Composing for Intercultural String Consort

Farshid Samandari

Kamānché, Alto Qeyčak, Viola da gamba

Historically *kamānché* (کمانچه with numerous transliterations) and *qeyčak* (قیچک with numerous transliterations) were both intended to entertain small audiences in a small chamber, while *viola da gamba* from its inception was used in larger galleries or halls. In other words, viola da gamba is built to have a louder resonance and higher projection. However, considering their more complex overtone spectrum, all of these instruments have less focused tone and project much less than the violin family.

While each of these instruments has a different make, in all cases their dynamic levels are limited by the shape and smaller size of their resonant boxes (for their range), and their individual raisons d'être (creating a more colourful, delicate timbre with a wider range of overtones). Both kamānché and qeyčak can play dynamics almost as soft as *niente*; their loudest unamplified dynamics can only match the viola da gamba up to ***f.*** In fact, even this dynamic range is due to a few modern modifications, including adopting metallic strings, and using stronger tuning pegs which allows higher tensions.

Traditionally both kamānché and qeyčak were used to accompany and resemble human voices in their range and lyrical nature. They are built to play florid melodic lines parallel to traditional chants. In fact, various refinements in their making, such as the round neck and fingerboard of kamānché, were intended to make the instrument more idiomatic towards intricate melodic lines and far more delicately expressive in their presentation. In some folk traditions, qeyčak plays exclusively double stops, often with prominent singing melodic lines. Most of the viola repertoire, despite the instrument's capacity to play multiple stops, is cantabile in nature. Alto qeyčak was refashioned in the twentieth century to allow both traditional florid lines and double stops that serve a more supporting, harmonic role, however musicians' training centers around ornate modal lines.

While all the consort musicians read various modes of the western musical notation, each has received a different training, and has acquired a distinct dialect interpreting the western notation. Hence, composers are recommended to be as lucid in their notation as possible, and as familiar with the institutional tendencies of each musician. And at times, use different terminology to reach the same end.

Kamānché

Kamānché (literally the little bow) denotes a family of bowed instruments built across the old Persian countries. Its first documented reference dates back to the fifth century, and is often presumed to be related to the rebec and bowed lyra, igil and erhu; all are descendants of the African rabab. Kamānché, like many other instruments, initially had two strings; gradually the third and fourth strings were added. The Azeri kamānché, except for a bigger sound box, is similar to the Persian instrument. In contrast, the Turkish instrument *kemençe,* though also a bowed instrument with a similar name, belongs to a different family of instruments, comparable to the Indian *sarangi*.

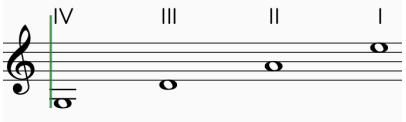
Kamānché has a spherical sound cavity made of a single carved piece or bound strips of mulberry or walnut wood, covered with a sheepskin membrane. In some regional makes, the back of the resonant chamber is open to create a louder sound. Most instruments have four strings of about 33 cm length (some regional models have three strings with a different length). However, they all share a long round neck including the fingerboard, which is shaped as a truncated inverse cone. Its wooden bridge is curved and slanted, parallel to the neck to enable more distinct and expressive bowing of the individual strings. Historically, a sizable pegbox held the silk (now metallic) strings. Most modern instruments also have a set of metallic fine tuning pegs, similar to that of a violin by the bridge. At the bottom end of the sound box, there is a metallic spike (of varying length), which is used to hold the instrument upright and facilitate rotating the instrument to reach various strings.

The bow is convex, almost resembling a bow and arrow (as the instrument name implies) and the horsehair is fairly loose, allowing the player to adjust its tension while performing. While controlling the tension wouldn't allow higher dexterity, it allows far more fluid, lyrical variations in timber as well as dynamic.

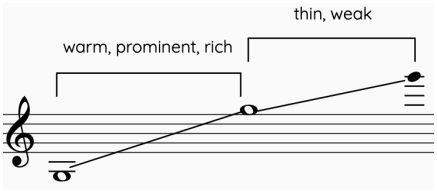
In the mid-twentieth century, in an attempt to revive a national orchestra, using historical encyclopaedias illustrations and engravings in historical structures, a team of luthiers made various sizes of Kamānché, other than its common soprano which has a range comparable to that of violin. The only common variant which is in use is the alto instrument.

Range

In the modern and intercultural settings to help performers play more distant modulations and to assist with its blend with the western instruments, kamānché is often tuned like a violin.



A versatile performer could play up to the fifth basic position (similar to that of a violin).



Techniques

While the majority of the techniques are described with the same terminology, up and down the fingerboard has an opposite implication on Persian instruments: up the fingerboard means closer to the tuning pegs and down refers to higher positions.

As the predominant traditional training is to play various melodic patterns in the modal tetrachords (*gūshe*), playing cross strings is not as common, and often is associated with modulation and changing the musical mood. Even, to reach different strings, the performer has to turn the instrument on its spike, which makes moving across the strings more clumsy.

Double stops between any two adjacent strings are possible, but often that involves an open string or parallel motion rather than contrapuntal lines.

The bowing changes are more frequent, especially in higher dynamics (almost half of what is possible on a violin). Different bowing directions are labeled like that of the cello: down bow refers to drawing the bow to the right.
Considering the shape of the bow, *a punta d'arco* (tip of the bow) and *al tallone* (at the frog) are less effective in creating a distinct timbre. Most other techniques related to the bowing and the placement of the bow are effective and common.
Col legno tratto sounds quite soft (a similar tone that could be made by loosening the tension of the bow and its placement); *col legno battuto* is common and a half wood, half hair *col legno battuto* is far more resonant.

Pizzicato is quite resonant on all the strings and could be achieved with different fingers, nail, snap, or even tapping on the strings. This allows for colourful, versatile passages and even finger tremolos (like guitar) resembling plucked strings.

Natural harmonics up to the fourth partial are resonant. Touch four, artificial harmonics are quite effective in the first octave, yet very thin and quiet in the second octave.

Finger vibrato is the modus operandi, but it is used more sparingly. Slide vibrato (*portamento*) is the idiomatic approach towards producing *glissando*, which usually decorates movement between different tones.

Flautando (especially involving bowing on the nodes to create harmonics) is a very effective idiomatic technique, clearly not as effective and resonant on more ornate lines.

Alto Qeyčak

Qeyčak (literally little swoosh or squeal or little silk) denotes an ancient family of bowed instruments built primarily in a region spreading from the south-eastern Iranian plateau to the Indian subcontinent (namely: Sistan, Balochistan and Hormozgan). Over many centuries it has spread to a wider region of the old Persian countries as far as Afghanistan, Uzbekistan and Tajikistan. It also has evolved from a folk instrument to a national instrument performing in larger ensembles.

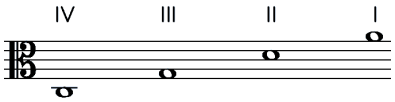
Qeyčak has a large pear shaped resonant box made of one piece of mulberry or walnut wood. The resonant box is heavy and has two depressions on either side to divide it into two interconnected parts. The smaller lower part is covered with a sheep or deer skin membrane. The upper part is an open sound cavity standing as an umbrella atop the lower part, and holds almost half the fingerboard. Originally, it had only two strings; in the sixteenth century a third string was added and eventually the fourth string was added. In some regions, the instrument has a number of sympathetic strings. The contemporary soprano qeyčak has four metallic strings of about 33 cm long (some regional models have three strings or different string lengths). The alto instrument's strings are about 37 cm long. It has a short, almost flat neck and fingerboard, which is carved along the resonant box out of the one piece of hard wood. A small bridge made of wood or occasionally bone, slightly curved and slanted to the neck, allows more expressive bowing on each string. A sizable pegbox holds the strings. Most modern instruments also have a set of metallic fine tuning pegs, similar to that of a violin by the bridge.

Qeyčak is played with a horsehair bow either similar to that of Kamāncheé or a cello bow. This implies different bowing techniques and capabilities depending on the type of the bow.

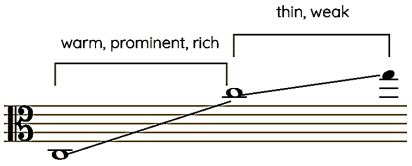
In the mid-twentieth century, in an attempt to revive a national orchestra, using historical encyclopaedias illustrations and engravings in historical structures, a team of luthiers remade various sizes of qeyčak, other than its common soprano which has a range comparable to that of violin. The alto and bass variants respectively with ranges comparable to those of viola and cello are used commonly.

Range

In modern and intercultural settings to help more distant modulations and to help with its blend with the western instruments it is often tuned like a viola.



A versatile performer could play up to the third basic position (similar to that of a violin).



Techniques

While the majority of the techniques are described with the same terminology, up and down the fingerboard has an opposite implication on Persian instruments: up the fingerboard means closer to the tuning pegs and down refers to higher positions.

As the predominant training is to play various melodic patterns in modal tetrachords (*gūshe*), playing cross strings is often associated with modulation and changing the musical expression. In fact, due to its make, the timbral distinction between the strings is more delicate than that of the violin family. Considering the fairly flat neck, most versatile melodic lines are played on the outer strings.

Double stops between any two adjacent strings are possible, but often that involves an open string or parallel motion rather than contrapuntal lines.

The bowing changes are more frequent, especially in higher dynamics (almost half of what is possible on a violin). Different bowing directions are labeled like that of the cello: down bow refers to drawing the bow to the right.
A punta d'arco (tip of the bow) and *al tallone* (at the frog), unless played with a cello bow, doesn't create a discernable distinct timbre. Most other techniques related to the bowing and the placement of the bow are effective and common.
Col legno tratto sounds quite soft (a similar tone that could be made by loosening the tension of the bow and its placement); *col legno battuto* is common and a half wood, half hair *col legno battuto* is far more resonant.

Pizzicato is quite resonant on all the strings and could be achieved with different fingers, nails, snap or even tapping on the strings. This allows colourful, versatile passages and even finger tremolos (like guitar) resembling plucked strings.

Natural harmonics up to the fourth partial are resonant. Touch four, artificial harmonics are quite effective in the first octave and very thin and quiet in the second octave.

Finger vibrato is the modus operandi, but it is used more sparingly. Slide vibrato (*portamento*) is the idiomatic approach towards producing *glissando*, which usually decorates movement between different tones.

Flautando (especially involving bowing on the nodes that create harmonics) is a very effective idiomatic technique, clearly not as effective and resonant on more ornate lines.

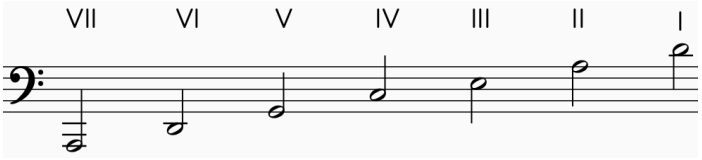
Viola da gamba

Viola da gamba (literally leg viol) denotes a western fretted bowed instrument, which evolved from vihuela as the performers tried bowing the instrument (vihuela de arco). Like vihuela, most da gambas are made with all surfaces - top, back, and sides - from flat slabs of joined wood, bent or curved as required. Some viols have carved tops, similar to the violin family. Their sound holes over time have transformed to C-holes, which distinguishes them from the instruments in the violin family, while their ribs became deeper. Also over time da gambas become heavily constructed and are fitted with a bass bar and sound post, like modern stringed instruments. Eight stretched gut frets are tied on the slightly curved fingerboard around the instrument's neck, allowing for fine-tuning of the instrument. Over time they have adopted a wide and high-arched bridge that facilitated the bowing of single strings. The number of the strings over time has increased from four to eventually seven similarly their make has changed from gut only to combination of gut strings and those overspun with metallic wires.

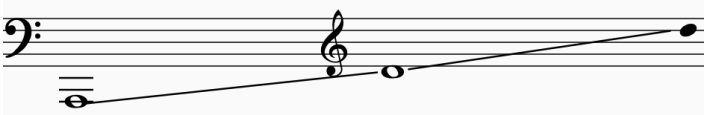
The bow's curvature is generally convex. Viol bows have an open *frog* that allows more movement of the hair. This facilitates a traditional playing technique where the performer uses one or two fingers to increase bow hair tension to control articulation and inflection.

Range

The six string viol used to be tuned like a lute, in fourths with a major third between second and third strings. In the second half of the seventeenth century, a seventh string was added to expand the low end which is tuned a fourth lower.



A versatile performer could play up to the fifth position.



Techniques

Double stops between any two adjacent strings are possible and quite idiomatic. One of the common techniques in playing multiple stops is *barré* in which one finger is pressed across two or more strings simultaneously to stop them at the same fret. It could be used in parallel motion. Viola da gamba could play chords similar to how a lute does, with or without a more prominent melodic line. Due to the make of the fretboard, the chords could be arpeggiated quite fast (barriolage) or with a varying speed.

The bowing changes are more frequent, especially in higher dynamics (almost half of what is possible on a violin). Due to its different bow grip (underhand to control the tension of the hairs), the down-bow of the viola da gamba is fundamentally different from that of the cello. In fact, the strong stroke (down-bow) is pulling the bow inward, towards the body rather than pushing away.

Pizzicato is quite resonant on all the strings and could be achieved with different fingers, nails, snap, or even tapping on the strings.

While the modus operandi in the historical repertoire is “non vibrato,” vibrato could be very effective. Slide vibrato (*portamento*) is possible, but continuous glissandi are very hard to produce, except above the frets. Within the fret range the glissandi are essentially chromatic runs.

Natural harmonics up to the fourth partial are resonant. Touch four, artificial harmonics are quite effective in the first octave and very thin and quiet in the second octave.

Most extended techniques of cello are playable on viol, though there are exceptions. For example, due to the frets, multiphonics are almost impractical.

Bibliography

Berlioz, Hector (2002). *Berlioz's Orchestration Treatise: A Translation and Commentary*. (H. Macdonald, Ed.). Cambridge: Cambridge University Press.

Bloom, J. M., & Blair, S. S. (Eds.). (2009). The grove encyclopedia of Islamic art and architecture (Vol. 1). Oxford University Press.

Blum, Stephen (2010). "KAMĀNČA". In Yarshater, Ehsan (ed.). Encyclopædia Iranica. Vol. XV/4: Kafir Kala–Ḵamsa of Jamāli. London and New York: Routledge & Kegan Paul. pp. 434–437.

Darvishi, Mohammadreza, and Arfa' Atrāii (2009). Sāzshenāsi-ye irāni [Acquaintance with Iranian musical instruments]. Tehān, Chap-O-Nashr Ketabha-ye Darsi.

Elsner, J. (1985). Rabāb and kamānǧa, On the Recent History of Stringed Instruments in Egypt. Beitrage zur Musikwissenschaft, 27(2), 161-166.

Farmer, H.G. (2012). Rabāb. In P. Bearman (ed.), Encyclopaedia of Islam New Edition Online (EI-2 English). Brill.

Kartomi, M. J. (1990). On concepts and classifications of musical instruments. University of Chicago Press.

Libin, Laurence, ed. (2014). "Kamāncheh [k'aman, kamanche, kemence] (Pers. 'little bow')". The Grove Dictionary of Musical Instruments (2 ed.). Oxford University Press.

Massoudieh, Mohammad Taghi (2005). Iranian Instruments. Tehran, Negar.

Otterstedt, A. (2002). The Viol: History of an Instrument. Bärenreiter-Verlag.

Pourjavady, A. H. (2024). Centers of Musical Patronage between the Fifteenth and Eighteenth Centuries. In: Music Making in Iran from the 15th to the Early 20th Century (1st ed., pp. 3–62). Edinburgh University Press.