

The *Tristan* Progression as an Energetic Voice-Leading Paradigm

A Study in Kinetic Displacement Intervals (KDIs)

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1a.

1a. Musical score showing vocal line and piano accompaniment. The vocal line includes the lyrics: "Noch losch das Licht nicht aus, noch ward's nicht Nacht im Haus: I - sol - de lebt und wacht;". The piano accompaniment features a complex harmonic progression with dynamic markings *pp* and *p*.

1b.

1b. Musical score showing piano accompaniment with a complex harmonic progression.

HARMONIES:

(some are labeled enharmonically)

$a^{\circ 7}$ $a^{\flat m 7}$ $a^{\flat \emptyset 7}$ $a^{\flat \circ 7}$ $g^{m 7}$ $g^{\emptyset 7}$ $g^{\circ 7}$ $f^{\sharp m 7}$ $f^{\sharp \emptyset 7}$ $F^{maj 7}$ $f^{\circ 7}$

EXAMPLE 1. from *Tristan und Isolde*, Act III, Scene I*

KINETIC DISPLACEMENT INTERVALS: AN OVERVIEW

- KDIs assign a single holistic and directional vector, based on the conceit that semitonal motions constitute discrete “quanta” of voice-leading energy. Their aim is to model the “stepwise” interval classes (ic-(1) and (2)) as *kinetic linear pairs* bearing an idealized melodic contour, some trace of essential “up-” or “downness.”
- To find the KDI of a same-cardinality tertian chord pair, one first determines what Cohn 1998 calls its *directed voice-leading sum* (DVLS):
 - 1) Find the “sum” of each collection, by adding its pitch-class integers, mod12.
 - 2) Subtract the sum of the first chord from the second; this produces a range of results from 0 to 11.
- Finally, add a positive valence to any result between 1 and 5, and convert any result between 7 and 11 to its mod12 complement with a negative valence assigned. Thus KDIs will range {0, +1, +2, +3, +4, +5, 6, -5, -4, -3, -2, -1}.**
- The KDIs aim to capture a qualitative, energetic aspect of voice leading independent of consonance/dissonance differentials. In certain contexts we may hear negative KDIs as “tension-releasing” or “stability increasing,” and positive KDIs as “stability-decreasing” or “tension-increasing.” KDIs of {0} might be heard as “tension-neutral” or embodying “motion within stasis.” KDIs of {6} are a special case, suggesting “maximum displacement.”†

* TRANSLATION: *Still the light is not extinguished, still night does not come to the house! Isolde still lives and keeps watch.*

** Like Cohn’s DVLS, the KDIs form a transpositional, commutative GIS whose elements are the twelve sum-classes.

† In practice, KDIs of {6} often seem to require either a positive or negative valence. For instance, a C major triad moves by a KDI of {6} to either D+ or B+; intuitively, these would seem to be “opposite” moves of “+6” and “-6”, respectively. But from the standpoint of group structure, they are the same interval.

1. "Yearning/Negation" Paradigm: Harmonies proceed by negative KDI, pulling "downward," while voice undertakes a pitch-space ascent, peaking at F5, G5, and A5.

TRISTAN

Es naht! Es naht mit mu - thi-ger Hast! Sie weht, sie weht, die Flag - ge am Mast!

CHORDS: f ^{"g^{♭7}"} e^b D^{b7}
 KDIs: [-2] [-1] [-4]

g^{♭7} A^b ped [-3]

2. Reversal: Shift to positive KDIs; upward pitch-space thrust (parallel diminished sevenths) jettisons bass line, culminating in a functional dominant seventh.

Das Schiff! Das Schiff! Dort streicht es am Riff! Siehst du es nicht? Kur - we-nal! Siehst

CHORDS: A^{b7} E^{b7}/A^b ped e^{♭7} f^{♭7} f^{♭7} g^{♭7} a^{♭7} a^{♭7} a^{♭7} E^{b7}
 KDIs: [-5] [+3] [+1] [+4] [+4] [+4] [+4] [+4] [+4] [+1] [+3]

3. Climax: Culminating dominant seventh chord left unresolved, the yearning impulse unconsummated.

Mässig langsam
 (As Kurwenal hesitates to leave Tristan, who gazes at him in mute expectation, the mournful tune of the shepherd is heard, as at the beginning)
 — du es nicht? Noch — ist kein Schiff zu seh'n!

All linearized ♭II → V⁷ in F minor

f minor: quasi-PAC

EXAMPLE 2. from *Tristan und Isolde*, Act III, Scene I*

*TRANSLATION: (Tristan) It approaches! It approaches, speedy and brave! It waves, it waves, the flag on the mast. The ship! The ship! There it goes past the reef! Can't you see it? Kurwenal, can't you see it? (Kurwenal) Still nov ship is in sight!