

Appreciating Hindustani Music
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Lecture 6
Swara and Shruti: Tone and Microtone

[Music]. Music is universal. In the sense, every culture in the world has its own music. But the nature of the music itself and musical thought or musical discourse, how you speak about music; that is far from identical. One might venture the idea that while for instance members of a tribe or a rural community may not think or talk about their music in conceptual terms or often you know concepts and categories to talk about the music or even teach it, that is music exists purely as a performance tradition in many communities.

But classical traditions must have such literature. One of the markers of classical music traditions is that the music is codified, that is it is organized in terms of basic categories and we use these categories to talk about it, to discourse about it, even teach it. Now, if music is Shastriya as we saw earlier, it is a body of rules, and these rules have to be cast in terms of general categories and two such fundamental categories in the context of Indian music in the context of Hindustani music as far as melody goes is they are the two fundamental categories are swara and shruti.

Swara which is notes and shruti which is microtones. We speak of music in these terms, we teach it and we have textual discussions of music using these categories. We have textual discussions of these categories and with these categories right. And these discussions are over 2 millennia old. So, we have quite an ancient history not just of musical practice or musical traditions as performance but also musical thought.

Now, most of you would know that what I sang in the beginning were swaras right notes ah. In fact, I sang some notes, some phrases of the ragas Tilak Kamod followed by Jaijivanti, these are the two ragas notes and phrases of those ragas that I sang. So, ragas at a very fundamental at a very basic level are constituted of swaras or notes or tones. And so, the first step towards understanding raga, this raga sangeet and raga is to understand, to study to know about the swaras. So, what is swara?

So, we have two things here right, swara as a category and swaras as notes the actual notes that we sing and it is always easier to talk about the specifics right the particulars that is, swaras-notes. What are the notes; and all of you would know we have seven swaras right. So, we have seven swaras [Music] that is the first [Music]. These are the seven swaras and beyond that you all know comes the Sa right [Music], that was the ascending swaras and a descending set of swaras and beyond that lie the same set of swaras in the higher region and the lower region. So, you have [Music] and so on [Music] and so on.

So, this is the first set of categories that, first set of concepts that you need to know, so this is the swaras of course, the pitches. And you have the Sa which is the base the Adhaara the foundation

of all music and all music refers and gets meaning from the Sa, which we will see in a later video that that never changes during a performance right unlike other music like western music, where the tonic can change in a certain piece the tonic never changes for us. The Sa remains the same throughout a performance throughout many years for many performers. So that is the Adhaara Sa Adhaaraswara the foundational note with reference to which all music makes sense every other note is fixed with reference to this Sa and then you have the rest- the six other swaras. Now, between the Sa and the Ni [Music] this is called the Madhya, this is called the Saptak, a set of seven swaras.

And this is also the middle seven right the middle range and you have [Music] and so on that forms the Mandra or the lower register and the higher register is upwards of the higher Sa. So, we therefore, we define we we have three registers we can call it, we call it Saptak Madhya which is the basic, the middle range and then you have the Mandra and then you have the Taara.

And a typical Hindustani Khayal vocalist would have a range from the lower part to the higher part. So, a range of two octaves. It could be a wider range or a lesser range but this is a typical range of two octaves. So, then we have the Saptak we have the set of seven swaras but we all know that you know anybody who has taken a look at a keyboard or a harmonium you know that between one Sa and the next Sa you have twelve pitches not just seven.

So, actually we have the total number of swaras is seven plus five variants hm. So, there are twelve pitches between twelve musically useful pitches. I must say there are actually infinite pitches between any two pitches theoretically- physics will tell you in theory infinite pitches are there between any two pitches and definitely between [Music] you have many many pitches.

But what we use in music is primarily twelve there are twelve pitches. And this we speak of as seven shuddha swaras and five vikrita swaras or five variants. And in contemporary Hindustani music this is the these are the shuddha swaras what I just sang corresponding to the major scale [Music] these this is the these are the shuddha swaras with Sa this is the Sa then these are the shuddha swaras

And five five of these notes Re Ga Ma Dha Ne they have a variant each. So, what we have are actually twelve swaras that we use. We constitute the basic tonal material besides the Shuddha swaras we have Komal and Tivra swaras, Komal swaras are flatter lower than the Shuddha swara, Tivra is higher than the Shuddha swara and this is the scheme.

These are the twelve swaras Sa of course, Re Komal Re Shuddha Ga Komal Ga Shuddha Ma Shuddha Ma Tivra Pa Dha Komal Dha Shuddha Ne Komal Ne Shuddha. So, this is = as I said the twelve you know twelve tone system that we have in western music it is something quite similar to it.

Now, I will quickly demonstrate the pitches many of you would already know it but like. So, this is the Adhaara [Music]. This is the Shuddha Re right, Shuddha Rishabh [Music] this is the Komal Rishabh which is the lower than the Shuddha Rishabh and again [Music]. This is the Shuddha Gandhar [Music] Komal Gandhar again Komal Gandhar is lower than the Shuddha Gandhar [Music] Shuddha Ma [Music] this the Tivra Madhyam [Music] and so also for Dha and Ne [Music] Shuddha Dha [Music] Komal Dha [Music] Shuddha Ne [Music]. So, these are the twelve

itches twelve swaras. It is quite difficult to sing all these twelve pitches like we sing the seven, seven swaras to sing the twelve swaras this would be quite a feat because they are very very closely placed. So, it will be like [Music] I cannot do it sorry, so, you have to practice separately for it.

So, we speak of seven swaras and their five variants. Seven Shuddha swara right we call Shuddha means pure and contaminated, but it really does not have any such significance when we speak of Shuddha swara; it is just that we identified these as the primary swaras and the others as the variant.

And, and this is completely arbitrary in the sense that is how it has evolved and there is nothing necessary or natural about it. In fact, centuries ago, there was another set of swaras that are designated that were designated Shuddha. In fact, even today Shuddha swaras or Carnatic music are a completely different set.

So, just as a matter of identifying or talking about this these twelve swaras we say that these seven are Shuddha and they have their variants. So, as this is a matter of choice cultural choice, that has evolved and has been defined over centuries. The way we choose to organize and name the basic stuff of music.

So, Re Ga Dha Ne and Ma right Re Ga Dha Ne have a Komal variety Ma has a Tivra or the sharper augmented variety and how about Sa and Pa Sa and Pa do not have any variants, right. So, they write what called, they are called Achala. Achala means it does not move, it is fixed.

Now, we will see later on that though we speak of twelve pitches twelve swaras as pitch positions when we actually use them in ragas there is nothing fixed about it there are very subtle variations. So, even though we say Shuddha Re the exact pitch may vary very subtly depending on the raga, depending on the phrase, depending on the ornament that we use. And this is equally applicable to Sa and Pa. So, subtle variations microtonal variations are possible even for Sa and Pa

So, in fact, the Dhrupad tradition of the dagger family, which was speaking to a master and he says we do not regard Sa and Pa as Achala and it is true, in as a matter of fact they are not immovable there are subtle very subtle variations just as we have in the case of the other swaras.

So, the right word for Sa and Pa would be Avikrita that is they do not have variants like there is no Komal Pancham or Tivra Pancham we do not have it we have only one Pancham just as we have only one Shadja, but microtonal variations are very much there, just as they are there for other swaras.

So, this takes us to the next category, next concept in terms of which we talk of melody. This is shruti- shruti which is generally translated as microtone ok. So, so what is micro tone I will demonstrate it that is the best way to all [Music] which is the next pitch after Sa we have Komal Rishabh that is the next swara or flat Rishabh

[Music]. So, this is the next swara right [Music] between these two and there are no other swaras between Sa and Komal Rishabh, but there are microtones, there are shrutis [Music] right. Now, I will try to hit a pitch between these two [Music] no that was not quite Komal Rishabh all the way it is not Sa of course,

So, that [Music] that is a shruti that is that particular pitch you can call it as a shruti. In fact, the difference the interval is also sometimes called the shruti but needless to say we do not use shruti in such a crude manner I am just demonstrating it for conveying what shruti is in practice . It is used in very subtle ways.

So, that you are almost you do not discern that there was a microtonal variation. So, within ragas and within phrases all swaras any swara moves subtly there are micro tonal variations and this is what we refer to as shruti . And tradition the textual tradition says that we have 22 such shrutis 22 microtones that is while we have twelve swaras there are subtler and more minute pitch which intervals and these are 22 in number.

So, this number 22 was advanced by Bharatha in his very remarkable text Natyasastra, which was sometime around the second to fourth century of the common era and this he did he advanced this number on the basis of an empirical experiment. You can really look it up on the internet what exactly the experiment was and he said that there are 22 pitches.

And it was base. As I said it is empirical in the sense it is just what he was able to discern, he said ok now this is one pitch and then he tightened it a little more as you know if you tighten the string the pitch increases right. So, he said that as he tighten little by little he could, as he discerned a different pitch he, you know, he counted the number of pitches he was able to hear and he arrived at 22.

Now, this is not contested ok you know we have about 2 millennia or at least 15 centuries of such discussions, discussions of musical concepts and the music itself in various texts from various regions of the country in various languages indeed we have Sanskrit, Persian and other languages.

Because this 22 the number of 22 is largely uncontested no nobody in that no later theorist said no it is not 22 you know actually I can hear 24, no it is just 18 or something like that this is not contested, but and. In fact, in the text in the textual traditions these 22 pitches are distributed over these of this over the seven basic pitches.

So, typically we have Sa Ma and Pa with four shrutis, they are supposed to be they are supposed to have four shrutis each and Re and Dha have three each and Ga and Ne have two each. So, you have 22 pitches. But you see in practice in the performance tradition these numbers; the quantification of shruti is not relevant.

Shruti is a very, it's a matter of great importance and nobody denies the reality of micro tonal nuancing in the performance tradition and we all practice it teachers impart it and performance are very sensitive to it. But is it the actual numbers that is not of concern in the performance tradition. So, while shruti is very much a reality, in that microtonality is found extensively in the performances of this music the 22 shruti idea that there are 22 shrutis does not carry much weight in practice.

So, this is how the musical material or the basic stuff of music is organized in Hindustani music, right. You have seven Shuddha swaras or sometimes it is also called Prakruthi swaras and then five Vikrutha swaras of which four are Komal and one is Tivra and you have shrutis micro tones

which as I said according to theory or 22 in number.

But practice does not concern itself with the number of microtones. Now, the important idea emerging from this discussion is that swara is not a single pitch, it is not a particular frequency especially, within a raga for exercise initially for just initiating a person into music of course, they are fixed positions, but once you enter into the music itself.

Swara is more of an aural space and subtly different pitches get lit up during performance.