

AMERICAN GUILD OF ORGANISTS

COMMITTEE FOR PROFESSIONAL CERTIFICATION

WEBINAR ON FUGUE (PART 1 OF 2)

MONDAY, MARCH 20, 2023 at 7PM EST

OUTLINE OF THIS WEBINAR

- 1) Subject and answer
- 2) Real answer and tonal answer
- 3) Countersubject
- 4) Fugal exposition
- 5) Sample questions from past exams

Section 1: Subject and Answer

- **Subject:** The melodic line that is stated alone at the beginning of the fugue and is imitated by all remaining voices.
- **Answer:** The subject stated in the dominant key.

Example: Bach, Fugue in C Major, *Well-Tempered Clavier*, Book I, BWV 846



The image displays a musical score for the beginning of the Fugue in C Major, BWV 846 by J.S. Bach. The score is written for two staves, both in treble clef and common time (C). The right-hand staff begins with the Subject in C Major, starting on C4 and moving up stepwise: C4-D4-E4-F4-G4-A4-B4-C5. The left-hand staff begins with the Real Answer in G Major, starting on G4 and moving up stepwise: G4-A4-B4-C5-D5-E5-F5-G5. The score is divided into measures by vertical bar lines, and the piece concludes with a double bar line.

Section 2: Real vs. Tonal Answer

- **Real Answer:** An exact transposition of the subject in the dominant key.

Example: Bach, Fugue in C Major, WTC I on the previous slide

- **Tonal Answer:** Not an exact transposition of the subject. Some melodic intervals are altered because of the tonic-dominant tonal adjustment.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 on the next slide

Example: Bach, Fugue in C Minor, WTC I, BWV 847



The altered melodic intervals are enclosed in boxes.

Note that the tonic-dominant leap in the first box is answered by the dominant-tonic leap in the second box. Reason for the swap: An exact transposition would produce a G5-D5 leap that would conflict with the underlying harmony, the C minor chord.

The image displays two staves of musical notation. The top staff is labeled "Subject in C minor" and shows a melodic line starting with a grace note. Two boxes highlight specific intervals: the first box encloses a leap from C4 to G4 (tonic to dominant), and the second box encloses a leap from D5 to C5 (dominant to tonic). The bottom staff is labeled "Tonal Answer in G minor" and shows a corresponding melodic line starting with a grace note, where the first box encloses a leap from G4 to D4 (dominant to tonic) and the second box encloses a leap from E4 to G4 (tonic to dominant).

When to Write a Tonal Answer?

1. A tonic-dominant leap that appears early in the subject is usually answered by a dominant-tonic leap.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 on the previous slide

2. When the subject modulates from the tonic to dominant, the answer shows the reverse.

Example: Bach, Herr Jesu Christ, dich zu uns wend, BWV 749 on the next slide

Example: Bach, Herr Jesu Christ, dich zu uns wend, BWV 749



Overall, the subject modulates from G major to D major, the tonal answer does the opposite.

Notice that the arpeggiated G major chord in m. 1 is not altered in the answer in m. 3. (A similar example is the “Little” Fugue in G Minor, BWV 578.)

Subject modulates from G to D Major

Tonal Answer modulates from D to G Major

The image shows a musical staff with a treble clef and a key signature of one sharp (F#). The subject begins in G major (G-A-B-A-G) and modulates to D major (D-E-F#-E-D). The tonal answer begins in D major (D-E-F#-E-D) and modulates back to G major (G-A-B-A-G). The notation includes a treble clef, a key signature of one sharp, and a common time signature. The subject is written in a single line, and the tonal answer is written in a single line below it. The subject starts with a quarter rest, followed by a quarter note G, a quarter note A, a quarter note B, a quarter note A, and a quarter note G. The tonal answer starts with a quarter note D, a quarter note E, a quarter note F#, a quarter note E, and a quarter note D.

Section 3: Countersubject

- **Countersubject:** A recurring counterpoint that accompanies the subject/answer.

Example: Bach, Fugue in C Minor, WTC I, BWV 847



The image displays the first system of the Fugue in C Minor, BWV 847 by J.S. Bach. The top staff contains the Subject in C minor (measures 1-4) and the Tonal Answer in G minor (measures 5-8). The bottom staff shows the Countersubject #1 (measures 1-4). The subject and answer are boxed to show their relationship. The countersubject is also boxed to show its relationship to the subject.

Subject in C minor

Tonal Answer in G minor

Countersubject #1

How to Write a Successful Countersubject?

1. **Examine the harmonic implication of the subject/answer.** Compose a countersubject that supports or clarifies the implied harmonies.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 (again) on the next slide

The roman-numeral analysis shows the basic harmonic trajectory, not a detailed chord-by-chord analysis:

- The subject suggests i-iv-i-V-i in C minor.
- The tonal answer suggests iv-i-V-i in G minor. Not i-iv-i-V-i because the tonal answer comes right after the conclusion of the subject, the last chord of which is the C minor triad.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 – consider the harmonic implication

The image displays the first two lines of the Fugue in C Minor, BWV 847. The first line contains the Subject in C minor and the Tonal Answer in G minor. The second line contains the Countersubject #1. Harmonic implications are indicated by Roman numerals below the notes.

Subject in C minor
Cm: i iv i V

Tonal Answer in G minor
Gm: i

Countersubject #1
Gm: iv

Countersubject #1 (continued)
Gm: i V i

How to Write a Successful Countersubject?

2. The countersubject must be invertible at the octave because it may appear above or below the subject/answer.

Interval size:	1	2	3	4	5	6	7	8
Inversion at the octave:	8	7	6	5	4	3	2	1

The subject and countersubject should be kept within an octave apart as much as possible.

At the inversion at the octave:

- Imperfect consonances remain as imperfect consonances (3rd, 6th).
- Dissonances remain as dissonances (2nd, 7th).
- Perfect unison becomes perfect octave and vice versa.
- **Perfect 5th becomes the dissonant perfect 4th.**

The perfect 5th interval must be used with care, particularly on strong beats. Also, parallel 4ths would become parallel 5ths.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 – consider the intervals between the tonal answer and countersubject

(explanation on the next slide)

The image displays a musical score for the beginning of the Fugue in C Minor, BWV 847. It features two staves of music with harmonic analysis below them. The first staff shows the 'Subject in C minor' and the 'Tonal Answer in G minor'. The second staff shows 'Countersubject #1'. Red arrows point to specific notes in the tonal answer and countersubject sections.

Subject in C minor
Cm: i iv i V

Tonal Answer in G minor
Gm: i V i

Countersubject #1
Gm: iv

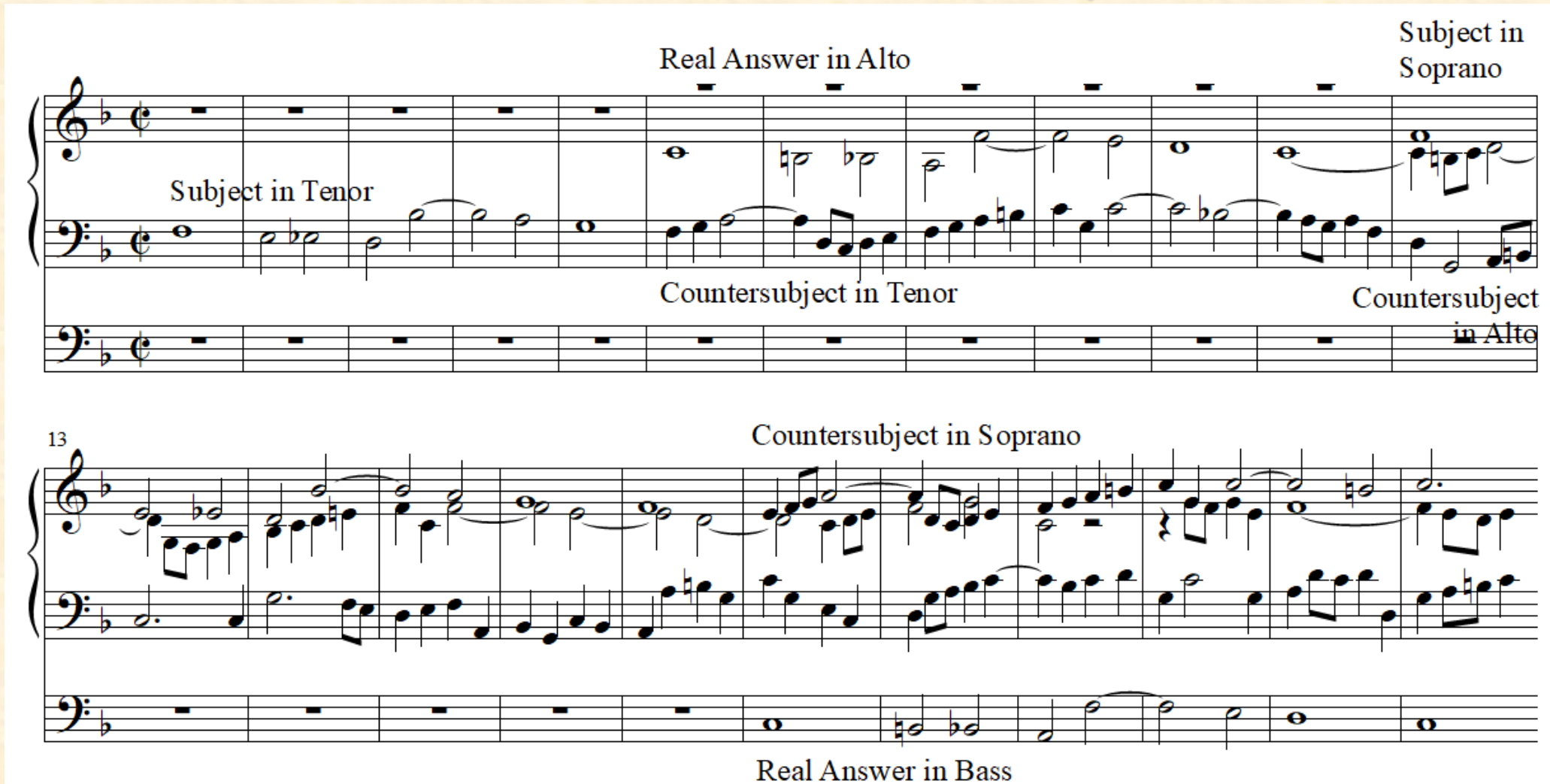
- In this example, the intervals between the subject and countersubject are mostly imperfect consonances (3rds, 6ths).
- The two voices exceed the distance of an octave only once, in m. 3, beat 3.
- In m. 3, the red arrow points at the perfect 4th interval between the tonal answer and countersubject. It would become a 5th at inversion. This interval is fine because the note D is a passing tone.
- In m. 4, the red arrow points at the dissonant 7th. The G is an incomplete neighbor to the F#. There are actually parallel 6ths between the tonal answer and countersubject.

How to Write a Successful Countersubject?

3. Contrasts in melodic contour and rhythm between the subject and countersubject are necessary.

- Vary the melodic motion between the two voices – similar motion, oblique motion, contrary motion, parallel 3rds and 6ths.
- Vary the rhythm – when one line is rhythmically active, make the other line less active.
- This is not like hymn harmonization. The subject and countersubject must sound like independent melodic lines.

Example: Bach, Fugue in F Major, BWV 540 – consider the rhythmic and melodic contrasts between the subject and countersubject 



The image displays two systems of musical notation for the Fugue in F Major, BWV 540 by J.S. Bach. The first system shows the initial entries of the subject and countersubject. The subject is first presented in the Tenor voice (bass clef), and the countersubject is introduced in the Alto voice (bass clef). A 'Real Answer' is shown in the Alto voice (treble clef), and the subject is repeated in the Soprano voice (treble clef). The second system, starting at measure 13, shows the countersubject in the Soprano voice (treble clef) and the real answer in the Bass voice (bass clef). The notation includes clefs, a key signature of one flat (F major), and a common time signature (C). Various musical notations such as notes, rests, and accidentals are used to represent the melody and harmony.

Section 4: Fugal Exposition

- **Fugal Exposition:** The voices enter one at a time, with the subject and answer alternating. Furthermore, the subject and answer may be accompanied by one or more recurring countersubject(s).
- **Order of Entries:** It is the most common to start from an inner voice, then proceed outward.
- **Modulation back to the Tonic Key:** For a non-modulating subject, the answer would begin and end in the dominant key. A modulation back to the tonic key would be necessary before the third voice can enter with the subject in the tonic key.

Example: Bach, Fugue in C Minor, WTC I, BWV 847 – layout of the fugal exposition (the score is on the next slide)

	mm. 1-3	mm. 3-5	mm. 5-7	mm. 7-9
Soprano	--	TA in Gm	Modulation Gm to Cm	CS1
Alto	Subj in Cm	CS1		CS2
Bass	--	--	--	Subj in Cm



Tonal Answer in Soprano

Subject in Alto

Countersubject #1 in Alto

Modulation from G minor back to C minor

Countersubject #1 in Soprano

Countersubject #2 in Alto

Subject in Bass

The image displays a musical score for a fugue in C minor. The score is written in treble and bass clefs with a common time signature (C). The key signature has two flats (Bb and Eb). The score is divided into several systems. The first system shows the 'Subject in Alto' and the 'Tonal Answer in Soprano'. The second system shows the 'Subject in Alto' and 'Countersubject #1 in Alto'. The third system shows the 'Modulation from G minor back to C minor'. The fourth system shows 'Countersubject #1 in Soprano' and 'Countersubject #2 in Alto'. The fifth system shows 'Countersubject #2 in Alto' and 'Subject in Bass'. The score includes various musical notations such as notes, rests, and accidentals.

**Example: Bach, Fugue in F Major, BWV 540 – layout of the fugal exposition
(the score is on the next slide)**

The two real answers end differently. In mm. 10-11, the alto's real answer does not conclude in C major. The modulation back to F major is worked into the last two notes of the answer.

The real answer in the bass concludes in C major at mm. 22-23.

	mm. 1-6	mm. 6-11	mm. 12-17	mm. 18-23
Soprano	--	--	Subj in FM	CS
Alto	--	RA in CM	CS	Free Ctpt
Tenor	Subj in FM	CS	Free Ctpt	Free Ctpt
Bass	--	--	--	RA in CM



Real Answer in Alto

Subject in Soprano

Subject in Tenor

Countersubject in Tenor

Countersubject in Alto

13

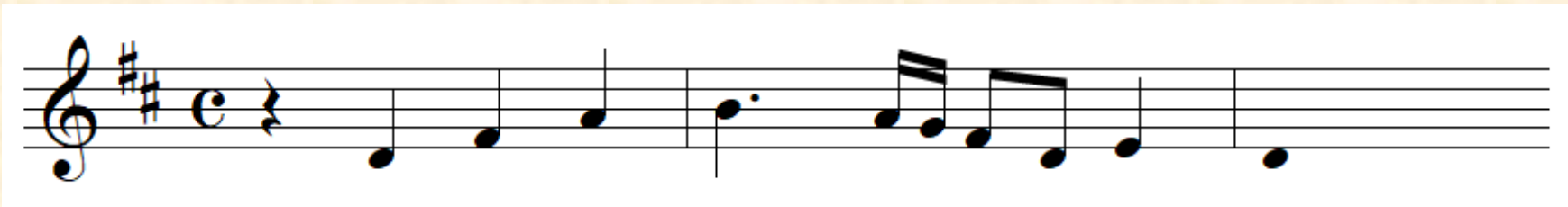
Countersubject in Soprano

Real Answer in Bass

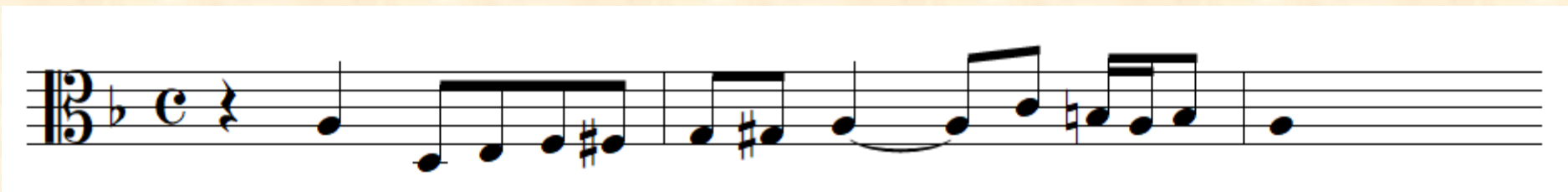
Section 5: Sample Question

- On the AAGO exam, candidates are required to compose a fugal exposition for THREE voices. The subject is given and a recurring countersubject is required.
- On the FAGO exam, the fugal exposition is for FOUR voices, scored for a string quartet. A recurring countersubject is required. (The main challenge here is the instrumentation. The fugal writing is not that different from what is required on the AAGO exam.)
- The fugue questions often ask for a modulatory episode and the bringing back of the fugue subject in a closely-related key, or in inversion, stretto... We will consider these in the webinar on March 27.

This is the fugue subject from the 2022 AAGO exam:



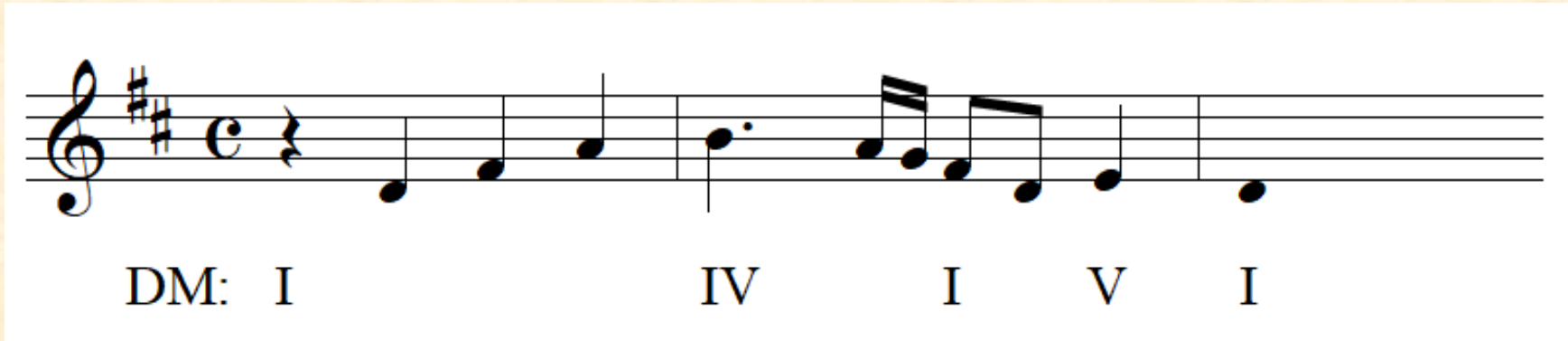
This is the fugue subject from the 2022 FAGO exam:



Questions to think about:

- 1) Real or tonal answer?
- 2) What chords are implied in each subject?

A possible interpretation of the harmonies in the 2022 AAGO fugue subject:



The image shows a musical staff in treble clef with a key signature of one sharp (F#) and a common time signature (C). The melody consists of the following notes: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter), F#4 (quarter), E4 (quarter), and D4 (half). Below the staff, the harmonic analysis is given as: DM: I, IV, I, V, I.

A REAL ANSWER is likely because:

- The subject does not modulate from the tonic to dominant.
- The subject does not feature any tonic-dominant or dominant-tonic leap.

From the 2022 solution booklet (posted on the AGO HQ Certification webpage):

The first system of musical notation shows measures 1 through 4. The treble clef staff contains a melody starting with a quarter rest, followed by quarter notes G4, A4, B4, and C5. The bass clef staff is empty. The key signature has two sharps (F# and C#) and the time signature is 4/4.

The second system of musical notation shows measures 5 through 8. The treble clef staff contains a complex melodic line with eighth and sixteenth notes. The bass clef staff contains a simple accompaniment of quarter notes: G3, A3, B3, C4, D4, E4, F4, G4.


The third system of musical notation shows measures 9 through 12. A red arrow points to the first note of measure 9 in the treble clef staff. The treble clef staff continues with a complex melodic line. The bass clef staff continues with a simple accompaniment of quarter notes: G3, A3, B3, C4, D4, E4, F4, G4.

Observe the following in mm. 3-4:

- The real answer and the countersubject make imperfect consonances on most beats.
- Rhythmic contrasts between the two voices.
- A lot of contrary motion and some parallel 6ths between the two voices.
- The harmonic progression is clear and logical.

The exposition ends at the red arrow.

A possible interpretation of the harmonies in the 2022 FAGO fugue subject:



The musical notation shows the subject in D minor, starting on A. The notes are: A (quarter), B (quarter), C (quarter), D (quarter), E (quarter), F (quarter), G (quarter), A (quarter), B (quarter), C (quarter), D (quarter), E (quarter), F (quarter), G (quarter), A (quarter). The harmonies are: Dm: i, V/iv, iv, V/v, v, Am:, i, V, i.

Dm: i V/iv iv V/v v
 Am: i V i

The solution booklet suggests a REAL ANSWER:

- The subject begins and ends on the note A. Harmonically, it begins in D minor, then G minor is tonicized and a modulation to A minor follows.
- The advantage of writing a real answer down a 5th is that the answer can begin and end on the note D. Additionally, the key of C is tonicized before the modulation back to D minor occurs.

From the 2022 solution booklet (posted on the AGO HQ Certification webpage):

Musical score for Violin I, Violin II, Viola, and Violoncello, measures 1-4. The score is in 4/4 time and B-flat major. Violin I and Violin II are silent. Viola and Violoncello play a rhythmic pattern of eighth and sixteenth notes.

Musical score for Violin I, Violin II, Viola, and Violoncello, measures 5-8. The score is in 4/4 time and B-flat major. Violin I and Violin II are silent. Viola and Violoncello play a rhythmic pattern of eighth and sixteenth notes.

This exposition ends at m. 9. Due to space limitation, mm. 8-9 are not included on this slide; however, a sample solution can be viewed on pp. 18-19 of this [booklet](#).

Recommended Readings:

- Walter Hilse, “The Fugal Answer,” in *The American Organist*, April 2006.

Click [here](#) to see the article.

- Walter Hilse, “Regular Countersubjects in Fugue,” in *The American Organist*, March 2008.

Click [here](#) to see the article.

- Robert Gauldin, *A Practical Approach to 18th Century Counterpoint*, revised edition. Illinois: Waveland Press, 2013.