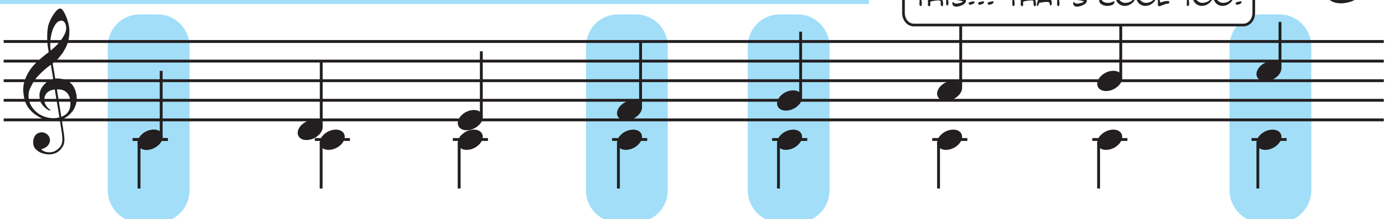
Perfect Intervals

THE *DISTANCE* OF AN INTERVAL IS *ONE* PART OF ITS NAME, BUT THERE'S *MORE*: EVERY INTERVAL HAS ANOTHER QUALITY TO IT, WHICH WE'LL CALL *INFLECTION*.

INFLECTION IS A BIT *HARDER* TO UNDERSTAND, PARTLY BECAUSE IT DEPENDS ON THE *TYPE* OF INTERVAL. SO LET'S START BY LOOKING AT *UNISONS, FOURTHS, FIFTHS* AND *OCTAVES*.

SOME THEORISTS USE THE TERM *QUALITY* FOR THIS... THAT'S COOL TOO.



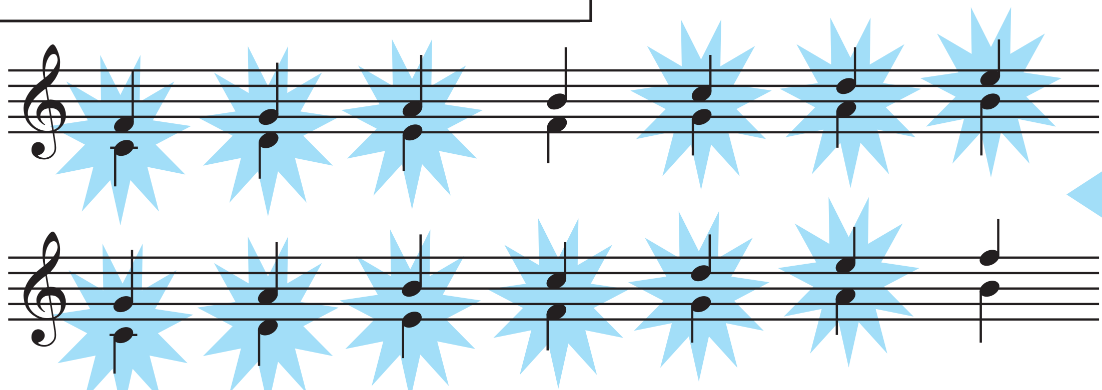
UNISONS AND OCTAVES

ARE THE EASIEST TO LABEL: IF THE TWO NOTES ARE THE *SAME* (FOR EXAMPLE, *B FLAT* AND *B FLAT*), THEN THE INFLECTION IS *PERFECT*: SUCH AN INTERVAL IS CALLED A *PERFECT UNISON* OR A *PERFECT OCTAVE*.

FOURTHS AND FIFTHS

REQUIRE A LITTLE MORE *EXPLAINING*.

IF YOU LOOK AT ALL THE FOURTHS AND FIFTHS YOU CAN CREATE USING ONLY THE *WHITE NOTES* ON THE PIANO KEYBOARD (IN OTHER WORDS, USING ONLY NOTES *WITHOUT ACCIDENTALS*):



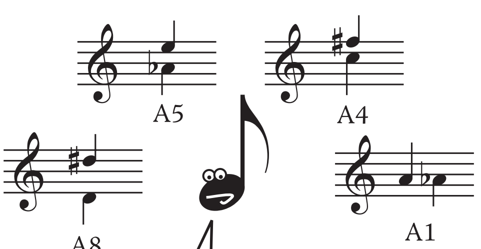
EACH ONE IS *PERFECT* EXCEPT FOR THOSE WHICH USE *F* AND *B*!

WAIT... WHY ARE THE *B* TO *F* INTERVALS *DIFFERENT?*

WELL, IF YOU WERE TO COUNT THE *HALF-STEPS* THAT MAKE UP EACH INTERVAL, YOU'D NOTICE THAT ALL THE OTHER ONES ARE *EQUAL IN SIZE*, BUT THE B TO F INTERVALS ARE NOT: *F* TO *B* IS A HALF-STEP *LARGER* THAN A PERFECT FOURTH, AND *B* TO *F* IS A HALF-STEP *SMALLER* THAN A PERFECT FIFTH.

WHICH RAISES THE *QUESTION*: IF THE INTERVAL IS NOT *PERFECT*, THEN WHAT *IS* IT?

AN INTERVAL THAT IS A HALF-STEP *LARGER* THAN PERFECT IS CALLED AN *AUGMENTED* INTERVAL.



YOU CAN GO *FURTHER*, TO *DOUBLY AUGMENTED* AND *DOUBLY DIMINISHED* INTERVALS, BUT... DO YOU REALLY *WANT* TO?

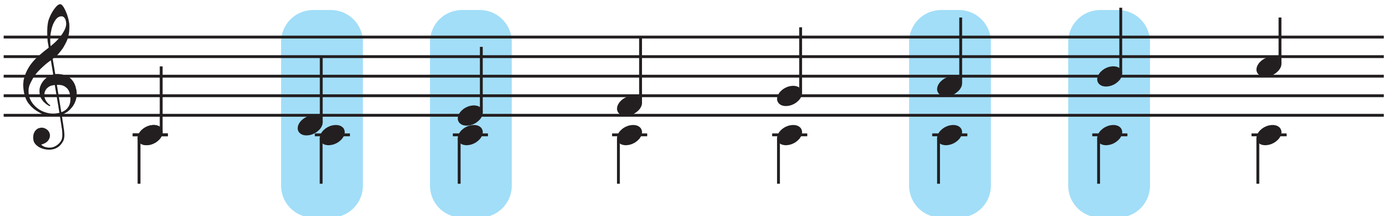
AND THERE'S *NO SUCH THING* AS A *DIMINISHED UNISON*...

JUST LIKE TWO THINGS CAN'T BE *NEGATIVE TWO FEET* AWAY FROM EACH OTHER!

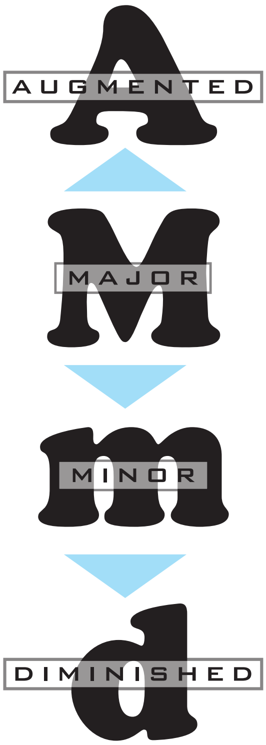
AN INTERVAL THAT IS A HALF-STEP *SMALLER* THAN PERFECT IS CALLED A *DIMINISHED* INTERVAL.

Imperfect Intervals

WE'VE TALKED ABOUT ***UNISONS, FOURTHS, FIFTHS*** AND ***OCTAVES***, BUT WHAT ABOUT THE REST? ARE THESE OTHER INTERVALS SOMEHOW ***IMPERFECT?***

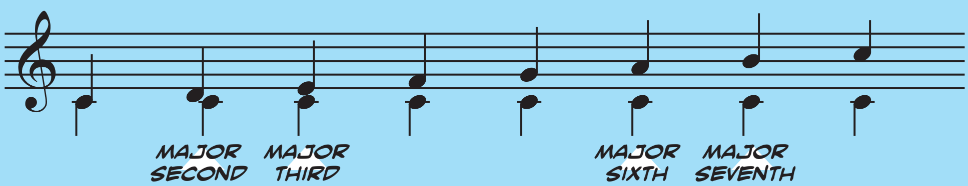


WELL, YES, BUT NOT BECAUSE THEY ARE SOMEHOW ***INFERIOR*** TO PERFECT INTERVALS... ***SECONDS, THIRDS, SIXTHS*** AND ***SEVENTHS*** JUST WORK A LITTLE ***DIFFERENTLY!***



FOR ONE THING, THE ***INFLECTION*** FOR THESE INTERVALS IS NEVER ***PERFECT;*** IT WILL BE EITHER ***MAJOR*** OR ***MINOR.*** MINOR INTERVALS ARE A HALF-STEP SMALLER THAN MAJOR INTERVALS. LIKE PERFECT INTERVALS, THOUGH, THEY CAN ALSO BE ***AUGMENTED*** OR ***DIMINISHED;*** AUGMENTED INTERVALS ARE A HALF-STEP LARGER THAN MAJOR, AND DIMINISHED INTERVALS ARE A HALF-STEP SMALLER THAN MINOR.

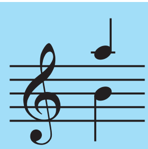
HOW DO WE KNOW IF AN INTERVAL IS ***MAJOR*** OR ***MINOR?*** WE CAN ACTUALLY USE THE ***MAJOR SCALE*** TO FIND OUT. NOTICE THAT, IN THE MAJOR SCALE, INTERVALS FROM THE ***TONIC*** UP TO ANOTHER SCALE DEGREE ARE ***MAJOR.***



LIKEWISE, INTERVALS FROM THE TONIC ***DOWN*** TO ANOTHER SCALE DEGREE ARE ***MINOR.***

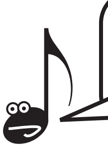
KNOWING THIS, WHEN YOU ARE CONFRONTED WITH A ***SECOND, THIRD, SIXTH*** OR ***SEVENTH,*** YOU CAN FIND ITS INFLECTION BY THINKING ABOUT THE KEY SIGNATURE OF THE TOP AND/OR BOTTOM NOTE.

WE KNOW THIS IS A ***MAJOR SIXTH*** BECAUSE ***D,*** THE TOP NOTE, IS IN THE KEY OF ***F MAJOR*** (THE BOTTOM NOTE).



AND THIS IS A MINOR SEVENTH BECAUSE ***B,*** BOTTOM NOTE, IS IN THE KEY OF ***A MAJOR*** (THE TOP NOTE).

IF THE ***TOP NOTE*** IS IN THE MAJOR KEY OF THE ***BOTTOM NOTE,*** THE INTERVAL IS ***MAJOR.***
IF THE ***BOTTOM NOTE*** IS IN THE MAJOR KEY OF THE ***TOP NOTE,*** THE INTERVAL IS ***MINOR.***



WHEN THE NOTES OF THE INTERVAL HAVE ***ACCIDENTALS,*** THE ASSOCIATED KEY SIGNATURES CAN BE MORE ***COMPLICATED...*** SO IT'S EASIEST TO ***TEMPORARILY IGNORE*** THE ACCIDENTALS, DETERMINE THE INTERVAL, AND THEN ***ADD THE ACCIDENTALS BACK ONE AT A TIME*** AND TRACK HOW THE INTERVAL CHANGES!

ACK! WHAT IS ***THAT?*** LET'S FIRST HIDE THE ACCIDENTALS...

E IS IN THE KEY OF ***G,*** SO WE KNOW THIS IS A ***MAJOR*** SIXTH.

ADDING BACK THE ***FLAT*** MAKES THE INTERVAL ***SMALLER,*** SO IT'S NOW A ***MINOR*** SIXTH...

ADDING BACK THE ***SHARP*** MAKES IT EVEN ***SMALLER...*** A ***DIMINISHED SIXTH!***