THOUGHTS ABOUT "SLIPPERY SLENDRO"

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A few years ago I became aware that the tunings of laras slendro vary in substantive ways and that the variations have a very wide range of musical meanings.

The first Javanese gamelan in which I learned and played was Kyai Udan Mas, now permanently kept in the music department of the University of California, Berkeley. This is a fine central Javanese-style gamelan from Surakarta, one of an approximately 75-year-old pair. I learned to play under the direction of K.R.T. Wadidiningrat and his assistants, Jody Diamond and Daniel Schmidt. I also learned to read and use Kepatihan notation, that method evolved in the now destroyed Surakarta Palace of the same name. This is based on a European notation first proposed to the French Academy by Jean Jacques Rosseau and later developed by Cheve. The pitch designation of the original was simple, and thus do, re, mi, fa, so, la, ti, do became 1, 2, 3, 4, 5, 6, 7, 1. This was based on the major scale of the European Baroque era, numbered serially in rising order from the home, or usual cadence tone of the mode. The sense of this mode and ordering still prevails in 'the West.'

This cypher system of notation is widely used among Chinese musicians for whom—as for modern Indonesian, Thai, Vietnamese, and others—it is the main pitch notation used. Among the Chinese, the 'major scale' assumption is so strong that, if a key other than C is written for, it is sometimes not mentioned that sharps and flats might be needed thus misleading the unwary into the discovery of some fascinating illusionary mode. Northeast Asians have robustly subscribed to the "European" (northwest Asian) error that the 'relative minor' mode begins on pitch 6 of the major scale and have so noted. Java, however, and for several reasons, numbers its pelog (a roughly 'minor' mode) from cypher 1 so that the 'majorish' slendro and the 'minorish' (and 7-toned) pelog are coincident in five of their pitch names as well as number level. Since pitch variations are treasured realities in Indonesia—in all its traditions—this handsome, abstracted and logical way of cyphering two very differing tuning schemes (laras) in a common way is immensely useful.

One is seldom in doubt hearing pelog. The pelog tuning is mostly stable and only in Kyai Udan Arum of the Mankunegaran Palace, in
which the pitch 4 is so low as to sound a little like northwest Asian fo
instead of the usual quite sharp 4th degree, has my own ear ever
been confused in thinking or in transcription. Pak Cokro has said of
that pitch 4 that it is pamijen (special). However, Sue DeVeale
comments that I am not alone and has brought up the subject "puzzling
pelog" in companionship to "slippery slendro." She reports that many
of her students used to playing only one gamelan get the numbers
wrong when transcribing pelog from another gamelan by ear. Again
the beautiful old gamelan at the Field Museum, which she so ably
restored and revived, itself contained a lowish pitch 4 (as well as a
raised pitch 2). K. R. T. Wasitodiningrat told me that a pelog
gamelan owned and used by the Dance Conservatory in Jogia possesses
nine keys, the usual seven appearing as normal, but tones 1 and 4
have two different pitches each and, as in using pelog gambang, the
suitable ones are put onto the instrument for each piece. In modes
with a tendency to "go down," the lower ones are used. Some older
Sekatan gamelans have very close intervals in other than 4, 5, 6
levels, but generally modern pelog is fairly stable, at least greatly
more so than laras slendro.

The problem of laras "crossover" much fascinates Javanese. Some
pieces apparently have carte blanche to sound in any of the six
recognized patet. Pak Cokro says that "Pangkur" and "Eling Eling"
are such. R.L. Martopangrawit gives only five of Pangkur's
translations but in his Catatan-Catatan Pengetahuan Karawitan,
translated by Martin F. Hatch and just published in "Karawitan" by
the University of Michigan under the editorship of Judith Becker, he
lists "Ginonjing", "Bonhet", and "Kinanthi" as enjoying three or more
versions. In the same writing he also offers a table for converting
pelog gending into slendro. Again it is very commonly understood
that almost all pieces in patet pelog barang may be translated to
slendro manyura and vice versa, thus adding a great number of
gending to crossover types.

Within slendro itself however, the difficulty is other, for it is the
nature of the several slendro tunings themselves to transpose and
relocate patet. Objections from the argument that voices, rebab, or
suling, by using variable pitch subtleties, "incline" the mode (despite
majority fixed tuning) have no validity when we consider the large and
prestigious body of gending bonang. Here we hear nothing but the
fixed pitch instruments and here the bonang themselves behave in
highly predictable ways, ways that preclude the cengkak slanting of
gender movement that R. L. Martopangrawit regards as important in
the soft style.

Widiyanto, co-director with Allen Thomas of gamelan Kyai Nyai of
Victoria University of Wellington, New Zealand, and of Kyai Handayani
at the embassy there, has said that very many students in Java "get
all the numbers wrong" when transcribing slendro by ear. It was
because of my own efforts in transcribing and making the same errors
that I began to study the problem of "slippery slendro."

Dan Schmidt gave me a dub of the gending "Soran" cassette recording
by Lockonanta played on the gamelan of Radio Indonesia in Surakarta.
I found myself entranced by the play of 'secondary 7th sequences' (for
want of better words) sounding like 5, 3, 1, §--with variations--in the piece "Maesa Liwung," which is in the center of Side A of the cassette. Much wanting to transcribe the piece so that we could play a version of it on Gamelan Si Betty at San Jose State University, I went to trouble to extract the balungan and, finding myself with a difficulty in a repeat and transition, I took my transcript to Pak Cokro for aid. He looked at it and told me "But there is no gong 3; it all has to be lowered to gong 2." Since doing this would have nullified the beautiful special attractions of the piece as it was recorded, I quietly shelved the project. Sometime later I realized that Pak Cokro, in a few subsequent lessons, gave me several attractive pieces in gong 3, reminding me of Jody Diamond’s delightful statement about Javanese procedures: "It’s always like this, except when it isn’t." Later again, I encountered the beautiful recording on Argo discs of "Babad" played on the gamelan of Radio Indonesia in Yogyakarta, and again fell in love and had to have it. This time I simply asked for the notation since the piece is a large gending bonang. Pak Cokro happily went to the box of scores and presented me with a copy. "But, Pak Cokro, this is in patet nem, and the recording is in sanga," "Oh, then the gamelan must be a sanga-sounding one." By this time I was slightly less mystified, and had a little idea. Surely, it occurs to me, if a work sounds "sanga" on one gamelan, then couldn’t one legitimately transcribe, transpose and play it in that patet on another gamelan capable of it? Suitable deliberations and time elapsed before I asked Pak Cokro this question. He took not more than a small moment of consideration to answer, "Well, yes." He thus established that what happens to gending "Pangkur" and perhaps one or two other pieces and also to some gender cengkok, in simple modular transposition, can, in fact, happen to a balungan gending.

This is a liberating and fascinating doctrine which, in its turn, brings up terrifying problems for a composer hoping that his own interval expression might be observed. That it in fact happens in the Javanese classical context is amply clear from a consideration of slendro tunings. Indeed, R. L. Martopangrawit points out that ladrang "Mugi Rahayu" is a simple transposition by K. R. M. H. Wirjandiningrat of the old melody ladrang "Grompol" from gong 5 to gong 2. The matter becomes less perplexing after discovering from so eminent an authority as Elang Yusuf Dendabrata that it has been traditional in the Cirebon region to play any gending on any pitch level. Since variations in the interval structures of laras slendro are also found in the Cirebon region, it would appear that this reasonable and sometimes necessary use of transposition is a Cirebonese response and actually a solution to the problem, at least in most Central Javanese music. As to the whole area and history of central Java, it is possible that Cirebon is an important key. Here a fair number of performance methods as well as structural forms suggest themselves as at least partially ancestral to Central Javanese uses. They are simpler, of wider abstraction and applicable at large.

Besides K. R. T. Wasitodiningrat, it was also my pleasure during this last year (1983-84) to speak of slendro tunings with Widyanto in Wellington, New Zealand, Pak Kanto (Sukanto Sastrodarsono) and Santosa S.K.A.R. in Surakarta, and Jennifer Lindsay in Sydney,
Australia, from all of whom I gained knowledge and intuition. Pak Kanto spoke of the retuning in the last century of "Kanyut Mesem" and the addition of one lowest slab to the balungan instruments of this Mankunegaran gamelan. He spoke of the courtiers doing this, whether to make singing easier or for other reasons. He also, as had Pak Cokro, drifted from speaking of interval relationships to general tessitura. Santosa S.K.A.R. aided me, in company with Vincent McDermott, to understand the present, preferred method for tuning a large double gamelan with tumbyk 6 and confirmed that final tuning decisions rest entirely with the owner. It was clear that the owner's taste was final. In my inquiry I asked Pak Kanto to hum or sing the balungan of "Pangkur" in patet manyura and he opened with the 3 2 3 1 sounding like 2 1 2 6 and confirmed the whole piece along these lines.

Cassette's from Jogja indicate that a favorite tuning there has pitch 2 sounding like 1. A number of the slendro gamelan that I heard in Central Java were tuned like my Example A with the sense of do on 1, and I am still under the impression that this tuning is very common. Pak Cokro has recently confirmed this and, with some emphasis, calls it "standard." I must add that during our conversation he and I both used the sense of "do" and other "so-fa" terms with equal understanding and ease while referring to the whole of a slendro tuning and not in connection with patet.

Nonetheless, composers who wish to control the interval sense of a piece must either compose directly for a gamelan with which they are familiar, build or commission their ideal gamelan, or append specific instructions if the piece may be transposed or altered.

Clearly, in Java only "contour," or in Pak Marto pangrawit's term, "kaden," really counts in patet or mode recognition, and then only over a fair number of 4-note groups (gatra) or neumes. Sure it is that modes do not depend on interval structures at all, for the various slendro tunings in themselves continuously alter even gross interval structures and there is only contour left. One is reminded that the Chinese characters for a melody show a "crooked path" and it is apparently by their twists and turns that we shall know patet as well.

In the following charts and examples it is important that the closeness and subtlety of slendro intervals be realized and that the shift of one or two such intervals will produce the following examples. Since beginning this paper I have gone over with Pak Cokro two possible "just intonation" tunings of slendro, both in "standard" position, and give them here only to demonstrate the closeness of intervals. The first example Pak Cokro says is an acceptable Surakarta tuning and the second clearly a Jogja tuning. They are:

Surakarta: 1 8/7 2 8/7 3 7/6 5 8/7 6 147/128 1

Jogja: 1 8/7 2 8/7 3 147/128 5 8/7 6 7/6 1

7/6 is 266.9 cents, 8/7 is 231.2 cents and 147/128 is 239.6 cents.
It will be seen that these small differences are important. These tunings are only examples and of course there are slendro tunings with wider and smaller intervals. These facts should be held in mind when looking at the examples about slendro problems.

**SLENDRO PROBLEMS**

Usual notation for the 7-tone saron in Surakarta: 6 1 2 3 5 6 1

Showing the interval patterns in the above (A), and how two tunings "modulate" the intervals (B and C):

A) 6 1 2 3 5 6 1 (roughly): Bb Db Eb F Ab Bb Db
B) 6 6 5 6 1 2 3 5 Bb Db Eb Gb Ab Bb Db
C) 6 6 6 6 1 2 3 6 Bb C Eb F Ab Bb C

Customary cadences in slendro pathets (as played on a typical saron):

Nem — 6 5 3 2
Sanga — 2 1 6 5
Manyura — 3 2 1 6

How the cadences sound changed in the B and C tunings:

Nem: A) 6 5 3 2 B) 3 2 1 6 C) 2 1 6 5
Sanga: A) 2 1 6 5 B) 6 6 3 2 C) 6 6 2 1
Manyura: A) 3 2 1 6 B) 1 6 6 3 C) 6 6 6 3

How the Surakarta melody of "Pangkur" in Slendro Manyura sounds altered by tunings B and C:

A) 6 6 6 6 1 2 3 6 B) 6 6 6 6 2 1 6 5 C) 6 6 6 6 1 2 3 6

The "neumes," or gatras, of the piece are bracketed in A above. Only five "contours," or kaden, make the melody as played on a typical saron:

a) Down 1, Up 1, Down 2
b) D1, D1, U4
c) D1, D2, D1
d) D1, D1, D1
e) U1, D1, D1
The melody "Auld Lang Syne" similarly treated:
Martopangrawit, R.L.