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Mélodie parlée et évolution de l'esthétique minimaliste dans l'oeuvre *The Cave* de Steve Reich

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Article abstract

This paper seeks to explain Reich's use of the "speech melody" technique in his video opera *The Cave* in terms of the minimalist reliance on impersonal processes and the economical use of musical material. For this piece Reich uses digitally sampled speech fragments with an emphatic melodic contour as the basis for composition. These speech melodies provide the primary building blocks out of which the work is constructed. Because the musical material is actually contained in the verbal material, Reich is able to provide innovative solutions to some of the traditional problems facing the composer of vocal music. This technique not only enables Reich to reintroduce a compelling expressive element into his work, but also enables him to reconcile the composer's search for rigorously autonomous musical structures with his documentary interest in the subjective concerns and social problems of the outside world.

Speech Melody and the Evolution of the Minimalist Aesthetic in Steve Reich's *The Cave*

Eric Prieto

Whenever a composer writes vocal music, he must make a number of decisions about the proper relationship between the words and the music. At the most elementary level, he must decide whether (to paraphrase Monteverdi) the music should be the servant or the master of the words. Should the acoustic properties defined in the score be the primary focus of the listener's attention (with the lyrics serving in a support capacity, i.e., as an incitement to invention on the part of the composer or as a guide to interpretation for the listener) or should the music play the supporting role (as, say, an intensifier or expressive supplement)? There is also, of course, a third path, which is to insist that the two be melded into an organic whole that is both semantically and musically satisfying, where (semantic) meaning and music are inseparable and indistinguishable. This was, to cite just one example, the ideal of the nineteenth-century German art song tradition. But in practice this ideal balance has been difficult to achieve, and the long list of approaches to the problem — which includes theories and techniques as diverse as Wagner's "musico-dramatic unity" and Schönberg's *Sprechgesang* — shows that there can no single solution acceptable to all: the balance of power between text and music, and the role of the composer in regulating that relationship, will continue to vary from situation to situation. Even the most straightforward monophonic, syllabic setting of a text (as in a recitative) can have the effect of obscuring the meaning of the words, but the semantic indeterminacy of instrumental music means that those composers who feel they have something urgent to say will always be drawn to language and its ability to convey semantic messages efficiently.

One of the most interesting recent attempts to provide a new solution to this problem has been supplied by Steve Reich, most notably in his "video opera", *The Cave*, which was produced in collaboration with his wife, the video artist Beryl Korot. From a compositional standpoint, the primary feature of *The Cave* is its pervasive deployment of a technique that Reich calls speech melody. Reich refers to Leos Janáček's theory of speech melody to explain his own practice, but Reich's

version of the technique is actually much more dependent than Janáček's on the specific properties, both acoustic and semantic, of speech. Rather than recording the patterns of everyday speech to use as study material for the composition of more or less stylized vocal melodies, Reich introduces recorded speech samples into the fabric of the composition, and uses those speech samples to provide not only the rhythmic patterns of the music, but also the melodic contours and harmonic material of the composition. The music and text of *The Cave*, in other words, are not simply based on spoken texts, in the way that a symphony might use folk melodies or a song spoken idioms, but actually **built out** of the pre-recorded material in the most literal sense. Using a procedure he developed for an earlier piece, *Different Trains*, Reich pored over 150 hours of video footage, isolated short bits of speech with an appealing melodic and rhythmic profile, and used a digital sampler to analyze and transcribe the melodic contours of the spoken text. These sampled speech fragments provide a set of ready-made melodies that Reich integrates into the instrumental and vocal texture of the piece, using them as the building blocks of the large-scale musical structure.

This approach to the problem of text setting is of interest to contemporary composers for several reasons: for the innovative way in which it integrates digital technology into the compositional process; for its tendency to steer melodic invention into new channels, which remain intelligible to the casual listener while at the same time providing interesting intellectual challenges to the dedicated listener; and — most significantly — for the way in which it modifies the relationship between music and text, not only shifting the balance of power between them, but fundamentally altering the ways in which musical structure and semantic content work together. This last point has important consequences for what might be called the social function of music theatre.

Reich has found in the speech-melody technique a way to make the specifically musical concerns of the composer compatible with the extra-musical concerns that preoccupy us in our lives outside of the concert hall. The civic-minded composer has always found himself in a vulnerable ethical position: on the one hand, any artist who neglects the specific challenges of his art and its material in order to make political statements, risks becoming a mere propagandist; but on the other hand, in the realm of politics, inaction is itself a form of action. How, then, is the composer to react to the dual challenge of remaining faithful to the centripetal exigencies of his art form while putting his skills to use for the benefit of the community? The solution proposed in Reich's *The Cave* is to seek out and exploit those points at which musical and referential concerns overlap, so that it becomes possible to advance in what Anton Webern called "the ongoing conquest of the tonal field" (cf. Webern, 1960, *passim*), and to do so without withdrawing from the field of political responsibility. By modifying the nature of the relationship between music and text, Reich's technique has the potential to modify the role of music theatre in the civic life of the community.

It is significant, in this regard, that Reich chose to give his speech-melody technique its most thoroughgoing deployment in a piece that takes as its subject a highly charged political and cultural symbol: the Cave of Machpelah. This place, which is situated in Hebron/West Jerusalem and is holy to both Jews and Muslims, automatically, if implicitly, calls to mind the current Palestinian conflict, while also providing Reich with a starting point for a detailed meditation on the history of relations between Jews and Muslims, the cultural origins of this relationship, and its expression in American cultural life. What better way to explore the impact of music/text relations on the social function of music theatre than to examine an operatic work that makes use of a radical new compositional technique in order to interrogate the relations between Jews, Arabs, and North American culture?

Before turning to this larger question, however, it will be useful to understand how Reich arrived at his particular solution to the problem of text setting. Reich's first allegiance as a composer has always been to the search for impersonal compositional principles. But these, it would seem, have little, if any, relation to the ethical and political questions invoked above. Nevertheless, Reich's path to the technique of speech melody should, I believe, be understood in light of his early "minimalist" interest in impersonal processes, mechanical repetition, and what he calls the "psycho-acoustical by-products" of shifting patterns of sound.

Minimalist aesthetics and the origins of the speech-melody technique

It is interesting to note that although Reich has composed relatively little vocal music, and is best known as the composer of such minimalist instrumental pieces as *Drumming* and *Music for 18 Musicians*, his first compositions were built around the human voice. In *It's Gonna Rain* (1965) and *Come Out* (1966), Reich used taped recordings of spoken texts as the basis for composition. But in these early works, Reich's method for working with the verbal material is much less sophisticated than what we find in *The Cave*. Rather than composing instrumental music derived from the tapes, as he does in *The Cave*, he uses the prerecorded snippets as the material for an experiment in the phasing effect with which he was so pre-occupied in his early years. In the first part of *It's Gonna Rain*, for example, he takes two recordings of the same snippet of speech ("it's gonna rain!") and plays them back on two tape machines which run at slightly different speeds. Since they are played at different speeds, the two tapes start out in unison, gradually slip out of phase, and then slowly move back to unison. Musically speaking, the expressive power of these pieces is extremely limited. Their interest derives solely from the

"psycho-acoustical by-products" perceived by the listener as he follows the slowly shifting relationships between the two sound streams¹.

In these early vocal works, the phasing technique has the effect of obliterating the linguistic content of the words; Reich treats them as an indifferent acoustic material, without regard for their semantic content. It seems significant, though, especially in light of later works like *The Cave*, that Reich has consistently chosen source material that has powerful cultural and political resonances: *Come Out* features the voice of Daniel Hamm (one of the "Harlem Six", victims of a notorious act of police brutality in the 1960's) and *It's Gonna Rain* features the voice of a black Pentecostal preacher warning of imminent (racial?) apocalypse. After these two early works, Reich's vocal output will be put on hiatus for some ten years. But when he returns to the use of the human voice, in his 1981 piece *Tehillim*, he will use source material that has a different, but equally powerful, cultural resonance: the Hebrew text of the Book of Psalms. Reich, who had "rediscovered" his Jewish heritage in the 1970's, sought to write music that could accommodate the verbal structures of Hebrew cantillation to his own compositional idiom, without simply writing a "Jewish sounding piece". Antonella Puca has pointed out that it is with this piece that Reich begins to show, for the first time, a pronounced interest in preserving the semantic meaning, as well as the acoustic profile, of his verbal source (Puca, 1997, p. 538). This emphasis on preserving the semantic content of the words brings Reich one step closer to the guiding principle behind the text settings of *The Cave*. But this solution does not seem to have satisfied him entirely, and it is important to understand why².

Reich has always maintained an especially severe discipline in his compositional practice. Although by 1971 he had moved away from his initial reliance on mechanically generated phase effects, he never did abandon his belief in the primary importance of impersonal processes as guarantors of the formal integrity of the work. His 1968 essay, "Music as a Gradual Process," emphasizes the importance of gradual processes, where "once the process is set up and loaded it runs by itself" (reprinted in Reich, 1974, p. 9). He insists that these processes must be audible to a listener without a score, and that the interdependence of content and form is paramount: "What I'm interested in," Reich asserts, "is a compositional process and a sounding music that are one and the same thing" (p. 10). Throughout his career, he has remained astonishingly loyal to these early principles, even as his compositional practice evolved away from his initial preoccupations. This commitment to audible structures based on impersonal processes that continue on their own once put into motion clearly explains Reich's initial interest in the phasing principle put into play on *Come Out* and *It's Gonna Rain*. But it provides him with no tools for working with speech *per se*. If, then, we are to explain Reich's attitude toward the text-setting principle of *Tehillim* and fully understand its significance for the speech-melody technique used in *The Cave*, we'll need to understand its relation to the earlier, more mechanical, work. For it is only with the

1. The same kinds of effect will also be produced, but in a more deliberate way, in the patterned repetitions of Reich's mature work, as in the shifting patterns of *Drumming*. Although composed in a more conventional, less mechanical, manner, these pieces also rely for their effect on gradually evolving rhythmic patterns and the shifting relations between short melodic motifs.

2. His next vocal piece, *The Desert Music*, from 1984, uses a text by William Carlos Williams written in response to the bombings of Hiroshima and Nagasaki. For vast stretches of the five-movement piece, the meaning of the text is entirely subordinated to the rhythmic and melodic patterns of the music. Indeed, the chorus is considered as one instrument among others. As Reich put it in a 1985 interview with Jonathan Cott: "The chorus begins wordlessly. You know a voice can sing words — but does one hear the voice or the words? At certain points in *The Desert Music* there's no more to be said — there are things that can only be said musically. So the voices continue without words as part of the orchestra" (liner notes to *The Desert Music*, Reich, 1985).

speech-melody technique that Reich finds a way to reconcile his commitment to impersonal processes with the use of verbal materials.

What each of the pre-*Tehillim* attempts at vocal music has in common is the use of a culturally charged source text that is then completely transformed by its integration into a fully autonomous musical structure. The initial kernel of cultural meaning is subsumed in musical structures that pay it no heed³. In none of these early works is there a **necessary** link between the linguistic content of the words and the formal procedures deployed in the music. What Reich seems to be searching for in *Tehillim* is a compositional principle capable of reconciling the semantic content of the source text with the musical structures put into play. As Reich puts it:

[Before *Tehillim*] I had limited myself to set in music individual words independently, in a way, of their meaning, but now I had to confront myself with texts in which meaning was fundamental, and for this kind of operation I did not have any method... For the first time, the music had to serve the purpose of the meaning of the words. (*Tehillim* liner notes, as quoted in Puca, p. 545)

The technique used in *Tehillim* is based on the tradition of Hebrew cantillation, which provides him with a clear set of rules for establishing the rhythms of the text. Cantillation, in other words, provides the kind of pre-determined rule or mechanism that he favors as a basis for composition. What cantillation does not provide, however, is a method for generating melodies. Reich presents this lack of guidance, in positive terms, as a form of freedom:

One of the reasons I chose to set Psalms, as opposed to parts of the *Torah* or Prophets is that the oral tradition among Jews in the West for the singing of the Psalms has been lost. (It has been maintained by Yemenite Jews.) This means that I was free to compose the melodies for *Tehillim* without a living oral tradition either to imitate or to ignore. (Puca, p. 545)

The advantages of this freedom for the composer are obvious: they allow him to imprint his own personality onto the materials, without simply imitating an earlier style, and (equally importantly) without showing disrespect for the culture of his source materials. Nevertheless, Reich's propensity for working with preset mechanisms and impersonal processes left him in search of a rule for the determination of melody. It is to this need for an outside determinant of pitch that the speech-melody technique will respond, first in *Different Trains* (1988), then, most successfully, in *The Cave* (1993), and again in *City Life* (1994)⁴. The sampled speech fragments, simply put, provide a form of necessity. Like the magnetic tapes of *Come Out* and *It's Gonna' Rain*, they furnish the kind of predetermined material that Reich prefers to work with. In this sense, Reich's music can be said to come full circle with *The Cave*: it returns to its origins in the human voice, with the sampling technique simply replacing the magnetic tape as the guarantor of his material's formal integrity. But unlike the magnetic tapes, the greater control provided by digital sampling/sequencing technology enables him to work with words without turning

3. Even in *Tehillim*, with its emphasis on the speech patterns of Hebrew, the very fact that the text is in Hebrew makes it directly accessible to few.

4. And, given the success he has had with this technique, there is no reason to think that Reich has finished exploring the possibilities of speech melody.

them into mere acoustic events. Because the guiding principle for composition comes from the verbal material itself, the complete fusion of musical and semantic meaning is guaranteed.

The Cave as music theatre

Reich and Korot call *The Cave* a work of “documentary music theatre”. They are uncomfortable with applying the term “opera” to *The Cave*, because although its subject matter is provided by a mythical narrative — the story of Abraham, patriarch of both Arabs and Jews, who is said to be buried in the Cave of Machpelah — it does not present this story in the usual dramatic manner of traditional opera. Instead of re-enacting the legend on stage — perhaps choosing the Koranic account, perhaps the Biblical account, or perhaps combining the two or retelling the story in their own way — Reich and Korot use videotaped interviews with people talking **about** the legend as the primary focus of the audience’s attention. Where a traditional opera would have enacted the story of Abraham on stage, with singers playing the parts of the biblical characters, *The Cave* alternates between sung recitations of the scriptures recounting the story of Abraham, and videotaped commentary on the legend, with the emphasis clearly placed on the commentary. The stage set makes this focus on the documentary material perfectly clear: the stage is dominated by a giant wall of scaffolding, on which the instrumentalists and singers are positioned, surrounded by a number of video displays (see image, below).

Why present the story in this decidedly un-dramatic manner? For Reich and Korot, the primary interest of the Abraham legend is in its contested history, as one of the foundational myths of both Islam and Judaism. Both Muslims and Jews trace their ancestry back through Abraham, and both the Koran and the Bible tell the story of his life, including, notably, the sacrifice episode, in which God tested Abraham by commanding him to sacrifice his son. Of course, in the Islamic tradition, it is Ishmael, the father of the Arab tribes, who is chosen for sacrifice and then spared, whereas in the biblical account of Genesis, it is Isaac, the father of the Hebrew tribes, who plays the role of sacrificial victim. Such discrepancies have the effect of highlighting the common origins (both ancestral and cultural) of Judaism and Islam, while at the same time emphasizing the tensions between their respective master narratives. Faced with the two conflicting versions of the Abraham myth, Reich and Korot decided that its true meaning was not to be sought in any authoritative interpretation of the story, nor in any ad hoc attempt to reconcile or combine the different versions, but in what might be called, in Bakhtinian terms, the dialogic functioning of the story, which is a product of the relations between the

Figure 1: Stage set for *The Cave*



(Photo by Andrew Potheary, reproduced with the artist's permission.)

various existing interpretations. This dialogic tension helps to explain the significance of the cave as the central symbol of the piece. As Reich points out, Hebron, where the cave is located, is a largely Arab town, and has traditionally been a place of war between Jews and Muslims. But the cave itself, or rather the mosque/tomb that sits on top of it, is the only place where Jews and Muslims pray together, or at least, as Paul Griffiths puts it, simultaneously (Griffiths, p. 155). It is, then, this cultural tension, not the story itself, that provides the true subject matter of *The Cave*. For this reason, *The Cave* might be considered the most completely dialogical piece of music theatre on record: the piece constitutes an attempt to come to terms with the truth of the ancient myths by incorporating multiple conflicting voices.

Reich and Korot began work for the piece by taping the interviews that would serve as their raw material. But rather than using the text of the interviews as the basis for a libretto, to be set to music and performed by the singers, they decided to incorporate the interview footage directly into the piece. Production worked in the following way. Korot first edited the raw footage, selecting short sequences that she found to be of particular interest and sending them to Reich. Reich then worked on the audio component of that footage, isolating segments of the interviewees' speech with a marked melodic outline, processing them with a digital sampler, and notating the melodies. The resulting samples were then loaded into a sequencer and synchronized with the video images so that the pre-recorded material could be meshed seamlessly in performance with the live musicians.

Reich composed his score using the short melodies derived from the speech fragments, developing them into extended sequences using the usual compositional devices of repetition and variation, contrapuntal development, modulation through different key areas, and the like. In this way, he was able to build a large-scale musical structure derived primarily from the recorded speech fragments. In some cases, Reich allows the spoken words to stand on their own, with no intervention whatsoever from the live musicians; in others, he limits the on-stage musicians to simply doubling the melody of the speech fragment; in yet others, the musicians develop the speech melodies in a variety of ways, often interweaving two or more of them into responsorial or contrapuntal patterns. In performance, the general effect is one of close interaction between the videotaped speech fragments and the on-stage musicians and singers. One sees and hears the interviewees as they speak, most often doubled by the instrumentalists, and then follows the orchestra and singers as they develop the implications of the recorded speech, meditating on them, juxtaposing them with references to earlier fragments, and, more generally, spreading them out in time in a way that encourages the audience to reflect upon their meaning.

The Cave runs a little under three hours in performance and is divided into three acts, with the first devoted to the Jewish account of the Abraham myth, the second to the Islamic account, and the third to American interpretations of the story. The

interviewees included a number of Biblical and Koranic scholars, but also a number of non-specialist acquaintances of the couple (including, in act three, such luminaries as Carl Sagan, Arthur C. Danto, and Richard Serra). In each case, Reich and Korot posed the same questions to the interviewees: "'Who for you is Abraham?', 'Who for you is Sarah?', 'Hagar? Ishmael? and Isaac' " (*The Cave*, liner notes, p. 14). They also sought commentary on the significance of the near sacrifice of Isaac/Ishmael, and of the Cave of Machpelah. As one would expect, the answers to these questions vary considerably from act to act and person to person, according to the cultural and religious background of the interlocutors. Thus the first interviewee from the second (Muslim) act declares that "Ibrahim was neither Jew nor Christian, but a Muslim," while one of the interviewees from act one recites his family lineage, going all the way back in an unbroken chain from himself to Adam, in order to demonstrate in the most literal way that "Abraham, for me, is my ancestor."

Not surprisingly, references to the current Palestinian conflict enter into the piece on several occasions. One of the Israelis, speaking of "the children of Ismail," notes that "you can see them in the streets." And one of the Palestinians mentions that Hagar "lived in a tent," adding, after a pregnant pause, "as a refugee I think." Meanwhile, the Americans, in act three, display a much more distant relationship to all these characters. Richard Serra flatly declares: "Old Testament — never read it," and many of the Americans, asked about Ishmael, think first of *Moby Dick*, and only secondarily, if at all, of the son of Abraham. Reich builds on this theme of cultural loss by including testimony from a Hopi Indian in the following exchange, ostensibly about the Cave of Machpelah:

E. Brummet:	It has no particular meaning to me.
J. Sabala:	I have no idea.
J. Sabala:	I knew growin' up all along that I was Indian, I knew I was Hopi, but...
J. Sabala:	I have no idea.
V. Steele:	I never heard of it.
M. MacArthur:	Nothing, it never rang a bell.

Similarly, one of the interviewees, speaking of Hagar, Abraham's cast off wife and the mother of Ishmael, affirms that "When I think of Hagar, as a black female I really think of myself."

It would be possible, and worthwhile, to examine in greater detail the verbal, discursive structure of the piece, and the effects that the manipulations of Reich and Korot have on the meaning of the documentary material. Much of the message of the play is to be sought in the transversal connections that link the three acts together, which greatly enrich the range of thought and emotion that is stimulated by the piece. Reich and Korot display great skill in their manipulation of the material, not only using unexpected juxtaposition to create comic or ironic effects, but

also meditating musically on one or another of the speech fragments in ways that bring out connotations and implications that would have gone by too quickly to be noticed in casual conversation. It is equally important, however, to emphasize the musical techniques employed by Reich. It is to these that I now turn.

The role of the speech-melody technique in *The Cave*

Unlike the vast majority of Reich's music, there is little dependence in *The Cave* on the hypnotically repetitive rhythms, phasing effects, and gradual processes with which his music is usually identified. Indeed, despite the unconventional use of speech and digital technology, the documentary tone, and the discursive rather than dramatic structure of the piece, *The Cave* actually comes closer to the mainstream tradition of cultivated music than any of Reich's other music. For the first time in Reich's entire career, the emphasis is on melodic, harmonic, and semantic interest, rather than gradually unfolding processes.

The new emphasis on melody is in itself a significant development in Reich's work, since he had never previously shown much interest in melodic inventiveness. (Some of the reasons for this lack of interest in melody have already been discussed. Others will be considered in the conclusion.) With this in mind, the musical analyses offered here will focus on the melodic aspects of the composition. Some of the formal devices and techniques used to develop this material will be mentioned, but no detailed analysis of the large-scale forms or tonal syntax of the music will be attempted. The primary intellectual focus of *The Cave* is elsewhere. Indeed, one of the primary tasks of the analysis that follows will be to identify the specific kinds of intellectual work required by *The Cave* and to explain why these kinds of work are of interest.

The musical flavour of each of the three acts is quite different. Act one is dominated by the staccato rhythms of what Reich calls "typing music," but which might also be called "scriptural music," since it always accompanies the recitation of biblical passages. It is first heard at the outset of the work, in the percussion only, as an English translation of Genesis XVI is "typed" onto the screens of the onstage video monitors⁵.

Rhythmically, this music recalls the minimalist style of Reich's earlier music. This impression is confirmed when more percussion parts are superimposed contrapuntally over the first in a way that creates shifting patterns of interlocking rhythms. These same rhythms are employed by the singers whenever a biblical text is sung (i.e., primarily in act one, but also in act three).

5. There is no published score for *The Cave*. All transcriptions of musical excerpts are by Antonio Artese.

Figure 2 : Typing Music



It should be noted that the scriptural music constitutes an important exception to the documentary speech-melody mode of composition described above. The scriptural passages of acts one and three are sung in a freely composed style that, although clearly derived from the "cantillation" technique used in *Tehillim*, bears no direct relation to the speech melodies used elsewhere in *The Cave*. This departure from the speech-melody technique might be taken at first glance to undermine the documentary claims of the piece, i.e., as a sign that Reich was either unable to build a full-scale work out of speech melodies or that he lacked enough commitment to the technique to maintain stylistic consistency throughout. As it turns out, however, the scriptural music fulfills an important structural and thematic function. Whereas the speech melodies feel close to us, expressing familiar human concerns, the scriptural music gives the impression of coming to us from another realm, presumably the archaic, quasi-mythical realm of the Torah. Thus, although this use of the cantillation technique provides what is, at least in my estimation, the least compelling music in

The Cave, it plays an important role in accentuating the close relationship between form and content, communicating a sense of the authority, otherness, and immutability of the scriptures, while at the same time highlighting, by contrast, the sense of flux and human fallibility that is created by the speech melodies.

Act two, which is built around the Koranic account of Abraham and his descendants, dispenses entirely with the scriptural music. Reich, citing a traditional Islamic prohibition on setting the Koran to music, decided not to incorporate Koranic verse into the score. There is, therefore, no need for scriptural music in act two. Instead, the act begins with an extended excerpt from Surah 3 of the Koran, chanted in Arabic, without any musical accompaniment (by, as the libretto indicates, the Muqri of Al-Aksa mosque).⁶ The rest of this act is dominated entirely by music based on the speech-melody technique.

Some of the most interesting examples of speech melody can be found in act two. To begin with a simple example: the previously cited passage — “Ibrahim was neither Jew nor Christian, but a Muslim” — is presented first in isolation, simply doubled by the strings. (figure 3)

It is then developed in a responsorial pattern with a soprano voice. This creates an interesting contrast, as the singer outlines the same melody, but using the formal diction of the Western high-art tradition. The relatively low register, sliding pitch center, and vocal intonations of the speech sample are clearly contrasted with the purity of pitch and diction, blocky rhythms, and alto register of the singer. These two contrasting versions of the speech melody are intertwined in a way that enables the audience to compare the respective merits of the two. Although the meaning of the words remains clear in the singer’s version, semantic meaning seems to be almost automatically subordinated to the artificiality of the vocal display of the soloist. This contrast also makes clear the inherent limitations of the speech-melody technique. Microtones and glissandi are lost, of course, as are all those nuances and vocal inflections that make the spoken word expressive. Thus, although Reich makes sure to maintain the melodic outline of the speech sample, he is obligated to make musical choices at every level. This is true of all the speech melodies in the work. Sometimes, for example, the melodic outline of a speech segment is blurred by the vocal inflections of the speaker and remains indeterminate. Reich has a marked tendency to choose dramatic chromatic or triadic movement, when given a choice (as he does for the word “impossible” in figure 4, below), even if a more monotone outline seems dominant. Reich also has a tendency to highlight overtones over the fundamental tone in some situations, presumably to create melodic interest, although it is difficult to be sure of his intentions. There seem to be many cases in which it would be impossible to decide between the various pitch components of a given utterance, and so Reich chooses whichever pitch best suits his needs.

These inherent limitations of the speech-melody technique need not, however, be taken as liabilities or inconsistencies. On the contrary, the simplifying stylizations

6. It should be noted that the recited passage entreats the listener to avoid arguing over whether Abraham was Jewish, Christian, or Muslim—along with all those other “matters of which/You have no knowledge”—and seek instead to be, like Abraham, “true in Faith.” This message of tolerance, humility, and the search for truth, is central to the larger meaning of *The Cave*.

Figure 3 : Neither Jew nor Christian

The musical score is for a piece titled "Neither Jew nor Christian". It consists of three systems of music, each with a Voice part and a Piano (Pno.) part. The tempo is marked as $\text{♩} = 80$.

System 1:

- Voice:** The melody begins with a quarter note G4, followed by eighth notes A4, B4, and C5, then a quarter rest, followed by eighth notes D5, E5, and F5, and ends with a quarter note G5. The lyrics are "I - bra - him was nei - ther Jew nor Chri - stian but a Mu - slim".
- Piano:** The right hand plays a series of eighth notes (G4, A4, B4, C5, D5, E5, F5, G5) and quarter notes (G4, A4, B4, C5, D5, E5, F5, G5). The left hand plays a sustained bass line with a half note G3 and a half note F3.

System 2:

- Voice:** The melody starts with a quarter note G4, followed by eighth notes A4, B4, and C5, then a quarter rest, followed by eighth notes D5, E5, and F5, and ends with a quarter note G5. The lyrics are "I - bra - him was I - bra - him was nei - ther nei - ther Jew nor Chri - stian".
- Piano:** The right hand plays a series of eighth notes (G4, A4, B4, C5, D5, E5, F5, G5) and quarter notes (G4, A4, B4, C5, D5, E5, F5, G5). The left hand plays a sustained bass line with a half note G3 and a half note F3.

System 3:

- Voice:** The melody starts with a quarter note G4, followed by eighth notes A4, B4, and C5, then a quarter rest, followed by eighth notes D5, E5, and F5, and ends with a quarter note G5. The lyrics are "I brahim was nei ther nei ther Jew nor".
- Piano:** The right hand plays a series of eighth notes (G4, A4, B4, C5, D5, E5, F5, G5) and quarter notes (G4, A4, B4, C5, D5, E5, F5, G5). The left hand plays a sustained bass line with a half note G3 and a half note F3.

of the melodies often reveal hidden depths of meaning in the spoken text. In what turns out to be one of the most beautiful speech melodies of the second act, a Palestinian man proclaims: "This place is holy for me, you can't make war against my feelings. It's impossible to get in my heart." (figure 4)

This segment is doubled by the strings in a way that draws out first the plain-
tiveness of "this place is holy for me," then the implied martial sentiment of "you

Figure 4 : This place is holy for me

The musical score is written for Voice and Piano. The key signature has five flats (B-flat, E-flat, A-flat, D-flat, G-flat), and the time signature is common time (C). The score is divided into four systems, each with a Voice staff and a Piano staff. The lyrics are: "This place is ho - ly for me this place is ho - ly", "This place is ho - ly for me you can't make war against my fee - lings", "it's im - poss - ib - le to get in my heart it's im - pos - si - ble You", and "can't make war against my feel - ings it's im possib le to get in my heart". The piano accompaniment includes various musical notations such as triplets (marked with a '3'), eighth notes, and chords. The piano part is labeled "Pno." on the left side of each system. The voice part is labeled "Voice" on the left side of the first system.

Figure 4 displays a musical score for the song "This place is holy for me". The score is written for Voice and Piano. The key signature is five flats (B-flat, E-flat, A-flat, D-flat, G-flat), and the time signature is common time (C). The score is divided into four systems, each with a Voice staff and a Piano staff. The lyrics are: "This place is ho - ly for me this place is ho - ly", "This place is ho - ly for me you can't make war against my fee - lings", "it's im - poss - ib - le to get in my heart it's im - pos - si - ble You", and "can't make war against my feel - ings it's im possib le to get in my heart". The piano accompaniment includes various musical notations such as triplets (marked with a '3'), eighth notes, and chords. The piano part is labeled "Pno." on the left side of each system. The voice part is labeled "Voice" on the left side of the first system.

can't make war against my feelings," and interprets the resolve and finality of "it's impossible to get in my heart" in terms of a modulation from E♭ minor to the relative major key of G♭ (measures 4-5 and 9-10).

As a general rule, the live musicians play a support role for the documentary source material. Although there are several speech-melodies that are developed contrapuntally by the instrumentalists, the vocal texture is resolutely homophonic throughout. The speech fragments are most often doubled by the strings, and the effect is that of a unison, although the strings often break into a kind of chordal accompaniment — characterized by parallel fourths — that seems meant to capture the overtones and resonances of the original speech sample. The implied key center of the speech segments is most often indicated by a simple drone, playing discreetly in the background, while the tempo is most typically indicated by one or more of the strings, pulsing gently.

This same subordination of the live performers to the documentary source is also evident in the large-scale structures of the piece. The beginning and end of each scene or segment are given no special treatment: the drone simply picks up in the new key. Sometimes at the end of a scene, there will be a gentle concluding note, but no effort to provide a strong cadential pattern. There is, however, an attempt to provide a sense of closure for each act. Both acts one and two end with a recording of the ambient sounds in the mosque/tomb, with the strings subtly indicating the key of A minor. As Reich explains:

Acts 1 and 2 end in A minor because I found that inside the cave, or rather the mosque that sits on top of the cave, the acoustical resonance of the space with several prayers being said simultaneously, was a drone A minor. This was what I recorded there. Then I began looking for significant phrases that were said by the interviewees that were also in A minor so that both acts would cadence there. (*The Cave*, liner notes, p. 14)

As with the speech melodies, it should be noted, Reich seeks the musical logic for this ending in his source material: it is the acoustical resonance of the cave that motivates Reich to end in A minor. This is an important principle for Reich and Korot. As he says: "Whenever there was a musical or visual question about the piece, the solution was to be found by a still more careful examination of the source material itself" (p. 13). Korot reinforces this point:

the cave still exists, though underneath a partly Herodian, Byzantine, and mostly Islamic structure today in Hebron. *And that was important, that there was actually a place that existed now that was connected to events which took place so long ago, that I could actually travel to with my camera.* (p. 11)

This emphasis on the **actual** — this **empirical** bias, if I can call it that, of Korot and Reich — has important implications, not only for its role in determining their documentary approach to their subject matter, but because it provides Reich with

just the kind of impersonal rule that he likes to work with. The musical structure of the work is determined at every level by the logic of the source material.

Act three — devoted to American interpretations of the Abraham legend — begins with what is, by most accounts, the liveliest section of *The Cave*. This perceived liveliness may simply be an effect of cultural proximity, but it is not entirely attributable to the bias of the audience, nor even to the fact that Reich and Korot, as Americans, are able to engage their American interviewees on a more personal level. It seems also to have something to do with the idiomatic rapidity of American English spoken by native speakers. Whatever the case, act three has a livelier tempo and relies to a much greater extent on humorous effects and ironic juxtapositions. In the following exchange, for example, the punch line is proffered by the voice of Richard Serra, in response to a long, slowly building passage, derived from the statement, “when people say to me ‘it [the Bible] has nothing to say to us’ I think they’ve never read it”. (Since it would be fastidious to transcribe the entirety of this musical passage, which lasts for almost a minute, I have given only an indication of the way repetition is used to prepare the punch line. The segments in brackets are sung by the choir, in alternation with the sampled source.)

V. Davis: When people say... when people say... [when people say to me...] when people say... [when people say to me...] when people say... when people say... [when people say to me...] when people say... when people say to me ‘it has nothing to say to us’ I think they’ve never read it.

R. Serra: Old Testament—never read it.

There are several effects of this kind spread throughout the third act. But humour is not the only effect sought there. I have also mentioned the numerous confessions of ignorance about the biblical tradition, which is usually presented with a certain sense of melancholy and which leads into an extended meditation on cultural loss. There is also, however, some fairly erudite analysis of the biblical texts in act three (concerning the flight to Egypt, encounter with the pharaoh, the binding of Isaac, and discovery of the cave). To be sure, some of this plays on the particularly American perspective of the interviewees (who compare Ishmael to James Dean and Hagar to Lillian Gish, reference Melville’s Ishmael and Abraham Lincoln, situate Hagar’s predicament in relation to the oppression of American blacks, and so forth), but some of it is quite disciplined, almost scholarly in nature. Perhaps surprisingly, even the scholarly commentary furnishes some excellent melodic material, including one of the most interesting passages of the third act, which is derived from a statement by Carl Sagan.

I think of Abraham like this: It’s 21 hundred B.C. or thereabouts. He’s living in the 3rd dynasty of Ur. It’s a polytheistic society. The chief god is “Nana”, who’s the moon god. Abraham grows up, he’s a city kid. his father makes idols, he crafts idols.

Figure 5 : Sagan "Nana"

The musical score for Sagan "Nana" is presented in three systems. The first system shows the beginning of the piece with a key signature of two flats (B-flat and E-flat) and a common time signature (C). The Voice part begins with the lyrics "I think of A - bra - ham like this". The Piano part provides a harmonic accompaniment. The second system continues the melody, with the Voice part singing "it's (uh) twen - ty one hun - dred B C or there a - bout". The Piano part features a triplet of eighth notes in the right hand. The third system shows the Voice part singing "He's li - ving in the third dy na sty of". The Piano part continues with a steady accompaniment. The fourth system shows the Voice part singing "Ur it's a po ly the is tic so ci e ty The". The Piano part features a triplet of eighth notes in the right hand. The score is written for Voice and Piano (Pno.) and includes lyrics in English.

Figure 5 displays a musical score for the song "Nana" by Sagan. The score is written for Voice and Piano (Pno.). The key signature is two flats (B-flat and E-flat), and the time signature is common time (C). The lyrics are in English.

The score is divided into three systems, each with a measure number (1, 2, 3) indicating the start of a new line of music.

System 1 (Measures 1-2):

- Measure 1:** Voice: "I think of A - bra - ham like this". Piano: Accompaniment.
- Measure 2:** Voice: "it's (uh) twen - ty one hun - dred B C or there a - bout". Piano: Accompaniment.

System 2 (Measures 3-4):

- Measure 3:** Voice: "He's li - ving in the third dy na sty of". Piano: Accompaniment.
- Measure 4:** Voice: "Ur it's a po ly the is tic so ci e ty The". Piano: Accompaniment.

System 3 (Measures 5-6):

- Measure 5:** Voice: "Ur it's a po ly the is tic so ci e ty The". Piano: Accompaniment.
- Measure 6:** Voice: "Ur it's a po ly the is tic so ci e ty The". Piano: Accompaniment.

Figure 5 : Sagan "Nana" (continued)

9
(uh) chief God is Nan-na who's the Moon God

Pno.

12
A-bra-ham grows up he's a ci-ty kid his fa-ther makes ido - ls he crafts

Pno.

15
id - ols

Pno.

One would not expect this to be an especially melodious statement, but Reich deploys it to marvellous effect, taking this apparently simple, unassuming piece of factual prose and doubling it on marimba and strings in a way that highlights its swooping melodic line, rhythmic energy, and brilliant use of suspense and motivic repetition. He also adds an instrumental accompaniment that serves both to punctuate the syntax of the statement, revealing its inherently dramatic structure, and analyzing it in terms of a striking harmonic progression. This passage, which is,

musically speaking, quite beautiful, is like a tribute to the substantial oratorical gifts that have enabled Sagan to be so successful as both a teacher and media figure.

Reich has often used this kind of relation between melody and personality to explain his interest in the speech-melody technique. He argues that the speech melodies reveal something about that speaker's personality which the musician can discover empirically, by analyzing speech in melodic terms.

As Janáček said, "...Speech melodies are windows into people's souls... for dramatic music they are of great importance." Important because it's impossible to separate the music from the person speaking. (libretto, p. 21)

This explanation of speech melody's inherent interest—as a window into the soul of the speaker—seems fairly controversial. After all, as we've already seen, the transcription of the speech melody entails the loss of many of the characteristics of speech most likely to reveal the speaker's personality (those myriad minute characteristics of speech that cannot be transcribed in conventional musical notation). Indeed, this is precisely why Reich needs to incorporate the video and audio tapes into the performance: without them the personality of the speaker would be lost. Even in the case of the Carl Sagan passage just analyzed, it is far from clear that the musical analysis provides any knowledge that we couldn't have discovered by listening to Sagan's voice on our own. For this reason, I believe that we need to look elsewhere if we are to explain Reich's singular commitment to the technique. And the best place to start is with the concept of necessity. This concept has particular importance for Reich, because it is the one he has always used to defend his work against those detractors who accuse it of a lack of intellectual rigor or musical complexity.

Conclusion: speech melody and intellectual integrity

Based upon the preceding analyses, with their emphasis on the description of melodies, the listener attuned to the formal complexities of music in the Western high art tradition, and adept at the kind of "structural listening" promoted by such musicologists as Schenker and Adorno, might feel that *The Cave* offers little in the way of a specifically musical intellectual challenge. This is a complaint that has been consistently levelled against Reich's music, and against minimalist music in general. As the composer Kyle Gann recently put it: "Despite having produced the most publicly popular new works of the last third of the 20th century, minimalism remains controversial, damned in academic and intellectual circles" (Gann, 2001, n.p.). It is true that if by "intellectual content" we mean formal complexity or harmonic innova-

tion, then Reich's music will disappoint: in *The Cave*, as in all of Reich's music, the search for Schenkerian structures or major contributions to the tonal language of Western music is bound to fail. Indeed, *The Cave*, in this sense, seems doubly damned. Even in relation to the rest of Reich's oeuvre, the structural logic governing *The Cave* might seem difficult to locate. Reich had always explained the value of his work in terms of regular, predictable processes. Thus he writes of the importance of "psycho-acoustic by-products" in the phase music, those phantom melodies and rhythms that are heard by the listener as patterns overlap and interact.

The use of hidden structural devices in music never appealed to me. Even when all the cards are on the table and everyone hears what is gradually happening in a musical process, there are still enough mysteries to satisfy all. These mysteries are the impersonal, unintended, psycho-acoustic by-products of the intended process. (Reich, 1974, p. 10)

But *The Cave* is different. There, analysis must focus, not on the nature of the principles that govern the gradual processes at work in the music (there are none, at least not of the kind he had used previously), but on the relationship between the speech samples and the music derived from them. In *The Cave*, psycho-acoustic by-products play an insignificant role. But that function of the music is replaced by what I would call "psycho-semantic by-products", where the juxtaposition of different speech fragments emphasizes now one, now another of the linguistic connotations of each of the fragments. The psycho-acoustic effects of the phase music have been transferred in *The Cave* onto the semantic level defined by the interplay of connotation and denotation.

This, at first, might seem like an abandonment of Reich's earlier compositional principles, but it is not. In each case, the necessity of every musical event is guaranteed by its status as the by-product of a pre-established mechanism. Indeed, I would argue that the speech-melody technique can even be reconciled with Reich's devotion to the principle of music as a "gradual process". The difference is that in the case of speech melody the "gradual," "processive" nature of the composition is guaranteed by the place of the speech fragments in the discourse from which they are taken (those 150 hours of documentary footage), rather than the musical structure into which they are inserted.

If, as mentioned earlier, Reich had never previously shown much interest in melodic inventiveness, it is because what truly interests him is the ability of music to refer the listener to a larger law, which the composer discovers, but over which he has no control. And it is only with the discovery of the speech-melody technique that he was able to find a way to devise satisfactorily interesting melodies that could be derived from an impersonal principle (complete reliance on the source material) while maintaining the semantic integrity of speech. In a sense, then, the documentary footage plays a role like that of the tone row in serial music: it is a form of artistic necessity, the enabling constraint that makes this alternative form of composition possible. Unlike the serial manipulation of tone rows, however, Reich's manipulation of the documentary material can be evaluated by listeners with no

special musical training or expertise. This too is an important principle for Reich, who has defended the intellectual rigor of his earlier music by insisting on what he calls "total sensuous-intellectual involvement" (Reich, 1974, p. 52).

With *The Cave*, Reich becomes a composer who makes use, not just of the acoustic properties of language, but also its semantic properties: he composes simultaneously on both planes. This point is crucial for understanding the primary innovation of *The Cave* with respect to traditional vocal music. Reich composes with words in such a way that he is able to maintain the two-tiered structure of the linguistic sign throughout — the acoustic and the semantic properties of words remain as indissoluble as they are in ordinary speech. Unlike the traditional composer, who begins with words on the one hand and melodies on the other and tries to reconcile them as best he can, Reich's procedure ensures that the bond between the two is unbreakable, like the two sides of a coin. He composes, in a sense, holistically, working on both the bodies and the souls of the words, in an idiom capable of orchestrating thoughts and arguing with tones. He does not compose music to accompany words, he composes **with** words.

This new emphasis on the interdependence of the semantic and the acoustic enables Reich to transcend many of the self-imposed limitations of minimalist music, and to do so without abandoning the basic principles that had governed the intellectual project of minimalism. The use of the speech-melody technique humanizes his music, allowing it to grow in organic, rather than mechanical, patterns. It also has the effect of enabling Reich to engage more directly in the extra-musical world of human concern, bridging the gap between political content and abstract formal procedures. As one reviewer put it, *The Cave* "shows not only that media and technology can be vessels for complex ideas, but that they can also be used for humanistic debate" (Goldberg, 1993, p. 84). For these reasons, I believe that even those who have been put off by the characteristic elements of Reich's earlier music can find much to like — and learn from — in *The Cave*.

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