

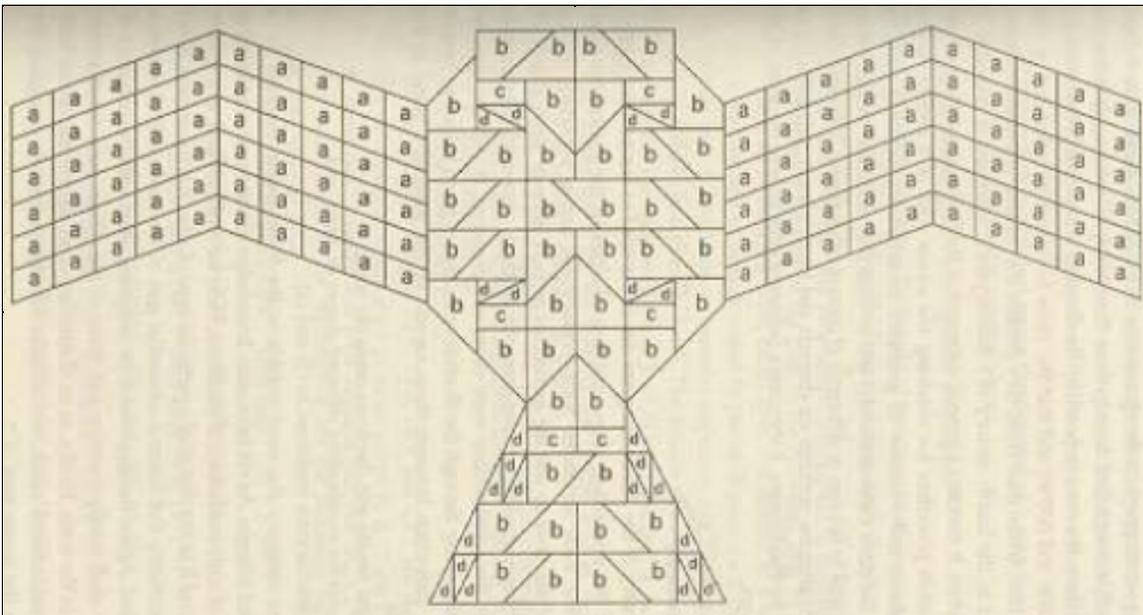
# SULVASUTRA

(RULE OF THE CORDS)

BY

EVAN ZIPORYN

FOR SANDEEP DAS & THE SILK ROAD  
ENSEMBLE



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(ASCAP)

## SULVASUTRA

1. Ka
2. Agni
3. Letter to Pythagoras (3/4/5)

Tabla  
P'ipa  
String Quartet

**Duration: @18 minutes**

Sulvasutra is based on the ancient Sanskrit treatise of the same title. The original concerns the proper measurements for building Vedic temples; as such it includes the oldest Indian document on mathematical principles, particularly geometry. Its awareness of the Pythagorean Theorem predates the Greeks.

It is assumed that the tabla part will be learned by ear rather than notation; its notation is therefore schematic and directional, and is meant to accompany practice tapes to be supplied by the composer.

Sulvasutra was commissioned by Carnegie Hall and the Silk Road Ensemble.

### Program notes by Evan Ziporyn

Sulvasutra (2006) is based on an ancient Sanskrit treatise, probably dating from 800 BC, which gives rules for the proper construction of Vedic altars. It is in three continuous movements, built around rhythmic cycles of 4, 5 and 3, that is, the sides of a right triangle. "Ka" (literally, 'who,' also the first consonant in the Sanskrit alphabet) is the secret name of Prajapati, the self-existing one who creates the universe. His story here mingles with our own creation myth, the Big Bang. String harmonics are floating particles, regarded as waves by the 'one seer,' who dreams the pipa melody. The particles accrue to singularity, then explode and take shape, creating space for the tintal meter of the tabla.

"Agni" is the sacrificial fire, Prajapati's second creation, itself a god. There is evidence that elements of Vedic culture spread to Georgia and Greece; this movement represents that wildfire-like diffusion. Its modal harmonies wind their way through Georgia to the west; its meter begins as strict jhapa (a 5 beat tal) and ends in an additive feel closer to the Balkans.

In "Letter to Pythagoras (3/4/5)", we remain in Greece, where the Mystical Order learned its math from someone (who?). Over a simple drone, the violins build a melody on the same 3-4-5 triangle. Mathematical formulae are infinitely expandable, and what follows is a door opening to that expansion, all burning steadily over a strict 3-beat tal.

for Sandeep Das & the Silk Road Ensemble  
**Sulvasutra (Rule of the Cords)**

Evan Ziporyn

♩ = 84

1.Ka

**A**

Tabla

Pipa

Violin I

Violin II

Viola

Violoncello

*pp* harmonics indicate resultant note: use natural harmonics where possible

*p*

*pp* harmonics indicate resultant note: use natural harmonics where possible

*pp* harmonics indicate resultant note: use natural harmonics where possible

IV<sup>o</sup>

*ppp*

FLAGEOLET ARPEGGIOS (see notes) - speed and contour approx

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Pipa

Violin I

Violin II

Viola

Violoncello

*ppp*

gliss.

3 6 6 7 7 6 7 7

454

12 12 12

455

5 5 5 5 5

*ff* 5 5 5 5 5