HENRY FLYNT/CATHERINE C HENNIX

THE ILLUMINATORY SOUND ENVIRONMENT
ZKM SUBRAUM VERSION
21 III 13 - 12 V 13

By an *Illuminatory Sound Environment* (ISE) is meant a *psychotropically working sonic agency* which transports the listener to an alternate state of mind the portals to which are closed without the sound as guide and input. ISE works on more than one level of mind and the priming of all these levels increases the listening subject's receptivity to the ramified lamina of "sheets of sounds" which build up the integral sound defining the sonic space engaged.

ISE needs a dedicated acoustic space which provides the listener unlimited access to its sound which is often continuous and frequently cyclic as all pitches are fixed in accordance with standards of just intonation. The repeated exposure to this sound environment exerts a *priming* of the attentive listening subject consisting in an activation of neural plasticity dynamics which lays down new signal paths connected with neural sound processing sites. As a function of this neural priming activity, the listening
subject acquires a heightening sensibility to present threshold acoustical events by cultivating new neural tissue - the innervation of which provides the portals to hitherto unvisited and unmapped sonically mediated sites and regions of mind.

ISE is intended as a *new paradigm* for experimental electronic music which introduces a new purpose for the attentive listening subject consisting in a reorientation of auditory driven consummation and behavior. It is therefore useless to compare our paradigm with any past or contemporary form of music - the listener is encouraged to forget about other paradigms in order to be able to chose the appropriate *tactic(s) of attention* required to engage with our new paradigm. With regard(s) to the latter, in spite of our use of traditional sound sources traditional tactics of attention are inapplicable as the electronic sound processing (analog, digital) forges *new composite sound wave forms hitherto never produced*. Hence, in order to experience and appreciate the novelty of the latter, the listener needs to choose *ever novel tactics of attention* in order to probe all levels of this sound paradigm. With this listener-interactive aspect for the sounds of ISE, we offer a new purpose for the listening subject.

The ZKM SUBRAUM VERSION of ISE comes in three "flavors" (rasas) , two by Flynt (Celestial Power/Glissando No.1) and one by Hennix (Rag Infinity/Rag Cosmosis), the three flavors alternating daily in accordance with the schema: Flynt, Hennix, Flynt, Hennix... (see PLAY LIST for details).

Catherine C Hennix (1948) was among the pioneers in Sweden experimenting with main-frame computer generated composite sound wave forms in the late '60s (**Still Life, Q***: Fylkingen Records, 1970 (vinyl), 2004 (cd)). In the '70s she led the just intonation live-electronic ensembles *Hilbert Hotel* and *The Deontic Miracle,* the recordings of the latter are presently being released by Important Records. In 1978 Henry Flynt formulated what, subsequently, became known as the concept of an *Illuminatory Sound Environment* (ISE) on the basis of Hennix' performance of **The Electric Harpsichord** at the Moderna Museet in Stockholm,1976 (released by Die Schachtel, Milano, 2010). ISE was first realized in 1979 at the Kitchen, New York, as a joint manifestation by Flynt and Hennix. For the next 20 years Hennix devoted much of her time to mathematical research at the insistence of her late Nada Guru, Sri Faquir Pandit Pran Nath, serving as a professor of mathematics and computer science and assistant to and coauthor with A.S. Yessenin-Volpin for which she was given the Centenary Prize-fellow Award (2000) by the Clay Mathematics Institute, Cambridge, USA. In 2003 she returned to computer generated composite sound wave forms now called *Soliton(e)s* of which **Soliton(e) Star** was the first result. Subsequently she formed the just intonation ensemble *The Choras(s)an Time-Court Mirage* which performs **Blues Dhikir al- Salam** (*Live at the Grimmuseum*, vol. 1, Berlin, 2011, Important Records 2012). In 2012 Henry Flynt asked Hennix for a new, expanded realization of ISE for an installation at ZKM in Karlsruhe, Germany, to be featured in his retrospective/ prospective show Henry Flynt Activities 1959 – at ZKM. In response Hennix realized a 4-channel composition, **Rag Infinity/Rag Cosmosis**, her first 4-channel computer assisted composition since 1969. A beta-version has been made available for the ZKM Subraum installation. The world premiere, version 1.0, will take place at the Project Room, Brooklyn, NY, in June 2013. This is Hennix´most complex composition since returning to the avant-garde music scene - so far.

Catherine C Hennix
Rag Infinity/Rag Cosmosis (1976 - 2013)
[Myobu no Omoto in Memoriam]

A Realization in Two-Part Harmony in 8H Sections
ZKM-Beta-Version for the Illuminatory Sound Environment Installation

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Catherine C Hennix: well-tuned Yamaha keyboards,
tetra-chord custom sine wave generators & computer
Stefan Tiedje: program design & sound mastering

The title, *Rag Infinity/Rag Cosmosis*, is a rag *in name only*, referring, if only indirectly, to the Sanskrit root meaning (from "*ranja*") of "*raga*" (meaning color, passion) as an agency for "*coloring the mind*" (of a listener exposed to an all-enveloping sound). The title is a derivative from my (very) "abstract" composition OMSAHASTRANAMA (The Thousand Names of OM) (cf. **Monistic Universes B. 0.1** - in Catherine Christer Hennix: The Electric Harpsichord, Die Schachtel, Milano, 2010) of which *Rag Infinity/Rag Cosmosis* is one of its emanations (among other such derivatives I mention *Rag Tinnitus* (2006), *Raag Ignoranti* (John Cage: Songbook No. 56) (2011) and *Rag Sama*' (2013).

The sound of OM is related to the *Creation Myth of the Rg Veda* and in modern cosmology to the Hubble frequency (the lowest possible frequency the universe can sustain at any future time) and the event of the *acoustic peak* at which moment, billions of years ago, the observable universe became transparent to light. Current models of the universe are "spectral" in the sense that all components are described by *oscillators* with specific frequencies not necessarily occurring in an acoustic medium which, in effect, *ipso facto*, are defining the latter as specimens of *anahata nada* or the *non-acoustic* or *unstruck sounds*. It is not without astonishment one reads this ancient creation myth today noting, in particular, its refusal to proclaim unrestrained speculations to which most creation myths have fallen victim:

There was neither non-existence nor existence then: there was
neither the realm of space nor the sky
which is beyond.
What stirred? Where?
Was there water, bottomlessly deep?
Who really knows? Who will have proclaimed it?
Whence was it produced? Whence is this creation?
The gods came afterwards, with the creation of this universe.
Who then knows whence it has arisen?
Whence this creation has arisen -
perhaps it formed itself, or perhaps it did not -
the one who looks down on it, in the highest heaven,
only he knows -
or perhaps he does not know.

The eight eternal questions of the *Creation Myth* are still not answered but ours is the Golden Age of cosmology which makes them more relevant than ever. While sound cannot by itself model all possible cosmic frequencies, a rag represents a (small) universe or aspect thereof *all by its own* based on a set of ordered frequencies serving as pitches and beats (pulses) the perception of which gives rise to "inner universes" no less unexplored than the physical universe. *Rag Infinity/Rag Cosmosis* presents fragments of "raga-like" frequency constellations following distinct cycles and permuting their order creating a simultaneity of "multi-universes". When two such "universes" come in proximity of each other and begin unfolding simultaneously along distinct cycles there is a kaleidoscopic exfoliation of frequencies as one universe is becoming two but not separated - the effect of *cosmosis* is entrained binding two or more frequency universes into proximity where their modal properties interact and blend creating in the process entirely new microtonal constellations in an omnidirectional simultaneous cosmic order with phenomenologically "transfinite" Poincare' cycles (cyclic returns to initial conditions). Projecta of (tensor-products of) the *Hilbert Space Shruti Box* (The Quantum-Harmonic Ether - Sounds from Another World) represent the formal ontology of these universes of oscillations ("*shruti*" means: that which can be heard (as a means of expression) - the concept applies to *both*, texts (like the *Rg Veda*) *and* actual sounds (like a rag). (By "*cosmosis*" I mean a (reciprocal) process or event where two distinct but related universes are leaking or bleeding into one another along a continuous (non-chaotic) dynamic trajectory).

Besides the direct live or "online" experience of this sound there is also a significant "*after-sound*" or "offline"-experience which is primed by self-"tuning" of a t*emplate for otoacoustic emissions* formed by the hair cells of the inner ear by prolonged exposure to *Rag Infinity/Rag Cosmosis*. This experience is accessible to a listener who withdraws to a quiet space and concentrates on the sparkling frequencies filling the inner ear many, if not all, of which are "re-broadcasted" from the "online- experience". I note, not without satisfaction, that this re-broadcast is an exemplary instance of a *terrestrial* experience of the unstruck sound, a sound which does not travel through air - *anahata nada*. This is, by definition, one of the thousand sounds of OM!

Episodes of this experience I call "*Rag Tinnitus*" which are not a physiological anomaly but a trap-door to what in Indian music theory is referred to as the "*subtle sound*", commonly known as the "*inner sound*". The listener regularly alternating between *ahata nada* (acoustic sounds) and *anahata nada* experiences will, according to Indian music theory, be best adapted to the ultimate goals of exposure to psychotropic sounds, a *shruti-dialectics* of sorts.