

THE ILLUSORY MOZART: SELFISH MEMES IN THE PRIESTS' MARCHES

FROM *IDOMENEO* AND *DIE ZAUBERFLÖTE*

for Julian Rushton

I want to claim almost limitless power for slightly inaccurate self-replicating entities, once they arise anywhere in the universe. This is because they tend to become the basis for Darwinian selection which, given enough generations, cumulatively builds systems of great complexity.

(Dawkins 1989: 322)

1. CONTEXT: THE LATE SUMMER OF 1791

In comparing the Priests' Marches from Mozart's *Idomeneo* K. 366 (1781) and *Die Zauberflöte* K. 620 (1791), Rushton observes that the earlier march '...breathes an air of mystery which anticipates another temple, in *Die Zauberflöte*' (1993: 105). The affinity is apparent to the ear, yet the marches share much more than a mood of hushed devotion: my concern here will be to show that musical similarities between them are such that one can clearly regard the later march as replicating, in various ways, much of the content of the earlier.

First, the background. By mid-July of 1791 Mozart had completed the bulk of the work on *Die Zauberflöte*, but in his *Verzeichnüß aller meiner Werke* we see the opera entered, in that month, using the opening bars of Tamino's 'Zu hilfe!' (number 1) as the incipit (see Rosenthal and Tyson 1991: 57). With the exception of *Die Entführung aus dem Serail*, the overture was the last part of Mozart's operas to be composed, being put aside while vocal sections were completed so the singers could begin work. With *Die Zauberflöte*, the composition of the Priests' March, the only other extended instrumental number, was also deferred, Mozart presumably intending to write it later with the Overture.

The reason Mozart entered *Die Zauberflöte* under the incipit of 'Zu hilfe!' rather than, as normal, under that of the Overture is clear: before the Overture and March could be started, the composer was compelled to begin work on *La clemenza di Tito* K. 621 for the coronation of Leopold II at Prague, the opera being scheduled for its première on 6 September 1791.¹ Landon suggests the impresario Domenico Guardasoni offered Mozart the commission shortly after 16 July, after unsuccessfully attempting to engage Antonio Salieri (1988: 96). According to Solomon, Mozart and his entourage (Constanze and Franz Xaver Süssmayr) left Vienna on or around 25 August and arrived in Prague on 28 August. After the festivities, they left the Bohemian capital on or around 15 September, arriving home on or around 18 September (1995: 485, 487).

¹ Köhler suggests that the 'contour' of the Overture was established before Mozart departed for Prague (in Branscombe 1991: 81–82). Branscombe 1991 Chapter 4 is a summary of the complex evidence surrounding the composition of *Die Zauberflöte*.

It is not unreasonable to suggest that Mozart had little or no time to work on the remainder of *Die Zauberflöte* after the première of *Tito*; Landon lists the composer's busy schedule between 6 and 12 September, although, it must be said, he lists nothing for 13 and 14 September (1988: 112–121). From the date of his return to Vienna, Mozart had ten days in which to compose the Overture and March, for both were entered into the *Werkverzeichnis* on 28 September, two days before the first performance at the Theater auf der Wieden (Rosenthal and Tyson 1991: 57).

In the absence of other commitments this would clearly have been ample time for a composer of Mozart's facility. However, as Branscombe notes, there was in fact more to be done to the score than the composition of these two items. Principally on the evidence of paper types used in the autograph, he suggests that

...the opera was substantially complete before the end of July, [but] that rather more than has generally been thought had still to be written (or revised) after Mozart's return from Prague in mid-September....one can deduce that the final revision of the introduction (no. 1) was not carried out until shortly before the first night, and that, despite the impression created by the entry in the *Catalogue* that the opera lacked only the two purely instrumental numbers which were added at the last minute, no fewer than three vocal numbers were also written, or at least only attained their final form, in that hectic period (perhaps less than a fortnight in duration) after the return from Prague: the terzetto for the Three Boys ('Seid uns zum zweiten Mal willkommen') [no. 16], Pamina's aria ['Ach ich fühl's', no. 17], and the...terzetto for Pamina, Tamino and Sarastro ('Soll ich dich Teurer nicht mehr sehn?') [no. 19].

(1991: 84, 86).

Moreover, this fortnight must also have been used to carry out final revisions to the rest of the opera and, more importantly, to supervise final rehearsals and general preparations in collaboration with Schikaneder. Even if Mozart worked in his carriage on the return from Prague—as he had, it is widely accepted, with the assistance of Süßmayr, on *Tito* during the outward journey—these weeks must have been among the most frenetic of the composer's busiest year and we may reasonably assume the time available to compose the Overture, by far the greater task, and March was extremely limited.

The completion of the march was, perhaps, the more urgent task for, as Hertz observes, 'Even incidental orchestral pieces such as marches had to figure in the score and parts during rehearsals because they usually involved scene changes and stage action had to be timed to the second accordingly. But an overture involved no stage action...' (1990: 319). In view of this imperative, Mozart made a sketch—more an abortive attempt—for a March in D minor, given in piano reduction in Example 1 below, presumably written after the composer's return from Prague in the days leading up to the première. The relationship between this fragment and the two marches will be taken up briefly at the end of Section 3.1:

EXAMPLE 1: MOZART'S SKETCH FOR K. 620, NO. 9 (AFTER GRUBER AND OREL 1970: 376).



After rejecting this *Entwurf*, I suggest that, at some point during these days, Mozart came to use the Priests' March from *Idomeneo* as a model for the march he needed to write for *Die Zauberflöte*. Their relationship will be demonstrated in Section 3 but, taking this on trust for the moment, is it possible to identify the factor that engendered this? In these pressing circumstances, Mozart's attention may have turned to the march from *Idomeneo* as a possible solution to his compositional problem because of their similar dramatic context, one which occurs only in these two of Mozart's operas. Both marches are associated with solemn rites; in *Idomeneo* the march accompanies the priests' preparations for the sacrifice, to placate the wrathful Neptune, of Idamante; in *Die Zauberflöte* the march opens the second act, wherein Tamino undergoes trials by fire and water as initiation into Sarastro's priesthood.

It is quite possibly this recurrent dramatic context which motivates the musical affinities. These compositional connections might, initially, be understood in terms of the notion of *topics*—recurrent connotative configurations which are part of the shared musical language of a cultural community. I now briefly outline this idea and then go on to develop it using a somewhat more radical perspective.

2. TOPICS AND THE 'SELFISH MEME'

One of the most fruitful products of the reaction against the positivism of the 1950s, the application of the Aristotelian notion of *loci topici* has provided a rich seam of insight into the organisation and expressive content of the music of Haydn, Mozart, Beethoven, and their contemporaries, facilitating the understanding of this music in terms that are sensitive to its social and expressive context. Ratner, the seminal figure in this tradition, captures the essence of the idea in noting that

From its contacts with worship, poetry, drama, entertainment, dance, ceremony, the military, the hunt and the life of the lower classes, music in the early 18th century developed a thesaurus of *characteristic figures*, which formed a rich legacy for classic composers. Some of these figures were associated with various feelings and affections; others had a picturesque flavor. They are designated here as *topics*—subjects for musical discourse. Topics appear as fully worked-out pieces, i.e., *types*, or as figures and progressions within a piece, i.e., *styles*. The distinction between types and styles is flexible; minuets and marches represent complete types of composition, but they also furnish styles for other pieces.

(1980: 9)

As with all topics, the march is defined by a set of stable, recurrent compositional characteristics, including the use of the tonality of C or D major, an orchestration with trumpets and drums, the use of dotted figures (generally ♩.♩.♩ and variants) in common time, and a less easily defined atmosphere of brilliance and swagger. The vast majority of Mozart's marches are of this military type: the magnificent number 8 from *Idomeneo*, accompanying the disembarkation of the storm-tossed Cretan forces; and the choral march 'Bella vita militar' (number 8) from *Così fan tutte*, attending the embarkation of Ferrando and Guglielmo to the sham battlefield, are typical.

Within the ambit of this topic, Allanbrook notes that 'The march suitable for the ceremonial procession of a solemn, nonmilitary occasion is slower in tempo and *alla breve*, but uses many of the figures characteristic of the military march' (1983: 47). This subtopic, the 'ecclesiastical *entrée*' (: 48), is a great deal rarer in Mozart,

being represented in his operas only by the present pieces from *Idomeneo* and *Die Zauberflöte*. In these, the key is F major, the orchestration dispenses with trumpets and drums, and the mood is altogether more sombre; the principal link with the main topic, Allanbrook observes, is the retention of dotted figures in duple metre.

Agawu's perspective on topical theory, motivated by an attempt to add rigour to its inherent fuzziness by synthesizing the semiological functioning of the topic with the structuralism of a Schenkerian orientation, is particularly relevant to the present discussion for, perhaps with greater specificity than Ratner, he attempts to identify the pitch and rhythmic structures characteristic of given topics. To this end, he suggests that

The pursuit of a deeper-level, nonreferential process may be conceptualized as a search for an answer to the question 'what is the essence (E) of each individual T[opic]?' Methodologically, we investigate each T, invoking Jauss's notion of a 'generic dominant' to determine its invariable elements. E's include a rhythm, a procedure, a melodic progression, a cadence, and so on. From this list of elements we find a guiding idea, which often turns out to be a lowest common denominator. Thus, the succession of E's may be subject to the same constraints as the succession of T's, only on a lower, or micro-level.

(1991: 130)

Moving from the notion of topic to a more unconventional perspective, if a topic can indeed be reduced to a constituent rhythmic profile, pitch configuration, textural disposition, etc., and if we maintain Ratner's definition of the topic as '...a thesaurus of characteristic figures, which formed a rich legacy for classic composers' (1980: 9), then the topic can easily be understood as an example of what Dawkins has termed a *meme*. He notes that

The gene, the DNA molecule, happens to be the replicating entity that prevails on our own planet. There may be others. If there are, provided certain other conditions are met, they will almost invariably tend to become the basis for an evolutionary process. But do we have to go to distant worlds to find other kinds of replicator and other, consequent, kinds of evolution? I think that a new kind of replicator has recently emerged on this very planet. It is staring us in the face. It is still in its infancy, still drifting clumsily about in its primeval soup, but it is already achieving evolutionary change at a rate that leaves the old gene panting far behind. The new soup is the soup of human culture. We need a name for the new replicator, a noun that conveys the idea of a unit of cultural transmission, or a unit of *imitation*. 'Mimeme' comes from a suitable Greek root, but I want a monosyllable that sounds bit like 'gene'. I hope my classicist friends will forgive me if I abbreviate mimeme to *meme*....Examples of memes are tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches. Just as genes propagate themselves in the gene pool by leaping from body to body via sperms or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation.

(1989: 192)

This is not the place to present, as I hope to do elsewhere, a comprehensive account of the nascent discipline of *memetics*² as it applies to music; nevertheless, an overview of the basic principles of this notion is needed before we proceed to examine Mozart's music. Consideration of the marches from a memetic perspective will give a clearer picture of what such a discipline, fully elaborated, might offer, and will, it is hoped, also afford insights not available using other approaches.

The memetic paradigm rests upon the 'substrate neutral' concept of the *replicator*. It proposes that genes are but one type of replicator, and that other configurations of information capable of engineering their replication warrant inclusion in the class. The evolution of the human brain has created a medium in which units of cultural information may be replicated within communities. The definition of what constitutes a 'unit of cultural information', like the definition of the gene itself, is not absolute. For present purposes, we might adapt Dawkins' definition of the gene and define the musical meme as '...any portion of [musical patterning] that potentially lasts for enough generations to serve as a unit of natural selection....a...unit that is small enough to last for a large number of generations and to be distributed around in the form of many copies....a unit which, to a high degree, *approaches* the ideal of indivisible particulateness' (1989: 28, 32, 33).

The meme exists fundamentally as a pattern of nerve cell interconnections within the human brain. Delius notes that the brain contains somewhere in the region of 10¹⁵ 'variable synapses', interconnections between neurons which are established or modified when a unit of information is assimilated (1989: 43–44). These neuronal structures constitute, to adapt the genetic term *genotype*, the organism's *memotype*; their physical manifestations—the behaviours and artefacts they engender—comprise, to adapt the genetic term *phenotype*, the memes' *phemotype*. Dawkins devotes a whole study to what he calls the *extended phenotype*, namely 'all effects of a gene upon the world', such as the beaver's dam and the effects of parasite genes upon their host (1983: 286). That memes once resident in Palestrina's brain still motivate humans to recreate them—in performance, in print, and in various recording media—four centuries later all over the planet testifies to the long reach of the memetic extended phemotype.

The success of a given meme, as with any replicator, rests upon the degree to which it possesses three attributes: '...longevity, fecundity, and copying-fidelity' (Dawkins 1989: 194). The longer a particular copy of a meme survives, the greater the likelihood that other copies will be made from it; the greater the fecundity of a meme the more copies of it will come to occupy the 'infosphere' (Dennett 1995: 347); and the greater the copying-fidelity of a meme the greater its durability and resistance to *mutation*, the term being used here in analogy with its genetic counterpart to represent any change or alteration of a meme with respect to its antecedent form. Memes which possess these qualities will, by definition, prevail. To paraphrase Dawkins, 'The [meme] pool is the long-term environment of the [meme]. 'Good' [memes] are blindly

² Since Dawkins' genesis of the 'meme meme' in the first edition of *The Selfish Gene* in 1976, several commentators, notably Daniel Dennett, Aaron Lynch, Susan Blackmore, and Robert Aunger, have begun the task of developing a science of memetics. Lynch 1996, Blackmore 1999, and Aunger 2002 are the first book-length studies in this field. The foundation of the on-line *Journal of Memetics—Evolutionary Models of Information Transmission* (<<http://jom-emit.cfpm.org/>>.) represents a further advance. More detailed treatments of the subject of musical memetics may be found in Jan 2000a, 2000b, 2002, 2003, and 2004. I am currently working on a book-length study of this subject.

selected as those that survive in the [meme] pool. This is not a theory; it is not even an observed fact: it is a tautology' (1989: 86).

In comparison with the gene, however, the copying-fidelity of the meme is relatively low, as the game of 'Chinese whispers' vividly illustrates. Deviations from perfect copying-fidelity, giving rise to mutations, constitute one of the principal driving forces behind the process of *evolution by natural selection*, which

...occurs whenever the following conditions exist: (1) variation: there is a continuing abundance of different elements [;] (2) heredity or replication: the elements have the capacity to create copies or replicas of themselves [;] (3) differential 'fitness': the number of copies of an element that are created in a given time varies, depending on interactions between the features of that element and features of the environments in which it persists.

(Dennett 1995: 343)

This 'maximally abstract' (: 343) definition of evolution by natural selection clearly applies to the meme, such that mutant forms of a given meme which have higher fitness—in this case greater fecundity—than their antecedent form will tend to prosper. Just as the nucleotide sequences which constitute successful genes code for morphologies and behaviours which tend to increase the gene's prevalence in the gene pool, so the neuronal interconnections which constitute successful memes code for behaviours and artefacts which tend to increase the meme's prevalence in the meme pool. Stripping the anthropomorphic term of its implication of conscious intentionality, both genes and memes are, in a word, *selfish*.

No meme is an island, however, and the agglomeration of memes into *co-adapted meme-complexes* of varying magnitude is characteristic of human culture, in systems of thought, religious belief, and artistic products (Dawkins 1989: 323). The term *memplex*, coined by Speel, will be used here in preference to Dawkins' more cumbersome term (see Blackmore 1999: 19). This phenomenon is a manifestation of selfishness, for it seems the case that co-adaptation tends to increase the fecundity of individual memes. The increasing complexity of musical structure over time, to take just one example, is an instance of the power of evolution by natural selection to build 'systems of great complexity' (Dawkins 1989: 322). This 'principle of the accumulation of design' (Dennett 1995: 68) is, in Dawkins' phrase, a 'blind watchmaker' (1991: 5), unconsciously and non-teleologically producing ever more elaborate configurations by the *bottom-up* selection of mutant memes. These agglomerate into ever larger and more intricate hierarchical structures which, as will be seen in Section 3.2, may themselves be memetic.

Despite the complexity of these structures, it is the individual, particulate, memes which are the driving force of this process for, as Dawkins insists,

...the best way too look at evolution is in terms of selection occurring at the lowest level of all....the fundamental unit of selection, *and therefore of self-interest*, is not the species, nor the group, nor even, strictly, the individual. It is the gene, the unit of heredity.

(1989: 11; my emphasis)

Nevertheless, to appreciate fully this important contribution to the biological debate over the 'units of selection'—that is, the level at which natural selection operates—and to apply it analogically to memetics, we need some cultural parallels to the

biological categories of species, group, individual, and gene. The gene-meme parallel has already been identified; one is tempted to suggest the following for the remainder:

TABLE 1: CORRESPONDENCES BETWEEN NATURAL AND CULTURAL HIERARCHIES.

Nature	Culture ³
Species	Dialect
Group of Organisms	Idiom/Genre/Formal-Structural Type
Individual Organism	Intraopus Style (Movement/Work)
Gene	Meme

On this interpretation, it is clearly erroneous to take the work as the unit of selection, let alone any of the higher hierarchic levels, for *cultural selection* clearly does not work on such large and unwieldy dimensions.⁴ As will become evident, in writing the Priests' March from *Die Zauberflöte*, for instance, Mozart did not seek to replicate the march from *Idomeneo* as a unit. Rather, cultural selection, to recall Dawkins, will be shown as '...occurring at the lowest level of all', the level of the meme.

Returning to the opening theme of this section, topics, from the memetic standpoint, are simply memes characterized by the fact that they are propagated at the level of *dialect*⁵ in stable association—in co-adaptation—with extra-musical, verbally-encoded *verbal-conceptual memes* articulating such notions as social hierarchy, affective nuance, and historico-cultural location. In a non-topical musical meme, by contrast, any co-adaptation between the musical meme and a verbal-conceptual meme is much weaker, being located largely at the level of *idiom* and constantly subject to fracture at the interface between idiom and dialect.

From this perspective, it may be suggested that the musical memes of the march from *Idomeneo* and concepts from the dramatic situation which accompanies it were associated in Mozart's brain in the form of a memplex. The recurrence of similar verbal-conceptual memes in *Die Zauberflöte*, and the urgency of Mozart's schedule, led to an increased propensity for the co-adapted musical memes of the *Idomeneo* march to be replicated in the march from *Die Zauberflöte*, thereby giving rise to a march whose contours parallel its antecedent as the later dramatic context accords with the earlier.

3. MEMETIC REPLICATION IN THE PRIESTS' MARCHES

In order to illustrate the various foreground-level correspondences between the marches, Example 2 below presents *particelle* of them in vertical alignment, showing

³ *Dialect*, *idiom*, and *intraopus style* are to be understood in the Meyerian sense: see note 5.

⁴ Cultural selection can be defined as '...the rate or probability that a given innovation, skill, type, trait, or specific cultural activity or object—all of which we shall call, for brevity, *traits*—will be accepted in a given time unit by an individual representative of the population' (Cavalli-Sforza and Feldman 1981: 15).

⁵ Having defined style as '...a replication of patterning, whether in human behaviour or in the artefacts produced by human behaviour, that results from a series of choices made within some set of constraints' (1989: 3), Meyer identifies several hierarchical levels upon which this replication—*mimesis* in Dawkins' terms—occurs. He terms these *dialect*, '...substyles that are differentiated because a number of composers...employ (choose) the same or similar rules and strategies' (: 23); *idiom*, constraints '...a composer repeatedly selects from the larger repertory of the dialect...' (: 24); and *intraopus style*, '...concerned with what is replicated within a single work' (: 24). Nattiez' 'levels of stylistic relevance' are directly analogous to Meyer's concepts (1990: 135–136).

the melodic content, bass line, and some details of the inner parts where relevant. Continuous and broken brackets and various other annotations, to be explained below, indicate specific pitch connections between analogous points in the marches; brackets below the score marked with asterisks signal extended spans of rhythmic similarity. Section 3.1 is addressed to this example.

In order to illustrate the various middleground- and background-level correspondences, Example 3 below presents Schenkerian graphs in vertical alignment. Section 3.2 is addressed to this example.⁶

EXAMPLE 2: PARTICELLE OF THE PRIESTS' MARCHES FROM *IDOMENEO* AND *DIE ZAUBERFLÖTE*.

- | | |
|-----|---|
| i) | Mozart: <i>Idomeneo, re di Creta</i> K. 366 (1781), no. 25. |
| ii) | Mozart: <i>Die Zauberflöte</i> K. 620 (1791), no. 9. |

EXAMPLE 3: SCHENKERIAN GRAPHS OF THE PRIESTS' MARCHES FROM *IDOMENEO* AND *DIE ZAUBERFLÖTE*.

- | | |
|-----|---|
| i) | Mozart: <i>Idomeneo, re di Creta</i> K. 366 (1781), no. 25. |
| ii) | Mozart: <i>Die Zauberflöte</i> K. 620 (1791), no. 9. |

During the course of the following discussion, it should be remembered that were it not for the obvious connections between these pieces, evident on even a cursory examination of Example 2, one could not be so specific as to the relationships connecting the various memes. To identify a meme in, say, a symphony of Brahms' and trace its evolutionary derivation from a similar pattern in a Cantata of Bach's would be arduous, considering the myriad rivulets of imitation and influence connecting the streams of European music. Even with a musical equivalent to the *recensio* of textual criticism, the sources may be too numerous and the labour may be too great to make the attempt feasible. Here, however, the connection between the marches is so strong as to allow us to regard them as a circumscribed and discrete case study in evolutionary relations, permitting us to identify with high confidence patterns in the *Idomeneo* march which give rise, by replication, to analogues in corresponding *loci* in the march from *Die Zauberflöte*.

3.1. THE REPLICATION OF FOREGROUND MEMES IN THE MARCHES

As represented in Table 2, which aligns corresponding sections, each march is cast in a species of the binary form typical of such pieces. That from *Idomeneo* has two reprises of equal length, the last four bars of the second reprise, bb. 13–16,

⁶ Schenkerism, it will be understood, is a rich memplex of musical and verbal-conceptual memes fronted by a set of musico-graphical memes. As such, we need to be aware that it filters, and inevitably colours, the memes that make up the music which is its subject and with which it interacts. In other words, the view of musical structure we formulate via Schenkerian analysis is, possibly, as much an artefact as those distortions which sometimes result from the treatment of samples in preparation for electron microscopy. Throughout this article, my reliance on Schenkerian memes is a testament to their virulent infective powers; no other comparable analytical memplex has such high fecundity at present. Nevertheless, I am fortunately also a host to other memes which impart to me some degree of critical detachment, and I hope the reader is likewise infected.

effecting a modified return of the analogous bars of the first reprise, bb. 5–8, the second subphrase. The first four bars of the second reprise move to an imperfect cadence on the dominant and have the character of a second phrase/X section in terms of the Rosen/Ratner three-phrase/rounded binary form model (see Rosen 1988: 18–21; Ratner 1980: 209ff.). However, these bars also demonstrate a certain parallelism with bb. 1–4, the first subphrase, an attribute of simple binary form (Rosen 1988: 22–25). The march from *Die Zauberflöte* is clearly of the three-phrase type, with an elaborate second phrase and an extended third, engendered by an expansion of the second subphrase. For ease of description, the march from *Idomeneo* will be spoken of in terms of the three-phrase model which it approximates, despite the ambiguities noted.

TABLE 2: FORMAL ORGANISATION OF THE MARCHES.

FIRST REPRISE		:	:	SECOND REPRISE	
FIRST PHRASE		:		THIRD PHRASE	
<i>Idomeneo</i> no. 25					
1st subphrase bb. 1–4	2nd subphrase bb. 5–8				2nd subphrase, recomposed bb. 13–16
<i>Die Zauberflöte</i> no. 9					
1st subphrase bb. 1–4	2nd subphrase bb. 5–8		bb. 9–16	1st subphrase, reorchestrated bb. 17–20	2nd subphrase, expanded bb. 21–28

The relationship between the marches is signalled at the outset, for both begin with the same harmonic meme, I–V–vi. The associated melodic meme is $\hat{3}-\hat{2}-\hat{1}$ in the *Idomeneo* march and what might be regarded as an *allelic* form⁷ $\hat{3}-\hat{5}-\hat{1}$ in the march from *Die Zauberflöte*, although, as Example 2 shows, a $\hat{3}-\hat{2}-\hat{1}$ line is also presented in the alto trombone part of the *Zauberflöte* march. Their continuations then both express the melodic motion f^1-d^2 , bb. 2–3. The opening meme(plex), $\hat{3}-\hat{2}-\hat{1}/I-V-vi$, perhaps itself a mutant form of the simpler $\hat{3}-\hat{2}-\hat{1}/I-V-I$, seems common during this period (the association $\hat{3}-\hat{5}-\hat{1}/I-V-vi$ is perhaps less prevalent); as shown in Example 4 v below, a copy occurs at the start of Beethoven’s ‘Das Lebewohl’ piano sonata:

⁷ Dawkins notes that ‘[e]ach gene is able to occupy only a particular region of chromosome, its locus. At any given locus there may exist, in the population, alternative forms of the gene. These alternatives are called alleles [or *allelomorphs*] of one another....there is a sense in which alleles are competitors of each other, because over evolutionary time successful alleles achieve numerical superiority over others at the same locus, in all the chromosomes of the population’ (1983: 283). It seems reasonable to suggest that memes of analogous configuration might similarly compete for slots in the structural sequence of a composition.

EXAMPLE 4: I–V–VI MEMEPLEX IN GLUCK, MOZART, AND BEETHOVEN.

- | | |
|------|---|
| i) | $\hat{3}-\hat{5}-\hat{1}$: Gluck, <i>Iphigénie en Tauride</i> (1779), ‘Chaste fille de Latone’, bb. 1–4. |
| ii) | $\hat{3}-\hat{2}-\hat{1}$: Mozart, <i>Idomeneo, re di Creta</i> K. 366 (1781), no. 25, bb. 1–4. |
| iii) | Wranitzky: <i>Oberon, König der Elfen</i> (1789), no. 4, ‘Hör, o Gottheit, meine Klagen’, bb. 1–4. |
| iv) | $\hat{3}-\hat{5}-\hat{1}$: Mozart, <i>Die Zauberflöte</i> K. 620 (1791), no. 9, bb. 1–4. |
| v) | $\hat{3}-\hat{2}-\hat{1}$: Beethoven, Piano Sonata in E \flat major op. 81a (‘Das Lebewohl’) (1810), I, bb. 1–2. |

A more striking correlation than that between the *Idomeneo* and *Zauberflöte* marches may, however, be seen by comparing the opening of the *Zauberflöte* march with that of the hymn ‘Chaste fille de Latone’ from Gluck’s *Iphigénie en Tauride* (Example 4 i), first performed in Paris on 18 May 1779. Despite the primary focus of this article on the strong idiom-orientated connections between the two Mozart marches, this dialect-level connection—the replication of the $\hat{3}-\hat{5}-\hat{1}/I-V-vi$ memeplex—cannot be overlooked. Moreover, a comparison between Example 4 i and iv reveals that the connection goes beyond the opening structure of the two pieces. Bars 2–4 of the Mozart are also similar in shape to bb. 2–4 of the Gluck hymn: various connections, including the tetrachordal memes to be discussed below, are indicated on Example 4. Mozart could not have attended the Paris production of *Iphigénie en Tauride*, for he had returned to Salzburg from his ‘fool’s errand’ to the French capital by mid-January 1779 (Solomon 1995: 154). However, Gluck later gave the opera in a revised (German) version in Vienna on 23 October 1781. Mozart had arrived in Vienna after his break with Salzburg on 16 March of that year (: 241) and so might have seen this performance.



After its opening I–V–vi meme, the march from *Die Zauberflöte* is dominated at the foreground level by the replication of a pitch meme—i.e., a pitch succession occurring independently of rhythmic patterning—which derives from the *Idomeneo* march. (Two co-adapted rhythmic memes from the *Idomeneo* march— and —are also replicated in the march from *Die Zauberflöte*, particularly in bb. 22–28; these are easily seen in Example 2.) This meme is, quite simply, a tetrachord, which is prominent throughout the marches either as a conjunct linear sequence or with its pitches permuted. Strictly, it might be more accurate to speak of several distinct tetrachordal memes, for clearly their internal intervallic structure varies according to the starting pitch of the tetrachord. In order to survey and compare these patterns systematically, Table 3 below summarizes the different forms a tetrachordal meme may take according to its starting point in the diatonic scale:

TABLE 3: FORMS OF THE DIATONIC TETRACHORD.

Tetrachordal Meme	Intervallic Structure	Initial Scale Degree	Pitch Content: F Major	Pitch Content: C Major
1	2-2-1	$\hat{1}$	F-G-A-B _♭	C-D-E-F
2		$\hat{5}$	C-D-E-F	G-A-B \square -C
3	2-1-2	$\hat{2}$	G-A-B _♭ -C	D-E-F-G
4		$\hat{6}$	D-E-F-G	A-B \square -C-D
5	1-2-2	$\hat{3}$	A-B _♭ -C-D	E-F-G-A
6		$\hat{7}$	E-F-G-A	B \square -C-D-E
7	2-2-2	$\hat{4}$	B _♭ -C-D-E	F-G-A-B \square

The table shows that there are essentially four basic categories, defined according to their internal intervallic structure (where 1 represents a semitone); it seems logical to suggest that intervallic structure, in addition to absolute pitch location, should be a criterion in the establishment of memetic equivalence classes. These categories are subdivided into types numbered 1 to 7 according to the degree of the scale upon which they begin. They are given in the keys of both F and C major for ease of comparison with the marches.

These memes are marked with brackets on Example 2, labelled according to the categorization of types presented in Table 3. As the example shows, the marches are clearly bound together very intimately by these pitch sequences, some of which deserve special mention. At bb. 2-3 of the march from *Idomeneo*, for instance, the meme I term type 5 is prominent. This meme is replicated at the same point in the march from *Die Zauberflöte*, initially appearing in the bass and then being replicated in the upper voice at bb. 3-4, where it is given in mutated form, as a retrograde. This engenders a palindrome centred about b. 3³⁻⁴.

Further to the earlier observations concerning Gluck's *Iphigénie en Tauride*, one more dialect-orientated connection deserves mention at this point. Tetrachordal memes also occur in Titania's aria 'Hör, o Gottheit, meine Klagen' from Wranitzky's *Oberon*, shown in Example 4 iii, although the opening I-V-vi memeplex of the *Idomeneo* and *Zauberflöte* marches does not. *Oberon* was premiered in Vienna in 1789 and several commentators have drawn attention to its influence on *Die Zauberflöte*. Beyond their common infusion of the Singspiel genre with magical and mystical elements, the two works have a number of stylistic features in common (discussion of which is beyond the scope of this article), of which the present connection is a clear and focused example. Essentially, however, the influence of the *Oberon* aria on the *Zauberflöte* march is limited to the replication of Wranitzky's type 5 meme, bb. 3-4, in Mozart's bb. 3-4. That we can posit such an evolutionary connection between these two pieces is supported by the replication of the parallel $\hat{6}_3$ harmonic motion in the centre of their opening phrases. The type 5 meme is also replicated in the opening phrase of the march from *Idomeneo*, but in retrograde. However, owing to the looser musico-cultural connections between *Idomeneo* and *Oberon*—and, let us not forget, the general prevalence of tetrachordal memes in the dialect of the European late-eighteenth century—it is rather more difficult to demonstrate the derivation of the tetrachord memes in the *Oberon* aria from those in the *Idomeneo* march.

Returning to the Mozart marches, at b. 5 of each march (the start of their second subphrases), the pitch collection $g^1/c^2/e^2$, although not tetrachordal, is prominent, the dotted brackets in Example 2 indicating their different dispositions. Note also the (per)mutation of the bass pitch sequence d-e-f in the following bar of

the *Idomeneo* march to $e^1-d^1-f^1$ in the inner voice of the corresponding bar of the march from *Die Zauberflöte*, again marked with dotted brackets in the example.

In the second phrase of the march from *Idomeneo*, at b. 11, the type 5 meme is given in crotchets. The same pitch sequence, again mutated by retrogression, is given at the same bar of the march from *Die Zauberflöte*. The result, as the crossing diagonal lines in Example 2 indicate, is a voice exchange occurring at an analogous point across two pieces at a decade's remove. Note also in this phrase the rhythmic pattern $\square \cdot \cdot \cdot | \square \cdot \cdot \cdot$ in the upper voice of bb. 9–11 of the *Idomeneo* march, replicated in the lower voice of the corresponding bars of the march from *Die Zauberflöte*.

There is no explicit recapitulation of the opening subphrase in the *Idomeneo* march (see Table 2). Instead, the second subphrase returns reworked, the harmony of its first bar here, b. 13, subtly alluding to that in the *second* bar, b. 6, of its first statement. This reversal serves to convey the sense of an interrupted cadence, as found in the opening meme of the march:

EXAMPLE 5: PSEUDO-RECAPITULATION IN THE MARCH FROM *IDOMENEO*.

- i) First Reprise, opening, bb. 1–2; start of second subphrase, bb. 5–6.
- ii) Second Reprise, interface between second and third phrases, bb. 12–13.

For this reason, I have aligned the vertical of b. 13 with that of b. 18 of the march from *Die Zauberflöte* in Example 2, for both are vi harmonies appearing in the context of V–vi motion and thematic recapitulation. The alignment then tentatively relates the d^2-g^2 motion of b. 13 of the *Idomeneo* march to the arpeggiation $d^2-b^1-g^1-e^1$ in bb. 21–22 of the march from *Die Zauberflöte*.

Towards the end of Example 2, the alignment is intended to show that bb. 22–28 of the march from *Die Zauberflöte* represent a rich and beautiful evolution of the corresponding bars, bb. 14–16, of the *Idomeneo* march. Whilst following its model closely in essence, the passage from the later march greatly extends that from the earlier by means of mutation of the analogous memes (signified by placing the tetrachord type number in brackets) and what might be described as *immigration* of additional memes into new ‘slots’ between elements derived from the earlier march. For example, the type 1 meme from b. 15 of the *Idomeneo* march is replicated in b. 25 of the *Zauberflöte* march, in both cases mutated by the alteration of f^1 to $f^{\sharp 1}$ (an unmutated form occurs in bb. 14–15 of the *Idomeneo* march), and further mutated in the later march by the permutation of the sequence $f^{\sharp 1}-g^1-a^1-b^1$ to $f^{\sharp 1}-g^1-b^1-a^1$.⁸ Immigration of the type (2) and 5 memes occurs in bb. 26–27 of the march from *Die Zauberflöte*, bars which occupy a locus analogous to that between beats 3 and 4 of b. 15 of the *Idomeneo* march. The type 5 meme spanning bb. 26³⁻⁴–27¹ of the march from *Die Zauberflöte* might be regarded as a ‘displaced’ statement which, on the basis of b. 15¹⁻³ of the *Idomeneo* march (types (1)/5), we might expect to have been stated in b. 25¹⁻³ (type (1)) of the *Zauberflöte* march.

⁸ Alternatively, one might regard the sequence $f^{\sharp 1}-g^1-a^1-b^1$ as a type 6 tetrachord in G minor; it will be seen, however, that I have chosen here to label tetrachords in either F or C major, the principal keys of the marches, and to regard chromaticisms as mutations.

middleground and background voice-leading structures generated by their foreground patterning. As Example 3 shows, in the first subphrase of the *Zauberflöte* march the middleground third-progression $f^1-g^1-a^1$ from the corresponding bars of the *Idomeneo* march is replicated; it follows the replication of the $\hat{3}-\hat{2}/\hat{5}-\hat{1}/I-V-vi$ foreground meme from the *Idomeneo* march discussed in connection with Example 4. At this level of reduction, therefore, what one might term the *structural meme*—that is, any *sub-foreground* replicated pattern—generated in the first four bars of the *Idomeneo* march is replicated intact and unmutated in the march from *Die Zauberflöte*, despite the differences in foreground patterning.

From this it will be evident, as the heading for this section implies, that musical memes are not confined to the foreground level. Provided it satisfies the criterion of replication, a pattern acquires memetic status, irrespective of the structural level at which it is propagated. In this sense, the Schenkerian *Ursätzen*, to use just one representation of large-scale structure, represent memes propagated—repeatedly replicated—at the deepest levels of structure.⁹ Moreover, despite the extended duration of such structures—spanning extended stretches of music up to a movement in length—they remain particulate, in the sense used in Section 2. It should be noted, however, that whereas a Schenkerian perspective proposes the *top-down* generation of middleground- and foreground-level diminutions from the background, a memetic view implies a *bottom-up* process, whereby foreground-orientated memes generate those at the middleground which, in turn, generate background-level structures.¹⁰

The second subphrases show similar structural correspondences. The directly-replicated element here is the immediate generation of $\hat{2}||/V$ at b. 5 of each march, marking the interruption of the *Urlinie*. Thereafter, in the *Idomeneo* march, a middleground third-progression $e^2-f^2-g^2$ and associated 10–10–10 linear intervallic pattern spans the bulk of the second subphrase. In the march from *Die Zauberflöte*, this progression is mutated, becoming $e^2-d^2-c^2$; nevertheless, it is analogous to that from the *Idomeneo* march in its placement within the reprise and in its recreation of the linear intervallic pattern.

The second phrase of the march from *Die Zauberflöte*, bb. 9–16, is based on a mutation of the corresponding material of the *Idomeneo* march, bb. 9–12. The structural meme from the earlier march is the sequence $\hat{2}||/V-\hat{3}/I(N)-\hat{2}||/V$ spanning bb. 8 (where the $\hat{2}||$ is implied above the V)–12. This is replicated in the march from *Die Zauberflöte*, although with modifications. Chiefly, the support for $\hat{2}||$ is alternated, beginning with V, b. 9, changing to ii, b. 12, and then returning to V, b. 15. This expansion, as is the case with everything in the bottom-up world of memetic replication, is a consequence of the mutation and immigration of foreground-orientated memes.

As noted in Section 3.1, bb. 22–28 of the march from *Die Zauberflöte* replicate foreground memes from the corresponding bars of the march from *Idomeneo*, bb. 14–16. From the restatement of the $\hat{3}$ in b. 14 of the *Idomeneo* march, the upper voice

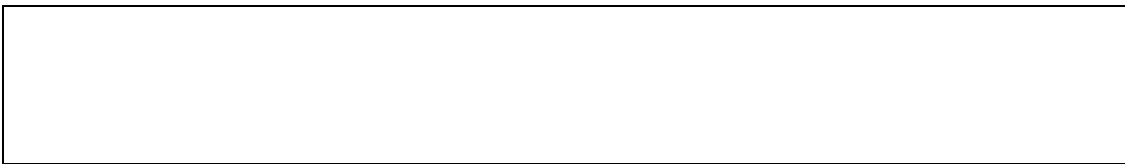
⁹ Other systems of representation include the concepts of *basic form* and *normative prolongational structure* formulated in Lerdahl and Jackendoff 1983, the latter being ‘...specified in terms of relationships of prolongational connection among structurally significant events, not in terms of any specified sequence of events’ (: 248), by which is meant the repeated reinstantiation of a few basic prolongational archetypes by a variety of surface configurations.

¹⁰ Narmour’s ‘implication-realization’ model of musical structure takes a similar bottom-up perspective (1990: 59ff.).

traces the pitch sequence $f^2-d^2-g^1-b_1^1$, bb. 14–15, followed by the closure of the *Urlinie*, bb. 15–16. A similar sequence appears at the analogous point in the march from *Die Zauberflöte*, bb. 24–28, now subsumed within an ascending middleground third-progression $f^1-g^1-a^1$, bb. 24–27, which precedes the closure of the *Urlinie*, bb. 27–28. This third-progression might be said to be embryonically presented in the march from *Idomeneo*, as the middleground progression f^2-g^1 in bb. 14–15. It is worth mentioning that the third-progression creates an allusion to bb. 2–4—and, indeed, to bb. 18–20, the opening of the third phrase—of the *Zauberflöte* march.¹¹ Another voice-leading event at this point, albeit one closer to the foreground, is the voice-exchange $g^1-b_1^1/B_1-G$ generated in b. 15 of the *Idomeneo* march, which is replicated, transposed to $b_1^1-d^2/d-B_1$, in bb. 26–27 of the march from *Die Zauberflöte*, within the third-progression.

From Example 2 and Example 3, it is evident that the march from *Idomeneo* articulates, by means of foreground-orientated memes, a structure situated largely at the middleground and background levels which, by virtue of its replication in the march from *Die Zauberflöte*, is memetic. Example 7 below presents a schematic of this shared large-scale structural meme showing those middleground and background elements common to both marches. Common foreground notes are also shown in brackets. Where two bar numbers are separated by a slash (e.g., 9/14), the first number refers to the location of the element in the *Idomeneo* march, the second to its placement in the march from *Die Zauberflöte*:

EXAMPLE 7: STRUCTURAL MEME FROM THE PRIESTS' MARCHES TO IDOMENEO AND DIE ZAUBERFLÖTE.



It will be understood that in the march from *Die Zauberflöte*, components of the structural meme are often instantiated by foreground-level memes which are dissimilar to those at the corresponding point in the *Idomeneo* march. Such foreground memes are either mutant or allelic forms of their counterparts, the latter as in bb. 1–2 of the marches (the foreground patterns $\hat{3}-\hat{2}-\hat{1}/I-V-vi$ and $\hat{3}-\hat{5}-\hat{1}/I-V-vi$ respectively, which express the background $\hat{3}/I$); or forms which are so different from the pattern at the corresponding point of the *Idomeneo* march as likely to warrant description as new and underivative, as in bb. 9–11 of the *Idomeneo* march and bb. 9–10 of the march from *Die Zauberflöte* (contrasting patterns which both engender the prolongation of the middleground $\hat{3}/I$). Moreover, immigration of memes into the middleground-background structure instantiated by the march from *Idomeneo* creates an expansion—in terms of length and complexity—of that structure in the march from *Die Zauberflöte* (especially, as has been seen in Section 3.1, towards the end of its third phrase). From this process arises a configuration more elaborate than that of its antecedent but which, because the example identifies only *shared* structural characteristics, is not shown in Example 7.

¹¹ When the close of the *Urlinie* is considered, it will be seen that the $a^1-g^1-f^1$; $f^1-g^1-a^1$ motion at the opening the march from *Die Zauberflöte* is inverted to $f^1-g^1-a^1$; $a^1-g^1-f^1$ at its conclusion.

Clearly this pattern, essentially a $\hat{3}/I-\hat{2}/V||\hat{3}/I-\hat{2}/V-\hat{1}/I$ *Ursatz*, is by no means confined to these pieces, being generated as the background of an enormous number of tonal movements. Nevertheless, particular common middleground prolongations associated with this structure—the third-progression $f^1-g^1-a^1$ at the beginning (bb. 1–4); the vertical e^2/c at the start of the second subphrase (b. 5); the *zweimalige Akkord* $f^{2/1}/d$ after the return to the tonic (*Idomeneo* bb. 13, 14; *Die Zauberflöte* bb. 18, 24); and the middleground g^1 (*Idomeneo* b. 15; *Die Zauberflöte* b. 25) before the final structural $\hat{2}$ —clearly make the whole background-middleground complex distinctive and particular. More than their shared *Ursatz*, then, these pieces might be said to replicate a common *Memesatz*. Moreover, if one accepts that notes are privileged by replication, one could legitimately include not only background- and middleground-level notes but also notes at the foreground level in such a structure, these, by virtue of this replication, acquiring an importance beyond that which their Schenkerian voice-leading status would ordinarily warrant.

At the risk of treating an important issue cursorily, it is, I suggest, this replication of underlying structural patterns, cumulatively extended over time as a result of the mutation of their generative foreground-level memes, and the immigration of additional foreground-level memes into slots between extant memes, which is the driving force in the evolution of large-scale musical structures. By this process—a cultural version of ‘...Darwinian selection which, given enough generations, cumulatively builds systems of great complexity’ (Dawkins 1989: 322)—the simple binary forms of Renaissance dance music may have given rise, over a period of a few hundred years, to the large-scale sonata structures of the late-eighteenth and nineteenth centuries.

4. THE ILLUSORY MOZART: CONSCIOUSNESS AND INTERTEXTUALITY

Two related issues, the nature of human consciousness and intertextuality in music, arise from my interpretation of the Priests’ Marches. In conclusion, I examine these in order to develop further the implications of the memetic perspective.

4.1. SELFISH MEMES AND CONSCIOUSNESS

Running through the considerations of Sections 2 and 3 is an implication that now needs to be made explicit. Memetics maintains that conscious intentionality, the fundamental attribute of the human mind, is not some unitary presence, but the resultant construct of a multitude of memes in constant competitive interplay. Dennett argues that a person is an example of the ‘...kind of entity created when a particular sort of animal is properly furnished by—or infested with—memes...’ (1995: 341); and that ‘[t]he haven all memes depend on reaching is the human mind, but a human mind is itself an artifact created when memes restructure a human brain in order to make it a better habitat for memes (1993: 207).

This ‘infestation’ is a consequence of the fact that, unlike the exclusively ‘vertical’ (parent-to-child) transmission of genes, memes may also be transmitted ‘horizontally’ (between unrelated, and often widely separate, individuals) (Blackmore 1999: 132–137). This, as Delius notes, imparts to memetic transmission an *epidemiological* characteristic. From this notion, it is a small step to the idea that, just as with other infective agents, such as bacteria and viruses, memes can be seen as

either *mutualist* (beneficial), *commensal* (neutral), or *parasitic* (harmful); and that the human brain is truly a *tabula rasa* at birth (1989: 48–65).

‘Our personalities, abilities and unique qualities’, Blackmore maintains, ‘derive from the complex interplay of these replicators. What then of our innermost selves—the “real me”, the person who experiences “my” life?’ (1996: 9). ‘Selves’, she suggests,

...are co-adapted meme complexes—though only one of many supported by any given brain. Like religions, political belief systems and cults, they are sets of memes that thrive in each other’s company....In fact we know, of course, that selves are a myth. Look inside the brain and you find only neurons. You do not find the little person pulling the strings or the homunculus watching the show on an inner screen. You do not find the place where ‘my’ conscious decisions are made. You do not find the thing that lovingly holds all those beliefs and opinions. Most of us still persist in thinking about ourselves that way. But the truth is—there is no one in there!

(: 9)

This cold but ultimately convincing view is developed in Blackmore’s recent study of memetics, *The Meme Machine*, in which she asserts that

The self is a vast memplex—perhaps the most insidious and pervasive memplex of all. I shall call it the ‘selfplex’. The selfplex permeates all our experience and all our thinking so that we are unable to see it clearly for what it is—a bunch of memes. It comes about because our brains provide the ideal machinery on which to construct it, and our society provides the selective environment in which it thrives....the selfplex is successful not because it is true or good or beautiful; nor because it helps our genes; nor because it makes us happy. It is successful because the memes that get inside it persuade us (those poor overstretched physical systems) to work for their propagation. What a clever trick....The memes have made us do it—because a ‘self’ aids their replication.

(1999: 231, 233–234)

To accept this notion, one must first dispense with the *dualist* view of consciousness, first advocated in Descartes’ *Meditations on First Philosophy* of 1641, whereby the mind is seen ‘...as distinct...from the brain, composed not of ordinary matter but of some other, special kind of stuff...’ (Dennett 1993: 33). Dennett’s alternative view, the ‘multiple drafts model’, is *materialist* in orientation—i.e., it rests on the principle that only physical matter, and no ‘special kind of stuff’, gives rise to consciousness—and is based on the premise that

...all varieties of perception—indeed, all varieties of thought or mental activity—are accomplished in the brain by parallel, multitrack processes of interpretation and elaboration of sensory inputs. Information entering the nervous system is under continuous ‘editorial revision’.

(1993: 111)

This model allows him to dispense with the notion, held by some materialists, of the *Cartesian Theatre*—Blackmore’s ‘inner screen’—which Dennett describes as ‘...somewhere, conveniently hidden in the obscure “center” of the mind/brain...where “it all comes together” and consciousness happens’ (1993: 39). In the multiple drafts model, the Cartesian Theatre is seen as a virtual serial ‘user illusion’ (: 216) generated

by the ‘parallel, multitrack’ activities of, in Blackmore’s phrase, ‘...sets of memes that thrive in each other’s company’. In an eloquent summary of this perspective which draws telling analogies between the workings of the human brain and the computer, Dennett contends that

Just as you can simulate a parallel brain on a serial...machine, you can also, in principle, simulate (something like) a [serial] machine on parallel hardware...Conscious human minds are more-or-less serial virtual machines implemented—inefficiently—on the parallel hardware that evolution has provided for us...Human consciousness is *itself* a huge complex of memes (or more exactly, meme-effects in brains) that can best be understood as the operation of a [serial] virtual machine *implemented* in the *parallel architecture* of a brain that was not designed for any such activities. The powers of this *virtual machine* vastly enhance the underlying powers of the organic *hardware* on which it runs, but at the same time many of its most curious features, and especially its limitations, can be explained as the byproducts of the *kludges* [i.e., *ad hoc* software repairs] that make possible this curious but effective reuse of an existing organ for novel purposes.

(1993: 218, 210; his emphases)

On this reasoning (to return to the main subject of this article), the similarity between the Priests’ March from *Idomeneo* and that from *Die Zauberflöte* is perhaps not best explained as the outcome of a conscious, Cartesian process on Mozart’s part—although our traditional way of thinking, and the language of musicology, including much of that in Section 1, still clings to this view. Rather, it can be understood, in memetic terms, as the result of the replication of a number of memes within the fertile environment provided by Mozart’s brain. From this perspective, the Mozart who composed these marches, and everything else listed in the Köchel catalogue, was but an illusion, a meme-generated serial virtual machine running on the parallel neural hardware provided by the brain of the living and breathing Mozart.

Owing to the confluence of a number of factors—Mozart’s superior mental processing power; the particular configuration of his selfplex, various memeplexes, and countless other memes copied in his brain; and ‘the slings and arrows of outrageous fortune’—some of the memes of the *Idomeneo* march, with which Mozart had been infected through his exposure to the music of his predecessors and contemporaries, passed into the march from *Die Zauberflöte*, and then on into the future.¹² To paraphrase Dawkins, the physical Mozart was a ‘vessel’—albeit a magnificent one—used by memes to convey themselves on certain stages of their ‘long odyssey’ from brain to brain (1989: 33).

This idea of the artist as vessel or medium is often expressed, although not in memetic terms, in writings by creative artists in all fields. Despite problems of authenticity in a number of such statements—for example, the forgery of a well-known remark once attributed to Mozart himself discussed in Dennett 1995: 346–347—they accord well with the memetic view of consciousness. The following remarks made by Roger Sessions represent a typical expression of this theme:

¹² For reasons of space, I avoid consideration of memes antecedent to those in the March from *Idomeneo* and consequent to those in the March from *Die Zauberflöte*, except to note that the Air from Handel’s F major *Water Music* suite (c. 1717) clearly contains precursor forms of memes in the *Idomeneo* march.

[The composer] is not so much conscious of his ideas as possessed by them. Very often he is unaware of his exact processes of thought till he is through with them; extremely often the completed work is incomprehensible to him immediately after it is finished.

(in Sloboda 1996: 115)

4.2. SELFISH MEMES AND INTERTEXTUALITY

My interpretation of the Priests' Marches will have indicated how the memetic paradigm offers a powerful tool for the analysis of intertextuality in music, that is, for studying questions of '...quotation, borrowings, compositional modelling...the use of conventions' (Korsyn 1991: 6). In an attempt at '...a new poetics of musical influence' based on Harold Bloom's theory of poetic influence, Korsyn notes that

...Bloom replaces the mimetic view of influence with a new notion of 'antithetical influence', conceiving influence as 'discontinuous relations between past and present literary texts'. Influence becomes something poets actively resist, rather than something they passively receive, and poetry becomes a psychic battlefield, an Oedipal struggle against one's poetic fathers, in which poems seek to repress and exclude other poems. Bloom's enterprise here changes the very function of poetry: it becomes a mode of psychic defence, as the belated poet's quest to defend himself against anteriority becomes a model for the reader's quest for selfhood[.]

(1991: 8; his emphasis)

The 'mimetic view of influence' is, of course, the one advocated in this article, as Dawkins' quotation in Section 2—in which he speaks of deriving the word 'meme' from 'mimeme'—makes clear; and I need, in conclusion, to defend it against Bloom's seemingly more subtle notion of 'antithetical influence'. First, it should be noted that the Bloom/Korsyn position operates at what memetics would regard as too high a level in terms of the nature/culture analogy. As Table 1 indicates, it is the meme, not the work (poem/composition) which is the 'fundamental unit of selection', yet Korsyn speaks of Bloom's theory as '...providing a model for analysing compositions as relational events rather than as closed and static entities...' (1991: 15). On a memetic view, the meme is the 'relational event', not the composition. The analysis in Section 3 indicates that the Priests' Marches relate significantly to each other principally because they share many similar memes, not because they are Priests' Marches.

Buttressing this 'work-centricity' is the notion of the 'otherness' of works of art. Paraphrasing Bloom, Korsyn asserts that

The meaning of a composition can only be another composition, a composition not itself, and *not* the meaning of the other piece, but the *otherness* of the other piece, manifested not only through the presence of the precursor-piece, but also through the precise figurations of its absence.

(1991: 14; his emphases)

The 'otherness' of a precursor-piece is, however, a collection of *abstracta*; it is the *concreta*, the words, sentences, ideas, pitches, rhythms, etc., of the other work which have to be imitated—even if they are subject to the mutation Korsyn terms 'misprision' (1991: 10)—in order for us to recognise and speak of influence, however 'antithetical', and to chart the 'precise figurations of...absence' of the precursor-piece.

One cannot, in other words, recognize work *x* as the precursor of work *y* if no concrete element of the former, none of its constituent memes, survives into the latter.

The work-centricity of the Bloom/Korsyn perspective is allied to a correspondingly heightened ‘composer-centricity’. In common with much musicological discourse, studies of intertextuality in music tend to see the composer as the sublime creator of discrete and permanent works of art which, *in toto*, influence other works. Moreover, in ‘...map[ping] intertextual space’ (1991: 6), such studies tend to move, in Meyer’s terms, from the level of intraopus style to the level of idiom, to see composers as influencing other composers, thereby transcending the boundaries of the individual work.

It seems that these two facets of the Bloom/Korsyn intertextual perspective—work- and composer-centricity—derive from the following causes. First, work-centricity arises from the ‘regulative capacity’ of the memplex Goehr terms the *work-concept* (1992: v, 2; she does not, however, invoke the memetic paradigm). The work-concept is a verbal-conceptual memplex which she asserts arose in western Europe *circa* 1800, and which acted to privilege the higher-order structures into which musical memes assemble. On a memetic interpretation, such a memplex would tend to mediate the process of memetic replication by incorporating memes articulating the value of genius, individuality, and novelty, and censuring overt imitation, plagiarism, and conservatism. Secondly, composer-centricity derives from the Cartesian perspective on consciousness discussed in Section 4.1—either full-blown Cartesian dualism or *Cartesian materialism* (Dennett 1993: 107) drawing nostalgically upon the notion of the Cartesian Theatre, both of which see humans as controlled by a unitary and omniscient self.

On a memetic interpretation, what Bloom describes as the poetic ‘revisionary ratios’ (Korsyn 1991: 10) seem at least partially to overlap with the musical work-concept memplex, in that both act to regulate the replication of the memes comprising a substrate (poetry, music) by means of a higher-order array of verbal-conceptual memes. In Korsyn’s study, Bloom’s poetic revisionary ratios are applied to some of the memes constituting the Berceuse op. 57 by Chopin (1843–1844) and the Romanze op. 118 no. 5 (1893) by Brahms. Clearly his approach presupposes Brahms’ infection not only with the by-then-ubiquitous work-concept memplex, but with a musical analogue to the poetic revisionary ratio memplexes.

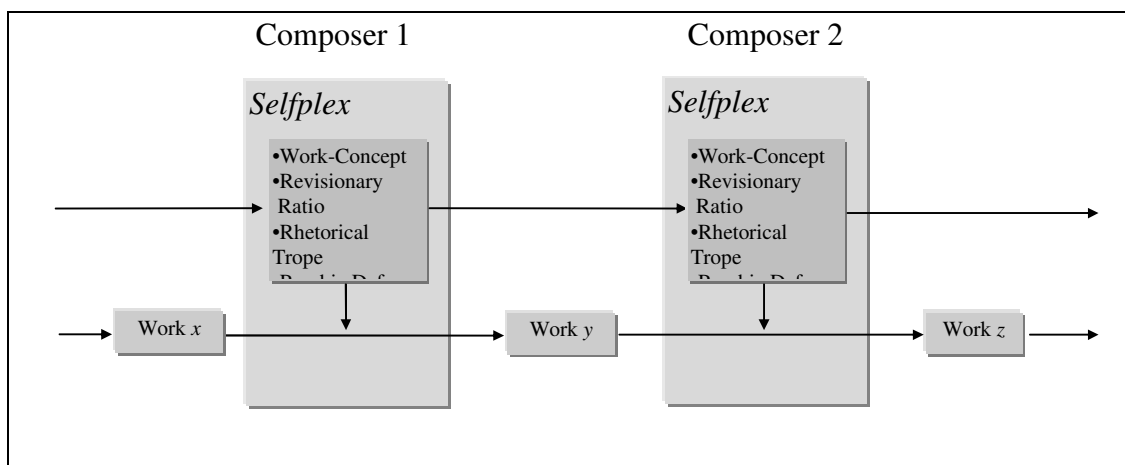
To take a brief example of this application in order to reconceive it in memetic terms, Korsyn claims that *tessera*, the revisionary ratio of ‘antithetical completion’ of a precursor-piece, is the motivation for the modelling of bb. 17–44 of the Romanze on elements of the Berceuse (1991: 26). Moreover, the *tessera* ratio is associated with the rhetorical trope of *synecdoche*, wherein the whole is understood from mention of the part. In order ‘...to convince us that [his] discourse is more complete than the truncated discourse of the precursor’, Brahms ‘...emphasises the correspondence of part and whole: his motive [b. 17, a mutation of Chopin’s bb. 3–4] is a microcosm for the entire theme [bb. 17–20];...the theme is a microcosm for the whole variation set’ (1991: 58, 27; see also his Exx. 10 and 11). A third component of this memplex, the ‘psychic defence’ against the precursor, is here manifested as ‘reversal into the opposite’, whereby ‘[a]fter the reaction-formation of bs 1–16, which masked the concern with the precursor [i.e., there is no replication in these bars of the memes of the Berceuse], Brahms reverses [in bb. 17–44] into the opposite, identifying with [i.e., replicating some of the memes of] the Berceuse rather than denying it’ (: 58).

From this we can see that the ‘psychic battlefield’ of influence Korsyn speaks of (1991: 8) is fundamentally a memetic one, upon which selfish memes fight for differential replication. Owing to their high longevity, fecundity, and copying-fidelity, we may assume the memes of the Berceuse copied themselves into Brahms’ brain relatively easily; Brahms, as with most listeners familiar with the piece, could doubtless recall the whole Berceuse from memory. Perhaps more importantly, however, the interests of its memes would have been best served by their receiving phenotypic expression in Brahms’ works, for this would serve to increase their longevity, fecundity, and copying-fidelity. However, assuming forms of the memplexes Goehr and Bloom/Korsyn respectively term the work-concept and revisionary ratios were propagated in the meme pool of 1890s Vienna, the adoption of the Berceuse memes would have been impeded, for the memes constituting these verbal-conceptual memplexes would tend to mediate the propagation of Chopin’s memes by engendering in Brahms what Bloom terms ‘the anxiety of influence’ (: 6–7). Such memplexes tend to be successful in a meme pool because they serve to bolster the stability of their carrier’s selfplex against the perceived threats to its integrity caused by the unmediated incursion of foreign memplexes.

Having made this point with respect to Chopin and Brahms, it is of course clear that such conditions did not apply to Mozart’s replication of his ‘own’ memes from the Priests’ March from *Idomeneo* in that of *Die Zauberflöte*. Even if we accept that the work-concept and revisionary ratio memplexes had assembled and were operational by 1791, of the two forms of intertextuality—that connecting texts by the same composer and that connecting texts by different composers—the foregoing interpretation clearly applies principally to the second.

The process of memetic competition between musical memplexes and verbal-conceptual memplexes is represented in Figure 1, in which horizontal arrows represent lines of memetic-evolutionary transmission over time and vertical arrows represent meme-*contra*-meme selection pressures:

FIGURE 1: THE COEVOLUTION OF MUSICAL AND VERBAL-CONCEPTUAL MEMEPLEXES.



From this it can be seen that Bloom’s ostensibly more subtle notion of ‘antithetical influence’ (outlined in the quotation at the start of this section) turns out to be just as memetic as the ‘mimesis’ his theory attempts to transcend, based as it is upon the replication of the memes constituting the revisionary ratio memplexes. These must have arisen from more simple antecedent forms and are themselves subject to a process of variation and selection. As Figure 1 illustrates, a process of *coevolution* is

under way here, not between genes and memes (the original sense of the term, used in Durham 1991), but between memes and memeplexes in various spheres of human culture.

Finally, it is clear that Figure 1 represents only the *poietic* aspect of the revisionary ratios (Nattiez 1990: 11–12). From the *esthetic* standpoint, however, when we engage in the study of a work of art—in terms of analysis, theory, history, criticism, aesthetics, or philosophy—we do so through the mediation of numerous verbal-conceptual and graphical memeplexes: these are the basis of our various ideas, methodologies, preconceptions, and prejudices. The point made earlier concerning the distorting effects of Schenkerian analysis (note 6) is just as applicable to Bloom’s revisionary ratios. They are one way of understanding a work of art and are, at present, a fairly successful memeplex; but we must be aware that such memeplexes—and they are many and varied—inevitably distort that which we seek to understand, even as they themselves are transformed by the memetic-evolutionary dynamic.

Steven Jan, 20.iv.2005.

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Example 1: Mozart's Sketch for K. 620, no. 9
(after Gruber and Orel 1970: 376).

1

Vln. I
Vln. II
Vla.

6

ft.

Example 2: *Particelle* of the Priests' Marches from *Idomeneo* and *Die Zauberflöte*.

The first system of the musical score consists of two staves. The top staff is for *Idomeneo* and the bottom staff is for *Die Zauberflöte*. Both are in C major and 4/4 time. The *Idomeneo* part begins with a first ending bracket (1) over the first two measures, followed by a five-measure phrase (5), a three-measure phrase (3), and a six-measure phrase (C: 6). The *Die Zauberflöte* part begins with a first ending bracket (1) over the first two measures, followed by a five-measure phrase (5), and then a six-measure phrase (C: 2). The *Idomeneo* part includes a trill (tr) and a second ending bracket (2) in the final measure.

The second system of the musical score continues the comparison. The top staff is for *Idomeneo* and the bottom staff is for *Die Zauberflöte*. Both are in C major and 4/4 time. The *Idomeneo* part begins with a five-measure phrase (5), followed by a four-measure phrase (C: 4) containing a trill (tr), and then an eight-measure phrase (8). The *Die Zauberflöte* part begins with a five-measure phrase (5), followed by a four-measure phrase (C: 4), and then an eight-measure phrase (8). A double bar line with repeat dots is at the end of the system. A double slash symbol is on the left side of the system.

Musical score for two parts: *Idomeneo* and *Die Zauberflöte*. The score covers measures 9 to 12. *Idomeneo* is in the upper system, and *Die Zauberflöte* is in the lower system. Both parts are in 3/4 time. Measure 9 is marked with a box containing the number 9. Measure 12 is marked with a box containing the number 12. The *Idomeneo* part has a melodic line with a slur over measures 10-11 and a fermata over measure 12. The *Die Zauberflöte* part has a more active line with slurs and a fermata over measure 12. A double bar line with a repeat sign is at the end of measure 12. A small asterisk is at the bottom left.



Musical score for two parts: *Idomeneo* and *Die Zauberflöte*. The score covers measures 13 to 16. *Idomeneo* is in the upper system, and *Die Zauberflöte* is in the lower system. Both parts are in 3/4 time. Measure 13 is marked with a box containing the number 13. Measure 16 is marked with a box containing the number 16. The *Idomeneo* part has a melodic line with a slur over measures 13-14 and a fermata over measure 15. The *Die Zauberflöte* part has a more active line with slurs and a fermata over measure 16. A double bar line with a repeat sign is at the end of measure 16.

Musical score for Idomeneo and Die Zauberflöte, measures 13-17. The score is in two systems. The first system shows Idomeneo's vocal line (measures 13-14) and the flute accompaniment (measures 17-18). The second system shows Idomeneo's vocal line (measures 15-16) and the flute accompaniment (measures 23-24). The flute part includes various fingerings and articulations such as trills, slurs, and accents.

Musical score for Idomeneo and Die Zauberflöte, measures 14-16 and 23-28. The score is in two systems. The first system shows Idomeneo's vocal line (measures 14-16) and the flute accompaniment (measures 23-24). The second system shows Idomeneo's vocal line (measures 15-16) and the flute accompaniment (measures 25-28). The flute part includes various fingerings and articulations such as trills, slurs, and accents.

Example 3: Schenkerian Graphs of the Priests' Marches from *Idomeneo* and *Die Zauberflöte*.

The image displays two Schenkerian graphs for musical pieces. The top graph is for 'Idomeneo' and the bottom graph is for 'Die Zauberflöte', specifically its 'First Reprise'. Each graph consists of a treble and bass staff with musical notation and a Schenkerian reduction above. The reduction for 'Idomeneo' shows a 3-measure phrase (labeled '3-prg.') starting at measure 1 and ending at measure 4, and a 2-measure phrase (labeled '2') starting at measure 5 and ending at measure 8. The reduction for 'Die Zauberflöte' shows a 3-measure phrase (labeled '3-prg.') starting at measure 1 and ending at measure 4, and a 3-measure phrase (labeled '3-prg.') starting at measure 5 and ending at measure 8. Roman numerals I, V, and V are placed below the staffs at the beginning, middle, and end of the pieces respectively. The numbers 10 and 10 are written below the first and second phrases of each piece.

This musical score page contains two systems of music. The first system is for the character *Idomeneo*, with measures 9 through 12. The second system is for *Die Zauberflöte*, labeled as a "Second Reprise", with measures 9 through 16. Both systems are written in a two-staff format (treble and bass clefs) and include various musical notations such as notes, rests, slurs, and dynamic markings. Measure numbers are enclosed in boxes above the notes. A fermata is present over measure 12 in both systems. Vertical lines with a 'V' below them indicate specific points of interest or performance cues. A '2' with a hat symbol is placed above measure 12 in the *Idomeneo* system and above measure 15 in the *Die Zauberflöte* system.

The image shows a musical score for two parts: *Idomeneo* and *Die Zauberflöte*. The score is written on four staves. The top two staves are for *Idomeneo*, and the bottom two are for *Die Zauberflöte*. The key signature has one flat (B-flat), and the time signature is 3/4. The *Idomeneo* part features a long melodic line starting at measure 13, with a fermata over a note in measure 23. The *Die Zauberflöte* part starts at measure 17 with a triplet, followed by a triplet starting at measure 18, and continues with various melodic figures and ornaments. Measure numbers 13, 17, 18, 21, and 23 are boxed. Performance markings include '7-', '-3-', and 'N' for *Idomeneo*, and '3', '3-prg.', and 'f' for *Die Zauberflöte*. A first ending bracket is shown below the first staff of *Die Zauberflöte*.

The image shows a musical score for two characters: Idomeneo and Die Zauberflöte. The score is arranged in four staves. The top two staves are for Idomeneo, with a treble clef on the first and a bass clef on the second. The bottom two staves are for Die Zauberflöte, with a treble clef on the third and a bass clef on the fourth. The music is written in a single system with measures 14 through 28. Measure numbers 14, 15, 16, 24, 25, 26, 27, and 28 are boxed. Fingering numbers are placed above or below notes: a '3' above measure 14, '2' above measure 16, '1' above measure 16, '3' above measure 28, and '5', '6', '6' below measures 24, 25, and 26 respectively. A chord diagram at the bottom right shows three vertical lines labeled 'V', 'V', and 'I'. The Idomeneo part has a melodic line with some slurs and a dotted line in measure 24. The Die Zauberflöte part has a more rhythmic line with slurs and a dotted line in measure 24.

Example 4: I-V-vi Memplex in Gluck, Mozart, and Beethoven.

i)

1

x| 6/3 6/3

ii)

1

5| 3|

iii)

1

2| 6/3 6/3 6/3

iv)

1

6/3 6/3 6/3 6/3 6/3 6/3 5| x|

v)

1

Le - be - wohl!

Example 5: Pseudo-Recapitulation in the March from *Idomeneo*.

i)

ii)

1

5

V

vi

$V_{3/4/V}$

12

V

vi7

tr

tr

Example 6: Cadential Memes in Mozart and Beethoven.

i)

7 15

x y

ii)

7 27

v z

iii)

iii)

iv)

66

v)

Example 7: Structural Meme from the Priests' Marches to *Idomeneo* and *Die Zauberflöte*.

Musical score for measures 1-8. The score is in G major (one flat) and 3/4 time. It features a piano accompaniment with a treble and bass clef. Measure 1 is marked with a box containing '1' and a fermata over a triplet of eighth notes. Measures 2-4 are marked with a box containing '3-prg.' and a dotted line above the notes. Measure 5 is marked with a box containing '5' and a fermata over a pair of eighth notes. Measure 8 is marked with a box containing '8'. Below the staff, there are labels 'I', 'V-', and '-V' under measures 1, 5, and 8 respectively. The number '10' is written below the first three measures.



Musical score for measures 9-16. The score is in G major (one flat) and 3/4 time. It features a piano accompaniment with a treble and bass clef. Measures 9, 12, 15, and 16 are marked with boxes containing their measure numbers. Above measures 12, 15, and 16 are fermatas with the numbers 2, 2, and 1 respectively. Above measures 12/13, 13/18, 14/23, 14/24, 15/25, and 15/27 are boxes containing their respective measure numbers. Below the staff, there are labels 'V' and 'V I' under measures 12 and 15 respectively.

Example 7: Structural Meme from the Priests' Marches to *Idomeneo* and *Die Zauberflöte*.

Musical score for measures 1-8. The score is in 3/4 time and features a structural meme. Measure 1 is marked with a box containing '1' and a fermata above a triplet of eighth notes. Measures 2-4 are marked with a box containing '3-prg.' and a dotted line above the melody. Measure 5 is marked with a box containing '5' and a fermata above a dotted quarter note. Measure 8 is marked with a box containing '8'. The bass line has markings 'I', 'V-', and '-V' under measures 1, 5, and 8 respectively. The number '10' is written below the treble staff in measures 1, 2, and 3.



Musical score for measures 9-16. The score continues from the previous system. Measures 9, 12, 15, and 16 are marked with boxes containing their respective measure numbers. Measure 12 is marked with a box containing '12' and a fermata above a dotted quarter note. Measure 15 is marked with a box containing '15' and a fermata above a dotted quarter note. Measure 16 is marked with a box containing '16' and a fermata above a dotted quarter note. The bass line has markings 'V' and 'I' under measures 12 and 16 respectively. The number '10' is written below the treble staff in measures 9, 10, 11, 12, 13, 14, 15, and 16.