Composing Melodies with Tune Blocks

French, Vienna, Portals

To tackle the tune called "French," I first listened to each of the five blocks in turn. I immediately noticed that blocks 1 and 5 were very similar. Each of them consisted of three evenly spaced attacks, with the first pitch high, the second pitch slightly lower, and the third pitch simply a repeat of the second pitch. Furthermore, it seemed that in both blocks, the interval between the two pitches was the same. However, block 1 was overall higher in pitch than block 5.

Block 2 was of the same duration as 1 and 5, but there were more notes. The tune block moved upward in pitch, so it seemed as if it might fit into the piece as the antecedent in a phrase. Block 3, on the other hand, consisted of four descending pitches. After experimenting with it a little (mainly by placing other blocks after it), I determined that block 3 was twice as long as 1, 2, and 5—with the final note in block 3 being exactly the length of each of blocks 1, 2, and 5. The fact that the notes descended seemed to indicate that block 3 might be the end of a phrase.

Block 4 was interesting in that the entire block was twice as long as 1, 2, and 5, but although there was more than one pitch in the block, the block itself did not seem to change pitch. Rather, it hovered around one fairly high note. This indicated to me that block 4 was probably not a beginning, but rather somewhere near the end—a climax, perhaps, due to the relatively high pitch.

I hadn't found any clearcut beginnings in my initial survey of the tune blocks, so I decided to begin with the end. If block 3 was indeed an appropriate ending, it implied something about the part of the tune that came immediately before it. Block 3's four descending notes gave the implication of descent, not only within

the block itself but before it as well. The last pitch of the preceding tune block should therefore be higher than the first pitch of block 3. I suppose my reasoning was that for an ending to be a truly musical ending, one had to come from somewhere. There was no point in coming from below only to end in the same place. The more I think about it, though, the less clear this idea seems. My intuition told me that the note before block 3 should be higher than the first note of block 3, and I remain convinced of that, but I am puzzled as to why I know this so definitely.

It turned out that the only two tune blocks ending with pitches higher than the start of block 3 were blocks 2 and 4. It was clear to me that I should use one of these blocks. I noticed that block 2 was the only block with overall upward motion, whereas block 4 was already at a high note when it began. Not only did it seem uninteresting to place block 2 directly before block 3 (going up only to come down immediately), but it occurred to me that the only way to go upward to the high pitch of block 4 was via block 2. I was satisfied with putting block 2 before block 4, so that instead of coming down immediately, the melody would linger at the high point (during block 4) before coming back down.

I now had a sense of the overall movement of the piece. It would start at a low pitch, move upward to the climax (block 4), and then come down for the ending. Unfortunately, this insight was not very helpful when it came down to designing a beginning for the piece. It clearly was rhythmically incomplete—I needed the equivalent (in duration) of three block 2s. I suppose it is really ingrained in us that we need four "measures" in a phrase!

Since I had already accomplished my melodic motion (up and back down again), I eliminated blocks 2 and 4 (which moved upward or were high in pitch) and focused on the other blocks. I soon became convinced that block 3 could only be at the end of a phrase, because its final note was so long that putting it anywhere but at the end of a phrase would immediately break up the phrase! I hadn't previously realized how much a piece

of music needs to be kept moving. No matter where in a phrase I placed block 3, it behaved like an ending, and if block 3 came too early, the tune seemed to die.

So I eliminated block 3 from the beginning and focused on blocks 1 and 5. Since block 1 was higher in pitch than block 5, I had the idea that I could place block 5 at the beginning and then put block 1 after it, to contribute to the overall upward motion that was about to occur. To make the rhythm work, though, I still needed another equivalent of 1 or 5. First I tried 5, 5, 1, 2, 4, 3. I thought it sounded okay, but the repetition of block 5 at the very beginning was boring. Even worse, however, was 5, 1, 1, 2, 4, 3. The first two blocks didn't sound like a beginning, and the piece seemed to get stuck on the repetition of block 1. I decided to try putting block 2 into the second position: 5, 2, 1, 2, 4, 3. The beginning of the piece sounded fine, but to my surprise there was a problem not in the beginning but with the fourth tune block (the second occurrence of block 2). The interval generated by jumping from block 5 to block 2 created the expectation, in my mind, of jumping the same interval upward from block 1 to block 2. The first note of block 2 was the same as the first note of block 5. But since block 1 was higher in pitch than block 5, going from block 1 to block 2 made it painfully obvious that the first note of block 2 was not as high as the first note of block 1. Ideally, 2 could be shifted up one pitch and the tune would move along fine.

Having eliminated all possibilities of placing block 5 at the beginning and not liking any of them, I decided that perhaps it would be possible to place block 1 before block 5 even though it was lower. The advantage of doing this quickly became apparent. Blocks 5 and 2 began on the same note; therefore, alternating 1, 5, 1, 2 had a certain symmetry to it. In fact, I liked the sound of block 1 followed by block 5 that I decided to make a second phrase in my piece, repeating the 1, 5 pattern. In the first phrase, I used only "low" tune blocks: 1, 5, 1, 2, 1, 5, 3. This allowed me to build up more slowly to the climax of block 4 in the second phrase: 1, 5, 1, 2, 4, 3. The structure of the overall

tune is therefore a (1, 5, 1, 2), b (1, 5, 3), a (1, 5, 1, 2), c (4, 3). On the topmost level, this reduces to a structure of A A', which is quite common among many of the tunes we studied in 1.1, but the a b a c structure is not common among those tunes. Unlike the tunes in 1.1, which often have a repetition of the phrase endings (i.e. a structure like a a b a or a a' b a'), in "French" I repeated the beginning of my phrases and changed the ending. I think this is also uncommon in some of the more complex orchestral pieces we listened to. The Beethoven and Hayden pieces returned to their original themes after exploring a secondary theme.

I next chose to work on "Vienna," which consisted of six blocks. On my initial listen, I decided that blocks 4 and 5 had to form a sequence. Not only were they half the duration of all the other blocks, but they shared a rhythmic pattern and pitch intervals. Block 5 was one pitch higher than block 4. Since the blocks themselves seemed to travel downward in pitch, it made sense for me to order them from high to low—a descending sequence. Placing them in the opposite order (4, 5) sounded wrong, I think because the highest note in the sequence is not a very stable one and it sounds jarring. However, if the blocks are ordered 5, 4, the "jarring" pitch is not the one we hear in the melody because we are listening to the overall downward movement in pitch.

Block 2 leaped out at me. It was clearly an ending. It used as its third-to-last pitch the highly unstable 7th, and followed through with a resolution to the note directly above it. Why did the last note in block 2 sound so definitely like a tonic, without any reference other than the tune block itself? It's hard to say. I think it must be that people in Western countries, without quite realizing it, are very attuned to the musical scale. In the musical scale, not all pitch intervals are equal, so simply by listening to the relationship between notes, we can tell where in the scale we are. The first two notes in block 2, for example, are just half a step apart in pitch. This is also true of the unstable note I mentioned earlier (the 7th) and the final note in the block. By placing these

two sets of half steps in context with each other, we are able to build the whole scale in our minds.

I am not completely satisfied with this explanation because I believe that if I heard only the first five notes of this tune block (ending on the note that is the 7th), I think I would still be able to pick the tonic out even though I had not heard it. I don't know why the fifth note in the block sounds so unstable all on its own.

Blocks 2 and 3 had a common rhythm and also shared the first five notes. Block 3, however, did not sound like a resolution. Unlike block 2, block 3 went upward, like a question that had to be resolved. This pointed to block 3 being the end of an antecedent phrase and block 2 being the end of the corresponding consequent phrase.

Blocks 1 and 6 were similar to each other. They had the same rhythm and were almost alike in pitch structure, but block 6 was much lower and ended on a stable note—another phrase ending.

The notes in blocks 1 and 6 were of longer duration than the notes in other blocks. My tendency is to start with slow notes and move on to faster, more complex tunes. I think this is more interesting. It's kind of like variations on a theme in a way.

Blocks 1 and 6, when played back to back, sounded like a call and answer. I decided to use that sequence as an introduction, thinking that a return to block 6 could form the end of the phrase. I was easily able to incorporate the descending sequence consisting of 5 and 4 into the middle, ending up with: 1, 6, 5, 4, 6.

Another very satisfactory ending to the descending sequence 5, 4 turned out to be block 2. This melody sounded almost exactly like the ending of the first phrase (5, 4, 6), except that it somehow sounded more like an ending than block 6 (perhaps due to the unstable 7th? or maybe the fact that the rhythm was more complex?). At any rate, since block 2 had a

corresponding antecedent, block 3, it wasn't hard to devise the antecedent 5, 4, 3. Putting the whole piece together, I had: 1, 6, 5, 4, 6; 5, 4, 3, 5, 4, 2.

"Vienna" was a much simpler piece for me to construct than "French." Sequences and endings were not as clear to me in "French" as in "Vienna." I think the result I obtained with "Vienna" is much more elegant than the result I obtained with "French," but that may be due to the fact that the tune blocks fit so easily with my preconceived notions of what a tune consisted of.

The structure of the tune is as follows: a a' b a'; b c b c'. The first phrase has a return to a' (which is simply block 6). The second phrase is an antecedent-consequent phrase in which only the endings differ. What ties the two phrases together is the b theme that occurs in both phrases. In addition, although it may not be clear from looking at the structure, a' (block 6) and c' (block 2) are very similar to each other. Although one might look at the two blocks and not see a great resemblance even though they end on the same note, they perform the same function within each phrase and for this reason sound alike.

This structure is somewhat like that of Haydn's minuet. First there is a statement, followed by a development of some of the ideas in the statement. The difference with the piece I created is that I don't have any sort of recapitulation. Looking back on it now, perhaps it might have made sense to add a resolution section to "Vienna." However, I think it would have been boring simply to repeat the opening phrase. I think I would have needed more tune blocks to make a resolution section that was not mere repetition.

"Portals" fascinated me when I first heard the blocks. It seemed that there was a tune in there, a cheerful and exotic one, almost like wind chimes, wanting to get out, but it badly needed help. There were seven blocks, and I had trouble remembering them because their timing and pitches didn't seem to bear much of a relation to—well, to anything. I discovered

that I could stand listening to groups of tune blocks with “messed-up” pitches—in fact, I found that I could get used to strange pitches, which was a little dangerous if I wanted to compose a “correct”-sounding tune—but I couldn’t make heads or tails of the tune blocks as long as their rhythms were nonstandard. So I initially focused on altering the rhythms until I could do something intelligent with the notes themselves.

I had many initial reactions to the actual pitches of the blocks, almost all of which turned out to be unhelpful later on. My log states that block 1 is painfully high and unstable, that block 2 ascends almost one octave that block 3 descends and sounds like it could be made into a resolution. Block 4 was a simple half-step descent—not clear what that was good for. Block 5 was an ascent that sounded like a beginning; I wrote that it soared upward. Block 6 was bubbly and cheerful and descended but remained high. Block 7 was interesting. In terms of pitch, it moved upward, but what one heard was a descent. It consisted of three notes decreasing, but the third note was played an octave higher than the other two. It was interesting, but I couldn’t make heads or tails of it. I couldn’t tell if it was a resolution or not.

At any rate, my first task was to get a rhythm going so I could see where some of the melodies could fit in. Some of the blocks (2, 5, and 7) had a short-short-long pattern, which led me to the idea that a short-short-long rhythm might work for most of the piece. I decided to start out by putting 5 and 6 at the beginning next to each other, with the justification that they seemed to have the same mood and were also in the same pitch area. Somehow, though, this combination sounded too fast for a beginning. I then hit upon the idea of trying 6 first and following it with block 5. I liked the rhythm it generated very much. It was energetic, and due to an additional long note in block 6, the rhythm seemed like long-short-short long-short-short. It’s important to realize, though, that the “down beat” of the rhythm generated by the combination did not necessarily occur at the beginning of a tune

block. When block 5 followed block 6, the beat for the second “measure” came from block 6.

Blocks 2, 5, and 7 all had a short-short-long meter. If block 6 were placed at the beginning, any sequence of these blocks would result in a long-short-short rhythm. However, the note durations of these blocks varied widely. I decided to change the rhythms of these blocks so that “long” was equal to a duration of 8 and “short” was equal to a duration of 4, or half of a long note. I chose this because blocks 6 and 5 (my beginning) seemed to have notes of those durations. Actually, when I looked closer, it turned out that block 6 had note durations of 7, 4, 4, and 8 (my ears had not picked up on the subtle difference between 7 and 8, but I changed it for completeness), and block 5 had durations of 4, 4, and 12. So I did not have many changes there (just from 12 to 8). But block 2 had durations of 3, 3, and 16. Metrically I would have had a great deal of trouble matching that with the 4, 4, 8 rhythm in block 5. So I changed block 2, and block 7, to 4, 4, 8 rhythm as well. I labeled each of the rhythmically changed blocks with an “a” at the end: 6a, 5a, and so forth.

I then stuck blocks 2a and 7a at the end of my beginning (6a, 5a) and seemed to detect a gradual descent into a tonic at the end of 7a. I thought that the sequence 2a, 7a could make an appropriate phrase or piece ending, once modified a little bit for pitch. So I left 2a and 7a at the end and tried to construct a middle.

I wanted to avoid block 1, which seemed extraordinarily piercing and not good for near the beginning, and block 4 consisted of two notes only which didn’t seem that interesting, so I tried putting block 3 after block 5. I liked the four notes descending that 3 provided; I also liked the rhythmic variation: blocks 6 and 5 formed a faster part, and block 3 was slower. But block 3 was too slow to keep the piece moving, and (of course) the rhythm was unpredictable. I created 3a by changing the four notes in block 3 to a duration of 8.

When I stuck my new piece together (6a, 5a, 3a, 2a, 7a), I liked the sound of it. But the phrase didn't seem to end where I had stopped it. It needed some additional notes. I added block 4 to the end, which until then had had no meaning for me whatsoever, but it sounded very nice at that particular point. It had an interesting syncopated rhythm due to its first note duration of 6. I liked the sound of the syncopation at first, but grew tired of trying to think around that rhythm rather quickly and so changed that note duration to 8. If I were writing a jazz piece, I would have left the duration as 6.

Having completed my first phrase, I decided to begin my second phrase. I wanted to start high (with block 1—I couldn't think of anywhere else to put it) and then have my piece descend to more or less the same pattern as in the first phrase. Putting 5a right after block 1 seemed like a funny jump rhythmically. When I put 6a after 1 instead, I sensed that the "true" rhythm of 1 was exposed (although it was not perfect yet). Placing 6a after 1 gave me an insight as to how I should assign the note durations: a double-length long note (i.e. duration of 16) followed by 4 notes with a duration of 4. After 1a, I simply added 6a, 5a, 3a, 2a, and 7a as in the first phrase. I noticed that if I ended the phrase with a second 7a instead of using 4a, it would sound like an ending, so I made that small change.

I liked the second phrase I had just created, and it did sound exotic and like wind chimes, but for some reason the phrase just seemed to be too long. Part of the problem was that adding notes to the beginning causes the whole rest of the tune to be translated to a later point in time. In the first phrase I created, there was a high note beginning a descent on the fifth beat (when counting a long note as one beat), and in the second phrase, that same descent begins at the ninth beat. Somehow that was too late. Since 1a was four beats long, I tried making a tune block called 1b, which added the high note which I wanted to occur at the fifth beat to the end of 1a. I

then tried out the order 1b, 3a, 2a, 7a, 7a (3a began on what had formerly been the tenth beat, so basically what I was doing was cutting out beats 5 through 8 of the phrase). The resulting phrase sounded very neat, cut and dry. I thought it descended too suddenly. Also, the "high" note of the fifth beat didn't sound very high when put next to the very high notes of the rest of 1b. In short, I preferred the "sprawl" of my earlier version of the phrase to the one I had just created. Back to the drawing board.

My composition was as follows: 6a, 5a, 3a, 2a, 7a, 4a; 1a, 6a, 5a, 3a, 2a, 7a, 7a. I thought that I could expand the second section into a "middle" section, and add a third section to the end, in hopes of controlling the "sprawl" that way. I began my middle section with 1a, 6a, 5a, because I liked that portion of it, and then I sang to myself what I thought the next part of the tune should sound like. It turned out to have a rhythm very much like block 3a. The principal difference between the block I wanted and block 3a was that block 3a descended in pitch, and I wanted a block that hovered around a single pitch. I created the block I wanted, 3b, out of 3a, and made the final note of my new block long enough to conclude the phrase.

Once the middle phrase was finished, it was clear to me what my final phrase would sound like. It would be a repeat of the initial phrase, but it would conclude with second 7a instead of 4a. Actually, a 7b was required instead of a second 7a—the only change from 7a was that the duration of the final note would be long enough to make the phrase sixteen beats in length, as the other two were.

By this point I had: 6a, 5a, 3a, 2a, 7a, 4a; 1a, 6a, 5a, 3b; 6a, 5a, 3a, 2a, 7a, 7b. I was happy with my rhythms, but the pitches of the notes left something to be desired. I am very fond of what I call the "rhythmic" version of "Portals" that I created, but there was no way that I could think the piece was finished.

The pitches themselves were not as hard to change as the rhythms had been. I clearly took the pitches of the music into account when I arranged the tune blocks in the first place in the sense that I had a general idea of where the piece was going. I had paid attention to details such as ascending/descending pitches and to how the notes in the tune blocks sounded in context. I didn't have to rearrange tune blocks anymore. My tune was, structurally at least, complete. My main task was to modify the pitches that I didn't like and exchange them for pitches that would seem more natural to my ear.

The pitches that seemed "unnatural" were based on my own idea of which key my tune was in. It was hard for me to tell which key I was in based on the first two tune blocks—6a followed by 5a. I liked the flavor of 6a and then 5a, but I had no idea what key they were in. Now that I have examined them more, I think the reason for my difficulty in figuring out what key they were in, and also for my enthusiasm for the piece, was that they were in a minor key but at the same sounded like a happy tune.

At the time, I didn't know what to do with 6a and 5a. I proceeded to 3a. It was then that I realized that even though I couldn't figure out exactly what 6a and 5a were telling me, they had to be telling me something, because I had expectations about what the first note of 3a was going to sound like. I knew that the first note of 3a was too flat. I adjusted that note to the correct pitch and changed the name to 3c.

I had trouble figuring out what the rest of the notes in 3c were supposed to be, so I worked backwards from the end of the first phrase. Immediately I realized that the second note of 4a was too sharp, so I adjusted it, making 4c. It was a very strange experience. Here I was, knowing which pitches were correct, but not having an inkling about the key I was in. Was I going to be in multiple keys? I had a horrible feeling that my three sections were going to be in different keys and that they wouldn't sound right together. What would I do in that case?

I moved on to editing 2a. Now that block 4 had been fine tuned, it was easy to tell that the last note of 2a had to be higher. I found that I liked the first note of 2a a whole step higher, too. I realized that 2a was the equivalent of a G7 chord (that is, if you're in C major).

I moved on to the middle phrase. My first reaction was, oh no, it's the wrong key! But that wasn't exactly true. My reaction was more likely to do with the fact that the difference between the previous note (from the end of 4c) was nearly (and I mean very nearly) an octave. Raising the first note of 1a half a step (producing 1b) made me much happier. The last note of 1b also had to be altered slightly. Having fixed that, the first note of 6a, 5!, didn't follow. I couldn't figure out which pitch to replace it with. When I attempted to replace the 5! with 6!, I wrote in my log: "disaster." When I tried to change the note to 4!, it sounded as if I was changing from some minor key to some other minor key rather abruptly. I finally settled on 3!, writing in my log: "all right, but stilted." I think it remains the weakest point in my tune.

I didn't change the chromatic ending of 7a (or the near-octave leap to the tonic). That was part of the flavor of my piece. I expect that it will sound unusual to others, but I don't think it sounds so foreign as the individual tune blocks originally did, and I also think it's rather pretty. Maybe I am flattering myself.

One thing that is rather unusual about these tune blocks is the way in which they are organized. Even though I was careful to allow sixteen beats per phrase, the tune blocks themselves are all manner of lengths. For this reason, I could not combine them in logical-looking larger blocks. The structure of the music is as follows: a b; c d; a b', leading to an overall structure of A B A'. This is almost exactly the structure in Beethoven's 9th and to some extent Haydn's minuet (I don't have antecedent-consequent phrases like

he does), with the playing of a tune, the development of the musical idea involved, and a return to the original tune. My theme is somewhat less "intuitive" a tune than Beethoven's, though. I found that while I was listening to "Portals," the initial section sounded very jarring and unusual, but I got used to it by the middle section and recognized it with pleasure in the third section.

How were the "Portals" blocks strange? First, the durations of the notes were very complex in their relations to each other, often so complex that I could not understand what the music was saying by listening to such rhythms. One block would have a note with a duration of 16 and another would have a note with a duration of 18. We humans (at least in Western countries) are very bad at keeping time with any music with a beat much more complex than three or four. That is why I had to change the rhythms before I could start to think about exact pitches! The pitches, of course, were also strange. The blocks were not in a specific key—I believe I more or less created my own key. Many of the pitches were "off" by a half step. For example, in one case the notes were half a step away from an octave. I was forced to choose between pitches—I could have one or the other in an octave, but not both of those pitches. That would have been too hard to listen to. I cannot say what exactly motivated me to choose one pitch over another. Generally speaking, though, I found it hard to listen to notes that were a half step apart from each other—I appreciated the chromaticism only when I was listening to a very unstable series of notes. Otherwise, I felt quite urgently that I had to change one of the notes.

It is an interesting experience to listen to my "rhythmic" version of "Portals" right next to the completed version that has had the pitches altered. If one listens to the "rhythmic" version first, the two pieces sound almost exactly the same, except that the completed tune sounds a little brighter. But if one listens to the completed version and then the rhythmic version, the second piece sounds very much worse than the first one. The resemblance is certainly there, but

once I have gone on to hearing the completed version, I have trouble going back to the earlier, much less tuneful, version.