MeloDex: Indexing hymn tunes

Peter Ralph Coates

As a novice organist in the 1960s, I needed a means to work back from a known tune to its name and location. Often the melody would be fugitive and easily lost from memory while trying the conventional access points such as metrical indexes in several hymn-books. So I needed a method of encoding the tune which did not require an intermediate step such as the well-known method of converting it to the key of C and then writing down the letters of the notes (Barlow and Morgenstern 1950), or using an extended Tonic Sol-fa code (Diehl 1966): by the time I had worked it out by this method, the melody in my mind would have evaporated! What I wanted was something more direct, which would work in any key, accommodate any normal range up or down the musical scale, and be reasonably precise. Denys Parsons (1975) invented a marvellously easy method of encoding a melody by noting simply whether it moves up (U), remains on the same note (R) or moves down (D), producing a code which looks like RDDDR UUUUU DURDR (which represents the famous Largo of Handel); the drawback is the code has to be quite long to achieve uniqueness, and, with a notational base of only three symbols, locating the code in the index can be quite laborious.

In 1967 I began work on The Methodist hymn book (1933 edition) which I knew well, followed by The church hymnary, revised edition (1927 edition) used by the Presbyterian Church where I was the organist. The system I devised was short and relatively simple to encode and very simple to look up. I have been surprised that it has not been invented by others; or perhaps it has been and I am just not aware of it. The principle is to begin with the first note, whatever that note may be on the keyboard, indicating it with an asterisk * . All successive notes of the melody are counted in semitones represented by the letters of the alphabet upward or downward from that starting note; each time the starting note occurs, it is represented by the * in the code string. One needs access to a keyboard to do the encoding properly. Notes above the starting note are written in lower case letters and below in upper-case letters. The letters represent successive semitones and not the names of the notes. The strings of asterisks and letters are filed alphabetically, making no distinction for filing purposes between lower and upper case letters. The ' * ' files before 'a'.

By this method, the famous hymn tune Old hundredth would be indexed as: **ACE*bd. This code is unique to this tune, simple though it is. Length of note and rhythm are not taken into account. Thus the two rhythmic versions of the Old hundredth will be found by the same code. The problem occurs with tunes which, while basically the same, have plain and embellished forms with passing notes or extra notes to accommodate the words. This is much the same kind of problem encountered in text indexing with synonyms, only in melody indexing one must provide a full entry under each encountered form; the very few cross-references are reserved for forms of the melody not found in the collections being indexed. For example *BBDeed, see *BDbDeed (Jesu meine Zuversicht or Ratisbon).


Originally I indexed 2,112 different tunes, most of which appear in more than one of the collections and a few in all the basic books. I was interested to find that in 39 instances (18%) two different tunes were represented by the same melodic code and in 10 instances (05%) three tunes were so represented, compared with the normal 'name' index where 124 (5.9%) hymn tune names (principally saints' names) represent two different tunes and 23 (1.1%) names represent three different tunes. Clearly my code was more precise.

Because of the significant number of German chorale melodies which appear in the English language hymnals, I checked the melodies in Charles Sanford Terry's The four-part chorales of J.S. Bach (Oxford University Press, 1929, revised 1964) and Johannes Zahn's Die Melodien der deutschen evangelischen Kirchenlieder (six volumes, Gütersloh, 1889, reprinted 1963) and added citations for the entries in these books to my hymn-tune index. My index therefore consists of the melodic code the name (or one name) of the tune cross-references from other names of the tune citations locating the tune in the several collections notes on other versions of the same basic tune citations, where applicable, to Terry and Zahn.

So far, so good! My original work took several years and I was quite pleased with the results when I had completed it in 1971. Thinking this work might be useful to others, I submitted a draft to the director of a large and well-known Church Music Society in the United Kingdom for his opinion as to its potential for publication. His reply loftily dismissed the work as completely useless, since, in his opinion, every organist worthy of the name knew all the tunes anyway, without requiring an index. Crushed by what can only be described as a singularly uncharitable letter, I packed the cards away and turned my energies into other channels, ultimately ending up indexing text.

A few months ago I returned to my hymn-tune index. During the past 25 years I had regularly referred to it in the course of my work as an organist, and I decided it should be brought up to date to cover new editions of the principal hymn books.

My object in writing this short note is threefold: to make known my method of melody indexing (which I have called 'MeloDex'), to establish whether anyone else has developed other systems, and to invite reaction from readers as to whether the labour of revising it would be worth the time spent. Comments may be sent to The Indexer or direct to the writer at 28 Lower Wrensch Road, Observatory 7925, South Africa (coates@salib.ac.za).

References

