus**, *Strategems*, 2.4.3., C. E. Bennett, trans., (Cambridge: Harvard University Press, 1925); Polybius, *Histories*, 2.29., *The Rise of the Roman Empire*, I. Scott-Kilvert, Trans., (London: Penguin Books, 1979); while this particular instance in Polybius actually refers to the Roman reaction to the use of ‘horns’ by a Celtic army it still serves to illustrate the psychological effect such a display can have on an opposing force.

³ **Polybius**, *Histories*, 15.12.2.1; **Livy**, 30.33.12., *The War with Hannibal*, A. de Selincourt, trans., (London: Penguin Books, 1972).

symbolism of these instruments in ancient primary source material. In this way an apparent aesthetic hierarchy has emerged in the modern presentation of ancient Roman instrument-groups themselves; strings, woodwind, brass and percussion instruments respectively. These issues are prevalent in the approaches of modern scholarship to this material and, they served to form the underlying, core research parameters of the present work.

INTRODUCTION

Music is an extremely significant sociocultural force that permeates all aspects of human history. Whether it is the scandalous premiere of Stravinsky's *Le Sacre du Printemps* in 1913, or the politically-charged demonstrations of the Russian act Pussy Riot, music is inherently interwoven through society and culture. This applies equally for the civilizations of the ancient Mediterranean. While music has been, and continues to be, an often-overlooked aspect of ancient history studies, we should not assume that the world of the ancients was one of silence. Musical cultures existed in a wide variety of contexts and conveyed a multitude of human expressions.

Contemporary sociomusicology is a significant subfield of inquiry of both sociology and musicology and is chiefly concerned with the role of music within society. The development of this subfield is significant, as music provides a distinct commentary and soundtrack to the political, social, and cultural growth and development of human societies. The modern world movements in music have mirrored these integral aspects of society and have provided distinct interpretations on the significant events of our history. A pertinent example is the 'counterculture movement' during the 1960s, with issues such as racial segregation, feminism, 'the sexual revolution' and anti-Vietnam protests clearly reflected through the music and lyrics of the period, especially in those of James Brown, Janis Joplin, the Beatles, Jimi Hendrix Experience, and Bob Dylan respectively. Music can be used as political propaganda or even political satire, providing a voice for marginalised subcultures and cultural groups.

In 2004 the Foo Fighters songs 'My Hero' and 'Times Like These' were played at Republican rallies and used in George W. Bush's presidential election campaign, against the express wishes of Foo Fighters', lead singer Dave Grohl. This may have been an attempt to utilise the popularity of the band and their music to provide a boost to Bush's own political popularity, particularly with a younger voting demographic. When Grohl was prevented from issuing a 'cease and desist order' and decided instead to join the campaign of Democrat John Kerry in protest.⁴ The use of these Foo Fighters songs is a clear manipulation of the intended composition of the pieces as political propaganda.

⁴ **Contactmusic.com**, 'Dave Grohl Sickened By Bush's Foo Fighters Abuse' (2005) Located at: ><http://www.contactmusic.com/news-article/grohl-felt-sickened-by-bushs-foo-fighters-abuse><; Accessed on: 26/4/14.

In contradistinction the Russian ‘Riot Grrrl’ group Pussy Riot, who have, in a sense, musically spearheaded the opposition to Putin, are a particularly relevant example of music providing a voice for marginalised subcultures. Two members of the band were arrested in 2012, following a demonstration in a Moscow church; their performances, such as this particular ‘flash gig’, highlight “...Russia's authoritarianism and... [Pussy Riot’s push]... for judicial, educational and cultural reform”.⁵ More recently, in February 2014, two members of the band were arrested at the Sochi Winter Olympics prior to the performance of their song ‘*Putin Will Teach You to Love the Motherland*’ that was “dedicated to prisoners of the swamp [slang for the coastal area around the Olympics], corrupt Olympics, ecologist Vitishko and suppressed [*sic*] freedoms in Russia”.⁶

While these are modern examples of the expression of music, they successfully highlight its potential to be used to persuade and influence, to raise awareness of social issues, and to communicate aspects of society and culture. One of the obvious difficulties in engaging in the sociological study of ancient music is the complete lack of aural evidence and a paucity of documented musical notation. Without recordings of ancient music we have little to use as a foundation for our concept of the aural production of these ancient forms of music and sound, and in this way, it can be difficult to draw similar parallels of musical expression between the modern and ancient worlds. Nevertheless, evaluating the importance of music to these ancient societies *is* possible through engaging with primary sources that present evidence regarding the perception of various forms of music in the ancient world. In doing this we *can* begin to construct concepts of individual and collective social identities and perceptions through the expression and production of music. This focus on primary source material, which allows for an analysis of social expression, will be of fundamental importance to the present work.

While these are important and emerging issues within the fields of musicology, sociology and ancient history, due to various limitations, the larger sociological issues will not be the main focus of the present work. This work will instead provide a necessary foundation for the

⁵ **The Week.com**, ‘Russian punk band Pussy Riot go on hunger strike in Moscow’ Located at: ><http://www.theweek.co.uk/russia/russia-election/45722/russian-punk-band-pussy-riot-go-hunger-strike-moscow><; Accessed on: 26/4/14.

⁶ **Miller, N.**, ‘Sochi Winter Olympics: Two members of punk band Pussy Riot arrested before protest performance’ (Sydney Morning Herald), Located at: ><http://www.smh.com.au/world/sochi-winter-olympics-two-members-of-punk-band-pussy-riot-arrested-before-protest-performance-20140218-hvcwn.html><; Accessed on 26/4/14.

further development of sociological-based inquiry into this specific area, especially in regards to the study of individual and collective expression of identity through the role of the brass musician (*aenator*) within both civic and military contexts. Vincent has recently made some important contributions to this debate,⁷ but more focus could be devoted to this topic.⁸ This could be very easily expanded into a central focus for a later PhD dissertation.

This present study focuses specifically on the social and cultural perceptions of ancient Roman brass instruments and the musicians who played them, the *aenatores*. It is important to attain an understanding of what is meant by the terms “social and cultural perceptions”, particularly in relation to musical instruments and musicians. Two contemporary examples of brass music highlight these key perceptions incredibly well. The first example is a piece of military music called the ‘First call’. This short piece of music was originally used as a warning for personnel to assemble for a formation, has now become strongly associated with horse racing, due to its use within this context.⁹ The second example is ‘The Last Post’, which, despite its melodic simplicity, is extremely recognizable. ‘The Last Post’ was originally used by the British army to signal the end of the day and is traditionally played at Commonwealth military funerals and commemorations of fallen soldiers.¹⁰ ANZAC day is one such example and has a deep-rooted connection with Australian cultural and social identity. These evocative pieces are heavy with connotations that immediately conjure up images of social and cultural contexts. These reactions provide us with an understanding of our own socio-cultural perceptions of these short, musical pieces and by extension the instruments and musicians themselves. By examining ancient texts, inscriptions and iconography, and the ways in which these instruments and musicians are portrayed within these ancient materials, we can begin to reconstruct similar ancient perceptions. This approach will be a key focus of this study.

The central aim of this thesis is to critically appraise pre-existing modern approaches to the study of these instruments in relation to ancient Roman society. Some of the main issues in

⁷ The forthcoming edited publication of Vincent’s 2011 PhD dissertation will benefit progress in this field immensely. **Vincent, A.**, (2011) *Les musiciens professionnels au service de la cité (fin de la République – Haut-Empire)*. PhD Ancient History, Aix-Marseille Université (unpublished).

⁸ The focus on the role of the *aenatores* can also be extended to reflect upon the variations of presentation and perception of different types of musicians in the ancient Greco-Roman world, such as stringed and woodwind players, and percussionists. One of these distinctions will be identified and discussed in the course of this work and will act as a stepping stone to a larger dissertation on this specific topic.

⁹ “First Call”, U.S. Army Music [Website], Located at:

><http://www.music.army.mil/music/buglecalls/firstcall.asp><; Accessed on: 17/6/14.

¹⁰ “The Last Post”, ANZAC day.org [Website], Located at:

>http://www.anzacday.org.au/education/tff/images/last_post.wav<; Accessed on 17/6/14.

the modern scholarship on this area of study include problematic or simplistic methodological approaches, convoluted terminology and typology, and an apparent tendency to under-emphasise the sociocultural importance of these instruments.

In order to address these central areas of concern, the work will be split into four main sections: I) an overview of previous scholarship and a proposed methodological approach II) a discussion of relevant terminological, typological and iconographical issues, III) an overview of the contextual uses of Roman brass instruments and IV) an evaluation the perceptions, power and symbolism that were associated with them. This structure will outline the progression of themes developed throughout the work, culminating in an important discussion on ancient Roman power-discourse and the symbolism associated with the use of these instruments in Roman society.

The paper will begin with a review of the existing modern literature on the area of ancient Roman music (I.1). This section will trace the development of this specific field from the early musicological works of Abert, Gervaeert and Bekker on the history of Greek music,¹¹ to the formative historical works of Wille and Baudot,¹² through to the most recent scholarship in the field, including the works of Meucci, Ziolkowski and Vincent.¹³ By highlighting the chronological progression of the study of ancient Roman music, we can begin to identify ideological patterns that have influenced the interpretation of both historical and musicological evidence within the surviving corpora of primary source material. The identification of these ideological paradigms subsequently highlights areas of concern that need to be addressed to further the development of the field.

Following this discussion of modern literature, I will examine the interdisciplinary approaches and methodologies that have been previously applied to this particular area of study (I.2). Through this process I will also outline the methods that will be utilised in the present work. This discussion is integral, as it highlights the various analytical processes

¹¹ **Abert, H.**, (1899) *Die Lehre vom Ethos in der griechischen Musik*. Leipzig.; **Abert, H.**, (1905) *Die Musikanschauung des Mittelalters*, Verlag von Max Niemeyer; **Bekker, P.**, (1927) *The Story of Music: An Historical Sketch of the Changes in Musical Form* (M. D. Herter-Norton, and Kortschak, A., Trans.), New York: W. W. Norton and Company, Inc.; **Gevaert, F. A.**, (1880) *Histoire et theorie de la musique de l'antiquite*.

¹² **Wille, G.** (1967) *Musica Romana: die Bedeutung der Musik in Leben der Romer*, Amsterdam.; **Baudot, A.**, (1973) *Musiciens romains de l'Antiquite*, Montreal.

¹³ **Meucci, R.**, (1989) 'Roman Military Instruments and the Lituus', *Galpin Society Journal*, 42, pp.85-97.; **Ziolkowski, J.**, (1999) 'The Invention of the *Tuba* (Trumpet)', *The Classical World*, 92.4, p. 367-373; **Vincent, A.**, (2013) 'Les aenatores, une categorie de musicien au service de la cité', in Emerit, S., (Ed.), *Le statut du musiciens dans la Méditerranée ancienne Egypte, Mesopotamie, Grèce, Rome*. (Lyon: Institut Français d'Archaeologie Orientale).

utilised to assess the diverse range of available primary source material. When developing a methodology for the study of ancient Roman music an awareness of interdisciplinary methods is paramount, especially due to the musicological and sociological foci of the thematic material central to this research. It is important therefore to assess and evaluate the strengths and weaknesses of the various disciplinary-specific approaches. In order to address these disciplinary-specific methodological issues, a brief investigation of the disciplinarity of this area of study will be included within this section (I.2).

One of the most contentious issues within the study of Roman brass instruments is the problematic use of specific Latin terminology for the four main brass instruments themselves: *tuba*, *cornu*, *bucina* and *lituus*. In Part II I will evaluate the use of these terms in order to establish my own definitions, through close examination of primary visual and literary evidence (II.2.1-6). This typological evaluation will introduce my own interpretations of the descriptions of the instruments, and will serve to highlight the terminological and typological disparities within both modern scholarship and ancient primary source material. Through this evaluation of key terms, I will also propose some possible explanations for these major issues. While this may appear to be a minor, introductory aspect of this paper, I would argue that an exhaustive evaluation of typology and organology of surviving ancient instruments, by means of an accessible catalogue, is very much overdue,¹⁴ and indeed essential, if scholarship is to proceed past such initiatory terminological debates. In this terminology section I will also broach the subject of disciplinary-specific terminology, especially key terms related to the discipline of musicology (II.1). I will also approach the issue regarding the differentiation between ‘noise’ and ‘music’ within a modern context and briefly discuss possible ‘aesthetic’¹⁵ aural classifications of brass instruments in ancient Rome. (II.1.1.) In the final chapter of this section (II.3) I will identify the iconographical issues present within the field and highlight the importance of an integrated iconographical analysis for the typology of these instruments.

Part III will begin with an overview of the contextual uses of these instruments in Roman society. Through evaluating their use within these contexts we can begin to conceive their

¹⁴ Such a catalogue is included in the appendices of a recent work by Cristina-Georgeta Alexandrescu. This work is, however, quite inaccessible due to its limited distribution, which has directly impacted upon its omission in the present work. **Alexandrescu, C.G.**, (2010) *Blasmusiker und Standartenträger im römischen Heer: Untersuchungen zur Benennung, Funktion und Ikonographie*, Cluj-Napoca: Mega-Verl.

¹⁵ The term aesthetics is a considerably problematic one, especially when applied anachronistically to the ancient Roman world, which did not have such analytical systems in place to critique music as an ‘art form’ as we understand it in the modern sense. I use the term to draw attention to an apparent distinction within ancient source material between ‘sound/noise’, ‘*sonus/sonitus*’, and ‘music’, ‘*musica*’. For the anachronistic issues of aesthetics and ancient history studies see **Scott, S.**, (2006) ‘Art and the Archaeologist’, *World Archaeology*, 38.4, pp. 628-643.

importance to Roman society. While arguing for the recognition of brass instruments as symbols of power, I will evaluate and assess both ‘positive’ and ‘negative’ depictions and presentations of the instruments in these various contexts. I will compare and contrast these differing perspectives and highlight the significance of their role as symbols of power (*imperium*) and authority (*auctoritas*).

The contextual uses of these instruments have been separated into three major categories: civil and military, and a transitional chapter that deals with contexts that feature both civil and military characteristics. Part III, Section 1 (III.1.) considers the civil contexts in which brass instruments were used. While I will briefly refer to some general uses of brass instruments within this context, I will focus especially on their use in gladiatorial games (III.1.1.) and funerary processions (III.1.2.). Ziolkowski heavily emphasises the association of brass instruments with death, and in this way, seems to suggest a stigmatisation of the instruments themselves.¹⁶ The use of these instruments within these contexts presents a clear link with violence and death, which seems to support Ziolkowski’s theory. This chapter will consider the evidence and present a balanced discussion of the primary source material.

In III.2., following the civilian contextual practices, I will discuss the brass instruments in two main transitional contexts between civil and military life, mainly triumphal processions and the *tubilustria* festivals. While these contexts are a part of public life, they are also firmly linked with the Roman military; in this way, these contexts further reinforce the significance of the instruments themselves to Roman society. The evaluation of their use in triumphal processions is crucial to understanding the ways in which brass instruments and musicians were perceived by an ancient Roman audience. Roman triumphs were clear outward demonstrations of power, authority and supremacy, and the music of the brass instruments within this context therefore aurally represent the same degree of importance and power. The *tubilustria* festivals are connected with the Roman military cycle and emphasise the crucial link between brass instruments and the Roman army. This will be an extremely important part of the discussion, particularly as the aural focus of such festivals is too often lost behind the political agendas of the ancient authors, who seem to care very little about the scholarly interests of future musicological historians.

Part III concludes with contextual analyses of the military applications of brass instruments (III.3.1-5). Within this military context we are provided with a great number of literary

¹⁶ Ziolkowski, J. (1999). ‘The Invention of the Tuba (Trumpet)’, *The Classical World*, 92.4, p. 367.

examples attesting to the forceful and awe-inspiring sound of brass instruments. These instances provide us with clear, practical examples of the power and importance of brass instruments to the Roman army and by extension, the Roman Empire. While the instrument-specific uses of brass instruments in a military context can be quite problematic, I will discuss their general uses within the camp, as well as their strategic and tactical applications in ancient Roman warfare.

The fourth and final part of the present work will focus on providing a concluding discussion on the power, perceptions and symbolism of brass instruments within Roman society. This part will begin with a brief discussion on Judeo-Christian perceptions of brass instruments (IV.1), which provides an important contrast to the presentation and perception of brass instruments within a Roman context. The following section will draw upon examples from the previous chapters on contextual uses in Part III and will suggest an approach to a Roman perspective. In this section I will also briefly consider the implications of such sociocultural perceptions of these instruments on the musicians that played them.

The final concluding section will highlight the various representations of these instruments in relation to Roman concepts of *imperium* and *potestas* (power) and *auctoritas* (authority) presented throughout the work.

PART I:

1. LITERATURE REVIEW

Modern scholarship on ancient music history dates back to the early works on Greek music, by music historians such as Abert, Gevaert and Bekker.¹⁷ These early formative works outlined some of the key areas of focus in the study of the ‘history of music’, most notably harmonic theory, and the identification of the origins of ‘Western’ musical traditions. These works generally focussed very closely on the theoretical principles underlying the Greek concept of harmony and pitch, in many ways to the detriment of the social and cultural issues in the study of Mediterranean musical cultures. While these early musical historians focussed on thematically distinct material, namely Grecian musical cultures (as opposed to the later Roman variants), their approaches and subjective opinions have heavily influenced scholarship in regards to the study of both Greek and Roman music. The first monograph on Roman music was Wille’s *Musica Romana*, published in 1967,¹⁸ which can be seen as a direct reaction to the views of earlier philhellenic scholarship that had all but denied the importance and indeed existence of a *distinct* ‘Roman music’.¹⁹ Since the publication of Wille’s text, the study of Roman music has developed considerably and has diverged into further subcategories of study. An interesting progression can be noted throughout the history of the study of ancient music, especially in regards to the central focus of the works. The emphasis of these musical history works seems to gradually shift from harmonic theories and principles of ancient music to a more sociological focus, the basis of which can be seen in Wille’s *Musica Romana*. This sociological focus was further developed in later general works including those of Baudot,²⁰ Comotti²¹ and culminates in the recent research programme initiative of the ÉFA-ÉFR-IFAO collective²² “looking at the constituent elements of the soundscape in urban spaces of the ancient Mediterranean World”.²³ This evaluation of the socio-cultural contexts and expression of musical cultures in the ancient world could be best

¹⁷ **Abert, H.** (1899). *Die Lehre vom Ethos in der griechischen Musik*. Leipzig; **Abert, H.** (1905). *Die Musikanschauung des Mittelalters*: Verlag von Max Niemeyer.; **Bekker, P.** (1927). *The Story of Music: An Historical Sketch of the Changes in Musical Form* (M. D. Herter-Norton, and Kortschak, A., Trans.). New York: W. W. Norton and Company, Inc.; **Gevaert, F. A.** (1880). *Histoire et théorie de la musique de l'antiquité*.

¹⁸ **Wille, G.** (1967). *Musica Romana: die Bedeutung der Musik in Leben der Römer*, Amsterdam.

¹⁹ **Levin, F. R.** (1970). ‘Review of *Musica Romana, die Bedeutung der Musik im Leben der Römer* by Gunther Wille’, *The Classical Journal*, Vol. 65, pp. 226-228.

²⁰ **Baudot, A.** (1973). *Musiciens romains de l'Antiquité*. Montreal.

²¹ **Comotti, G.** (1989). *Music in Greek and Roman Culture* (R. Munson, V. Trans.). London: John Hopkins University Press.

²² An initiative of École Française à l'étranger, which includes the (ÉFA), École Française de Rome (ÉFR) and the Institut Français d'Archéologie Orientale (IFAO).

²³ IFAO, (2014). *From cacophony to music: sound perception in ancient societies - Call for papers*, in S. Perrot, A. Vincent & S. Emerit (Eds.): École française d'Athènes.

described as ancient sociomusicology. Scholarship within this niche subdisciplinary field has progressed considerably in the last five years and has become a major focal point of the study of ancient music, especially in the work of Vincent on Roman musicians.²⁴ I will discuss the relationships between these principal works and highlight key areas of discussion and debate that have led to the development of the study of ancient Roman brass instruments, which is the focus of the present study.

The first major works on music of the ancient Mediterranean were writings on Greek music by early music historians, most notably, Hermann Abert, François-Auguste Gervaeert and Paul Bekker. The major focus of the works of these early scholars concerned the origins of Western traditions of musical expression, an aim that strongly influenced their own approach to the treatment of the primary research material. In this way Greek music was lauded as the ‘highest form’ of musical expression in the ancient Mediterranean. Bekker, a scholar previously known for his biographies of Beethoven and Wagner, in his 1927 work *The Story of Music: An Historical Sketch of the Changes in Musical Form*, stated that “...We know that the Romans were not a musical people; they imported their artists from Greece...”.²⁵ This is an over-generalisation, and it comes as no surprise that this statement occurred in a chapter entitled ‘Gregorian music’ following a chapter on ‘Greek Music’. This sentence appears to stand in place of a chapter on Roman music set between these two periods. This view is quite characteristic of early musical historians whose Romantic Grecian attachment to all things Greek strongly influenced their own interpretations of other musical cultures. Philhellenic concepts that regard Greek music as the epitome of aural expression in ancient times still permeate much of the secondary material on Roman music and hinder sociomusicological analyses of ancient music. In 1999 John Landels published a book entitled *Music in Ancient Greece and Rome*. In this 296-page text, a mere 33 pages are devoted exclusively to ‘The Roman Musical Experience’, which Landels begins by stating that “...The role of music in Roman life and literature was very limited indeed compared with its all-pervading influence in Greek culture...”.²⁶ This is, again, an oversimplification, which has been rightly criticized by scholarship.²⁷

²⁴ **Vincent, A.** (2011). *Les musiciens professionnels au service de la cité (fin de la République - Haut-Empire)*. PhD Ancient History, Aix-Marseille Université.

Vincent, A. (2013). ‘Les aenatores, une catégorie de musicien au service de la cité’, in S. Emerit (Ed.), *Le statut du musicien dans la Méditerranée ancienne Egypte, Mésopotamie, Grèce, Rome*. Lyon.: Institut Français d’Archéologie Orientale.

²⁵ **Bekker, P.** (1927). *The Story of Music: An Historical Sketch of the Changes in Musical Form*, p.40.

²⁶ **Landels, J. G.** (1999). *Music in Ancient Greece and Rome* (2nd ed.). New York: Routledge, p.179.

²⁷ **Soloman, J.** (2001). ‘Review of *Music in Ancient Greece and Rome* by John G. Landels’. *The American Journal of Philology*, Vol. 122, pp. 148-150.

Wille's immense work *Musica Romana* can be seen as a direct response to earlier opinions of early philhellenic scholars. Wille aimed to challenge the generally accepted view in scholarship that Greek music was an inherently 'higher form' of art than Roman music, and that Roman music was, ultimately, derivative of the earlier Grecian precedents. *Musica Romana* provides us with a comprehensive exposition of Roman music and its function in all aspects of Roman society. Some of these include use within contexts such as the military, religion, gladiatorial games, spectacles and various others. This text remains an extremely important foundation for work on the socio-cultural function of music in Roman society. Wille's section on brass instruments is an important formative text that should not be overlooked or undervalued, but due to the sheer breadth of the work, a number of issues are addressed quite briefly and even inadequately in some instances. As a foundational text *Musica Romana* is exemplary and Wille's bibliography exhaustive; however, when dealing with more specific information, there are considerable issues with the work. One instance is a reference to the use of music during funerary processions as protection from evil demons – which McKinnon claims isn't directly supported by the references that Wille himself provides.²⁸ This reminds us that while this work is of crucial importance to the study of Roman music, we must maintain a critical stance.

Wille was both lauded²⁹ and heavily criticised³⁰ for his text on music in the Roman world. While a number of his arguments appear to fall short of the aim of his immense undertaking, particularly in regards to the scale of some claims,³¹ the general premise seems entirely reasonable. McKinnon, one of Wille's critics, sided with the earlier Graeco-centric views of Bekker and Gavaert and argued that music for the Romans was a mere "aphrodisiac".³² At best this statement is a satirical comment on the nature of Wille's undertaking – at worst, an oversimplification of the issue. It is interesting to note that these criticisms of Wille failed to initiate any substantial scholarly debate on this distinction of Greek and Roman music as inherently 'high' and 'low' forms of art respectively. But modern scholars of Roman music

²⁸ **McKinnon, J. W.** (1968). 'Review of *Musica Romana. Die Bedeutung der Musik im Leben der Römer* by Gunther Wille. *Notes*, Vol. 25, p. 25.

²⁹ **Feaver, D. D.** (1970). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Römer* by Gunther Wille', *The American Journal of Philology*, Vol. 91, pp. 237-239; **Lind, L. R.** (1968). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Römer* by Gunther Wille', *The Classical World*, Vol. 61, p. 303.

³⁰ **Levin, F. R.**, (1970). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Römer* by Gunther Wille', *The Classical Journal*, Vol. 65, pp. 226-228; **McKinnon, J. W.** (1968). 'Review of *Musica Romana*.

³¹ Levin criticises Wille's lack of evidence for some arguments and accuses Wille of a "peculiar bias in favour of Rome's musical creativity"; **Levin, F. R.**, (1970), 'Review of *Musica Romana*'. p. 227.

³² **McKinnon, J. W.** (1968). 'Review of *Musica Romana*'. p.26.

do tend to highlight the difficulties with these older philhellenic views in the course of their works.³³

Twelve years after the publication of Wille's work, the Italian scholar Commotti published the important monograph *La musica nella cultura greca e romana* (which was later translated into English in 1989),³⁴ which does not contain any comments on such a distinction between "high" and "low" forms of music within these two cultures. This seems to be a more appropriate response, as it is of more immediate interest to evaluate the importance of musical cultures within their own socio-cultural context than to compare them (and to some extent, even belittle them) with others.³⁵ Commotti's text is rather well-balanced and he presents an important discussion on the development and progression of both musical cultures. The biggest flaws of the work, which inevitably comes with the scope of the task, are Commotti's generalisations on the function of brass instruments in ancient Roman society.³⁶ But considering the number of issues in this niche area, his treatment of this material is quite understandable. This text provides a good introductory survey into ancient Greek and Roman musical cultures.

In the introductory paragraph of his 1973 text, *Musiciens romains de l'Antiquité*,³⁷ Baudot both acknowledges and criticises the disproportionate preference for Greek music in earlier scholarship. Baudot asserts that while historians are willing to accept the music of Pythagoras and Aristoxenos, in modern scholarship there appears to be a marked pause in the evolution of music when it reaches the Roman period.³⁸ The aim of this work is to add further weight to the discussion that Roman music has the ability to stand on its own merit in distinction from Greek music. The text, like Wille's, covers a wide range of contexts but also focusses more

³³ **Baudot, A.** (1973). *Musiciens romains de l'Antiquité*. Montreal, pp. 9-10ff.; **Vincent, A.**, *Les musiciens professionnels au service de la cité (fin de la République - Haut-Empire)*. PhD Ancient History, Aix-Marseille Université, p. 183ff.

³⁴ **Comotti, G.** (1989). *Music in Greek and Roman Culture* (R. V. Munson, Trans.). London: John Hopkins University Press.

³⁵ There has been immense debate within the study of ethnomusicology over the application of universalistic versus cultural relativistic approaches. For texts on this discussion see: **Bohlman, P. V.**, (1991) 'Representation and Cultural Critique in the History of Ethnomusicology', in Netti, B. and Bohlman, P. V., *Comparative Musicology of Anthropology of Music*, Chicago.; **Mâche, F.B.**, (2000) 'The Necessity of and Problems with a Universal Musicology', in Wallin, N. L., Merker, B. and Brown, S., *The Origins of Music*, Massachusetts.; **Meyer, L.B.**, (1960) 'Universalism and Relativism in the Study of Ethnic Music', *Ethnomusicology*, 4.2., pp. 49-54. One of the major criticisms of cultural relativism is an apparent tendency towards ignorance on issues of cross-cultural influence, a weakness that can, to an extent, be resolved through more universalistic approaches (**Meyer**, see above). But while Greek influence is *clearly* evident in Roman music, I believe there is a strong and important distinction between providing a cross-cultural *comparison* of musical cultures and providing a cross-cultural *critique*.

³⁶ Commotti's brief survey on brass instruments: **Comotti, G.** (1989). *Music in Greek and Roman Culture*. p.73-74.

³⁷ **Baudot, A.** (1973). *Musiciens romains de l'Antiquité*. Montreal.

³⁸ **Baudot, A.**, (1973), *Musiciens romains*, pp. 9-10

on the role of musicians in Roman society;³⁹ this will later be developed in the work of Alexandre Vincent. The general works of Wille, Comotti and Baudot are extremely important in order to gain a basic understanding of the development of the field of Roman music studies, but it is also important to identify some of the main areas of debate within the more specific, subdiscipline of ancient sociomusicology.

The work of John Ziolkowski in this field is also quite important, especially to the present work. His publication ‘The Invention of the *tuba* (trumpet)’ provides a significant evaluation of the origin of the *tuba* and raises questions about possible negative connotations of this instrument in ancient Roman society. Ziolkowski asserts that this instrument (and by extension other brass instruments and those who played them) may have been perceived in a negative way by Roman society, due to the omission of an origin myth for the creation of the *tuba*, as well as its association with death through its use within military and funerary contexts.⁴⁰ This view has not been adequately discussed by modern scholars, and while it does provide important information relating to the social and cultural perceptions of Roman brass instruments, it does not provide a balanced evaluation of these ancient views. This issue will be the focus of much discussion throughout this work⁴¹ and will be addressed directly by means of a methodical, critical appraisal of Ziolkowski’s central hypothesis.

As previously mentioned, due to the multidisciplinary nature of this area of study a number of different approaches may be applied. Anthony Baines, in his text *Brass instruments. Their history and development*,⁴² applies a more musicological and typological approach to the research material. This approach provides an important overview of the development of brass instruments and highlights the social and cultural importance of these instruments throughout history.

The most recent scholarship on the topic is also perhaps some of the most significant. In a recent publication of the Institut Français d’Archaeologie Orientale on the status of musicians in the ancient Mediterranean,⁴³ Alexandre Vincent discusses the status of *aenatores* in ancient Roman society. While this only deals with the civilian context of brass musicians defined as

³⁹ Baudot, A., (1973), *Musiciens romains*, pp. 29ff; and 79ff.

⁴⁰ Ziolkowski, J. (1999), ‘The Invention of the Tuba (Trumpet)’, *The Classical World*, 92.4, p. 371-373.

⁴¹ See specifically: III.1.1-2 on gladiatorial and funerary contexts and IV on the perceptions of the brass instruments of Rome.

⁴² Baines, A. (1993). *Brass instruments. Their history and development* (4th ed.). Londres.

⁴³ Emerit, S. (Ed.) (2013), *Le statut du musiciens dans la Méditerranée ancienne Egypte, Mesopotamie, Grèce, Rome*. Lyon: Institut Français d’Archaeologie Orientale.

“trumpeters”, it does provide invaluable discussion on the ways in which these musicians were perceived by Roman society. Vincent’s earlier thesis, *Les musiciens professionnels au service de la cité*, is another important text in the study of ancient brass instruments, which provides two exhaustive corpora of both military and civil musicians through surviving epigraphic sources. The IFAO, in which Vincent’s most recent paper is published, has also initiated a research program with the other affiliate French schools in order to provide a distinct focus on the aural perception of sound and music in the ancient Mediterranean.⁴⁴ This program will run until 2016, which serves to highlight the importance of this emerging subdiscipline within the international academic community.

By evaluating the history of scholarship of ancient Roman music, from its earliest beginnings in the work of early music historians through to the most recent scholarship, including the IFAO publication *Le statut du musiciens dans la Méditerranée ancienne Egypte, Mesopotamie, Grèce, Rome*, we can begin to identify a distinct thematic and stylistic development of the research. The ways in which scholars have expressed their research has heavily impacted on the perpetuation of certain concepts and ideals, particularly the concept of Greek elitism in musical expression. The works of Wille, Comotti and Baudot have contributed to the dismantling of this archaic judgment, which has allowed the field of ancient Roman sociomusicology to progress on to important areas of sociological study.

⁴⁴ IFAO. (2014). *From cacophony to music: sound perception in ancient societies - Call for papers*. S. Perrot, A. Vincent & S. Emerit (Eds.): École française d'Athènes.

2. METHODOLOGY

Following the previous discussion of the core texts that have shaped scholarship in the study of ancient Roman brass instruments, it is important to outline the approaches and methodologies that will be employed in this present work. In order to understand the application of a number of methodologies that will be applied to this area of study, we must consider the *methodological* issues raised by previous scholarship. As previously mentioned, terminological issues are of key importance in the study of ancient Roman brass instruments and central to the first part of this current work. These issues have, to a certain extent, been perpetuated through the application of only a small number of distinct methodologies; this limits the overall analyses of the primary source material. As the surviving primary source material that relates to ancient Roman brass instruments includes a wide variety of evidence types, including textual, archaeological, epigraphic, and iconographic evidence, it is necessary to apply methodologies relevant to each specific subdisciplinary area of study, such as textual and archaeological analysis, epigraphy, and iconography respectively. Textual, archaeological, epigraphic and iconographic analyses will be particularly important to my discussion on the terminology and typology of ancient Roman brass instruments. By utilising these various techniques and approaches I will address some of the issues raised by contemporary scholars, especially in regards to the general omission of iconographic evaluation in modern scholarship.

One of the primary objectives of the present work is to investigate the ways in which brass music functioned in ancient Roman society.⁴⁵ In order to adequately address this key sociological question it is necessary, in the second and third parts of the work, to adopt aspects of sociological, musicological and historical methods equally. This interdisciplinarity highlights some of the broader disciplinary issues within the fields of musicology, sociology and ancient history studies, especially in regards to the generally unidisciplinary approaches of scholarship within this area of study. As the present work deals thematically with material from each of these distinct disciplines, it is important to maintain interdisciplinary approaches throughout. By identifying these general issues within a broader disciplinary context we may also begin to identify the benefits of applying such interdisciplinary approaches and methodologies to this particular of study. Before discussing the specific applications of these

⁴⁵ While the present work will raise sociological questions relating to social stratification and the status of musicians, these issues will not be the central foci of this present work. The present work will focus on the function of brass music within society and will hopefully be expanded to incorporate broader sociological questions in the course of a larger PhD.

various methodologies in this work, we must consider some of the ways other scholars have (or at times, haven't) utilised these particular methods and the particular problems that have arisen through such approaches.

One of the major issues in scholarship concerning ancient Roman instruments is the omission of thorough iconographic analyses. Analyses of the iconography of ancient musical instruments are an integral part of providing a thorough evaluation of musical instruments of the ancient Mediterranean world. Such an approach not only presents contemporaneous depictions of the shape and construction of the instruments themselves and the playing techniques required to play them, but also provides us with an understanding of the contexts in which they were used. Some scholars, such as Van Keer⁴⁶ and Anderson⁴⁷ (writing on Greek musical instruments), provide important iconographic interpretations in their arguments, which allows for a much more comprehensive approach to the evaluation of ancient musical instruments and musicians. In contradistinction, the importance of this approach is also evident in the omission of iconographical analyses, particularly in Renato Meucci's text *Roman Military Instruments and the Lituus*,⁴⁸ which is the major weakness of an otherwise important overview of the ongoing discussion. While some scholars deal specifically with the iconography of brass instruments,⁴⁹ scholarship tends to place less emphasis on iconographic evaluation of visual evidence and much more on primary literary and epigraphic evidence. Meucci presents a considerable number of images in his text in order to support his assertions. He does not, however, include a thorough iconographic analysis of the visual evidence, which leaves considerable gaps in his argument, particularly in his discussion of the relationship between *bucinae* and *litui*. This is a considerable weakness in Meucci's argument as his clear applications of terminology in relation to *bucinae* and *litui* and his argument for the omission of *litui* in a military context can be challenged through an iconographic comparison between two important visual sources, which will be discussed in more depth in Part One, Chapter Three, on terminology and typology.

This current work will emphasise the use of iconographic evidence (e.g. funerary reliefs, steles, Trajan's column and triumphal arches, etc.) due to its ability to visually depict Roman brass instruments across various contexts. The ways in which these instruments are

⁴⁶ Van Keer, E., 'The Myth of Marsyas in Ancient Greek Art: Musical and Mythological Iconography', *Music in Art: Iconography as a Source for Music History* Volume 1.28.1/2.

⁴⁷ Anderson, W. D., (1994) *Music and Musicians in Ancient Greece*, London: Cornwell University Press.

⁴⁸ Meucci, R. (1989), 'Roman military instruments and the lituus', *Galpin Society Journal*, 42.

⁴⁹ Alexandrescu, C. G., (2007), 'The Iconography of Wind Instruments in Ancient Rome: Cornu, Bucina, Tuba and Lituus', *Music in Art*, 32.1/2, pp.33-46.

represented can tell us a great deal about their use and perception in these contexts. This iconographic material will be compared and contrasted with other forms of primary source material in order to attain a more thorough evaluation of the perceptions of brass instruments and musicians.

The analysis of literary and epigraphic evidence has been much more consistent in modern scholarship concerning ancient Roman brass instruments than that of iconography; in fact, a large number of terminological and typological arguments are based upon written evidence.⁵⁰ While modern scholarship has placed a particular emphasis on the literary and epigraphic evidence, few scholars have included an exhaustive corpus of primary source material to supplement their research, which has also, to an extent, perpetuated the debates concerning terminology.⁵¹ Alexandre Vincent in his 2011 PhD thesis *Les musiciens professionnels au service de la cité (fin de la République - Haut-Empire)*⁵², included two large prosopographical corpora of epigraphic evidence relating to military (*corpus épigraphique des musiciens militaires*) and civil musicians (*corpus épigraphique des musiciens civils*). These resources are invaluable to the study of ancient Roman musicians but as yet there has not been sufficient discussion of this study in recent scholarship. The present work will directly engage with this material, albeit it in a somewhat limited sense, due to space constraints. Similar to the work of Vincent's compilation of the CMC and CMM, I will compile a corpus of literary evidence for the relevant Greek and Latin terminology in order to attain greater understanding of the use and perceptions of these brass instruments. While engaging with modern scholarship is essential for the development of the field, a strong emphasis on primary source analysis is imperative when attempting to address the complicated terminological issues that have arisen in recent scholarship.

By engaging in a number of historical methodologies including epigraphic, iconographic, textual, and archaeological analyses, I aim to reformulate the present scholarly view on the specific Latin terminology used to denote specific Roman brass instruments, by presenting a thorough evaluation of the terminology and typology of each individual instrument. This discussion will both establish my use of terminology for the remainder of the text and will minimise confusion that may arise through the use of such terms.

⁵⁰ **Meucci, R.** (1989), Roman military instruments and the lituus; Wille, G. (1967), *Musica Romana: die Bedeutung der Musik in Leben der Römer.*; Ziolkowski, J. (1999), 'The invention of the Tuba (Trumpet)'.

⁵¹ Refer to fn. 14. See **Alexandrescu, C.G.**, (2010) *Blasmusiker und Standartenträger im römischen Heer.*

⁵² **Vincent, A.** (2011), *Les musiciens professionnels au service de la cité (fin de la République - Haut-Empire)*, PhD Ancient History, Aix-Marseille Université.

The present work is situated firmly within the realm of Ancient Roman studies but as aspects of this study overlap thematically with other disciplines including Sociology and Musicology, the application of interdisciplinary methodologies is required in order to minimize certain discipline-specific issues. Each of these disciplines has their own methodological approaches to research but when research overlaps these disciplinary boundaries, methodological issues can be exposed. This is especially the case with Musicology.

One of the biggest issues with the study of Musicology is the apparent exclusivity of the field, which prevents interdisciplinary engagement from non-musicologists through the inaccessibility of discipline-specific terminology and methodology. Scholars such as McClary and Supičić⁵³ are quite critical of the apparatus used to discuss music and claim that it prevents the evaluation of important Sociomusicological questions by Sociologists that do not have a background in Musicology. This inaccessibility is by far the biggest issue in this field, and Supičić has attempted to suggest different approaches to the Musicological material.⁵⁴ Supičić, in his 1987 text *Music in Society: A Guide to the Sociology of Music*, asserts that the interdependence between Musicology and Sociology results in the establishment of ‘Music Sociology’ (or Sociomusicology) as an autonomous discipline distinct from traditional Sociology.⁵⁵ Supičić also further notes that the traditional approaches of Musicology raise important Sociological questions such as the function of music in society,⁵⁶ social stratification,⁵⁷ and the status of musicians,⁵⁸ which are often overlooked by musicologists and left unaddressed.⁵⁹ Within the study of Roman brass instruments there has been a distinct focus on terminological and typological issues, but more recent scholarship has shifted focus to such sociomusicological questions.

Vincent raises some of these important sociological questions in his recent text *Les aenatores, une categorie de musicien au service de la cité*, which itself is published in a work by the

⁵³ **McClary, S.** (1985), “Afterword: The Politics of Silence and Sound by Susan McClary”, in Attali, J. (1985), *Noise: The Political Economy of Music*, Massumi, B. (trans.), Minneapolis: University of Minnesota Press;
Supičić, I. (1987), *Music in Society: A guide to the Sociology of Music*, New York: Pendragon Press.

⁵⁴ The sociological methods outlined in Supičić’s text provide an invaluable framework in order to evaluate the Sociomusicological questions of the social status and identity of musicians and the function of music in Roman society, which will be the central focus of further study in this area.

⁵⁵ **Supičić, I.** (1987), *Music in Society*, pp. 5-25.

⁵⁶ **Supičić, I.** (1987), *Music in Society*, p. 85 ff.

⁵⁷ **Supičić, I.** (1987), *Music in Society*, p. 125 ff.

⁵⁸ **Supičić, I.** (1987), *Music in Society*, p. 195 ff.

⁵⁹ **Supičić, I.** (1987), *Music in Society*, pp. 9-12.

IFAO specifically on the status of musicians in the ancient Mediterranean.⁶⁰ Vincent interprets this material within a Sociomusicological framework and utilizes mostly epigraphic evidence to support his arguments on the function and social status of civilian musicians in Roman society. Both Supićić's methodologies expressed in his work *Music in Society* and the approaches present in Vincent's scholarship provide excellent reference points for Sociomusicological methodologies that can be effectively adapted to a discussion of the function of music in ancient Roman society, which will be of central importance to the present study.

The historical and sociomusicological methodologies that will be applied in this current text will be utilized in order to address the methodological issues present in previous scholarship. The use of iconographic analysis is of particular importance as it is an often overlooked approach to the study of ancient Roman brass instruments. Due to the interdisciplinary nature of my research I will also utilise Sociomusicological methods in my approach to questions concerning the social function of music in ancient Roman society, and, to some extent, the implications of the sociocultural perceptions of Roman brass instruments on the musicians that played them.

⁶⁰ **Vincent, A.** (2013), *Les aenatores, une categorie de musicien au service de la cité*, in S. Emerit (Ed.), *Le statut du musiciens dans la Méditerranée ancienne Egypte, Mesopotamie, Grèce, Rome*, Lyon: Institut Français d'Archaeologie Orientale.

PART II: TERMINOLOGY, TYPOLOGY AND ICONOGRAPHY

1. TERMINOLOGICAL ISSUES

The use of clear and specific terminology is paramount when approaching an interdisciplinary study such as the present work. Issues of disciplinary-specific, and Latin and Greek terminology, require informed discussions in order to maintain clarity throughout the work. In this chapter I will briefly identify and discuss issues with musicological terminology and the ideological distinctions between ‘noise’ and ‘sound’, before providing an in-depth exposition of the specific Latin and Greek terminology used to denote the four major Roman brass instruments: *tuba*, *cornu*, *bucina*, and *lituus*. These established definitions will be used throughout the present work.

Terminological Issues within Musicology

One of the central issues with musicology, as previously mentioned, is an inaccessibility of terminology. This inaccessibility is especially evident in the typological classifications of instruments. Typological classification is the process of categorising instruments by their type, construction, and playing techniques. There are a number of different methods of classification, but one of the most utilised is that of Hornbostel and Sachs.⁶¹ While this approach to specific categorisation of instruments is important for differentiation between instruments of similar construction or typology (as can be seen in Anderson’s discussion of the typological analyses of *lyrae* and *citharae*),⁶² the terminology of these classifications can be quite inaccessible for non-musicological scholars. The most accurate way to describe the instruments that are central to this study would be ‘lip-vibrated aerophones’, which refers to the method of production of the sound, irrespective of construction or specific type.⁶³ But this is an extremely inaccessible term, and for this reason I have decided instead, to use the modern term ‘brass instrument’ throughout. While the term ‘brass instrument’ does have its own 21st century connotations (e.g. construction of brass material, modern valves and

⁶¹ von Hornbostel, E. M., and Sachs, C., *Classification of Musical Instruments*, A. Baines and K. P. Wachsmann, trans., *Galpin Society Journal* 14. (1961); There are several other classification models, including G. Dournon’s, which is used by M. Sarkissian (1997) in her evaluation of ‘Lip-vibrated instruments of the ancient and non-western world’, (in T. Herbert and J. Wallace, eds., *The Cambridge Companion to Brass Instruments*, Cambridge.). Dournon’s model was specifically developed in order to classify non-Western instruments, more thoroughly, in the field of ethnomusicology.

⁶² Anderson, W. D., (1994). *Music and Musicians in Ancient Greece*, London: Cornell University Press, pp. 171-187.; A similar typological analysis would be extremely beneficial for the study of Roman brass instruments and may serve as an excellent focus for future research.

⁶³ Aerophone is a synonym for wind instrument; an instrument that produces sound through the vibration of the air within the instrument.

mouthpieces, and modern orchestral brass instruments themselves) the term is merely used in this work for the sake of convenience and accessibility. The specific Latin and Greek terms used to denote individual Roman instruments will be defined subsequently.

‘Noise’ vs ‘Music’

The ideational distinction between ‘music’ and ‘sound’ is a fascinating area of discussion in musicology. The perception of ‘music’ as an ‘art form’ has changed throughout history and through creative processes of innovation and experimentation it has perpetually evolved with the development of new avant-garde forms of musical expression. To Beethoven the chromaticism of Debussy’s works may have sounded like ‘noise’, to Debussy, the atonalism of Schoenberg. The rapid progression of musical expression is perhaps most evident in the form of a parent’s frustrated attempts to quell their teenager’s newfound fascination with post-hardcore/death-metal/dubstep music. The characterization of ‘sound’ and ‘noise’ in opposition to ‘music’ is a long-established concept that has strong implications for the current research.⁶⁴ This distinction can be traced back (and may very well precede) the *Laws* of Plato, in which the author has the Athenian character criticise the degeneration of Greek music. The Athenian states that the old laws forbade the mixing of distinct musical forms including “dirges”, “dithyrambs” and “paeans”, and discusses the influence that these laws had on maintaining order among the populace.⁶⁵ However, with the passage of time, under the rule of ‘ignorant’ and ‘unmusical’ leaders, these distinct forms were mixed together. In doing so they:

“unwittingly bore false witness against music, as a thing without any standard of correctness ... Hence the theatergoers became noisy instead of silent, as though they knew the difference between good and bad music”.⁶⁶

For Plato, ‘music’ and ‘unlawful music’ can be seen as an analogy for ‘order’ and ‘disorder’. This philosophical dichotomy between ‘music’/‘harmony’ and ‘noise’/‘dissonance’ raises a whole series of ideological questions regarding the ancient philosophical concepts of music. But I believe this dichotomy could be applied, in a more general sense, to the roles of musical

⁶⁴ A number of musicological theorists have written works challenging this theoretical distinction between noise and music, suggesting that the classification of music as ‘organised sound/noise’ an oversimplification: **Cowell, H.**, (2008), “The Joys of Noise”, in Cox, C., and Warner, D., *Audio Culture: Readings in Modern Music*, Continuum: London.; **Varèse, E.**, (2008) “The Liberation of Sound”, in Cox, C., and Warner, D., *Audio Culture: Readings in Modern Music*.

⁶⁵ **Plato**, *Laws* 700a-e, *Plato In Twelve Volumes*, Vols. 10 & 11, R. G. Bury, trans., (London: 1967 & 1968).

⁶⁶ **Plato**, *Laws* 700e-701a.

instruments of the ancient world through contrasting instruments with a distinctly musical role, and those relegated to the more functional role of ‘sound production’.

The role of ‘sound production’ could be identified in relation to key modern examples in the production of an identifiable ‘sound’; for instance a siren, fire alarm or the ringtone of a telephone. While these sounds do contain musical characteristics such as pitch and rhythm, due to their specific function within society, they are not typically classified as ‘music’. Due to the similar roles of brass instruments within ancient Roman society (i.e. primarily signalling and communication) this distinction may influence their presentation in an ancient Roman context. This hypothesis is reinforced by literary evidence, which seems to suggest that in certain contexts, these instruments were viewed as functional ‘sound producing’ instruments rather than musical ones. This notion of a distinction between the ‘sound producing’ and ‘musical’ roles of musical instruments may help provide an alternative to Ziolkowski’s identification of the ‘negative perceptions’ of brass instruments in ancient Roman society.⁶⁷ This will be further discussed, in relation to evidence presented in Part II, in Part IV.2. of the present work.

2. SPECIFIC ANCIENT TERMINOLOGY

2.1. Terminological Issues

There were four major brass instruments in ancient Roman society, the *tuba*, *cornu*, *bucina* and *lituus*. The use of these specific Latin terms is paramount for a clear and understandable approach to the study of ancient Roman brass instruments. The interchangeability of English terminology (often used in place of specific Latin and Greek instrument-specific terms) results in a considerable degree of ambiguity. This interchangeability can be seen in the varying English translations of the Latin term *lituus*, which has been translated as ‘bugle’,⁶⁸ ‘trumpet’,⁶⁹ and ‘clarion’.⁷⁰ Ziolkowski even translates terms denoting differing types of brass players into general English equivalents. Ziolkowski translates the terms *tubicines* (*tuba* players), *cornicines* (*cornu* players), *bucinatores* (*bucina* players) and *liticines* (*lituus*

⁶⁷ Ziolkowski, J., (1999) *The Invention of the Tuba*.

⁶⁸ Statius, *Achilliad*. 1.724., Statius Vol. I., J. H. Mozley, trans., (London: William Heinemann, 1928).

⁶⁹ Virgil, *Georgics*, 3.183, Virgil, Vol. I and II., H. R. Fairclough, trans., (London: William Heinemann, 1916).

⁷⁰ Horace, *Carm.* 2.1.18: “E’en now with trumpets threatening blare, you thrill our ears; the clarion brays; the lightening of the armour scare the steed and daunt the riders gaze”; Seneca, *Thyestes*, 575., *Seneca’s Tragedies*, F. J. Miller, trans., (London: William Heinemann, 1917).

players); as ‘trumpeters’, ‘horn-players’, ‘buglers’ and ‘liticinists’, respectively.⁷¹ This may have been in an attempt to present the Latin terms in a more accessible form, but the ambiguity of English terminology introduces the greater issue of anachronistic, sociocultural connotation. We would typically associate ‘buglers’ with small, hand-held ‘bugles’ but these instruments did not exist in an ancient Roman context. These anachronistic terms are simply not applicable, as they lack the true definition of the original terminology, which hinders our understanding of the ancient instruments themselves. This, in turn, has a direct influence on modern typological and iconographical evaluations. Ginsberg-Klar’s misidentification of a *cornu* as a small, handheld ‘cavalry bugle’ in her 1981 article is a pertinent example.⁷²

Bearing these issues in mind, it comes as no surprise that ancient authors had their own issues when approaching these terms. The problematic use of Latin terms in the ancient literary evidence itself has had an *immense* impact on modern interpretations. As a result, modern scholarship is often engaged in lengthy terminological and typological discussions, in a seemingly vain attempt to demystify the true nature of these elusive instruments. As the ancient authors may not have had a functional understanding of the specific construction, typology and uses of these instruments, the critical evaluation of literary material is of key importance. At times authors use general terminology such as *aenatores* (brass musicians) or *signa canere* (“signal to sound”),⁷³ which makes an evaluation of instrument-specific uses virtually impossible. In other instances the author may use terms interchangeably (regardless of the correct contextual use) for dramatic or poetic effect (e.g. to avoid repetition, provide alliteration or assonance, or to suit the poetic meter). This makes the evaluation of poetic sources particularly challenging.

The etymology of the Latin terms themselves often led to considerable confusion amongst the ancient authors. The most notable example is a confusing passage in Vegetius’, *Epitome of Military Science*, in which the author appears to completely misrepresent the construction of both the *cornu* and *bucina*.⁷⁴ The term *cornu*, while mainly referring to a large, circular, bronze instrument,⁷⁵ also refers to the horn of an animal, and as the *bucina* was typically made

⁷¹ Ziokowski, J., (1999) *The Invention of the Tuba*, p. 369.

⁷² Ginsberg-Klar, M., (1981) ‘The Archaeology of musical instruments in Germany during the Roman period’, *World Archaeology*, 12(3), p. 314.

⁷³ See III.3.5; The use of general terminology in relation to brass instruments is common in Frontinus; *aenatores*: Frontinus 2.4.3; 2.12.1.; *signa canere*: Frontinus, 1.9.2.; 2.7.8.

⁷⁴ Vegetius, 3.5.

⁷⁵ Ovid, *Metamorphoses* 1.98., *Metamorphoses* Vol. I and II., F. J. Miller, trans., (Cambridge: Harvard University Press, 1951).

from an animal's horn, it is easy to see how the terms could have been inadvertently switched. Meucci attributes this mistake to a later 16th Century scribe, who may have corrected what he perceived to be an error in Vegetius' original account.⁷⁶ Once corrected Vegetius' descriptions correlate perfectly with other accounts including those in Varro and Ovid.

As the focus of this work is on Roman perceptions, I will place less emphasis on Greek terms; however, several key terms (especially: *salpinx* (σάλπιγξ) and *keras* (κέρας)) will be identified in the discussion of Latin terminology. Similar to general English terminology, these Greek terms are applied generally across contexts. Once again this prevents a contextual understanding of specific instruments in Greek sources. Having identified some of the central terminological issues, we now turn our attention to a closer evaluation of our four specific Latin terms: *tuba*, *cornu*, *bucina* and *lituus*.

2.2. *Tuba*

We begin with the *Tuba* (plural: *tubae*), which is perhaps the least problematic Latin term used to denote any specific brass instrument. In ancient texts the *tuba* was described as a straight, cylindrical instrument,⁷⁷ and is clearly depicted in iconography, featuring a slightly flared bell.⁷⁸ Several examples include a section of Trajan's column (see figure 2) and, oddly enough, the stele of the *bucinator* Aurelius Surus (see figure 11). Pliny notes that *tubae* and *bucinae* could be made from wood, and that they would be louder if "...the wood is cut in some place where the elder bush is out of hearing of the crowing of the cocks...".⁷⁹ In Ovid we also see a reference to *tubae sacrorum*, the so-called 'sacred *tubae*' that are the focal point of the *tubilustrium* festival on the 23rd of March.⁸⁰ Hyginus provides an aetiological legend asserting that the *tuba* was created by Tyrrhenus, the son of Hercules, in order to put an end to his kinsmen's cannibalistic tendencies.⁸¹ This is a very peculiar association and features heavily in Ziokowski's discussion of negative associations of brass instruments, which will be discussed in more detail in Part IV.2 of the present work.

⁷⁶ Meucci, R., (1989) 'Roman Military Instruments and the Lituus', p. 85-86.

⁷⁷ Vegetius 3.5.; Varro, *On the Latin Language*, 5.117, *On the Latin Language*, Vol. I and II., R. G. Kent, trans., (London: William Heinemann, 1938).

⁷⁸ The bell refers to the flared section at the end of the instrument.

⁷⁹ Pliny, *Natural History*, 16.179., Vol. II, H. Rachham, trans., (Cambridge: Harvard University Press, 1961).

⁸⁰ Ovid, *Fasti*, 3.849, G. Frazer, trans., (Cambridge: Harvard University Press, 1967).

⁸¹ Hyginus, 176., *The Myths of Hyginus* M. Grant trans., (Lawrence: University of Kansas, 1960).

Salpinx (σάλπιγξ) is a Greek term that seems to be closely associated with the Roman *tuba*.⁸² Ziolkowski has suggested that there may have been particular stylistic differences between the Roman *tuba* and the Greek *salpinx*, which is evident in differing iconographic depictions across the two cultures.⁸³ This, however, is an area for further investigation and not of immediate importance to the present work, as the use of the term *salpinx* by Greek authors writing in a Roman context, such as Polybius and Procopius, is typically understood in the Roman sense as a straight trumpet. As previously stated, however, we cannot rely on the use of the term *salpinx* to highlight instrument-specific details due to the term's generic nature. One such example is the perplexing use of the term in a passage from Procopius, writing in the 6th century AD. In this passage Procopius suggested to his general Belisarius to adopt the use of two distinct instruments for the provision of unambiguous signals for advance and retreat manoeuvres. Procopius stated that:

“The men... who blew the trumpets (*salpinges*) in the Roman army in ancient times (*palaion*) knew two different strains (*nómos*), one of which seemed unmistakably to urge the soldiers on... the other used to call the men ... back to camp... such skill has [since] become obsolete through ignorance and it is impossible to express both commands by one trumpet (*salpinx*)... With the cavalry trumpets (*salpinxi hippikais* (σάλπιγξι ἵππικαῖς))⁸⁴ urge on the soldiers to continue fighting with the enemy, but with those of the infantry call the men back to retreat.”⁸⁵

This fascinating passage provides us with an expert, eyewitness account into the implementation of these instruments, insight into earlier playing techniques through the identification of distinct melodic ‘strains’, and it also identifies a clear link with the cavalry (an extremely contentious issue within scholarship).⁸⁶ This term, *palaion*, could refer to the *bucina*, especially when we consider Procopius’ description of the instrument’s construction

⁸² **Smith, W.** (1890) *A Dictionary of Greek and Roman Antiquities*, Watye, W., and Marindin, G. E., eds., (London); s.v., “tuba”.

⁸³ **Ziolkowski, J.**, (2002) ‘The Roman Bucina: A Distinct Musical Instrument?’, in *Historic Brass Society Journal*, 14, p.31-36.

⁸⁴ *Hippeis*, ἵππεῖς meaning cavalry

⁸⁵ **Procopius**, *History of the Wars*, 6.36.36ff., H. B. Dewing, trans., (Cambridge: Harvard University Press, 1914).

⁸⁶ **Meucci, R.** (1989) ‘Roman Military Instruments and the Lituus’; Vincent, *Les musiciens professionnels au service de la cité*, p. 143-147.

of “leather and very thin wood”.⁸⁷ Unfortunately, however, due to the ambiguity of the term, we cannot *definitively* identify it with any particular earlier Roman instrument.

2.3. *Cornu (aeris flexis)*

The term *cornu* (plural: *cornua*) typically denotes the large, circular, bronze instrument as described in the emended passage of Vegetius as “that which is bent back on itself in a bronze circle”,⁸⁸ and in Ovid as “*aeris cornua flexi*”, “horns of curving brass”.⁸⁹ Visual depictions of these instruments can be seen in sections of Trajan’s column (see figures: 1 - 4) and feature prominently on the funerary relief from l’Aquila (see figure 12). As previously mentioned term *cornu* itself has several distinct meanings, which has led to some confusion amongst the primary source material. The term *cornu* can denote: i) the horn of an animal (e.g. a ram’s horn, or bull’s horn), ii) an instrument made from horn material, which could perhaps be defined as an ‘animal’s horn’ (e.g. Jewish *shofar* made from the horn of a ram, or the Greek *keras* (κέρας)) and iii) a curved bronze instrument as denoted by Vegetius and Ovid.⁹⁰

The cumbersome shape and size of the instrument has led to discussion of their use within a cavalry context, with some scholars suggesting that it would not be possible to consider them within this context. Vincent notes that epigraphic and iconographic evidence attesting to their use on horseback undermines any serious attempt to resolve the issue by thinking merely in terms of practicality.⁹¹ The depiction of a *cornu* in the hands of an equestrian on horseback on a funerary monument from Schweinschied (see figure 18),⁹² and another, on the limestone stele of the equestrian Andes (see figure 16),⁹³ clearly suggest that this instrument was utilised by equestrians.⁹⁴ This visual depiction problematises our contextual understanding of this instrument as presented by the primary literary evidence. Due to the complicated nature of this evidence we must treat the specific contextual uses of *cornua* with great care.

⁸⁷ Procopius, 6.36.36ff.; cf. Pliny, *Nat. Hist.* 16.179.

⁸⁸ Vegetius, 3.5

⁸⁹ Ovid, *Metamorphoses*, 1.98.

⁹⁰ In the subsequent discussion I will propose a distinction between these last two types of *cornu* – *cornu (aeris flexis)* and *cornu (keras)*. For the remainder of the text the term *cornu* will refer to *cornu (aeris flexis)* unless otherwise specified.

⁹¹ Vincent, *Les musiciens professionnels au service de la cité*, p.84.

⁹² CMM290; Vincent, A., *Les musiciens professionnels au service de la cité*, Annex 1: p.324.

⁹³ CMM024; Vincent, A., *Les musiciens professionnels au service de la cité*, Annex 1: p.32.

⁹⁴ See also, figure 19.

These instruments, according to Vegetius also produced the *classicum*⁹⁵ (which is often translated as a ‘trumpet-blast’ or ‘trumpet-blare’⁹⁶ but perhaps more appropriately referred to as a ‘melodic-phrase’ or ‘melodic-call’) that was issued upon the presence of the Emperor, and is seen as a symbol of the Emperor’s *imperium*. A section from Suetonius’ *Life of Julius Caesar* complicates the use of this term, however, by asserting that an unknown *aenator* snatched a soldier’s *tuba* and issued a *classicum* call signifying the initiation of Caesar’s campaign.⁹⁷ If we take this instance as fact, it suggests that: i) the term *classicum* could also be applied more generally as a ‘melodic-phrase’ rather than strictly to ‘*the classicum*’ peculiar to the Emperor or Consul; ii) the rogue *aenator* simply issued ‘*the classicum*’ call on the *tuba* – an uncharacteristic instrument; or iii) Suetonius was perhaps not as careful with the use of his terminology as one would have hoped. To further complicate the issue Smith associates the *classicum* with both the *cornu* and the *bucina*.⁹⁸ The issues surrounding the term *classicum* in the primary source material itself are highlighted extremely well in the work of Alexandre Vincent.⁹⁹ Isidorus asserts that the term denoted an independent instrument, while Servius Honoratus goes even further by providing a description of this pseudo-instrument.¹⁰⁰ As Vincent notes, Pseudoacronius takes a more nuanced position and suggests that the term was merely used to denote the instrument that produced the call of the same name.¹⁰¹ Considering the later context of these sources, it seems more reasonable to suggest that in the Republican and Imperial periods this term simply referred to an identifiable ‘melodic phrase’.

2.4. Cornu (*keras*)

As previously discussed the term *cornu* can also be applied to objects made from horn material, which presumably led to the initial corruption of Vegetius’ text through scribal emendation.¹⁰² It is important to note a distinction between two types of *cornu*; the bronze, curved *cornu (aeris flexis)*, and *cornu (keras)*, an instrument made from the horn of an animal. The Greek term *keras* (κέρας) was used in a similar way to *cornu*, by Greek authors to denote instruments made from horn material, and perhaps, more generally, as a term for other types of brass instruments. While these instruments are not explicitly referred to in the ancient literature, I believe their use is heavily implied. The context in which the term *cornu* appears

⁹⁵ Vegetius, 3.5.

⁹⁶ Seneca, *Thyestes*, 575.

⁹⁷ Suetonius, *Life of Julius Caesar*, 32., *The Twelve Caesars*, R. Graves, trans., (London: Penguin Books, 1989).

⁹⁸ Smith, W. *A Dictionary of Greek and Roman Antiquities*, s.v. ‘*bucina*’ and ‘*cornu*’.

⁹⁹ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, p. 143-147.

¹⁰⁰ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, p. 144.; Isidorus, *Etymologies*,

18.4.5., *The Etymologies of Isidore of Seville*, S. A. Barney, trans., (Cambridge: Cambridge University Press).

¹⁰¹ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, p. 144.

¹⁰² Meucci, R., (1989) ‘Roman Military Instruments and the Lituus’; Vegetius, 3.5.

in a passage from Livy suggests the use of *cornua* in a covert, sabotage operation.¹⁰³ In 213BC the consul Fabius ordered a number of *cornicines* to surreptitiously scale the walls of Arpi, and to break open a gate from the inside. Once they were “in possession of the gate, the advanced party ordered the trumpeters (*cornicines*)... to give their signal to summon the consul.”¹⁰⁴ Bronze *cornua* are perhaps *too* conspicuous for such an inconspicuous task and it is difficult to imagine these large and unwieldy instruments on the backs of the soldiers scaling the walls of Arpi. I believe that, in this instance, Livy uses the term *cornu* to denote *cornu (keras)* players, as opposed to the more cumbersome *cornu (aeris flexis)*. While there is no iconographic evidence depicting the use of such an instrument, the various definitions of the term *cornu* itself make this theory plausible.

2.5. *Bucina*

Bucina (plural: *bucinae*) is another extremely contentious Latin term, as its description in Vegetius overlaps quite heavily with the use of *cornu (keras)* to denote an instrument made from horn. As suggested by the emended version of Vegetius, these instruments were described as being made from ‘wild aurochs horns’ laden with silver.¹⁰⁵ The horn material used to construct *bucinae* links the term directly with the *cornu (keras)*. As previously discussed, this led to considerable confusion in Vegetius’ account that attributed the horn material of the *bucina* with the term *cornu*. The confusion surrounding the use of these terms is compounded by the omission of both *cornua (keras)* and *bucinae* from any surviving visual evidence, which prevents differentiation of these instruments through use of typological analyses.

There is a strong connection between the *bucina* and signalling/marketing the hours of the day in both civil¹⁰⁶ and military contexts.¹⁰⁷ The prolific use of this term in literary sources also implies that this instrument was more widespread than some of the other brass instruments of ancient Rome. This also further reinforces its construction being of horn material (potentially also wood, as suggested by Pliny)¹⁰⁸ over more expensive materials such as bronze. This considerable presence within the literary corpus also raises further questions about their peculiar omission in visual evidence.

¹⁰³ Livy, 24.46ff.

¹⁰⁴ Livy, 24.46.

¹⁰⁵ Refer to terminological issues section; Vegetius, 3.5; Meucci, R., (1989) ‘Roman Military Instruments and the Lituus’.

¹⁰⁶ Propertius, 4.4.63; Seneca, *Thyestes*, 799.

¹⁰⁷ Virgil, *Aeneid*, 7.519; Livy, 7.35.1.

¹⁰⁸ Pliny, *Natural History*, 16.179

Vegetius also notes that when played it emits the sound of a “singing wind”.¹⁰⁹ This is an interesting quote as it provides an aural description of the instrument, which can give us an idea of associated playing techniques. The sound of melodious winds could be used literally to denote the use of a wider bore in the instrument, which could have been used to create more timbrally¹¹⁰ diverse signals, as opposed to melodic ones (as implied by references from Procopius and Caesar).¹¹¹ These timbrally diverse signals would use the wider bore of the instrument to create a noise similar to the sound of wind, and could be likened with the sound of a conch shell (*concha*). Pliny also alludes to the original construction of the instrument from the *bucinam* shell,¹¹² which offers an important connection to shell material. Smith also suggested, and rightly so, that in some instances the term *bucina* could be more correctly identified as a shell trumpet, similar to a conch, especially within a nautical context¹¹³ or when in reference to tritons.¹¹⁴

Smith discusses the ancient accounts concerning the invention of the *tuba* and draws strong connections between the *tuba* and Tyrrhenian pirates.¹¹⁵ If we consider the similarities between the sound of wind and the timbre of the conch shell, which can be quite deep and resonant, there is the potential for the signals of *bucinae* to be drowned out by the sound of turbulent seas and howling winds. This may have presented a catalyst for the utilisation of distinct materials for the construction of wind instruments such as the *tuba*.

Ziolkowski suggests that while the etymology of the term appears to be related to “*bou-cana; bos + cano*”¹¹⁶ referring to the bovine material used to construct the instrument, “the similarity of [the stems] *bou* (=cow) and *bucca* (=cheek) may have created confusion in the supposed derivation of *bucinare* since both sources seem appropriate to the sense [of the word].”¹¹⁷ The presence of the varied spelling *bucina* and *buccina* in primary sources also supports this theory. If the term *bucina* is derived from *bucca*, referring to the ‘puffed cheeks’

¹⁰⁹ Vegetius, 3.5.

¹¹⁰ Timbre means ‘tone-quality’ or ‘tone-colour’ that distinguishes the sounds of one instrument from another. Scholes, P. A., (1974) *The Concise Oxford Dictionary of Music*, J. O. Ward, ed., London, s.v. “timbre”, p. 576.

¹¹¹ Caesar, *The Civil Wars* 3.46.4, A. G. Peskett, trans., (London: William Heinemann, 1914); Procopius, 6.36.36.ff.

¹¹² Pliny, *Natural History*, 9.103; 9.130.

¹¹³ Lucan, *The Civil Wars (Pharsalia)*, 2.689., J. D. Duff., trans., (Cambridge: Harvard University Press, 1962)

¹¹⁴ Apuleius, *Metamorphoses*, 4.31, *The Golden Ass: Being the Metamorphoses of Lucius Apuleius*, W. Adlington (1566) and S. Gaselee, (London: William Heinemann, 1922); Macrobius, *Saturnalia*, 1.8.4., R. A. Kaster, trans., (Cambridge: Harvard University Press, 2011); Ovid, *Metamorphoses*, 1.335.

¹¹⁵ Smith, W. (1890) *A Dictionary of Greek and Roman Antiquities* s.v., “tuba”

¹¹⁶ Souter, A., Wyllie, J. M., et al., *Oxford Latin Dictionary*, (Oxford University Press, 1968), s.v. ‘Bucina’.

¹¹⁷ Ziolkowski, J., ‘The Invention of the Tuba’, p. 369.

of the brass players themselves, it may suggest a broader application of the term *bucina* in antiquity, similar to the use of the English terms ‘trumpet’ or ‘horn’.¹¹⁸ Unfortunately due to the complete lack of any visual depictions of *bucinae*, we cannot easily define their typology, construction and even uses, more precisely than has been conveyed to us in the primary literary evidence.

2.6. *Lituus*

We conclude with perhaps the most elusive of all Roman brass instruments the *lituus* (plural: *litui*). Used to describe a straight trumpet with a slightly curved, elliptical bell¹¹⁹ the term *lituus* has been the focus of much academic debate.¹²⁰ The instrument is utilised heavily by poetic sources and is often referenced in conjunction with horses, implying a connection with the cavalry.¹²¹ There is also a brief reference in the *epitome* of Florus¹²² to the effective use of *litui* against the war elephants used by Scipio at the battle of Thapsus in 46BC. It could perhaps be beneficial to investigate the mechanics of this battle to surmise whether or not the *litui* could be associated with Caesar’s cavalry within this context. This could provide further weight to the argument that these instruments were used in a cavalry context. An instrument fitting Aulus Gellius’ description is clearly depicted on the cippus of Iulius Victor, a member of the college of *cornicines* and *liticines* (see figure 9). Another instrument that very closely resembles the *lituus* of Iulius Victor was found in the Rhine and identified as a *lituus* by Ginsberg-Klar in 1981. Ginsberg-Klar, however, does not provide an approximate date for the instrument in her findings.¹²³

Meucci reclassified the same instrument as a ‘Celtic bugle’ despite the clear typological similarity with its depiction on the cippus of Iulius Victor.¹²⁴ Meucci associates this instrument with that of a Celtic warrior on a relief from Chiusi (see figure 10) and presents examples of “genuine” Roman *litui* (see figures: 7 and 8).¹²⁵ There is one major flaw with Meucci’s identification of the instrument in the Chiusian relief. How much knowledge would

¹¹⁸ The general use of the term may also resolve the discrepancy of a *tuba* on the stele of *bucinator* Aurelius Surus, however this only an hypothesis.

¹¹⁹ **Aulus Gellius** 5.8, *Aulus Gellius’ Attic Nights*, J. C. Rolfe, trans., (Cambridge: 1927); **Seneca**, *Oedipus*, 733., *Seneca’s Tragedies*, F. J. Miller, trans., (London: William Heinemann, 1917).

¹²⁰ **Meucci, R.**, (1989) ‘Roman Military Instruments and the Lituus’; **Ziolkowski, J.**, ‘The Roman Bucina’, p. 37-41.

¹²¹ **Horace**, *Carminae*, 2.1.18; **Virgil**, *Georgics*, 3.183.

¹²² **Florus**, *Epitome of Roman History*, 2.13.67., E. S. Forster, trans., (New York: Harvard University Press, 1929).

¹²³ Christina-Georgeta Alexandrescu reclassified this particular instrument as an early medieval instrument in an appendix to her 2010 text *Blasmusiker und Standortenträger im römischen Heer*; however due to its limited release, further engagement with this source will be reserved for future study.

¹²⁴ **Meucci, R.**, (1989) ‘Roman Military Instruments and the Lituus’, p.90.

¹²⁵ **Meucci, R.**, (1989) ‘Roman Military Instruments and the Lituus’, Plate XIV.

a Roman sculptor have had of Celtic brass instruments? Considering the difficulties Roman authors have with describing Roman instruments, I believe that Meucci may be placing too much faith in the stylistic reliability of the sculptor. One potential explanation for the presence of a *lituus* in the hands of a Gallic warrior is the stylistic emulation of more familiar *Roman* forms. From this evidence it seems more reasonable to assert the existence of two distinct types of *lituus* or, at the very least, to acknowledge the possibility of stylistic and physical variation within the visual and archaeological material, rather than simply denouncing the Rhine *lituus* as a Celtic variant. Further discussions of the issues regarding the artistic depictions of *litui* will follow in part II.3.

Seneca provides an interesting distinction between the deep and resonant *classicum* call and the shrill sound of the *litui*.¹²⁶ If we take the *classicum* to mean the call issued by the *cornua* (rather than referring to a general “melodic-phrase”, which could have been issued on a different instrument) we are presented with a comparative aural description of both *cornua* and *litui*. It would be useful to compare the aural qualities of these instruments, by means of experimental archaeology, with a view to examining the reliability of Seneca’s statement and other aural descriptions more generally.

3. ICONOGRAPHICAL ISSUES

As music is an aural medium, researching ancient musical cultures can be a difficult task, due to the inevitable loss of the aural tradition and even in many instances the physical instruments themselves. An evaluation of the visual representations of these instruments signifies an important connection to the ancient perception of these instruments. Analyses of the iconography of musical instruments of the ancient Mediterranean world is an integral part of providing a thorough examination of the evidence, as it not only presents contemporaneous depictions of their shape and construction, but also provides us with an understanding of the contexts in which they were used. Iconographical evidence provides a distinct perspective, which either complements or contrasts the primary literary material. A number of historians tend to overlook the significant advantages of iconographical analyses in the study of ancient Mediterranean musical instruments,¹²⁷ which leads to considerable gaps in the modern academic debate. The case of Roman brass instruments is a key example, as iconographic

¹²⁶ Seneca, *Thyestes*, 1.724.

¹²⁷ Comotti, G. (1989). *Music in Greek and Roman Culture*; Landels, J. G. (1999). *Music in Ancient Greece and Rome*; Meucci, R. (1989). ‘Roman Military Instruments and the Lituus’; Ziolkowski, J. (1999). ‘The Invention of the Tuba (Trumpet)’.

evidence takes a subordinate role in the clarification of the contentious terms *bucina* and *lituus*. Iconography can, however, also present serious issues through incorrect or imprecise depictions, or even simple stylistic variation, which requires focused analysis.

Visual representations of these instruments and the modern iconographic analyses (or lack thereof) present some major issues in approaching the typology and identification of Roman brass instruments. As previously mentioned there are no visual depictions of *bucinae*, which is a considerable barrier to the identification of the instrument. Similarly there is an instance in which an instrument that fits the description of a *bucina* or *lituus* can be seen in Trajan's column (see figure 4); but with the main identifiable feature, the bell, obscured by another soldier. Meucci attests that this section of Trajan's column depicts a *bucinator*, leading three *cornicines* (see figure 4).¹²⁸ It is clear that due to their short length that this instrument is not a *tuba*, but it remains to be definitively identified as either a *bucina* or *lituus*. The depiction of a single *liticen* leading three *cornicines* in a detail of a funerary relief from l'Aquila (see figures: 12 and 13) alludes to the presence of a *liticen* rather than a *bucinator* in the obscured sections of Trajan's column. Meucci also presents this funerary relief in the course of his argument, but omits a comparison of the formulaic similarities between the two depictions.

Accurate artistic representations of brass instruments rely, to a considerable extent, on the skill and expertise of the artisans themselves; lack of knowledge or even simple stylistic variance can have a strong negative impact on our own understanding. The impact of stylistic variation is particularly evident in the diverse depictions of *litui*, especially the depiction of the *lituus* of Iulius Victor and the lead instrument from the l'Aquila funerary relief (see figure 12). As previously mentioned, Meucci does not recognize the instrument from the Rhine (see figure 6) as a *lituus*, but I believe that these distinct variations may imply the existence of two different types of *litui*, one with a hooked shaped bell, and another type with a more gradual curve.¹²⁹ The various depictions of *cornua* in epigraphic evidence have also led to strange interpretations in modern scholarship. The most notable instance is Ginsberg-Klar's identification of a 'hand held bugle' from the relief of the *equus* Andes. Ginsberg-Klar notes the peculiar "oval form [of the instrument] which until recently was supposed to have been developed in the Middle Ages..."¹³⁰ However, if we critically analyse the image it becomes

¹²⁸ Meucci, R., (1989). 'Roman Military Instruments and the Lituus', Plate, IX.

¹²⁹ The further evaluation of such a division requires an exhaustive catalogue of surviving instruments, which would be an excellent subject for a PhD dissertation.

¹³⁰ Ginsberg-Klar, M. E., (1981), 'The Archaeology of musical instruments', p. 315.

apparent that it is “...a *cornu*, badly reproduced by the stone-mason...”.¹³¹ Although in defense of the humble stone-mason, perhaps they were merely limited by the space adjacent to the inscription. Figure 17 shows another inscription that depicts the *cornu* at a similar angle, which gives the illusion of a distinct, oval-shaped, trombone-like instrument.¹³² The importance of iconographic analyses to the study of ancient musical instruments cannot be overstated and I believe such an approach requires more attention in modern scholarship.

¹³¹ **Meucci, R.**, (1989), ‘Roman Military Instruments and the Lituus’, fn. 10

¹³² *Cornu de Remagen*; **Vincent, A.**, *Les musiciens professionnels au service de la cité*, Annex 3: p.10.

PART III: CONTEXTS OF USE

1: CIVIL CONTEXTS

From the grand spectacles of the arena to the resplendence of the Roman triumphs, the presence of brass musicians and instruments in the public life of ancient Rome is undeniable. While brass instruments were present in a wide variety of contexts, including: official proceedings,¹³³ time keeping,¹³⁴ agriculture¹³⁵ and even in early Roman mechanical devices as attested by Vitruvius,¹³⁶ the main foci of this discussion will be their use within gladiatorial games and in public funerary processions. The importance of these two settings provides a significant starting point for a discussion of the contextual uses and sociocultural perceptions of ancient Roman brass instruments.

1.1. Gladiatorial Games

Vincent notes that the presence of brass players in the arena seems so obvious that, for Juvenal, they are regarded as mandatory staff.¹³⁷ Juvenal records that these brass musicians “went the round of every provincial show and ...[their] puffed-out cheeks were known in every village”.¹³⁸ Their role within this context appears to be that of calling the assembly to silence and the beginning of specific events. Livy states that they were used to obtain silence at the opening of the Isthmian games:

“When the spectators had taken their seats, a herald, accompanied by a trumpeter, stepped forward into the middle of the arena, where the Games are usually opened by the customary formalities, and after a blast from the trumpet had produced silence, made the following announcement [regarding the freedom of the Greek cities]”.¹³⁹

Livy also suggests that such a practice was a “customary formality” of the games, which is

¹³³ **Propertius**, 4.1.13; **Tacitus**, *The Annals*, 15.30., A. J. Woodman, trans., (Cambridge: Hackett Publishing, 2004); **Varro**, *On the Latin Language*, 6.91.

¹³⁴ **Propertius**, 4.4.63; **Seneca**, *Thyestes*, 799.

¹³⁵ **Pliny**, *Natural History*, 16.179; **Propertius**, 4.10.29; **Varro**, *De Rustica*, 2.4.20.

¹³⁶ **Vitruvius**, 9.8.5., *Vitruvius: On Architecture*, Vol. II., F. Granger, trans., (Cambridge: Harvard University Press, 1934).

¹³⁷ **Vincent**, A., (2011) *Les musiciens professionnels au service de la cité*, p. 200.; **Juvenal**, *Satires*, 3.34-38., in *Juvenal and Persius*, G. G. Ramsay, trans., (London: William Heinemann, 1928).

¹³⁸ **Juvenal**, *Satires* 3.34-38.

¹³⁹ **Livy**, *Histories* 33.32-33, *The History of Rome*, Vol. V, C. Roberts, trans., (J. M. Dent & Sons, Ltd., London, 1905).

further corroborated in references from both Statius¹⁴⁰ and Virgil.¹⁴¹ The use of the *tuba* is also closely associated specifically with the beginning of individual events. The poet Sidonius connects the *tuba* with the beginning of chariot races¹⁴² and Vergil, in a naval contest, thus:

“When the shrill trump sounded, in a trice
All from their bounds leapt forward... The whole main yawns
Convulsed with oars and triple-pointed beaks”.¹⁴³

Vincent has suggested that the *tuba* was also used at the beginning of gladiatorial contests.¹⁴⁴ While there are a number of references attesting to the use of brass instruments in a gladiatorial context, their specific function during the specific events themselves is less clear. We must turn to iconographic evidence to supplement our understanding. Vincent notes that it is important to closely evaluate such visual evidence in relation to their specific uses during the combat itself. One of the best sources for the participation of musicians during the gladiatorial events is the Zliten mosaic, also known as the ‘Gladiator mosaic’ (see figures 20 and 21). Musicians are depicted in both the north and south sections of the piece and both scenes depict a solo *tubicen* with two *cornicines* and a *hydraulis* player.¹⁴⁵ The musicians are represented on the left-hand side while the combat takes place in the centre of the scene. This scene suggests that the musicians played throughout the games, and that they were also located in the arena alongside the gladiators. It is difficult to discern whether the musicians were physically present in the arena, or whether this detail is simply artistic licence to emphasise the presence of the musicians and to evoke a sense of aural imagery. I believe the latter to be a more likely, whereas scholars such as Junkelmann take the former viewpoint.¹⁴⁶ Vincent, again, provides a significant, well-balanced discussion regarding their location in relation to the audience and the fighters.¹⁴⁷

Having provided a brief overview of the use of these instruments in a gladiatorial context, we now turn to a short discussion about the potential negative associations this context may

¹⁴⁰ Statius, *Silvae*, 3.1.139., *Statius* Vol. I., J. H. Mozley, trans., (London: William Heinemann, 1928); Statius uses the strange phrase ‘peaceful tubae’ (*placidae tubae*), which is contrary to most descriptions of the instrument.

¹⁴¹ Virgil, *Aeneid*, 5.109-113, *The Poems of Virgil*, J. Rhoades, trans., (London: Oxford University Press, 1957).; “The trumpet’s note proclaims the sports begun”.

¹⁴² Sidonius, *Poems*, 23. 339-341, W. B. Anderson, trans., (Cambridge: Harvard University Press, 1936)

¹⁴³ Virgil, *Aeneid*, 5. 139-141.

¹⁴⁴ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, p. 201.

¹⁴⁵ A *hydraulis* was an ancient Roman water organ.

¹⁴⁶ Junkelmann, M., (2000) *Gladiatoren: Das Spiel Mit Dem Tod*, Mayence, p.210-211.

¹⁴⁷ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, pp. 208-210.

present for the perception of the instruments themselves. Ziolkowski asserts that the association of brass instruments with death and war is central to the omission of any origin myths relating to these instruments, and also for their distinct treatment by the Roman poets.¹⁴⁸ Ziolkowski presents their use in gladiatorial games as a further example of this connection. Through presenting iconographic evidence Vincent links the music of the *tubae* with the climatic finale of such spectacles – the death of the defeated gladiator.¹⁴⁹ This directly associates these instruments with the violence and death in the arena, and provides compelling support for Ziolkowski's theory.

In regards to the ancient response to these games, a number of authors express their explicit distaste.¹⁵⁰ Seneca provides a scathing ethical critique of the practice and also of spectators of the games themselves.¹⁵¹ He asserts that earlier contests were 'charity in comparison' to the events of his own context and directly questions the humanity of the spectators "Granted that as a murderer he deserved this punishment, what have you done, you wretched fellow, to deserve to watch it?".¹⁵² Livy presents an account of the gladiatorial displays orchestrated by Antiochus IV, which highlights the Greek response to these games:

"he also put on a gladiatorial show in the Roman style. At first this caused more alarm than pleasure to men who were not used to such a spectacle, but... [gradually] he familiarized men with this spectacle and made it popular".¹⁵³

Cicero, however, presents a reference that differs slightly from this mainly negative view. In his *Tusculan Disputations*, Cicero alludes to his respect for the stoicism of gladiators:

"What gladiator of moderate reputation ever groaned, or lost countenance, or showed himself a coward, as he stood in combat, or even as he lay down to die? Or what one of them, when he had lain down and was ordered to receive the fatal stroke, ever drew his neck back?"¹⁵⁴

¹⁴⁸ Ziolkowski, J., (1999) 'The Invention of the Trumpet (Tuba)', pp.367ff.

¹⁴⁹ Vincent, A., (2011) *Les musiciens professionnels au service de la cité*, p.206-207.

¹⁵⁰ Silius Italicus, *Punica*, 11.51, *Punica* Vol. I and II, J. D. Duff, trans., (Cambridge: Harvard University Press, 1934): "It was their custom to enliven their banquets with bloodshed, and to combine with their feasting the horrid sight of armed men fighting; often the combatants fell dead above the very cups of the revellers, and the tables were stained with streams of blood, the horrid sight of armed men fighting"; Cicero, *Letters to Friends*, 2.3., *The Letters of Cicero*, E. Shuckburgh, trans., (London: George Bell and Sons, 1908-1909): "The power of giving such things [funeral games] stirs no feeling of admiration in anyone...there is nobody who is not by this time sick and tired of them".

¹⁵¹ Seneca, *Letter 7, Letters from a Stoic*, Campbell, R., (London: Penguin Books, 2004).

¹⁵² Seneca, *Letter 7*.

¹⁵³ Livy, 41.20, *The Hellenistic World from Alexander to the Roman Conquest*, M. M. Austin, trans., (New York: Cambridge University Press, 2011), p.372-373.

¹⁵⁴ Cicero, *Tusculan Disputations*, 2.41., A. P. Peabody, trans., (Boston: Little, Brown and Co., 1886).

The link between death in the arena and brass music is undeniable, but these negative views come to us specifically through the responses of the authors themselves, and therefore, do not necessarily represent the views of the ‘majority’. Richard Beacham asserts that extravagant public entertainment “simultaneously validated personal power while contributing to the public’s sense of being paid the honor and enjoying the splendour that was its due”.¹⁵⁵ When we also consider the political importance of these events (in regards to gaining favor and support from the Roman people),¹⁵⁶ their popularity with the audience starkly contrasts with the negative associations of violence and death. It is difficult to come to a final conclusion regarding the perception of brass instruments within this context, but it is important to consider both the positive and negative responses to the gladiatorial events themselves.

1.2. *Funeral Processions*

Brass instruments were especially synonymous with funeral processions in ancient Roman society. Literary and iconographic evidence strongly attests to their use in a funerary context and provides another symbolic, sociocultural connection between these instruments and death. As previously noted, Ziolkowski places particular emphasis on the use of brass instruments in a Roman funerary context and presents this as a possible explanation for their varying treatment in primary literary evidence. While there is compelling evidence to support Ziolkowski’s theory, the placement of these instruments at the front of funerary processions and in close proximity to the deceased, particularly in large public funerals, suggests that these instruments played a crucial role in Roman funerals.

The clear negative association of brass instruments with funerals is exemplified in Petronius’ *Satyricon*.¹⁵⁷ Petronius’ satirical comments on the typical role of brass instruments in Roman funerals also extends beyond this initial context to highlight the association of these instruments with death more generally.¹⁵⁸ The character Trimalchio, who is rather obsessed with his own mortality, reportedly “has a clock and a uniformed trumpeter (*bucinator*) in his dining room, to keep telling him how much of his life is lost and gone.”¹⁵⁹ This draws on the

¹⁵⁵ Beacham, R. C., (1999). *Spectacle Entertainments or Early Imperial Rome*, London: Yale University Press. p.36.

¹⁵⁶ Beacham, R. C., (1999). *Spectacle Entertainments or Early Imperial Rome*, pp. 35-42.

¹⁵⁷ Petronius, 7.42; 26.9; 78.6; 129.7; *Petronius and Seneca Apocolocyntosis*, M. Heseltine, and W. H. D. Rouse, trans., (London: William Heinemann, 1920).

¹⁵⁸ Petronius, 7.42; "...just as he was speaking the cock crew... that trumpeter (*bucinus*) does not give his signal without a reason. Either there must be a fire or some one close by is just going to give up the ghost...".

¹⁵⁹ Petronius, 26.9.

association of *bucinatores* with nightwatches (*vigilae*) and the telling of the time,¹⁶⁰ while also alluding to the use of brass instruments in a funerary context. Trimalchio later calls for his *cornicines* to imagine that he were dead and to play him something “pretty”.¹⁶¹ At this point,

“The trumpeters (*cornicines*) broke into a loud funeral march. One man especially, a slave of the undertaker who was the most decent man at the party, blew such a mighty blast that the whole neighbourhood was roused...”.¹⁶²

The Pythonesque absurdity of the whole scenario could be likened to requesting brass musicians to perform Chopin’s “Funeral March” at a dinner party. Despite the satirical nature of the account, we are presented with a specific connection between *cornicines* and funerals, which is further supported by iconographic evidence.¹⁶³ Another satirical reference, this time in Seneca, clearly notes the use of brass players in the public funeral procession of the deified Claudius, and states “it was that a god was being borne to the grave: tooting of flutes, roaring of horns, an immense brass band of all sorts, such a din that even Claudius could hear it”.¹⁶⁴ The satirical representation of these instruments heavily implies the stereotypical contextual use of brass instruments within Roman funerals and alludes to broader, negative sociocultural perceptions.

While there appears to be a distinct focus on the satirical characterisation of the musicians and instruments associated with Roman funerals, other sources imply a different perspective entirely. The depiction of a *liticen*, and two *cornicines* (together with four *tibicines* (*tibia* players))¹⁶⁵ on the l’Aquila funerary relief from ancient Amiternum clearly attests to the position of the musicians at the head of the procession. Ziolkowski suggests that “the employment of the aeneatores at funerals in Rome probably had an apotropaic purpose”.¹⁶⁶ Wille also proposes this theory.¹⁶⁷ Their prime position at the forefront of the procession could support this symbolic function. While there is little direct evidence to support the use of these instruments in warding off evil spirits, Hyginus’ account of the invention of the *tuba* could

¹⁶⁰ *Time-Keeping: Propertius*, 4.4.63; *Seneca, Thyestes*, 799; *Vigilae: Caesar, Civil Wars*, 2.35.6; *Frontinus*, 1.5.17; *Livy*, 7.35.1; *Silius Italicus*, 7.154.

¹⁶¹ *Petronius*, 78.6.

¹⁶² *Petronius*, 78.6.

¹⁶³ See figures: 12 and 13 on the relief of l’Aquila.

¹⁶⁴ *Seneca, Apocolocyntosis*, 12.1., *Petronius and Seneca Apocolocyntosis*, M. Heseltine, and W. H. D. Rouse, trans., (London: William Heinemann, 1920).

¹⁶⁵ Tibiae were Roman woodwind instruments, often simply translated into English as ‘flutes’.

¹⁶⁶ *Ziolkowski, J.*, (2002), ‘The Roman Bucina’, p. 43.

¹⁶⁷ *Wille, G.*, (1967), *Musica Romana*, p.37.

provide a retrospective allegory for their symbolic use in his own context.¹⁶⁸ Ziolkowski's treatment of Hyginus' aetiological legend focuses primarily on the affiliation of the *tuba* with the stigma surrounding the cannibalism of Tyrrhenus's tribesmen,¹⁶⁹ but as this account also provides an origin for the use of music in Roman funerals, the argument could be made for a symbolic parallel between the warding off of cannibalism and evil/bad luck.

Appian presents an account of the funeral of Sulla that emphasises the crucial role of brass instruments in the context of public funeral processions. Appian notes that Sulla was carried to Rome "on a gilded bier, followed by large numbers of trumpeters and horsemen and a throng of armed men on foot".¹⁷⁰ The procession itself was a particularly lavish affair. 2,000 golden crowns were carried in the procession gifts from Roman towns from the legions in which Sulla had served and from his own friends.¹⁷¹ Appian notes that the standards and *fascēs* were present at the head of the procession, providing clear symbols of his *imperium* and *auctoritas*.¹⁷² The procession itself can be seen as an explicit expression of the *imperium* that Sulla wielded and embodied throughout his life. In this way the proximity of these brass musicians to the bier of Sulla signifies a clear association with consular power.

2: TRANSITIONAL CONTEXTS

The use of the term 'transitional' to describe the Roman triumph and the *tubilustria* festivals highlights the peculiar fluid interrelationship between military and public life. Both of these contexts are firmly planted within the civil sphere of Rome, and both contain an explicit military focus; in this way, neither can be categorised as *distinctly* civil or *solely* martial. These contexts provide some of the strongest arguments for the symbolic association of brass instruments with ancient Roman power-discourse and concepts of power (*imperium*), authority (*auctoritas*) and supremacy (*dominatio*). As the title suggests, this section will present a conceptual transition to the subsequent chapter on the military uses of Roman brass instruments.

¹⁶⁸ Hyginus, 176.

¹⁶⁹ Hyginus, 176.

¹⁷⁰ Appian, *The Civil Wars*, 1.105., J. Carter, trans., (London: Penguin Books, 1996).

¹⁷¹ Appian, *The Civil Wars*, 1.106.

¹⁷² Appian, *The Civil Wars*, 1.105.

2.1. Triumphal Processions

“On the first day the procession opened with twelve hundred waggons filled with embossed white shields, then another twelve hundred filled with bronze shields, and three hundred more laden with lances, pikes, bows, and javelins; as in war, trumpeters led the way”

– Diodorus Siculus, *The Library of History*, 31.8.10.¹⁷³

The awarding of a triumph, one of the greatest symbols of Roman *imperium*, infamously required 5,000 of the enemy to be killed in a single battle:¹⁷⁴ a bloody token of victory over a conquered people. These triumphs were clear outward demonstrations of authority (*auctoritas*), power (*imperium*) and supremacy (*dominatio*); the use of brass instruments in this context therefore signifies an equivalent, aural representation of triumphal *imperium*. Plutarch confirms the prestigious status of the triumph as a superior expression of Roman *imperium* by providing a comparison between the triumph and the lesser celebration, the Ovation.¹⁷⁵ Plutarch notes that those who had conquered people by means of force “entered the city with the martial and awe-inspiring pomp of the formal triumph”, heralded by *tubicines*,¹⁷⁶ wearing a crown of laurel, and drawn in a four-horsed chariot,¹⁷⁷ whereas the generals who had achieved victory through peaceful, diplomatic means, processed on foot escorted by flute-players (αὐλητής)¹⁷⁸ and wearing a myrtle crown, as “the flute is an instrument of peace and the myrtle is beloved of Aphrodite, who of all gods and goddesses is the most averse to violence and war”.¹⁷⁹ Plutarch himself believes that the prerequisites for a triumph suggest that “in ancient times” it was not the importance of the victory itself, but the manner in which it was achieved that mattered.¹⁸⁰ Plutarch also contrasts the significance placed on martial victories in Roman society with the emphasis placed on diplomatic victories within a Spartan context, as attested through the ox sacrifice present in both of these contexts.¹⁸¹ The importance of this account is threefold: not only does Plutarch reaffirm the

¹⁷³ **Diodorus Siculus**, *The Library of History*, 31.8.10, Vol XI., F. R., Walton., trans., (New York: Harvard University Press, 1957).

¹⁷⁴ **Valerius Maximus**, 2.8.1, *Memorable Doings and Sayings*, Volume II, D. R. Shackleton Bailey, trans., (New York: Harvard University Press, 2000); Smith, W., *A Dictionary of Greek and Roman Antiquities*, s.v. “triumphus”.

¹⁷⁵ **Plutarch**, *Life of Marcellus*, 22, *Makers of Rome*, I. S. Kilvert, trans., (London: Penguin Books, 1965).

¹⁷⁶ Plutarch uses the ambiguous term ‘περισαλπίζω’, which is translated as “sound of trumpets around”, but *salpinges/tubae* are implied; s.v. “περισαλπίζω” in Liddell, H. G., and Scott, L., (1940). *A Greek-English Lexicon*, (Oxford).

¹⁷⁷ **Plutarch**, *Life of Marcellus*, 22.3-5.

¹⁷⁸ Relating to the Greek word *aulos* (αὐλός), similar to the Roman *tibia*, which is often translated as ‘flute’.

¹⁷⁹ **Plutarch**, *Life of Marcellus*, 22.7.

¹⁸⁰ **Plutarch**, *Life of Marcellus*, 22.4.

¹⁸¹ **Plutarch**, *Life of Marcellus*, 22.8-9

sociocultural importance of the triumph to Roman society, but he also presents the use of brass instruments as a synonymous characteristic of the triumph itself, which, in turn, undeniably links these instruments with *imperium*. This key point significantly complicates Ziolkowski's theory regarding the negative perception of these instruments and will be expanded in the final part of the present work (IV.2).

Similar to the formation present in a funerary context brass instruments were typically positioned at the head of the triumphal procession, a customary martial configuration.¹⁸² Both Diodorus Siculus and Appian attest to the use of brass instruments in this significant leading position and note their presence in the opening of the triumphal procession.¹⁸³ As with funeral processions, the location of these instruments at the forefront of the procession signifies an importance in itself. Plutarch notes, in the *Life of Aemilius Paulus*, the specific use of brass instruments at the head of the consular procession.¹⁸⁴ Due to the sheer extravagance of Aemilius Paulus' triumph, his own procession began on the third day of the triumph,¹⁸⁵ following the processions of the 'spoils of war' during the first two days.¹⁸⁶ This presents a further synonymous association between brass instruments and the *imperium*, especially with the consular procession.

As Vincent astutely notes, the ambiguous Greek terminology used by these authors prevents an instrument-specific contextual analysis of these instruments.¹⁸⁷ Their use in triumphal processions is, however, heavily attested by iconographic material. Vincent utilises this material to provide a well-balanced discussion on this specific issue.¹⁸⁸ While the iconographical analyses of triumphal processions is valuable, as the sociocultural perceptions of these instruments are of chief concern to the present work, I will instead conclude with a discussion on an excerpt from Plutarch that epitomises the significance of these instruments as symbols of *imperium*, *auctoritas* and *dominatio*.

Plutarch recounts the context for the shared triumph between Marius and Catulus over the Cimbri and Tuetones in 102-101BC, and notes that, while

¹⁸² **Diodorus Siculus**, 31.8.10.

¹⁸³ **Diodorus Siculus**, 31.8.10; **Appian**, *The History of Rome*, 8.9.66, *The History of Rome*, Vol. II., H. White., trans., (New York: Harvard University Press, 1912).

¹⁸⁴ **Plutarch**, *Life of Aemilius Paulus*, 33.1, *Plutarch's Lives*, B. Perrin, trans., (Cambridge: Harvard University Press, 1918).

¹⁸⁵ **Plutarch**, *Life of Aemilius Paulus*, 33.1.

¹⁸⁶ **Plutarch**, *Life of Aemilius Paulus*, 33.2-3.

¹⁸⁷ **Vincent, A.** (2011). *Les musiciens professionnels au service de la cité*, p. 184.

¹⁸⁸ **Vincent, A.** (2011). *Les musiciens professionnels au service de la cité*, p. 184ff.

"The enemy's personal possessions fell into the hands of Marius's soldiers ... the spoils of battle, the standards and the trumpets (σάλπιγγας) were brought, they say, to the camp of Catulus - which was the main argument used by Catulus to prove that it was he who deserved the credit for the victory".¹⁸⁹

Plutarch, in this way, directly aligns the trumpets of the enemy, along with the enemy standards, as 'spoils of battle'. These 'spoils' are then used as evidence of Catulus' victory, and his right to the triumph. As these instruments are associated with power, the capture of enemy trumpets – these 'spoils of battle' – are subsequently presented as overt symbols of the victory and supremacy of Rome over a foreign enemy. These instruments may have been processed along with other spoils including enemy weapons, as described by Plutarch in the triumph of Aemilius Paulus.¹⁹⁰ This clear symbolic association of brass instruments with *imperium* and *dominatio* further supports their crucial role in the triumphal processions themselves; their presence at the head of the procession – a symbolic demonstration of the perpetuation of Roman dominance. This is one of the strongest arguments for the depiction of brass instruments in relation to ancient Roman power-discourse, and will be reiterated in the final part of this work (IV).

2.2. *Tubilustria* Festivals

The *tubilustria* festivals, occurring annually on 23 March at the conclusion of the *quinquatra* festival, as well as a corresponding festival on 23 May, focussed primarily on the ritualistic illustration of 'sacred *tubae*' (*tubae sacrorum*). These festivals provide an important example of the military and spiritual significance of *tubae* to ancient Roman society. Vincent asserts that while music was a particular characteristic of Roman sacrifices,¹⁹¹ there is a paucity of evidence attesting the use of brass instruments in such rites.¹⁹² The pivotal role of *tubae* within the *tubilustria* festivals, therefore, signifies an important point of discussion for the present work. The *tubilustria* festivals provide us with a distinctly positive link between *tubae* and the power of the Roman army. Despite their obvious importance to the ritual itself, we are presented with sparse details about the *tubae* of the *tubilustrium*. The term *tubae sacrorum*¹⁹³ is used by Varro, which implies the use of specific ritual instruments over the use of military

¹⁸⁹ Plutarch, *Life of Marius*, 27.6.2, *Fall of the Roman Republic*, R. Seagar, trans., (London: Penguin Books, 1972).

¹⁹⁰ Plutarch, *Life of Aemilius Paulus*, 33.2-3.

¹⁹¹ Vincent, A. (2011). *Les musiciens professionnels au service de la cité*, p. 152.

¹⁹² Vincent, A. (2011). *Les musiciens professionnels au service de la cité*, pp.163-168.

¹⁹³ Varro, *On the Latin Language*, 6.14.

instruments, whereas Ovid provides the rather ambiguous, ‘melodious trumpets’ (*canoras tuba*).¹⁹⁴ Scullard suggests the rite may have involved the symbolic purification of the *tubae* of the entire army.¹⁹⁵ This remains a possibility, but the specific use of military instruments remains unclear.

The *tubilustrium* on 23 March signified the commencement of the Roman campaign season, and as such, provides a strong, symbolic connection between the festival and the Roman god of war, Mars.¹⁹⁶ In this way, the lustration of the *tubae sacrorum* can be seen as an invocation of the patronage of Mars in the protection and success of the departing Roman armies. The nature of the May festival and the relationship between the two *tubilustria* is subject to debate. Scullard states that he can discern little connection between them, as the second festival is too early for the purification of a returning army.¹⁹⁷ Vincent however, suggests that the replication of the ceremony in May appears to correlate with the commencement of the campaign season of the ancient Spartan calendar, which occurred in the early weeks of spring.¹⁹⁸ Once again the commencement of war is closely associated with the purification of Roman *tubae*, which further emphasises the martial association of these instruments. Vincent also posits a strong link between the *tubilustria* and the *armilustrium* festival on 19 October, which corresponds with the *conclusion* of the Roman campaign season.¹⁹⁹ The relative position of these two festivals correlates well with what Beard describes as the “annual rhythm of war-making”; we can see a distinct emulation of this ‘rhythm’ in the *tubilustria/armilustrium* cycle,²⁰⁰ which clearly accentuates the importance of *tubae*, and by extension, brass instruments more generally, to the Roman army. This discussion of the significance of the connection between the lustration of *tubae sacrorum* and the symbolic commencement of war provides us with an ideal segue to our next broad contextual discussion, on the military applications of brass instruments.

¹⁹⁴ Ovid, *Fasti*, 3.849.

¹⁹⁵ Scullard, H. H., *Festivals and Ceremonies of the Roman Republic*, (London: Cornell University Press, 1981), p. 94.

¹⁹⁶ Beard, M., North, J., and Price, S. (2004). *Religions of Rome, Volume 1: A History*. (Cambridge: Cambridge University Press) p. 43.

¹⁹⁷ Scullard, H. H., *Festivals and Ceremonies of the Roman Republic*, p. 123.

¹⁹⁸ Vincent, A. (2011). *Les musiciens professionnels au service de la cité*, pp. 169-170.

¹⁹⁹ Vincent, A. (2011). *Les musiciens professionnels au service de la cité*, pp. 170-171.

²⁰⁰ Beard, M., North, J., and Price, S. (2004). *Religions of Rome, Volume 1: A History*. (Cambridge: Cambridge University Press) p. 43.

3: MILITARY CONTEXTS

As we have seen in our previous discussion on the perception of the triumph in Roman society in relation to the peaceful Ovation, in Rome, violence was lauded and rewarded. The inherent connection between brass instruments and the Roman army is of fundamental importance to understanding the positive presentation and perception of brass instruments in ancient Roman society and culture. These brass instruments, including: *tubae*, *cornua*, *bucinae* and *litui*, were utilised in three major contexts in the Roman army: i) training, signalling and mobilising the soldiers within camp, ii) in the tactical implementation of orders and communication on the battlefield, and iii) in the execution of strategic manoeuvres, primarily in regards to misdirection, misinformation and other forms of subterfuge. This present section will focus predominantly on the practical uses of these instruments in relation to these three major contexts, but their presentation and perception in relation to the power and authority of the Roman army will be emphasised in Part IV.

3.1. *Within Camp*

One of the general military uses of these instruments was in training, signalling and the communication of orders within the Roman camp itself. The use of *bucinae* in this ancillary context is strongly attested by the primary source material.²⁰¹ Meucci asserts that the *bucina* was first employed on the battlefield in the first century A.D., but *bucinae* were used extensively within the camp, to mark the night-watches (*vigiliae*), and in the conveying of orders to troops from a much earlier period.²⁰² While the use of the *bucina* is synonymous with Roman camps, Polybius asserts that both the *bucinatores*, (βυκανητὰς) and *tubicines*, (σαλπικτὰς) issued a signal near the commander's tent at allocated times, so that the night-watchmen would take up their positions.²⁰³ In contradistinction, Vegetius associates specific instrument types with corresponding military units regardless of the context. Vegetius asserts that all signals relating to the infantry, advance and retreat signals, signals issued while on night-watch or outpost duties, and even in military drills and training exercises, were issued by the *tubicines*.²⁰⁴ This contrasting account may be influenced by the late-fourth to mid-fifth century A.D. composition of Vegetius' work, perhaps describing a later Imperial practise. Vegetius does, however, strongly emphasise the significance of both *bucinae* and *tubae* to

²⁰¹ Frontinus, 1.5.17; Livy, 7.35; 26.15; Polybius, 14.3.; Propertius, 5.4; Silius Italicus, 7.154.

²⁰² Meucci, R., (1989). 'Roman Military Instruments and the Lituus', p. 89; Cicero, *Murena*, 22, *The Orations of Marcus Tullius Cicero*, C. D. Yonge, trans., (London: George Bell and Sons, 1856).; Caesar, *Civil Wars*, 2.35.6; Sallust, *The Histories*, 3.64, P. McGushin, trans., (New York: Oxford University Press, 1999).

²⁰³ Polybius, 14.3.

²⁰⁴ Vegetius, 2.22.

military training exercises. He notes that by training in obeying these signals during training exercises, the troops are likely to react to these ‘voiced signals’ more effectively in pitched battle.²⁰⁵ The *classicum* call, as previously discussed in part II.2.3., was also clearly evident in the context of Roman camps, and, as a sign of *imperium*, was sounded whenever the Emperor was present or during the execution of capital punishment.²⁰⁶

3.2. Tactical Applications

The utilisation of military brass instruments in a tactical context on the ancient battlefield is of paramount importance as their skilful application enabled greater communication and organisation, providing a distinct advantage to the ancient Roman army. As previously discussed, Vegetius aligns the infantry signals specifically with the *tubae*, but he also closely associates the *cornua* with the Roman standards rather than individual soldiers. When a battle is set to commence, however, Vegetius notes that both *tubae* and *cornua* are sounded simultaneously.²⁰⁷ Vegetius mentions the *bucina* only within its original context within the camp and omits any reference to the use of *litui* or *liticines*. This suggests that the instruments used within a tactical setting, at least during the later Imperial period, were the *tuba* and *cornu*, and also strongly implies the omission of *litui* during this period. Isidorus provides an interesting contrast to Vegetius’ account, particularly in his discussion *de bucinis* (‘on war-trumpets’). Isidorus establishes a clear distinction between the uses and definitions of *bucinae* and *tubae*. Supported by evidence from the *Aeneid*, Isidorus suggests that the ‘ancients’ differentiated between the *tuba* meaning ‘trumpet’, and *bucina* meaning ‘war-trumpet’. Isidorus identifies the distinction in relation to the specific time of their use; the signal of a *bucina* would raise the alarm and signify the approaching war, whereas the sound of the *tubae* would signal an imminent battle.²⁰⁸ This provides a noteworthy interpretation of the contexts in which these instruments were used, and emphasises both the connection with *bucinae* and *vigilae* (regardless of context, i.e. marking vigiliae, or the announcement of war) and the broader functional role of brass instruments in a military context.

Isidorus provides further descriptions of specific signals typically issued by the *tuba*. This includes signals for the commencement of battle, the order to pursue a fleeing or routed enemy, and/or to order a retreat.²⁰⁹ This assertion correlates with Vegetius’ consistent use of

²⁰⁵ Vegetius, 2.22.

²⁰⁶ Vegetius, 2.22.

²⁰⁷ Vegetius, 2.22.

²⁰⁸ Isidorus, *Etymologies*, 16.4.4.

²⁰⁹ Isidorus, *Etymologies*, 16.4.4.

tubae in the communication of various types of orders to soldiers. Caesar also presents an example of the use of an ‘about face’ signal issued by a *aenator*.²¹⁰ The specificity of this signal, along with the previous examples of *tubae* signals, suggests the utilisation of a complex system of signalling whereby various distinct and repetitive, either rhythmic or melodic phrases, were employed to denote the various official commands in the context of ancient battle. This is again affirmed by the obscure reference in Procopius regarding the adoption of a distinct instrument in lieu of recognisable melodic signals, the technique required to produce such signals having been lost by his own 6th century context. As previously noted in part II.2.2., Procopius’ ambiguous use of terminology in ‘cavalry *saplinx*’ (σάπλιγγι ἱππικαί) could refer to the use of potentially *cornua*, *bucinae*, or *litui*, as these instruments have all be noted within a cavalry context.

In regards to the issue of the brass instruments of the Roman cavalry, evidence is quite vague and often contradictory. Once again, the ambiguity of the ancient source material makes it difficult to evaluate the specific use of instruments in this context. The use of *bucinae* appears to have been prevalent in the Roman cavalry (*equites*), which can be seen in the funerary inscriptions of various equestrian *bucinatores*.²¹¹ Ioannes Lydus further stresses the connection between the *equites* and *bucinae* through the distinction of three different types of *aeneatores* (brass musicians): ‘*tubicines*, infantry buglers; *bucinatores*, cavalry buglers; *cornicines*, players of the horns.’²¹² Meucci uses this to emphasise his concept of the connection between *bucinae* and *litui* and asserts his theory that *bucinae* eventually replaced *litui* in a military setting. Meucci seems to be correct in this assertion since while Lydus’ passage and the various funerary inscriptions attest to the prolific use of *bucinae* by the cavalry, several ancient authors including Virgil, Silius Italicus and Statius, note the use of *litui* by the *equites*.²¹³ It is unclear whether these authors are using the terms *bucina* and *lituus* interchangeably to denote the same instrument, or in noting the specific use of the *lituus*. As previously discussed in II.2.1., if we consider that the main purpose of these texts was to entertain rather than inform, then the use of *lituus* in these contexts may have been used simply for dramatic or poetic effect. It seems reasonable to assume that the signals used by the *tubicines* and *cornicines* in the movement of soldiers and standards would have been similarly utilised by the cavalry *aeneatores*.

²¹⁰ Caesar, *Civil Wars*, 3.46.4.

²¹¹ CIL: III, 3352; VI, 3179; VI, 31147; VI, 32785;

²¹² Lydus, *De Magistratibus reipublicae Romanae*, 1.46; Greek text is that of R. Wuensch (Lipsiae, 1903) 47, R. Meucci, trans., in Meucci, R., *Roman Military Instruments and the Lituus*, (1989) 89 and fn. 49.

²¹³ Virgil, *Georgics*, 3.182; Silius Italicus, 4.97; 13.146; 14.25; Statius, *Thebaid*, 11.325.

3.3. Strategic Uses

The use of brass instruments in a strategic capacity within the ancient Roman army signified an important advantage as they could be used in misdirection, and misinformation in order to deceive or psychologically intimidate the enemy. The surviving literary corpus contains a large number of references attesting to the use of brass instruments in this context, several of which are presented in the anecdotal evidence of Frontinus. A considerable flaw with evidence presented by Frontinus is his use of ambiguous terminology. Frontinus often uses vague terminology in reference to the use of these instruments, such as *aeneatores*, or *signa canere* ('signal to sound'),²¹⁴ which directly impacts upon an 'instrument-specific' evaluation of the strategic uses of specific brass instruments. Despite this lack of specificity, Frontinus still provides us with great insight into more general strategic uses of brass instruments.

Brass instruments were often used to psychologically intimidate the enemy forces and to provide a false, or at least overemphasised, impression of size and power. This general use is clearly evident in Frontinus' anecdote of Minucius Rufus.²¹⁵ Despite being vastly outnumbered by Scordisians and Dacians, Minucius, through the skilful deployment of a detachment of *aeneatores* in the nearby hills, sent the enemy to flight in terror. The instruments themselves created the impression of a vast multitude, which averted a pitched battle with the enemy, providing a clear strategic victory for Minucius. A similar instance, albeit perhaps more incidental than strategic, is recorded by Livy. The Roman *tubicines* and *cornicines* created such a din that "the elephants, mostly those in front of the left wing, turned upon the Moors and Numidians behind them".²¹⁶ It seems reasonable to suggest that the Roman general was aware of the negative effect of brass instruments on elephants and would have exploited this characteristic accordingly. In contradistinction, Polybius presents an instance in which the *salpinges* of an *opposing* Celtic army had a profoundly negative psychological impact on the Roman soldiers.²¹⁷

Another important strategic use of brass instruments was the provision of misinformation. Frontinus notes that during the social war, Sulla, after failing to negotiate terms of peace with Duillius, successfully withdrew his entire army under the cover of darkness, while subject to the enemy's watch.²¹⁸ To accomplish this feat, Sulla entrusted a single *bucinator* with the

²¹⁴ Frontinus, 1.9.2; 2.7.

²¹⁵ Frontinus, 2.4.3.

²¹⁶ Livy, 30.33.12.

²¹⁷ Polybius, *Histories*, 2.29.

²¹⁸ Frontinus, 1.5.17.

continued sounding of the *vigilae*, which implied their continued presence within the camp. Similarly Titus Quinctius, when surrounded by the enemy, posted one cohort on duty and ordered his *aeneatores* to mount their horses and sound their instruments while making rounds of the camp.²¹⁹ This presented an appearance of strength and prevented the enemy from attacking, which provided much needed respite for the remainder of his troops. These various strategic applications of brass instruments provided the Roman army with a distinct advantage that further emphasises their importance to the Roman army, and to Roman society more generally.

²¹⁹ **Frontinus**, 2.12.1.

PART IV: THE POWER AND THE PASSION: POWER, PERCEPTION AND SYMBOLISM

Brass instruments are the loudest and most audible pitched instrument in the modern orchestra (save perhaps for the timpani, or tubular bells), and as such, makes perfect sense that we associate these instruments with power and authority. In many ways, this conceptual link between brass instruments and power-discourse is exemplified by the epic films of the 1950s and 1960s. The use of brass instruments in the films *Spartacus* (1960) and *Ben Hur* (1959) provide obvious examples of their association with authority and power in a Roman context, but the 1938 film *The Adventures of Robin Hood* also comes to mind. Set in a later 12th Century, the strong presence of the token brass musicians adorned with heraldic flags during the ‘archery tournament’ scene firmly establishes their connection with power and more specifically, in this context, regency.²²⁰ While we might suggest that the presence of brass instruments in Hollywood films is purely for the sake of a good ‘prop’ (as is probably the case with the presence of Roman cornua in the 2005 film *Troy*), I believe that their use and association with authority and power within film media, across various contexts, has been transmitted through history by Judeo-Christian views. While ancient Roman authors sometimes portray brass instruments as peripheral to Roman society, their continued symbolic use in a Judeo-Christian context represents an important development. This viewpoint is important in understanding the differing presentation of these instruments with power throughout history, and in understanding the influence these Judeo-Christian perspectives have on our own approach to ancient power-discourse. I believe that the symbolic representation of these instruments within Christianity implies an assimilation and continuation of Roman perceptions, rather than suggesting a distinct cultural perspective. Before we discuss approaches to a possible Greco-Roman perspective, it is important to briefly identify these Judeo-Christian symbolic associations and the various ways in which these views can impact upon our own interpretations.

²²⁰ This obviously draws on a long tradition of association of brass instruments with the English court and an overarching history of the presentation and perception of these instruments in relation to power-discourse from antiquity through to early modern Europe would be a fascinating exercise.

1. JUDAEO-CHRISTIAN PERCEPTIONS OF BRASS INSTRUMENTS

“...Seven priests carrying the seven trumpets went forward, marching before the ark of the lord ... When the trumpets sounded, the people shouted... and the wall collapsed...”

– *Joshua*, 6.13.221

The trumpets blared... and the walls came tumbling down... This powerful imagery from the book of Joshua in the Old Testament depicts the sound of the seven silver trumpets tearing down the walls of Jericho. This is a particularly well-known story and one that was personally read to me as a child. The sheer power of these instruments in this account has a significant impact on our interpretation of these instruments, partly due to the cultural importance of the story itself. This connection between trumpets and the God of the Hebrew Bible is established in the book of Numbers, as Moses is commanded by God to construct silver trumpets; but it is the use of the seven trumpets in the destruction of the walls of Jericho that provides a clear, outward expression of their symbolic power, and association with divinity. The symbolic association with divine authority and power is developed even further throughout the New Testament, as ‘trumpets’ themselves become extremely important Christian symbols.

Paul asserts that God would be the last trumpeter on the day of judgement.²²² “God, himself will come down from heaven... with the trumpet call of God, and the dead in Christ will rise..”²²³ In a Roman context the sound of brass instruments were associated with victory over the enemy in battle and in the pomp of the great triumphs; but for the Christians, the trumpet developed into a symbol of victory over death itself. Just as the *bucinae* were associated with the waking of the soldiers, so too would the trumpet be used to wake the dead at the second coming. This development can be seen as more of a conceptual progression than an entirely distinct sociocultural phenomenon, in which the *imperium* of the Roman Empire is merely superseded by the divine *imperium* of God. The seven trumpets of Jericho also return in the book of Revelation,²²⁴ but in this passage, the trumpets represent the awe-inspiring devastation of God’s vengeance at the end of days. The trumpets are associated with seven angels, each of them trumpeters, representing a distinct plague²²⁵ symbolic of the power and

²²¹ *Joshua*, 6.13, *Holy Bible: New International Version*, (Michigan: Zondervan Publishing, 2001).

²²² *Corinthians*, 15.52.

²²³ *Thessalonians*, 4.16.

²²⁴ *Revelation*, 8.6.1.

²²⁵ *Revelation*, 8.6- 10.1

wrath of God. In this instance, as with the reference from the book of Joshua, the sound of the trumpet is positioned as the aural representation of God.

This symbolism has an undeniable influence on our own 21st Century understanding of brass instruments and perception of their function in society. While there are links between these instruments and divinity in ancient source material,²²⁶ such an overt symbolic connection with divine authority, as can be seen in a Christian context, is unparalleled in a Roman context. Ziolkowski appears to interpret this as a stigmatisation of these instruments in ancient Roman society. This viewpoint however, fails to consider the overwhelming evidence that testifies to their positive association with Roman *imperium* and *auctoritas* as expressed in key contexts such as triumphal processions and tubilustria festivals, as well as the martial importance of these instruments more generally. A summary of the positive and negative perceptions of these instruments in relation to Ziolkowski's theory will be presented in the following section.

2. APPROACHING AN ANCIENT ROMAN PERSPECTIVE

Ziolkowski's theory regarding the negative perceptions of brass instruments in an ancient Roman context due to their close association with death and violence does provide an explanation for the omission of an origin myth for them and their adverse treatment in poetic works. But this theory fails to account for the contrasting positive associations with Roman concepts of *imperium*, *auctoritas* and *dominatio*. Ziolkowski himself notes these opposing views; the final section of his text is entitled 'Roman Attitudes towards Brass Players: An Interesting Paradox'. However he dismisses the evidence to the contrary and reiterates their close links with war and death.

The use of brass instruments in the gladiatorial arena and in funeral processions supports Ziolkowski's claims of the close associations between brass instruments and violence and death. Ziolkowski presents the Zliten 'Gladiator' mosaic as a further example of the link between violence, death and brass instruments (see figures: 20 and 21).²²⁷ Vincent adds weight to this assertion by providing a connection between the music of the *tubae* and the

²²⁶ The martial nature of the instruments themselves provides an (albeit indirect) divine association with Mars, which is exemplified in the *tubilustria* festivals; There are also links to Minerva in inscriptions (see especially: CIL, III, 10997 and XIII, 6503), and the goddesses Nike and Fama in iconographic representations: Ziolkowski, 'The Invention of the Tuba', pp. 370-371, especially fn.21.

²²⁷ Ziolkowski, J., (1999) 'The Invention of the Trumpet (Tuba)', p.367ff.

climatic finale – the death of the defeated gladiator.²²⁸ The ancient response to the games also implies a possible negative association, as a number of authors express their explicit distaste for the spectacles.²²⁹ The link between the violence and death in the arena and brass music is undeniable; however, as these negative views come to us specifically through the responses of the authors themselves, they may not necessarily represent the views of the ‘majority’. Their popularity with the Roman people starkly contrasts the negative associations with violence and death.

The negative association of brass instruments with death is most pronounced in a funerary context. The various satirical representations of brass instruments in a funeral setting place strong emphasis on their negative association with death.²³⁰ The aetiological account in Hyginus of the invention of the *tuba* and the origin of Roman funeral music presents a connection between the *tuba* and cannibalism.²³¹ Ziolkowski fervently highlights this particular detail and argues for the undeniable negative connotations of such a link. However, the use of brass instruments at the forefront of funeral processions, as attested by the relief of l’Aquila (see figures: 12 and 13), may suggest a more positive role in the warding off of evil spirits/bad luck. Ziolkowski himself suggests the possibility of an apotropaic use of brass instruments in funeral processions.²³²

The evidence attesting to the negative associations of brass instruments is strongly contrasted by the positive portrayal and general significance of these instruments within triumphal processions, the *tubilustria* festivals and ancient Roman warfare. Plutarch himself states that it was not the importance of the victory itself, but the manner in which it was achieved, that provided the awarding of a triumph.²³³ Plutarch reaffirms the sociocultural importance of the triumph to Roman society, and presents the use of brass instruments as a characteristic synonymous with the triumph itself, which subsequently links these instruments with *imperium*.²³⁴ This clear symbolic association of brass instruments with *imperium* and *dominatio* further supports their crucial role within the triumphal processions themselves; their presence at the head of the procession can be regarded as a symbolic demonstration of the perpetuation of Roman dominance. As these instruments were associated with power, the

²²⁸ Vincent.A., (2011) *Les musiciens professionnels au service de la cité*, p.206-207.

²²⁹ Silius Italicus, 11.51; Cicero, *Letters to Friends*, 2.3; Seneca, Letter 7

²³⁰ Petronius, 7.42; 26.9; 78.6; 129.7; Seneca, *Apocolocyntosis*, 12.1.

²³¹ Hyginus, 176.

²³² Ziolkowski, J., (2002), ‘The Roman Bucina’, p. 43.

²³³ Plutarch, *Life of Marcellus*, 22,

²³⁴ Plutarch, *Life of Marcellus*, 22,

capture of enemy trumpets, positioning them as ‘spoils of war’, subsequently presents them as overt symbols of the victory and supremacy of Rome over a foreign enemy.

The *tubilustrium* on 23 March similarly provides a strong, symbolic connection between the festival and the Roman god of war, Mars, through the symbolic commencement of the Roman campaign season.²³⁵ Thus, the purification of the *tubae sacrorum* can be seen as a direct invocation of the patronage of Mars in the protection and success of the departing Roman armies. While the *tubilustria* festivals attest to the sheer martial importance of brass instruments, an examination of their uses in the Roman army, both tactically and strategically, clearly highlights the extent of their significant role. The communication and organisation gained through the use of such ‘voiced signals’ was a notable asset. However it was their capacity to psychologically intimidate the enemy through their forceful presence that provides a practical example of their own symbolic *imperium*.

When we consider the stark contrast between the positive and negative representations of these brass instruments, it becomes apparent that Ziolkowski’s theory does not satisfactorily reconcile these two views. His theory of negative associations with violence and death does not take into consideration the clear outward expressions of Roman *imperium*, *auctoritas* and *dominatio* present in the Roman triumph; nor the various other positive associations with *imperium*, across various contexts.

I suggest that the specific role of brass instruments in ancient Roman society may provide an alternative to Ziolkowski’s theory that directly resolves the tension between the contrasting positive and negative perceptions of these instruments. The function of brass music was very distinct from the music of the stringed and woodwind instruments. Brass music played a primarily functional role in the production of signals for communication in both a civil and military context; their roles within triumphal and funerary processions can also be interpreted in a more functional sense. This distinction between the *roles* of woodwind and stringed instruments and brass instruments (‘musical’ and ‘sound producing’ roles respectively) provides us with an explanation for their varied treatment within poetic works. While brass instruments were not the subject of the great odes of the Roman poets (as Ziolkowski rightly notes),²³⁶ their presence in these texts was formidable. Ziolkowski portrays these depictions in poetry in a negative sense as their “sound was usually described as loud, harsh, and

²³⁵ **Beard, M., North, J., and Price, S.** (2004). *Religions of Rome, Volume 1: A History*. (Cambridge: Cambridge University Press) p. 43.

²³⁶ **Ziolkowski, J.,** (1999) ‘The Invention of the Trumpet (Tuba)’, pp.367ff.

unpleasant.”²³⁷ This oversimplifies the presentation of the sound of these instruments as ‘noise’ and fails to consider the power-discourse present within their strong, awe-inspiring, aural descriptions. They are presented as instruments of immense power, and are closely associated with harsh terms that are used to denote their dominant presence across a variety of contexts. I believe that the underlying, conceptual binary opposition of ‘noise’ and ‘music’ strongly influences both the ancient presentation of brass instruments, and also our subsequent modern interpretations of them. In order to gain a better understanding of the sociocultural perceptions of music in the ancient Mediterranean world, future scholarship should attempt to gain further insight into the ideational distinction between ‘noise’ and ‘music’ both in ancient and modern contexts.

CONCLUSION: THE SOUND OF POWER IN ANCIENT ROME

The study of ancient Roman brass instruments is an emerging area of study that considers one of the more overlooked aspects of the study of ancient Roman music. The present work has provided a number of important discussions that have built upon previous study and will hopefully serve as a strong foundation for further academic research. I will finally conclude with a summary of the central features of the present research.

I began with an important consideration of the history and development of the field, which has highlighted serious areas of interest for future scholarship and progression of the specific subfield. The in-depth discussion on the terminological, typological and iconographical issues in the study of ancient Roman brass instruments placed particular emphasis on the need for the utilisation of clear and accessible terminology. The present work also provided specific discussions of the four main Roman brass instruments: *tuba*, *cornu*, *bucina* and *lituus*, including supplementary discussions of related Greek terms including *keras* and *salpinx*. This discussion established my own interpretations of the specific Latin terminology; these definitions were maintained and utilised throughout the remainder of the work, which helped in preventing the perpetuation of major terminological issues within the area of study.

The third major section of this work focussed on presenting a general overview of the major uses of brass instruments across three broad contexts: civil, military and transitional settings.

²³⁷ Ziolkowski, J., (1999) ‘The Invention of the Trumpet (Tuba)’, p.372.

These broader contexts included more specific subcategories such as gladiatorial contests, funeral and triumphal processions, *tubilustria* festivals and the Roman army. The use of brass instruments within all of these contexts provide clear examples of their significance to ancient Roman culture and society, and present symbolic associations with Roman concepts of power (*imperium*), authority (*auctoritas*) and supremacy (*dominatio*).

A central focus of the work has been a well-balanced consideration of the social and cultural perceptions of brass instruments in an ancient Roman context. One feature that became clear through my research was a distinct link between these instruments and concepts of power. This directly challenged Ziolkowski's earlier theory regarding their negative perception in ancient Roman society due to associations with violence and death. This line of argument culminated in final part of the work with a critique of Ziolkowski's theory.

This thesis has provided a necessary foundation for the further development of sociological-based inquiry into this specific area, especially in regards to the study of the expression of identity through the role of brass musician (*aenator*), within both civic and military contexts, social stratification and the broader function of music within ancient societies. Further research could be implemented through expanding the scope of the present work to include a wider chronological framework, a cross-cultural comparison of Greek and Roman perspectives, evaluating the power-discourse present in ancient Roman music more generally, and an evaluation of the concepts of 'noise' and 'music' in the ancient Mediterranean world, in order to consider the influence of these concepts on the reception of sound in the ancient world.

Finally, while it is virtually impossible to gain a *complete* understanding of the social and cultural perceptions of brass instruments and musicians in ancient Roman society, one thing is abundantly clear: –

In Rome, the sound of power was the sound of triumphant brass.

BIBLIOGRAPHY

Ancient Sources:

- Appian, *The Civil Wars*, J. Carter, trans., (London: Penguin Books, 1996).
- Apuleius, *The Golden Ass: Being the Metamorphoses of Lucius Apuleius*, W. Adlington and S. Gaselee, (London: William Heinemann, 1922).
- Aulus Gellius, *Aulus Gellius' Attic Nights*, J. C. Rolfe, trans., (Cambridge: 1927).
- Caesar, *The Civil Wars*, A. G. Peskett, trans., (London: William Heinemann, 1914).
- Cicero, *Letters to Friends*, 2.3., *The Letters of Cicero*, E. Shuckburgh, trans., (London: George Bell and Sons, 1908-1909).
- Cicero, *The Orations of Marcus Tullius Cicero*, C. D. Yonge, trans., (London: George Bell and Sons, 1856).
- Cicero, *Tusculan Disputations*, A. P. Peabody, trans., (Boston: Little, Brown and Co., 1886).
- Diodorus Siculus, *The Library of History*, 31.8.10., Vol XI, F. R. Walton., trans., (New York: Harvard University Press, 1957).
- Florus, *Epitome of Roman History*, 2.13.67., E. S. Forster, trans., (New York: Harvard University Press, 1929).
- Frontinus, *Strategems*, C. E. Bennett, trans., (Cambridge: Harvard University Press, 1925).
- Holy Bible: New International Version*, (Michigan: Zondervan Publishing, 2001)
- Horace, *The Odes and Carmina Saeculare of Horace*, J. Conington, trans., (London: George Bell and Sons, 1882).
- Hyginus, *The Myths of Hyginus* M. Grant trans., (Lawrence: University of Kansas, 1960).
- Isidorus, *Etymologies of Isidore of Seville*, S. A. Barney, trans., (Cambridge: Cambridge University Press, 2006).
- Juvenal, *Juvenal and Persius*, G. G. Ramsay, trans., (London: William Heinemann, 1928).
- Livy, *Livy's History of Rome, The History of Rome*, Vol. V, C. Roberts, trans., (J. M. Dent & Sons, Ltd., London, 1905).
- Livy, *The War with Hannibal*, A. de Selincourt, trans., (London: Penguin Books, 1972).
- Livy, 41.20, in *The Hellenistic World from Alexander to the Roman Conquest*, M. Austin, trans., (New York: Cambridge University Press, 2011), p.372-373.
- Lucan, *The Civil War (Pharsalia)*, J. D. Duff., trans., (Cambridge: Harvard University Press, 1962)
- Lydus, *De Magistratibus reipublicae Romanae*, 1.46; Greek text is that of R. Wuensch (Lipsiae, 1903) p.47; English: R. Meucci, trans., in Meucci, R., *Roman Military Instruments and the Lituus*, (1989) 89 and fn. 49.
- Macrobius, *Saturnalia*, 1.8.4., R. A. Kaster, trans., (Cambridge: Harvard University Press, 2011)
- Ovid, *Fasti*, J. G. Frazer, trans., (Cambridge: Harvard University Press, 1967).
- Ovid, *Metamorphoses* Vol. I and II, F. J. Miller, trans., (Cambridge: Harvard University Press, 1951).
- Petronius, *Petronius and Seneca Apocolocyntosis*, M. Heseltine, and W. H. D. Rouse, trans., (London: William Heinemann, 1920).
- Plato, *Laws 700a-e, Plato In Twelve Volumes*, Vols. 10 & 11, R. G. Bury, trans., (London: 1967 & 1968)
- Pliny, *Natural History*, Vol. II, H. Rachham, trans., (Cambridge: Harvard University Press, 1961).
- Plutarch, *Fall of the Roman Republic*, R. Seagar, trans., (London: Penguin Books, 1972).
- Plutarch, *Plutarch's Lives*, B. Perrin, trans., (Cambridge: Harvard University Press, 1918).

- Plutarch, *Makers of Rome*, I. S. Kilvert, trans., (London: Penguin Books, 1965).
- Polybius, *The Rise of the Roman Empire*, I. Scott-Kilvert, Trans., (London: Penguin Books, 1979).
- Procopius, *History of the Wars*, 6.36.36.ff., H. B. Dewing, trans., (Cambridge: Harvard University Press, 1914);
- Propertius, *Propertius*, H. E. Butler, trans., (London: William Heinemann, 1916).
- Sallust, *The Histories*, P. McGushin, trans., (New York: Oxford University Press, 1999).
- Seneca, *Letters from a Stoic*, Campbell, R., (London: Penguin Books, 2004).
- Seneca, *Petronius and Seneca Apocolocyntosis*, M. Heseltine, and W. H. D. Rouse, trans., (London: William Heinemann, 1920).
- Seneca, *Seneca's Tragedies*, F. J. Miller, trans., (London: William Heinemann, 1917).
- Silius Italicus, *Punica* Vol. I and II, J. D. Duff, trans., (Cambridge: Harvard University Press, 1934).
- Sophocles, *Sophocles* Vol. II., F. Storr, trans., (London: William Heinemann, 1913).
- Statius, *Statius* Vol. I., J. H. Mozley, trans., (London: William Heinemann, 1928).
- Suetonius, *The Twelve Caesars*, R. Graves, trans., (London: Penguin Books, 1989).
- Tacitus, *The Annals*, A. J. Woodman, trans., (Cambridge: Hackett Publishing, 2004).
- Valerius Maximus, 2.8.1, *Memorable Doings and Sayings*, Volume II, D. R. Shackleton Bailey, trans., (New York: Harvard University Press, 2000).
- Varro, *De Re Rustica*, W. D. Hooper and H. B. Ash, trans., (London: William Heinemann, 1967).
- Varro, *On the Latin Language*, Vol. I and II., R. G. Kent, trans., (London: William Heinemann, 1938).
- Vegetius, *Epitome of Military Science*, N. P. Milner, trans., (Liverpool: Liverpool University Press, 1997).
- Virgil, *Virgil*, Vol. I and II., H. R. Fairclough, trans., (London: William Heinemann, 1916).
- Virgil, *The Poems of Virgil*, J. Rhoades, trans., (London: Oxford University Press, 1957).
- Vitruvius, *Vitruvius: On Architecture*, Vol. II., F. Granger, trans., (Cambridge: Harvard University Press, 1934).

Modern Sources:

- Abert, H. (1899), *Die Lehre vom Ethos in der griechischen Musik*. Leipzig.
- Abert, H. (1905). *Die Musikanschauung des Mittelalters: Verlag von Max Niemeyer*.
- Alexandrescu, C. G. (2007). *The Iconography of Wind Instruments in Ancient Rome: Cornu, Bucina, Tuba and Lituus*. *Music in Art*, 32(1/2), 33-46.
- Anderson, W. D., (1994). *Music and Musicians in Ancient Greece*, London: Cornell University Press.
- Baines, A. (1993). *Brass instruments. Their history and development* (4th ed.). Londres.
- Baudot, A. (1973). *Musiciens romains de l'Antiquite*. Montreal.
- Beard, M., North, J., and Price, S. (2004). *Religions of Rome, Volume 1: A History*. (Cambridge: Cambridge University Press) p. 43.
- Bekker, P. (1927). *The Story of Music: An Historical Sketch of the Changes in Musical Form* (M. D. Herter-Norton, and Kortschak, A. Trans.). New York: W. W. Norton and Company, Inc.
- Bohlman, P. V., (1991). 'Representation and Cultural Critique in the History of Ethnomusicology', in Netti, B. and Bohlman, P. V., *Comparative Musicology of Anthropology of Music*, Chicago.

- Brizzi, B., (2000). *The Column of Trajan*, Rome: Columbo
- Comotti, G. (1989). *Music in Greek and Roman Culture* (R. Munson, V., Trans.). London: John Hopkins University Press.
- Cowell, H., (2008), "The Joys of Noise", in Cox, C., and Warner, D., *Audio Culture: Readings in Modern Music*, (Continuum: London).
- Emerit, S. (Ed.) (2013), *Le statut du musiciens dans la Méditerranéeeancienne Egypte, Mesopotamie, Grèce, Rome*. Lyon: Institut Français d'Archaeologie Orientale.
- Feaver, D. D. (1970). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Romer* by Gunther Wille' *The American Journal of Philology*, Vol. 91, pp. 237-239.
- Gevaert, F. A. (1880). *Histoire et theorie de la musique de l'antiquite*.
- IFAO. (2014). *From cacophony to music: sound perception in ancient societies - Call for papers*. In S. Perrot, A. Vincent & S. Emerit (Eds.): École française d'Athènes
- Ginsberg-Klar, M. E. (1981). The Archaeology of musical instruments in Germany during the Roman period. *World Archaeology*, 12(3), 313-320.
- Holmes, P. H. and Coles, J. M. (1981). Prehistoric Brass Instruments. *World Archaeology*, 12(3).
- Junkelmann, M., (2000) *Gladiatoren: Das Spiel Mit Dem Tod*, Mayence.
- Landels, J. G. (1999). *Music in Ancient Greece and Rome* (2nd ed.). New York: Routledge.
- Levin, F. R. (1970). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Romer* by Gunther Wille' *The Classical World*, Vol. 65, pp. 226-228.
- Liddell, H. G., and Scott, L., (1940). *A Greek-English Lexicon*, (Oxford).
- Lind, L. R. (1968). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Romer* by Gunther Wille' *The Classical World*, Vol. 61, p. 303.
- Mâche, F.B. (2000) 'The Necessity of and Problems with a Universal Musicology', in Wallin, N. L., Merker, B. and Brown, S., *The Origins of Music*, Massachusetts.
- McKinnon, J. W. (1968). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Romer* by Gunther Wille'. *Notes*, Vol. 25, pp. 24-26.
- Meucci, R. (1989). Roman Military Instruments and the Lituus. *Galpin Society Journal*, 42, 85-97.
- Meyer, L.B., (1960) 'Universalism and Relativism in the Study of Ethnic Music', *Ethnomusicology*, 4.2., pp. 49-54
- Meyers, A. (1997). How Brass Instruments Work. In T. Herbert and J. Wallace (Ed.), *The Cambridge Companion to Brass Instruments*. (pp. 19-23). Cambridge: Cambridge University Press.
- Rajeczky, B. (1969). 'Review of *Musica Romana, die Bedeutung der Musik im Leben der Romer* by Gunther Wille', *Jahrbuch für Volksliedforschung*. Vol. 14, pp. 173-175.
- Sarkissian, M. 'Lip-vibrated instruments of the ancient and non-western world', (in T. Herbert and J. Wallace, eds., *The Cambridge Companion to Brass Instruments*, Cambridge.
- Scholes, P. A. (1974). *The Concise Oxford Dictionary of Music*, J. O. Ward, ed., London.
- Scott, S. 'Art and the Archaeologist', *World Archaeology*, Vol. 38.4, pp. 628-643, (2006).
- Scullard, H. H. (1981). *Festivals and Ceremonies of the Roman Republic*. New York: Oxford University Press.
- Smith, W. (1890) *A Dictionary of Greek and Roman Antiquities*, Watye, W., and Marindin, G. E., eds., (London);
- Soloman, J. (2001). 'Review of *Music in Ancient Greece and Rome* by John G. Landels'. *The American Journal of Philology*, Vol. 122, pp. 148-150.
- Souter, A., Wyllie, J. M., et al., *Oxford Latin Dictionary*, (Oxford University Press, 1968).
- Vincent, A. (2011). *Les musiciens professionnels au service de la cite (fin de la Republique - Haut-Empire)*. Ph.D Thesis, Aix-Marseille Universite.
- Vincent, A. (2012). 'Les colleges de musiciens. Pratiques professionnelles et insertion

- Civique'. In M. T. Dondin-Payre, N. (Ed.), *Collegia: Le phenomene associatif dans l'Occident romain* (pp. 183-265). Paris.
- Vincent, A. (2013). 'Les aenatores, une categorie de musicien au service de la cite'. In S. Emerit (Ed.), *Le statut du musiciens dans la Méditerranée ancienne Egypte, Mesopotamie, Grèce, Rome*. Lyon: Institut Français d'Archaeologie Orientale.
- Wille, G. (1967). *Musica Romana: die Bedeutung der Musik in Leben der Romer*. Amsterdam.
- Ziolkowski, J. (1999). 'The Invention of the Tuba (Trumpet)', *The Classical World*, 92.4, p. 367-373.
- Ziolkowski, J., (2002) 'The Roman Bucina: A Distinct Musical Instrument?', in *Historic Brass Society Journal*, 14, p. 31-58.

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