

Sınk

Composer / researcher:

Dimitri Voudouris

composed:

[2013 – 2014]

composition:

Σίηκ

[Music composed and constructed from the elastic behaviour of vehicular traffic]

[Regions: 1-25]

duration:

[64 min 35 sec]

Theatre for contemporary music and inanimate objects

giant puppet figures, optional [animation, shadow theatre and mechanized toys]:

puppeteer/s, choreographer/s

scenery:

scenographer/s

observer/s:

behavioural analysts

audience

electro-acoustic music

instruments: Adrian Loeb - alto flute and bass clarinet , Katina Sidrigynis – piccolo
extended instruments: Adrian Loeb and Katina Sidrigynis - midi- flute, piccolo, bass clarinet,
Computer assisted live electronics

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Musicians:

Adrian Loeb (*alto flute and bass clarinet*) born in Dresden Germany (1949*), he was appointed as alto flautist and performed with the Radio Symphony Orchestra Stuttgart since 1983. In 1986 he was appointed lecturer at the Royal Conservatory of Antwerp. In 1999 was appointed bass clarinetist at Dresden Orchestra , he also gives lectures on electro-acoustic music and is an expert on midi systems at Carl Maria Von Weber College of Music.

Katina Sidrigynis (*piccolo*) - born in Lom, Bulgaria (1952*) of Greek parents. She graduated from the Pancho Vladigerov State Conservatory in Sofia (1974), she worked from 1979 as artistic director of the National Ensemble of Popular Songs and Dances. Since 1986 she is a full-time virtuoso clarinetist and piccolo player for the Vidin State Philharmonic Orchestra . From 1989 onwards she has won three major awards in contemporary music performance in Bulgaria. Since 1992 she also teaches composition at the Academy of Fine Arts in Sofia.

Puppeteer – puppet – perceiver, limitations and restrictions in manipulation, an exercise in behavioural analysis:

When we refer to a motor vehicle travelling on the road , we either admire,dislike or accept the vehicle. When we refer to the way it is driven we refer to the driver's behavioural abilities [the vehicle is an extension of the driver's behaviour on the road]. In Sıñk we are interested in examining the relationship that music has on puppeteer and the puppeteers response to motion, applied to his/her puppet. The behavioural extension of the puppeteer is the puppet. The puppet is an object to which the puppeteer gives impetus, life or force. There is a transfer of energy. Simple movement in the object comes to represent motivation when in fact it is only movement given by the power of another body. The puppet object is inert and so vulnerable to the force and will of the puppeteer. The puppeteer transforms the inertia of the puppet into movement and thus transforms its energy, this is manipulation. With the response to music if the movement, given to the object by the performer, gives the object a quality of autonomy, the illusion is created that the object is moving and not being moved. Rhythm of movement, gives autonomy to the object. The more precisely the movement of the object reflects that of the thing it is imitating the more complete the illusion will be [synchronization]. It will then have a quality of movement which represents a force, which is not its own but gives the illusion of being so. The performer can move the object in a way that indicates the presence of consciousness. When this is done, the object is given a movement pattern that corresponds to the movement of something that possesses motivation. Through moving the object as if it has a will (the object wants to move, to go somewhere or do something), senses (the object sees, hears, feels, smells etc.) and/or perception (the object realizes something or experiences something emotionally), the object 'comes to life'. In giving the object movements that the perceiver can identify as 'signs of life', the puppeteer creates an illusion of the object being alive. In order to sustain the credibility of 'independently moving' or 'living' object a rhythm of movement particular to that object must be convincingly established. This movement, once established, must be maintained or broken only inside of what we can relate to as possible for that thing or character. This is tightly related to the perceived possible magnitude of movement within the given universe or reality of the illusion. This is a plausible illusion that operates according to an established set of rules. When certain key visual elements are in place and when these are combined with some coherent movement, the perceiver will begin to invest energy of his/her own object.

Illusionist manipulation throughout the performance:

When the manipulator is not visible the tension between these two forces (the illusion of life and the constructed nature of this illusion), decreases. The life force established in the object is fragile. It's tension is held inside of the play between this illusion and the real independence of the object and manipulator. Any change in the quality of the life force of the object, which is out of the character of the life force which has been established, either in its rhythm or in the puppeteer's relationship to it, becomes a contradiction to the illusion of the autonomy of the object. The perceiver is constantly aware of this double force at play. There is a sense of fragility in the illusion as the life force seemed to have come from nowhere, this can be easily destroyed and yet appears to exist. This is often captivating as the involved perceiver is aware of the illusion and wants it to survive. Whether or not the choice is made by the performers or director to break the illusion, the perceiver is aware that it can be broken.

When the *illusionist manipulation* technique is used, the object is given the illusion of life; set up as 'alive'. The perceiver will rarely be conscious of the performer with *illusionist manipulation*, as the performer is not seen. Convincing, the spectator will suspend his/her critical mind and follow the progression of the illusion. The rules of the physical world will not be expected to apply in the same way as the performing objects. As the spectator is drawn into the illusion so he/she allows her mind to play in a non-concrete reality and will enter a world where anything is possible. This associates strongly with the subconscious aspects of ourselves and our non-physical perceptions of reality.

Where the controlling force appears to be the object, the internal logic of the relationship is reversed. This is complex to establish. If the object is given certain characteristic ways of moving, an illusion may be created that is controlling the performer. If the manipulator maintains the illusion that has been created in the object, certain rhythms, reactions and behaviours become necessary in the object's movement. These are established as a pattern and the manipulator is forced (through the choice to protect the illusion) to maintain these behaviours. As this falls into place the manipulator may be perceived as being controlled by the object or by the rules of movement that the object has come to represent. If the performer is seen to struggle to do what has become necessary, the perceiver will become aware of this reversal in control. Depending on these factors and the scale of the objects, the perceived vulnerability of the performer can be established. If the performer(s) are seen to be uncomfortable, unhappy or distressed, their apparent loss of control will bring to mind effort, the human struggle to keep a grip on things. Where the 'controlling' objects are clearly objects, the situation will speak of a de-humanized world, the machine age, object-dominated realities and the individual's ingestion into 'the system' (often talked about as a machine). In other words, these power relationships, in which the objects dominate and are seen to be objects, will usually speak of negative human relationships with a dominant external reality. There are moments in the music score that encourage this reversal in control these particular moments are not clearly indicated to the scenographer and puppeteer.

The Puppet and the idea of Self:

When we consider the 'self' there are always several dimensions experience at play. Body and mind are articulated as 'self' but looking further the are difference of personality are often in conflict with one another, conscious and unconscious motivating complexes, the life force itself, dream, intuition, inspiration and many more. The body is often conceived as the anchor for all of these forces and dynamics, aspects of the self. Where the body represented on stage is a puppet, the viewer is taken out of the realm of the habitual physical form of the human body. This makes it easier to accept a plausible relationship between this body and other aspects of the self that the creator may choose to represent in a material form. A single character may have several heads, or several bodies. Replica physical forms, capable of different actions or possessing different intentions, may represent other selves. The body may not prove to be as solid as it appears, disintegrating and re-assembling itself. Other aspects may manifest in different physical form but still created from the same material thus bringing the two aspects of the same character into the same visual a textural plane. Even very different media can still seem closely related to each other depending on how they are treated. The Puppet's ability to represent multiple aspects of the self is not dependant on the material form, this is simply one tool that may be used. Of course the puppet—performer relationship is one of the key areas where puppetry can play with the multiplicity of interior human dynamics. The key element in the puppet that gives it this capacity is its plausible dissimilarity is close to our feeling of being human in that it appears to have intentions, will and all the other aspects of life force. At the same time it is physically capable of representing humanity in many different ways, materials and forms (ranging from the distorted to the caricatured to the form of anthropomorphized animals and even abstract bodies).

Within the limits of its own established rules of movement, the puppet is capable of many physical features which a physical human may only dream of doing. So the puppet on the one hand maintains its proximity to the self through the life force and can push away from the familiar physical limitations of the body through its material form and manipulation. Where it pushes away from the familiar and if the form and movement remain plausible to the audience for the dynamic it represents, the puppet can capture the imagination of the audience. It can give physical form to dynamics that often remain abstract or half explored. These forms can be used in contrast to, and in interaction with, physical performers to further extend the dynamics at play. This allows audiences to project less familiar aspects of their human experience into the theatre space. When puppetry represents these abstract dynamics, it gives a different weighting to the different aspects of self. Our inclination to see the self as a fixed unit can be destabilized by emotional involvement in these representations of aspects of the self we may otherwise choose to ignore. For the puppeteer as a human being, sensation and feeling exist in and through many different aspects of ourselves. There is the direct physical, censorial aspect, the emotional aspect and the conceptual and intellectual aspect of ourselves. No one of these aspects is more or less important in our experience of the sensation of life.

Music and kinetic motion of manipulation through various body regions:

The music composition displays 25 regions of manipulation. In physical manipulation this could include a single region of the body and in parts combined with [multiple] regions of manipulation outside the body. Treating the mechanical superstructure as a kinematic system while we treat the puppet itself as a dynamic system.

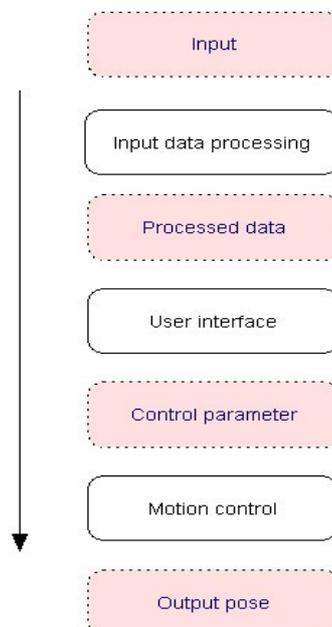


Fig 1: System Structure.

Step	Data
input	position and orientation of recognized hands position of recognized fingertips for each hand
processed data	existence of data for each hand and finger position and orientation of each hand (if visible) flexion angle of each finger (if visible)
control parameter	character's pelvis position character's head and trunk orientation character's foot position (foot height) character's hand position (hand height)
output	character's pelvis position and orientation character's joint rotations

Fig 2: *Input, output, and intermediate data at each step.*

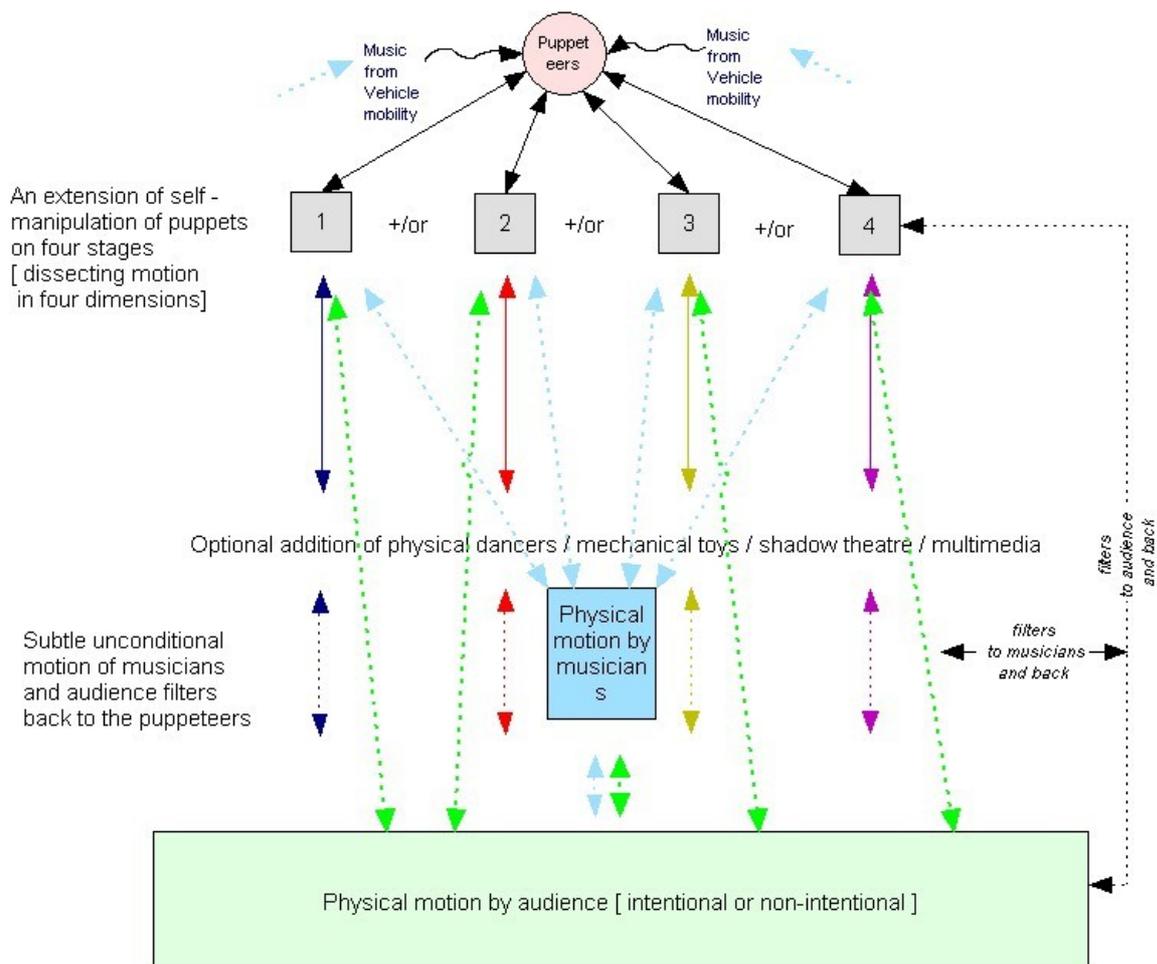


Fig 3: *Theatre space in constant motion and dialogue*

Composition:

Sırık - a universe of synchronization in complete dialogue between mechanical motion initiated by the puppeteer to the puppet, scenic motion, the intentional or unintentional motion of the musicians, the intentional or unintentional motion of audience and the mechanical nature of the music composition.

animate (+), inanimate (*)

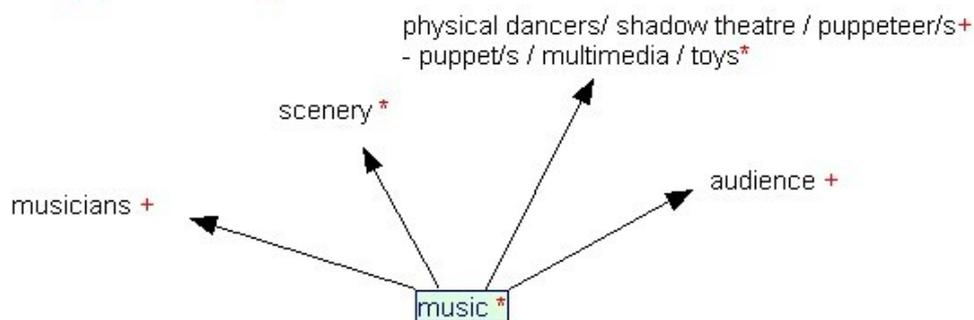


Fig 4 : Animate and inanimate objects in constant motion and dialogue in space

Music – Puppeteer – Puppet:

Sırık a work in progress were the puppeteer influenced by his/her hearing perception exercises motion. The work is open to other contributing factors: animation, shadow theatre, physical dance theatre and mechanized motion of toys, all are dynamic extensions of the [self] motion exercised by the puppeteer on the puppet/s. It is a decision taken by the scenographer, choreographer to incorporate one or more of these contributing factors into the work, which could further add complexity.

This work is constructed as a pageantry of colour and movement that establishes a unique multimedia presentation. This is a large work that invites the listener on a voyage of unfolding dimensions and focuses . One pair of stereo speaker monitors are placed on each of the four stages behind the giant puppet figures whose movements and specifications are notated in the score along with the music. Dialogue celebrates the dynamics of movement and structural forgings.

Each puppet is asked to perform a series of functions and inter-functions throughout the whole of the work. The universe of Sırık is constructed of 25 regions each region focuses on mobility in a specific region of the body [singular joint mobility or multiple joint mobility as determined by the choreographer]. Each region is dissected in some performances between four, three, two and one stage splitting and extending the focus of audience concentration in multiple dimension. The music from each of the 25 regions can be played in sequence or selected at random by the musicians and sound projectionist. Each puppet in this context is constructed so that independent and unison

movement positions are possible. This is necessary because each puppet is designated movements and functions in the performance spectrum.

We are transported to a continuum of evolving strategies that emphasize the use of static and active construction occurrences, timbral and focus specifications. The music forms and re-forms shapes blocks that maintain a central property mix from beginning to end. The forward strategy in this context involve the position of a given mixture and what it adds or takes away from the thrust presence of the music.

The principal language systems of the music used are: 1] open to closed (sequence) sound beam construction. 2] The use of phrase grouping line formations. 3] staccato line formations. 4] chromatic runs. 5] grace notes and 6] metric constructions.

Music – Changing scenery:

Σιρήκ - a universe of synchronization between mechanical motion and scenic motion initiated by scenographer and the mechanical nature of the music composition. The only time the scenographer is in discussion with choreographer is whether to incorporate other factors into the work and addition of further illumination. Scenic movements, illumination and specifications are notated in the score along with the music. In Σιρήκ the functions of the choreographer and scenographer are completely independent.

Vehicle mobility in the construction of Σιρήκ:

The investigation of elastic potential energies exhibited by [uni-directional] vehicular motion in [O]:Rd2 is revisited. This was conducted by alterations in speed formations of vehicles approaching each other from behind. The linear momentum of the various groups of vehicles [a product of velocity] which are frame dependant [a person driving a vehicle] and are subjected to various forces i.e. stop and start, acceleration and deceleration - in speed, showed elastic property behaviours [refer to *pdf*, in [O]:Rd2]. Attention was placed in particular to the elastic mobility of vehicle Matlab allowed for the translation of selected data collected from the analysis into musical language [acoustic and electronic]. In Σιρήκ the sound generated for computer composition as well as the acoustic source [Flute, Piccolo, Bass Clarinet] is of equal importance and is governed by the kinetic mobility theory, with exponents dominated solely by external characteristics of the intrinsic velocity distribution behaviours. Numerous data was captured on Hendrik Potgieter road, William Nicol road and Gordon road in Roodepoort, alterations in speed formations of vehicles were studied. The behaviour of traffic mobility was examined as moving in two lanes under various time intervals from the August 11th to 20th November 2013. To attain identifiable specifications the data had to be grouped in various categories of speed classification. Through numerous calculations *matlab* allowed for the interpretation, linking, structuring, positioning of the data and translation into musical language.

Instructions for participants

Triangular dependants:

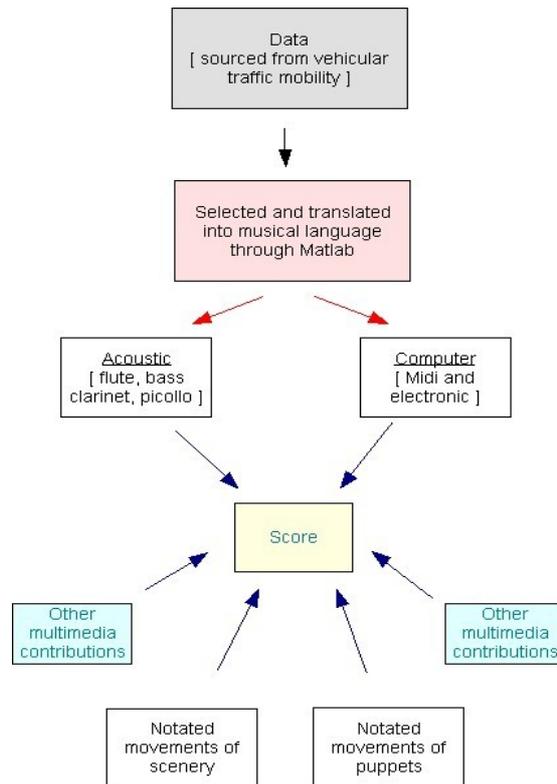


Fig 5: *Srhk* step by step formation of score

Triangular dependants between :

1] Choreographer, scenographer, musical composition.

2] Three inter dependant triangular activities:

a] The audio component - computer music, acoustic music, audience.

b] In puppetry, the thing becomes a being because of an implicit contract shared: the event depends on a triangle linking the audience, the human performer(s), and an inanimate object.

c] Music, scenery, audience.

A transaction of affect between these sites, we are allowed to engage with the object as if it were generating a universe of expressive and intellectual complexity. That as if it is crucial, and it is in these terms that puppets, scenic changes, illumination reaffirm the profoundly mediated nature of human subjectivity. In psychoanalytic terms, after all, it is through processes of projective identification, of role-play, and of separation that we are precipitated into individuation. Our pleasure in engaging with the scenic changes, illumination and puppets arises from the instability that they generate in relation to that process. No longer do we understand ourselves to be projecting meanings onto the thing, but rather the thing begins to speak to us, and we lose touch with the idea that the object has become sensible simply because of our commitment to transfer affect onto it.

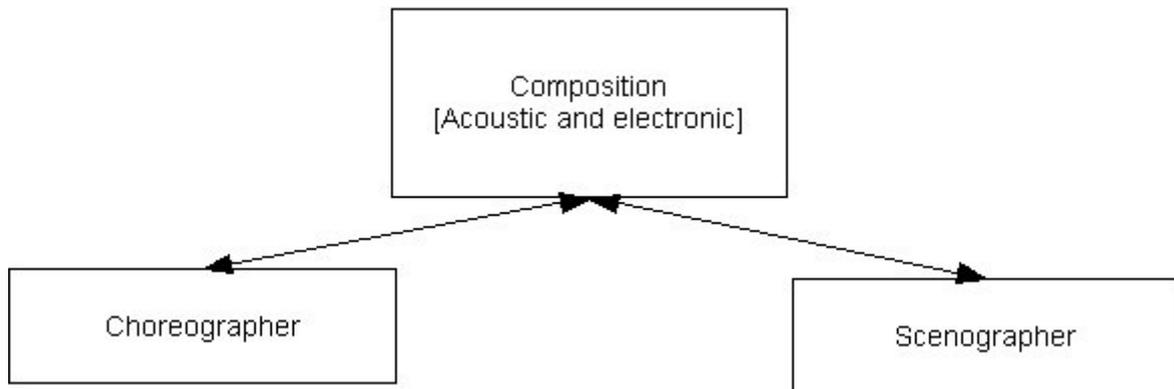


Fig 6: Σιήκ- triangular dependants (Choreographer / Scenographer / Musical composition)

In Σιήκ what interests us while watching a musical staged puppetry performance is not that we might forget that we are captive to the auditory and visual aspects in the performance but rather part of an ongoing dialogue-taking place where the own and the other are interwoven in indispensable and necessary phenomenological interplay.

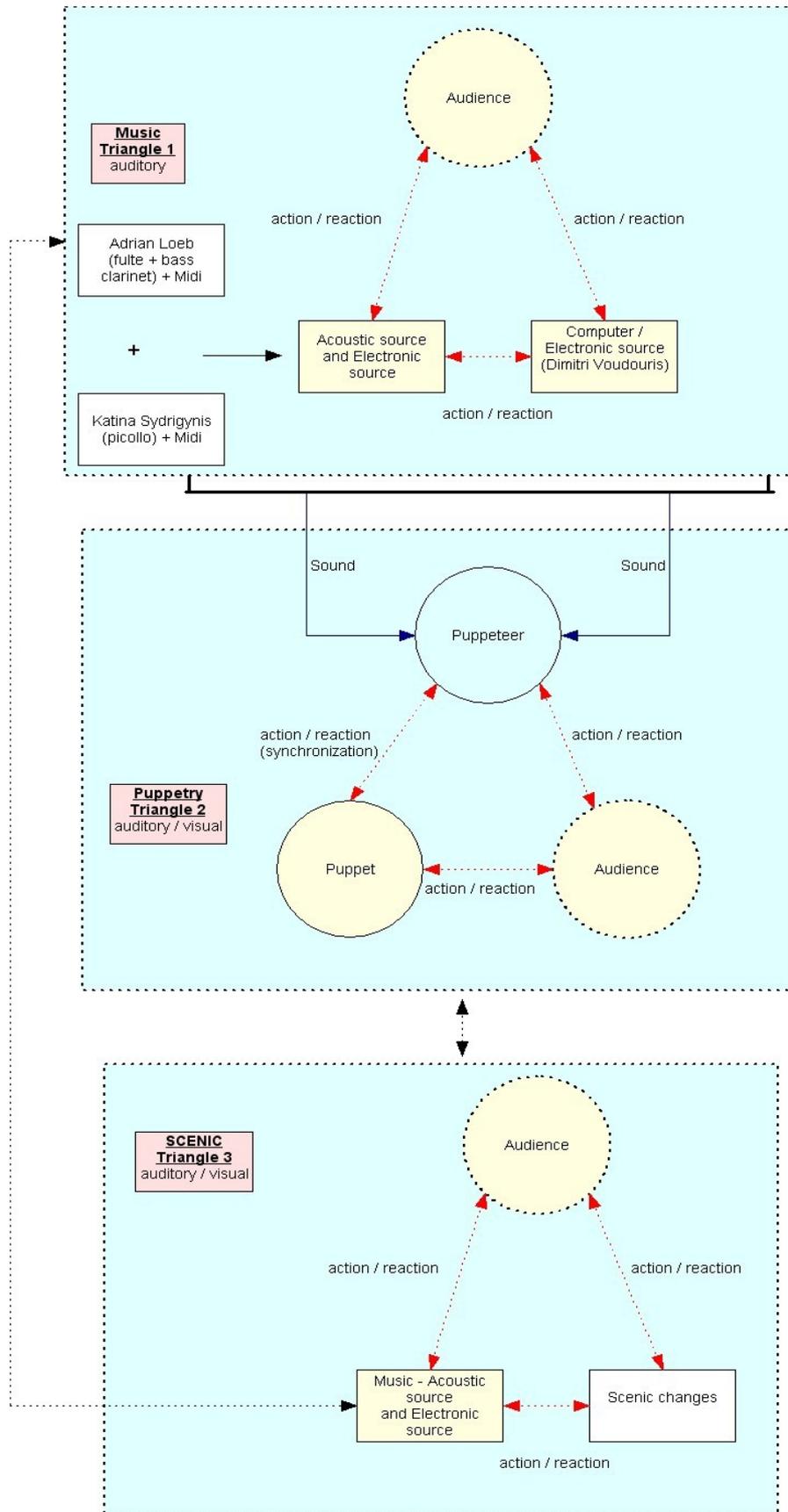


Fig 7: Σιήκ- Three inter dependant triangular activities (auditory / visual component)

Music diffusion affecting choreographer, puppeteers, scenographer from 4 to 1 stage.

Each region of musical performance selected will be played in its entirety, there will be no improvising of music within each region. (the order of performance might vary e.g. *region 6 followed by region 10 instead of region 6 followed by region 7*).

1] The choreographer, scenographer and (groups of) puppeteers are familiar with some music performed.

2] The choreographer, scenographer and (groups of) puppeteers are unfamiliar with some of music performed.

3] The choreographer, scenographer and (groups of) puppeteers are partly familiar or partly unfamiliar with the order of music performed.

- *The scenographer and puppeteers' familiarity / unfamiliarity with the music or order of performance could reflect with problems achieving autonomy, thus causing an inability to achieve fine motor coordination by the scenographer and the puppeteer.*

4] The choreographer, scenographer are not in communication with one another.

5] Each group of puppeteers are not in communication with one another.

6] The sound projectionist and musicians will have a diagram indicating the order of diffusion on the different stages and what music will be performed.

7] The group of puppeteers performing on each of 4 stage are to use the music allocated to that stage through a pair of stereo speakers or headphones supplied to them.

8] The scene manipulators on each of the 4 stage are to use the music allocated to that stage through a pair of stereo speakers or headphones supplied to them.

8] The music performed by the musicians on centre stage functions as a musical link between acoustic and electronic component and should be seen as part of the *whole*.

9] If multimedia [animation, shadow theatre, physical dance theatre and mechanized motion of toys] is incorporated to the work at a latter stage it is important that such media operates independently.

Anatomical terminology used by puppeteers in the process of manipulation [*animation, shadow theatre, physical dance theatre, mechanized motion of toys*]:

0.1] Separation of body into regions:

FRONTAL (or coronal) separates the body into Anterior and Posterior parts.

MEDIAN (or midsagittal) separates body into Right and Left parts.

HORIZONTAL separates the body into Superior and Inferior parts.

SAGITTAL any plane parallel to the median plane.

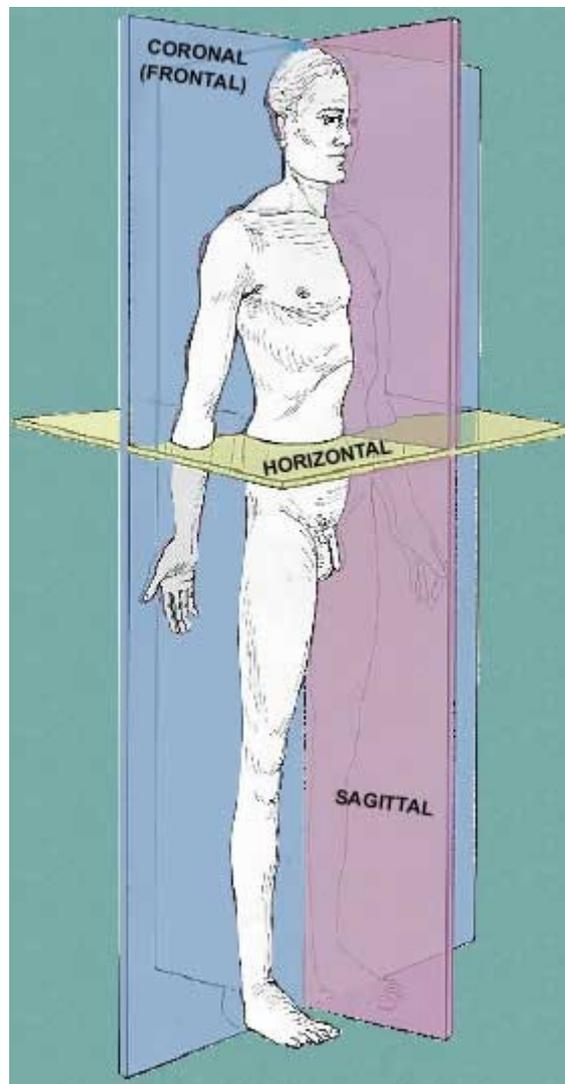


Fig 8: Anatomical regions of the body

0.2] Terms of relation or position:

superior (<i>closer to the head</i>)	inferior (<i>closer to the feet</i>)	reference point -- horizontal plane
posterior (dorsal) closer to the posterior surface of the body	anterior (ventral) closer to the anterior surface of the body	reference point -- frontal or coronal plane
medial (<i>lying closer to the midline</i>)	lateral (<i>lying further away from the midline</i>)	reference point -- sagittal plane
proximal closer to the origin of a structure	distal further away from the origin of a structure	reference point -- the origin of a structure
superficial	deep	reference point -- surface of body or organ
median		reference point -- along the midsagittal or median plane
intermediate		between two other structures
external	internal	refers to a hollow structure (external being outside and internal being inside)
supine	prone	face or palm up when lying on back, face or palm down when lying on anterior surface of body
cephalad	caudad	toward the head, toward the tail (feet)

0.3] Terms of movement:

flexion	extension	increasing angle with frontal plane decreasing angle with frontal plane
abduction	adduction	moving away from or toward the sagittal plane
protraction	retraction	moving forward or backward along a surface
elevation	depression	raising or lowering a structure
medial rotation	lateral rotation	movement around an axis of a bone
pronation	supination	placing palm backward or forward (in anatomical position)
circumduction		combined movements of flexion, extension, abduction, adduction medial and lateral rotation circumscribe a cone
opposition		bringing tips of fingers and thumb together as in picking something up

Selection, assessing, scoring....

Group selection of puppeteers, [based on]:

The following points need to be taken into account when selecting members of a group:

- 1] The collection of people shares an awareness of membership.
- 2] The collection of people are interacting with one another – they intercommunicate on an informative level and on a metacommunicative level.
- 3] The collection of people share one or more implicit or explicit objectives or motives which provide the reason for them being in the group.
- 4] The collection of people develop explicitly or implicitly a set of norms or rules which put pressure on the members in respect of the permissible behaviour within the group, and sometimes also in respect of the attitudes and behaviours of the group members towards other groups. Group norms and the consequent pressure can lead to conforming behaviour aimed at achieving the group's goals.
- 5] The collection of people can consider consensus within the group so highly that the phenomenon of the group thinking manifests.
- 6] If the interaction between the members of the group of people is long lasting a leader and followers pattern develops within the group.
- 7] If the interaction is long lasting there develops between the members of the group a network of interpersonal attraction based on the likes and dislikes the members have in respect of one another.

Two methods in assessing puppeteers:

It is important to know how we go about measuring the quality of information remembered and forgotten in an experimental situation [during each performance].

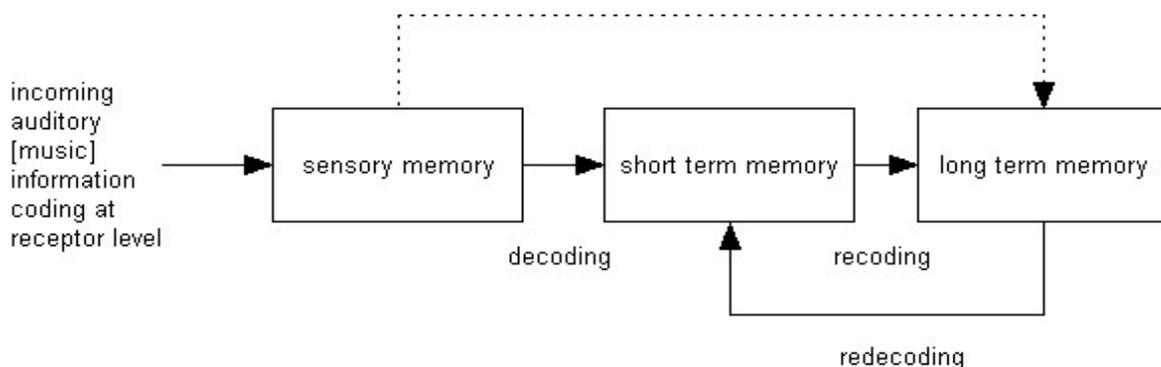


Fig 9: Puppeteer - Three types of memory

Fig 9: When we perceive a stimulus, it then makes us think of something else similarly one idea leading to another. The formation of associations between ideas was part of learning by the similarity and contrast existing between them and by the frequency with which they occur together. In the association approach to learning, stimuli and response are units on which the analysis of behavioural changes is based.

Scoring per individual or group puppeteers:

1] Scoring per individual is a more accurate method.

2] In a similar assessment scoring could be done per group of puppeteers. This scoring method could be used to attain results if a particular individual/s are not present in performance for the observer to see and assess but are part of a group of puppeteers. Thus the method of scoring used is as per 1].

Recall:

Recall is one of the most used methods for measurement of retention, and it consists of a person having to reproduce something he has been asked to learn.

Formula 1: Recall score = (number of items reproduced / number of items learnt) x 5

We distinguish between two forms of recall : a] verbatim recall which refers to the reproduction of information in the form in which it was received. b] free recall refers to the recall of information in the form in which the person himself organised it during the learning process.

Relearning or Savings Method:

Ebbinghaus said if a learning trial takes less time than did the first learning trial to reach the same learning criterion, then there was a saving as far as the time taken is concerned. This time saving is expressed as a percentage and is arrived at by means of the following formula.

Formula 2: Savings score = (time taken for the first learning trial – time taken for the relearning trial) / time taken for the first learning trial x 5

Role of observer/s – puppeteer, audience, musicians:

Re-selection of observer/s, choreographer, scenographer, (group) of puppeteers per country of performance.

- 1] The observer/s to note the specific differences with response to music.
- 2] The time taken for the puppeteers to respond to the music initiated by the performers.
- 3] As a result the type of kinematic performance engaged through the puppet – whether the response to music triggered a favourable *manipulation* result.[observing type of manipulation and audience response].
- 4] The type of concentration response from the audience .
- 5] The scenic changes and illumination: Helps to *achieve* or *undermine* the level of concentration desired by the puppeteer and audience?
- 6] Whether the puppeteer has achieved *autonomy* in response to familiar or unfamiliar music produced [achieving fine motor coordination with manipulation of the puppet].
- 7] The observations on level of concentration by the audiences [*different audience, venues, countries*] in the various performances reached.
- 8] The observations on level of concentration *initiation [music] and response* by the choreographer, puppeteers [*different choreographers, puppeteers, venues, countries, days, times*] in the various performances reached.
- 9] The observations on level of concentration *initiation [music] and response* by the stage manipulator for scenic changes [*different scenographer, venues, countries, days, times*] in the various performances reached.
- 10] The observer/s are to be present from the time of the first rehearsal with scenographer choreographer and music performers to the time performances – overlooking the construction of the work at large. a] The observer/s will note the series of particular events (items) learnt and the way they are reproduced. b] The puppeteers will be allowed to improvise a scene of events (items) or within a scene as prescribed by the choreographer. c] The improvised proceedings in b] will not be assessed by the method prescribed, rather on quality of a meaningful (manipulation) reproduction.
- 11] Four observers selected for four stages - **performance 1**, three observers selected for three stages - **performance 2**, two observers selected for two stages - **performance 3**, one observer selected for one stage - **performance 4**.
- 12] The results obtained from the observers will help the composer, choreographer and scenographer to establish constructive complexity in the work [music, motion and scenic changes] for future performances.
- 13] The observer/s to note the specific differences with response to musicians performing e.g. the music performed does it at all times remain linked to the total music proceedings [performance between midi, conventional instrumentation and electronic performance] and to what extent is this achieved.
- 14] The observer/s to note the specific differences of motion generated by musicians showing levels of concentration and to what extent is this achieved.
- 15] *These observations are to be noted on a numerical level in a scale [1-5], and handed over to the composer, choreographer and scenographer.*

<i>positions</i>	<i>meaning</i>
1	failure to achieve
2	week
3	moderate
4	good
5	excellent

Fig 10: *Numerical level*

Performance:

- 1] In the four performances the stages will be reduce from [4 stages to 1 stage].
- 2] Reducing the *group* of puppeteers performing from 4 groups [4 stages], 3 groups [3 stages], 2 groups [2 stages], 1 group [1 stage].
- 3] Reducing the sound diffusion from 8 active stereo speaker monitors gradually to 2 as well as the light manipulation by scenographer. The stage interlinks will also be gradually reduced from 4 to null, in Performance 1 – 4.
- 4] Each region of manipulation is dissected between 4 stages splitting the focus of audience concentration to a four dimension anatomical plane.
- 5] Gradual reduction of the stages [Performance 1 – 4], should have an observable influence on the concentration scope of the audience.

Reducing stages in performance:

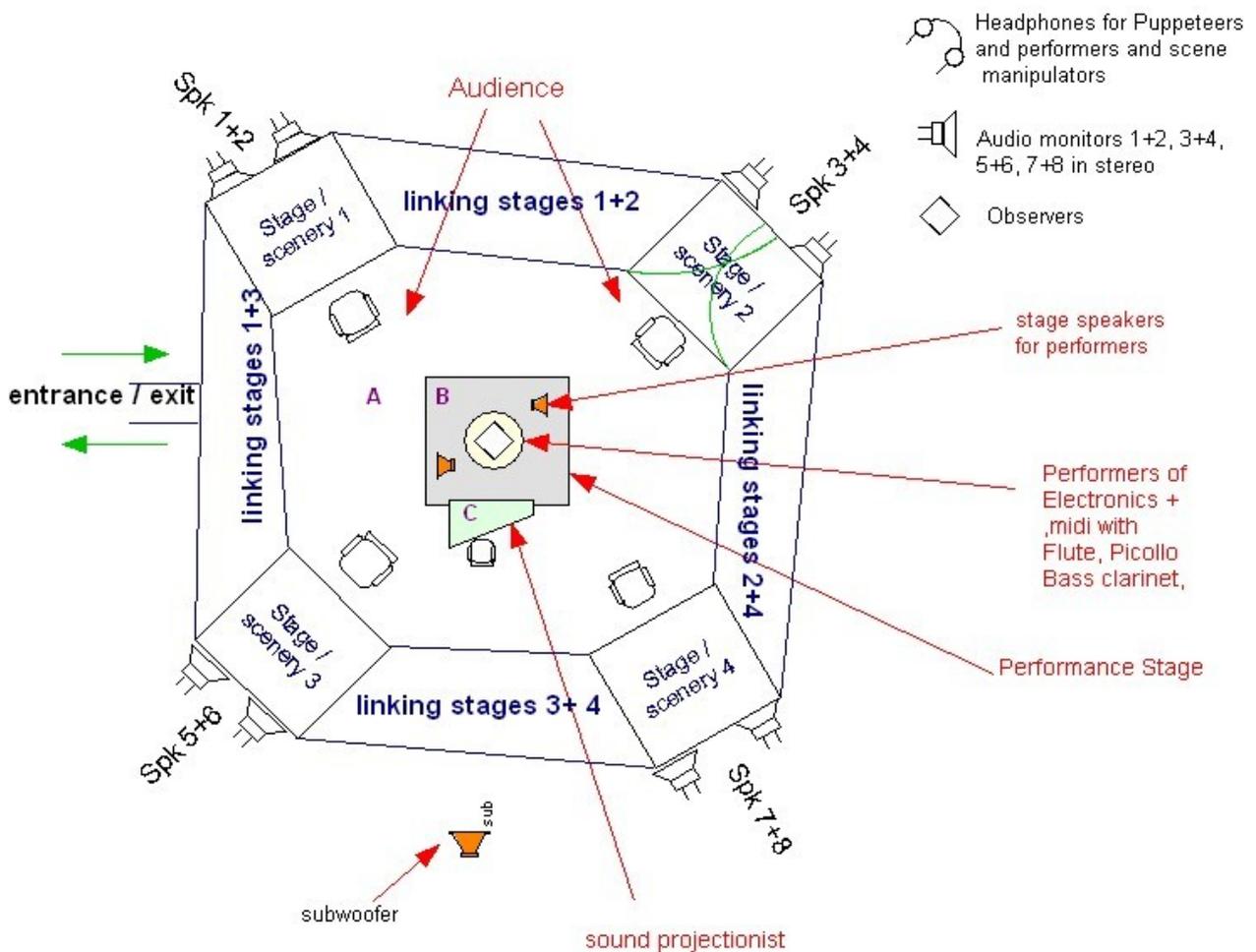


Fig 11a: Performance 1

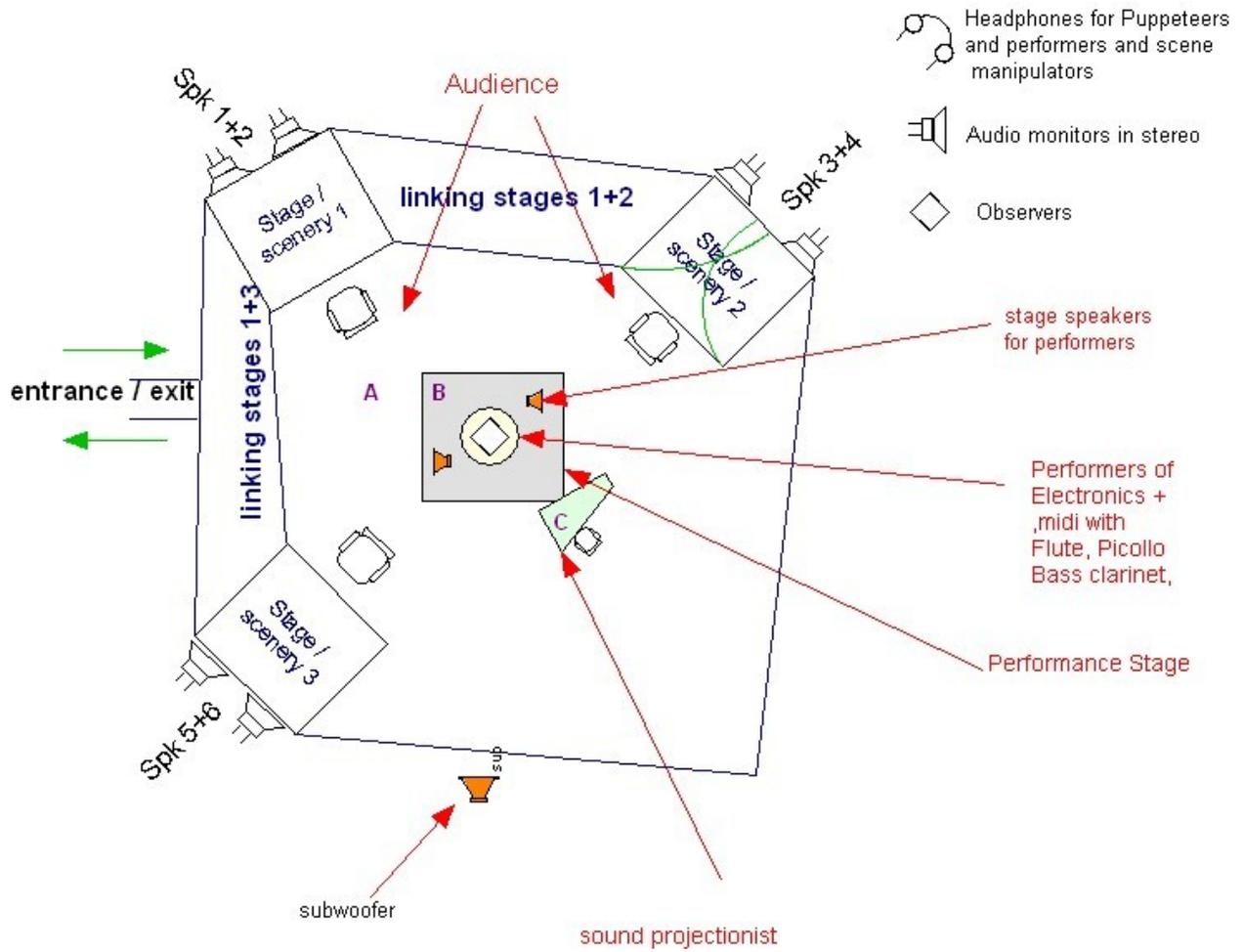


Fig 11b: Performance 2

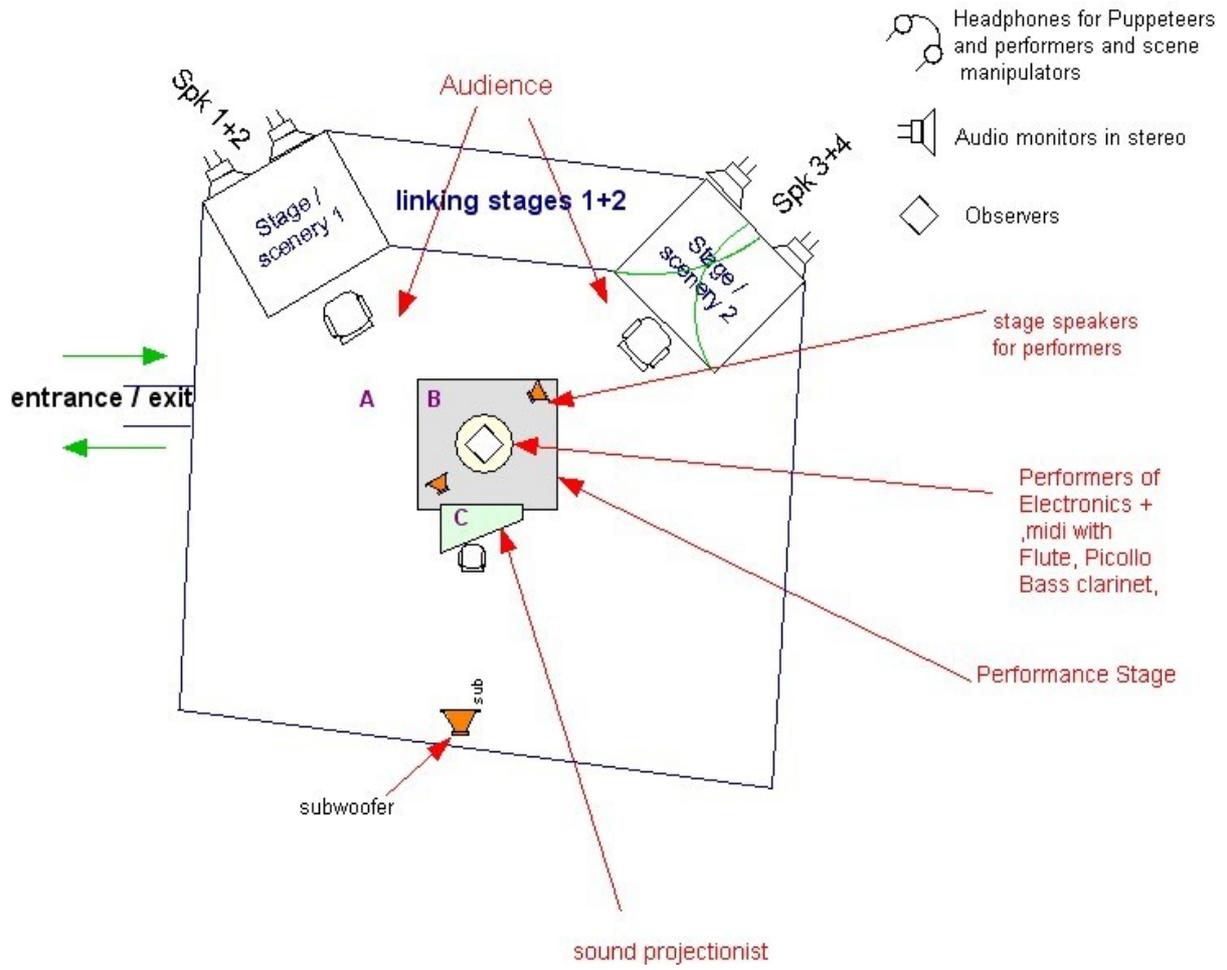


Fig 11c: Performance 3

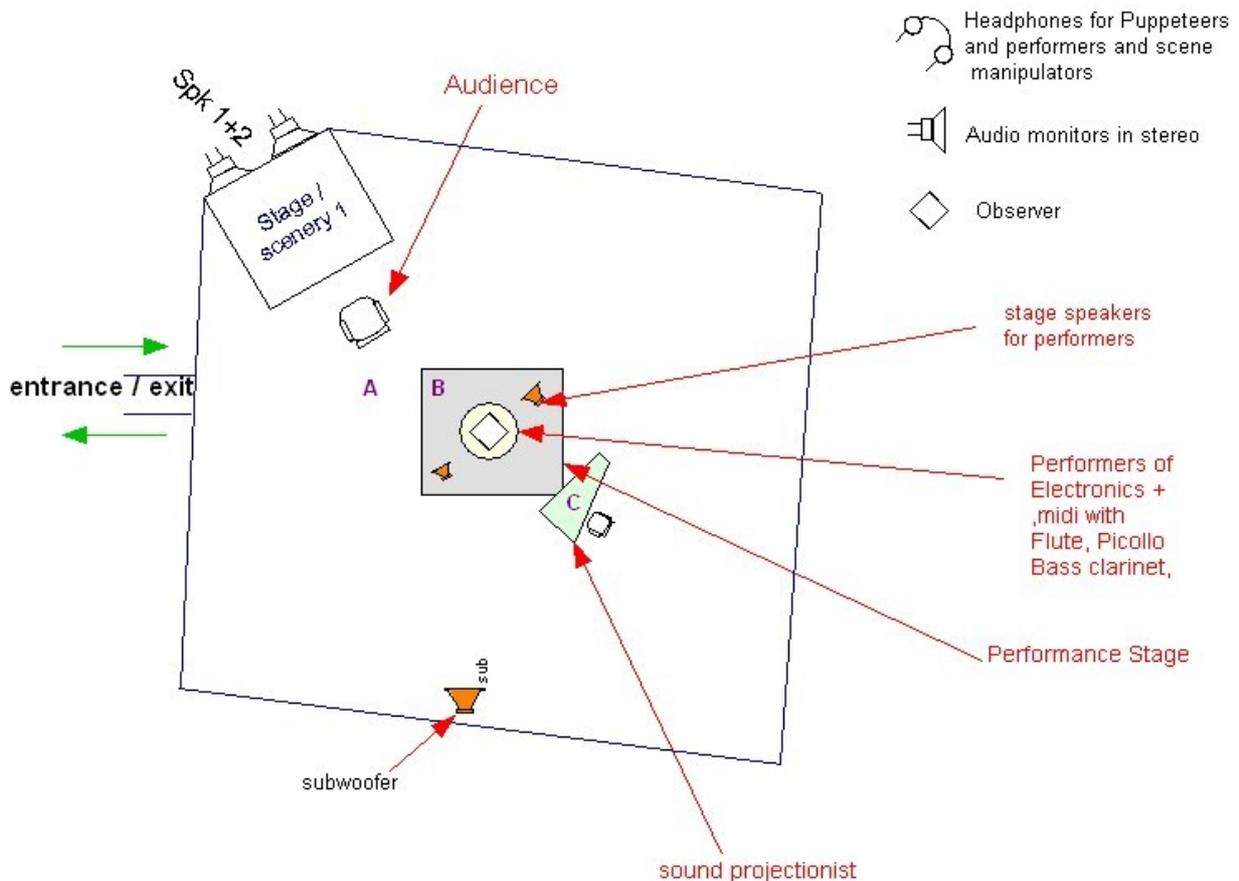


Fig 11d: Performance 4

Speaker monitors are to be organized in stereo pairs as in the diagram above. Interlinking between stages 1-4 is to increase performance space for giant puppets and to have enough space for incorporation of other contributing factors such as animation, mechanized toys, shadow theatre and physical dance theatre. *Diagram for specific dimensions and layout of stage and diagram - diffusion specifications for sound projectionist contact the composer.* The sound projectionist will indicate to the performers what region number [1-25] will be performed. Illumination designed by scenographer on stages 1-4 – linkings, and areas A,B,C.

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