

# THE FUGAL ANSWER

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**I**N FUGAL writing, the “answer” is the presentation of the fugue subject by the second voice to enter. The answer is “real” if this presentation is an *exact* transposition of the statement by the opening voice (every note a fifth upward or a fourth downward from the original), “tonal” if not exact. In traditional fugal writing, there are two principal types of tonal adjustment that may occur in the answer—one near the beginning of the subject (I will call this kind of adjustment “initial”), one later on (I will call this kind “terminal”). We will look at these in turn.

The diatonic scales, upon which the church modes as well as our modern major-minor tonal system are based, have an uneven number of pitches (pitch-classes) per octave: seven. This has had manifold consequences for Western music, one of the most important being that no pitch in a diatonic scale will divide an octave equally. A choice must always be made between a note significantly *below* the midpoint of the octave (the subdominant degree) and one significantly *above* (the dominant). The overtone series given us by Nature, with its array of ever-decreasing interval sizes between successive partials as we ascend, inevitably militated in favor of the dominant as the principal dividing note of the octave—witness 12th-century organum and the 13th-century motet. Triadic language, operating in both the melodic and harmonic dimensions, became prevalent by the later 15th century, and gave a further boost to the fifth scale degree, since that degree (and not the fourth degree) is a member of the tonic triad.

By the 16th century, vocal polyphony generally settled on densities of four to six voices. Each voice had, roughly speaking, a half-octave to call its own turf—with neighboring voices to either side—and thus would most often imitate neighboring voices at the fourth or fifth. Already in this repertory we frequently see “tonal” adjustments in points of imitation. As in Baroque fugues, the objective apparently was to translate the two most important tones of the scale—tonic and dominant—into each other, thereby reinforcing the home tonality and its principal sonority. In the following example, the four-note motifs introduced by the two entering voices are not treated as *different* melodies (because of the differences in melodic interval), but as variants of the *same* melodic idea, and are interpreted by us as such:

Ex. 1. Byrd, *Look downe, O Lord*



By the late 17th century, fugal expositions regularly featured “initial” tonal adjustments. While the answer as a whole would be a transposition of the subject up a fifth or down a fourth, a dominant degree found early in the opening statement of the subject would usually become the tonic degree (rather than the supertonic) in the answer. Often melodic neighboring notes surrounding that dominant note in the subject would be adjusted as well, to preserve melodic identity and elegance:

Ex. 2. Buxtehude, *Praeludium in D*



In the above example from Buxtehude, you may note that the answer is “harmonized” by the continuing opening voice with the opening tonic key in mind: there is no hint of a modulation to V in the answer was still the case more often than not at that time. All that would change in the next generation—particularly in the fugues of J.S. Bach. Eighteenth-century harmony was gradually moving in the direction of the idea of tonal dichotomy—two keys vying with each other for supremacy throughout a movement—a concept that was to receive its ultimate expression in the classical “sonata-allegro”

form. In the first two entries of a Bach fugue subject, we usually see this competition between tonic and dominant played out in microcosm. Not only is there a balancing act between the tonic and dominant *degrees* of the tonic scale (along with the triads based on those degrees), but also a contest between the rival *keys* based on these tonic and dominant notes. If the subject stays in the home key throughout (as most subjects do), ending with a melodic progression suggesting a V–I cadence in the tonic key, the answer will, to a large extent, be harmonized *in the key of V*, a mini-modulation to that key having taken place. (The third voice to enter will present the subject an octave higher or lower than the opening voice had, back in the home key of I. A fourth voice, if there is one, would again present the answer form of the subject, an octave higher or lower than the second voice, once more largely in V.) Within the context of this tension between keys, an “initial” tonal adjustment in the answer—in the form of the substitution of the tonic degree of the original scale for the supertonic—represents a subtle tipping of the scales in favor of the tonic key from the outset, foreshadowing the eventual outcome of this key struggle, which is *always* a victory for I! Harmonically, the “initial” adjustment also facilitates the ensuing modulation to the dominant key, by permitting the same harmony—I of I, which will now be reinterpreted as IV of V—to serve as a pivot chord:

Ex. 3. Bach, *Fugue in G Minor, Well-tempered Clavier, Book I*



If, on the other hand, the subject modulates within itself from the original tonic key to the dominant key, ending with a cadential V–I gesture in the latter, a different sort of tonal adjustment (which I call “terminal”) is needed in the latter stages of the answer, in order to steer that answer back to I. (A “real” answer to a modulating subject would lead us to the key of the supertonic at its end, thereby initiating a potential open-ended spiral of keys up the circle of fifths, further and further away from the original tonic!) This “terminal” adjustment consists of moving the latter stages of the answer one scale-degree downward—relative to the level on which the answer had begun—starting at some melodically congenial point. How to find such a congenial point? There is, alas, no ready, hard-and-fast formula here, but in order not to disfigure the subject, it is best to look for a caesura or natural “splice-point” in the melody. Two illustrations follow from Bach’s *Well-tempered Clavier*:

Ex. 4. Bach, *Fugue in E-flat Major, Well-tempered Clavier, Book I*



Ex. 5. Bach, *Fugue in G-sharp Minor, Well-tempered Clavier, Book I*



(“Terminal” adjustment starts on second note!)

I will now propose a relatively straightforward, systematic procedure to determine an answer to a fugue subject, based on the concepts outlined above. On a piece of scrap paper, write the subject in its original form on one staff. On the staff directly underneath, write an exact transposition of the subject up a perfect fifth or down a perfect fourth. Line up corresponding notes of these two versions carefully on top of each other. The latter version, which I shall call “Transposition A,” constitutes a real answer to this subject; and if the subject stays in the tonic key and there are no prominent dominant notes early in the subject, this real answer will be the appropriate one. If, however, there is a prominent dominant note early in the subject (or more than one such), and/or the subject modulates within itself to the dominant key, write a second transposed version of the subject (“Transposition B”) on the staff directly below Transposition A—this one up a perfect fourth or down a perfect fifth. The tonal answer we seek will be a combination of notes from Transpositions A and B—and *only* from these two transposed versions, except for possible chromatic changes.

If there, indeed, is a prominent dominant pitch early in the subject, consider the pitches corresponding to this note in Transpositions A and B: We find the supertonic degree of the home scale in Transposition A, the tonic degree of the home scale in Transposition B. Clearly, we should opt for Transposition B here. Furthermore, adjoining notes should be taken from Transposition B insofar as melodic beauty or integrity suggests that this is desirable. The remaining notes of the answer should, on the other hand, follow Transposition A:

**Ex. 6. Bach, Fugue in C Minor, *Well-tempered Clavier*, Book I**

The image shows three staves of musical notation. The top staff is labeled 'Subject' and contains a melodic line in C minor. The middle staff is labeled 'Trans. A' and shows the subject transposed to D minor. The bottom staff is labeled 'Trans. B' and shows the subject transposed to C major. Arrows and circles highlight specific notes in the transpositions, illustrating the concept of 'initial' and 'terminal' adjustments.

(As you can see, the entire answer is from Trans. A, except for one note.)

If the subject modulates within itself to the dominant key, Transposition B will offer the suitable ending to the answer, since this version will cadence in the tonic key (rather than the supertonic). The earlier part of the answer is usually best obtained from Transposition A, however, since we do want a taste of the dominant key at that time (except for a possible "initial" tonal adjustment). To find a melodically congenial spot to transfer from Transposition A to Transposition B, go back carefully from the final cadence as far as necessary. The "splice-point" you choose constitutes the desired "terminal" tonal adjustment:

**Ex. 7. From a recent AAGO exam**

The image shows three staves of musical notation. The top staff is labeled 'Subject' and contains a melodic line in D minor. The middle staff is labeled 'Trans. A' and shows the subject transposed to E minor. The bottom staff is labeled 'Trans. B' and shows the subject transposed to D major. Arrows and circles highlight specific notes in the transpositions, illustrating the concept of 'initial' and 'terminal' adjustments.

(The "initial" adjustment involves the first note; the "terminal" adjustment the last two notes.)

**A few concluding thoughts and observations**

1. As seen in the answer to Bach's *G-sharp-minor Fugue, Well-tempered Clavier*, Book One (Ex. 5 above), the "terminal" adjustment may occasionally occur *very* early in the subject, in which case a substantial part of the answer may subside in the subdominant key, before modulating to the tonic key.

2. Occasionally a sharped or flatted version of a pitch from Transposition A or B may be chosen, because of harmonic considerations. Bach regularly permitted himself to make chromatic changes while operating within contrapuntal constraints (not only in the realm of statements of fugue subjects but in canons and quotations of *cantus firmi*). Thus, for example, in the *Fugue in B-flat Minor, Well-tempered Clavier*, Book Two, we note the A-naturals at the end of the answer, responding to the D-flats at the end of the subject.

3. Having delineated procedures for constructing tonal answers that may be regarded as guiding principles in this matter, we must nonetheless acknowledge that Bach himself did not always opt for the "initial" tonal adjustment where the above remarks suggest that he should have. (In fact, Herr Bach broke every would-be "rule" at one time or another!) In the popular "*Little Fugue in G Minor*, for example, he obviously deemed the preservation of the triad, as outlined by the first three pitches, to be more important than the need for an "initial" adjustment.

4. Finally, the remarkable fact remains that we *all* (I am not aware of any dissenter) regard the subject of a fugue and aptly adjusted answer thereto to be essentially the *same* melodic idea. We actually identify one with the other. In learning fugues from the *Well-tempered Clavier* or any of Bach's organ fugues, how often have we even paused to acknowledge that the melodic interval content of the answer may differ from that of the subject? This all but automatic identification of one form of the subject with another is, above all, an eloquent testimony to the overriding importance of the tonic-dominant relationship in our traditional tonal system—first of the two scale degrees pure and simple, then the two triads generated by these degrees, and finally the two keys based on them.



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