CAiiA-STAR*

Interactive Art and Meta-Design: Collaboration and Co-Creation

Case Studies Results

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“You can’t create anything
by trying to separate yourself from others” (T. Anzai)

Interactive Art and Meta-Design

Overlaps

	Meta-design	Interactive art
Mindset	Consumer vs. designer	Viewer vs. co-author

Differences

	Meta-design	Interactive art
Goals	Problem framing/ problem solving	No final goals, experience per se
Motivations	Reflexive engagement, empowerment	Emotional enjoyment, value feeling
Exploitation	Knowledge	Intersubjectivity

What Can We Learn From Interactive Art?

- **Intrinsic motivations to intersubjective creativity (case studies)**
- **Improvement of meta-design systems and interfaces in terms of intersubjective creativity (case studies)**
- **Further development of the conceptual framework of meta-design (theory)**

Case Studies

The case studies have been chosen on the basis of their interactional characteristics. They are creative environment based on a high graphical interaction between participants.

- **Poietic Generator (poietic-generator.net)**
- **Open Studio (www.artcontext.com)**
- **SITO Synergy (www.sito.org)**

Case Studies: Limitations and Advantages

LIMITATIONS

- Artists policies
- Regulars participants
- Number of participants
- Online environment
- Summer time

ADVANTAGES

- Artists collaboration
- First-hand experience
- Many years of direct observation

Collaboration and Co-Creation

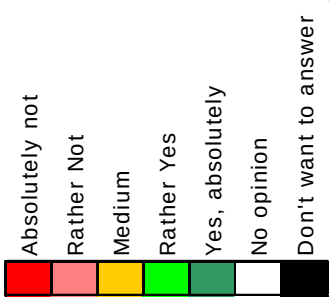
Abaque de Régnier

HOW DOES IT WORK?

- It uses an ordinal and colored scale, whose data are represented in a board;
- It consists of both the combination of a logical and a statistical representation.

WHY THIS METHOD?

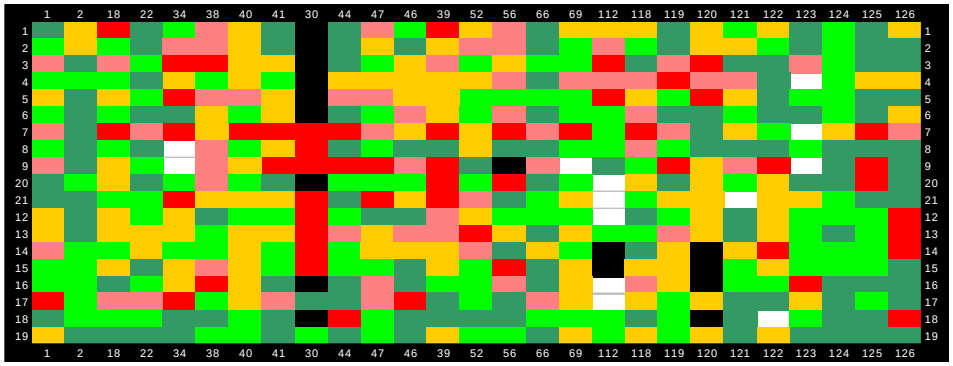
- The representation of values by colours matches spontaneity of judgement;
- It allows an istantaneous and dinamic visualization of judging patterns;
- It allows to explore information at 3 levels: local, regional, global.

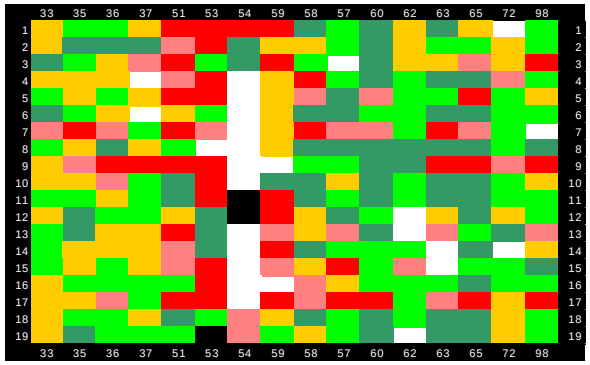


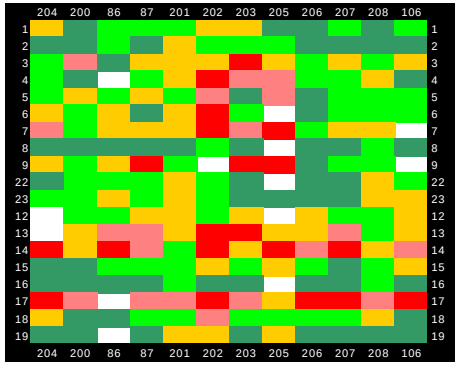
Mosaic of Individual Perceptions

PARTICIPANTS

QUESTIONS







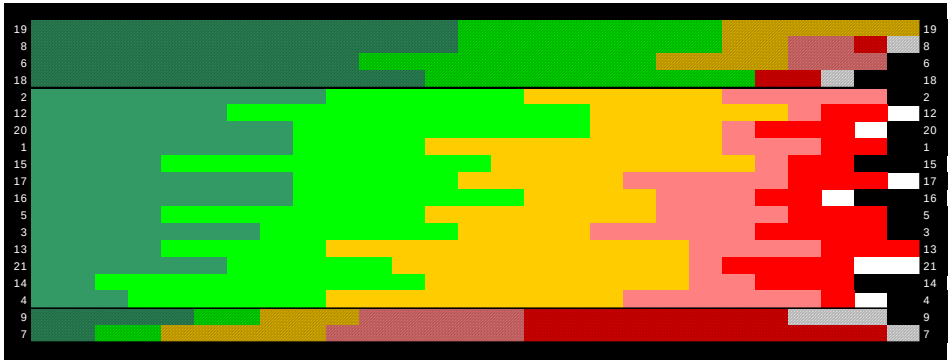
GP:
2 sessions
64 participants
27 respondents

OP:
2 sessions
unknown participants
16 respondents

SITO:
2 weeks online
12
respondents

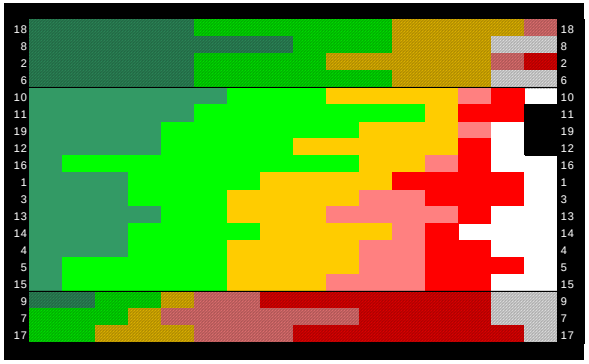
TOT 55
respondents

Questions : Overview



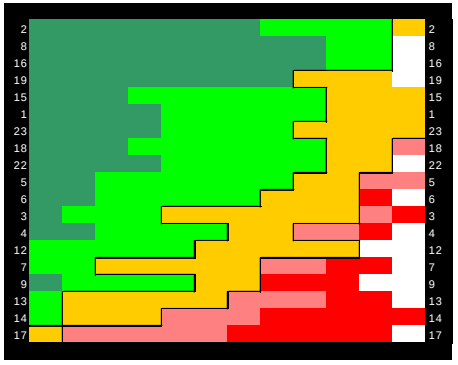
GP:

Positive trend on items 19, 8, 6, 18
Negative trend on items 9, 7
Rifiuto alto



OP:

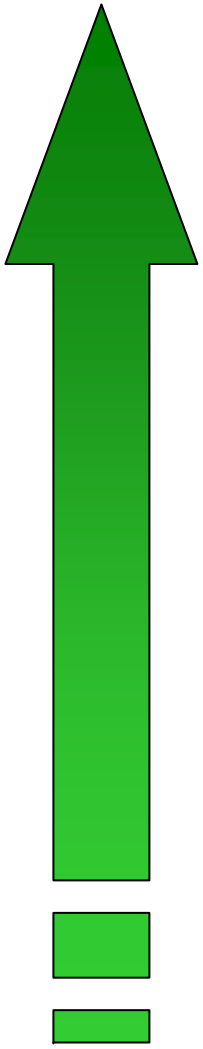
Positive trend on items 18, 8, 2, 6
Negative trend on items 9, 7, 17
Reticenza alta



SITO:

Positive trend on items 2, 8, 16, 19
Negative trend on items 13, 14, 17
Nessun rifiuto
Zona di frattura ridotta con accentuata discontinuità sui consensi positivi e negativi

Positive Consensus: Co-Creation



[8] “I created something that was different than I would have created alone” *(statistical value 1,4)*

[19] “I feel satisfied” *(statistical value 1,8)*

[16] “I felt there was a creativity that went beyond my interaction with the computer” *(statistical value 1,9)*

[6] “My interaction with other participants was guided by the visualization of their activity” *(statistical value 2,0)*

[2] “I felt that I interacted creatively with others” *(statistical value 2,1)*

[18] “The experience is more important than the outcome” *(statistical value 2,1)*

Negative Consensus: Co-Creation (more)

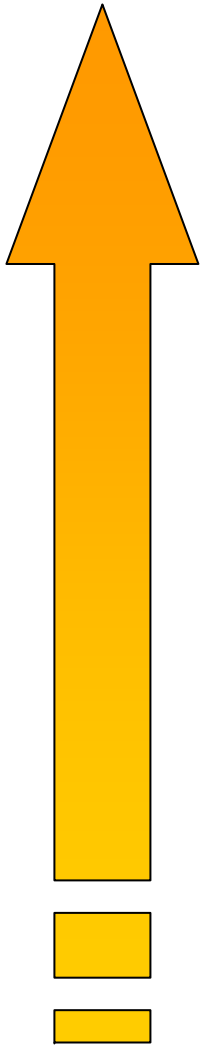
[17] "The outcome is predictable" *(statistical value 3,4)*

[7] "My interaction with other participants was guided by my chatting with them" *(statistical value 3,4)*

[9] "Previous knowledge of the people I was interacting with was relevant" *(statistical value 3,0)*

[14] "The outcome of interaction was determined mainly by the computational features of the system" *(statistical value 3,0)*

Dissensus A : Relationships, Feelings and Goals



[3] “I was following a goal ” *(statistical value 2,9)*

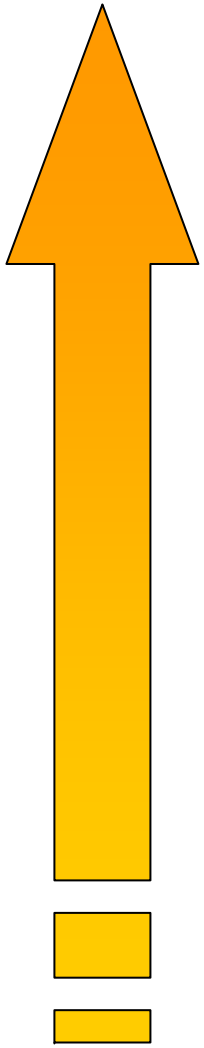
[5] “I imagined what other participants had the intention of doing” *(statistical value 2,7)*

[4] “I was emotionally coupled to other participants” *(statistical value 2,6)*

[15] “The outcome of interaction was determined mainly by the active relationship among participants” *(statistical value 2,5)*

[1] “I felt influenced by other participants ” *(statistical value 2,4)*

Dissensus B : Creative Environment



[20/21] “My activity was coupled to the activities of my neighbours/to the global activity” (GP)

[10/11] “My activity was influenced by colours/by strokes and marks” (OP)

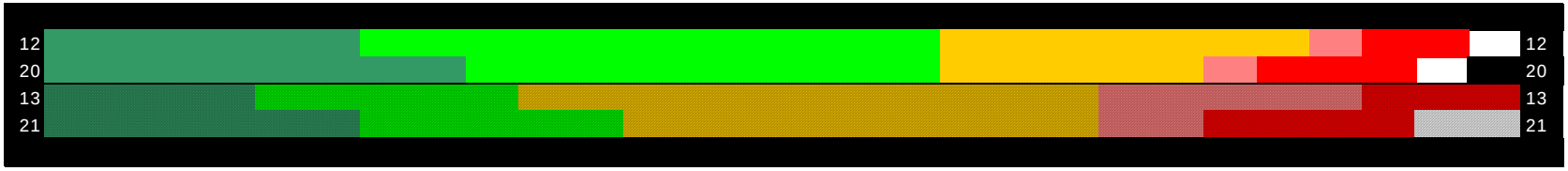
[22/23] “My activity was influenced by the pictures of my neighbours/by the whole of all the pictures” (SITO)

[12/13] “My relationships were affected mainly by the space of interaction/by the time of interaction ” (all)

More on the Creative Environment

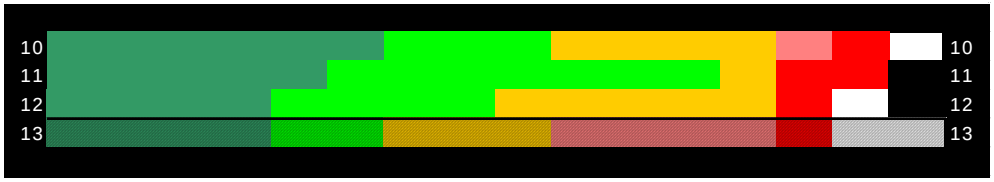
Space

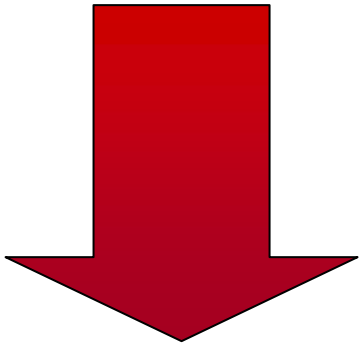
GP



Colours

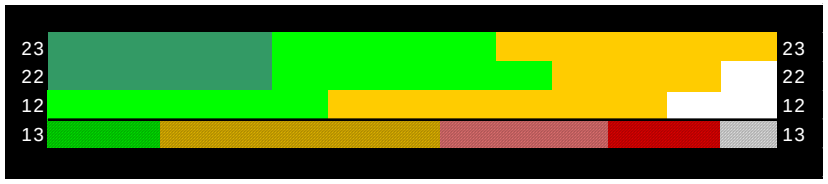
OP





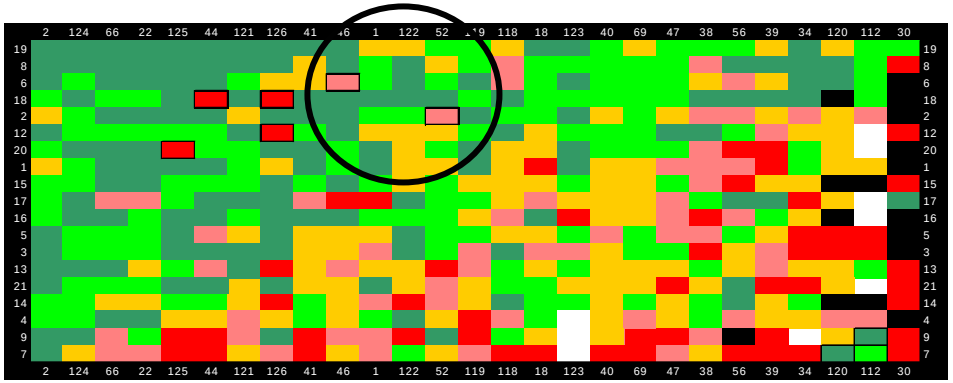
Whole picture

SITO

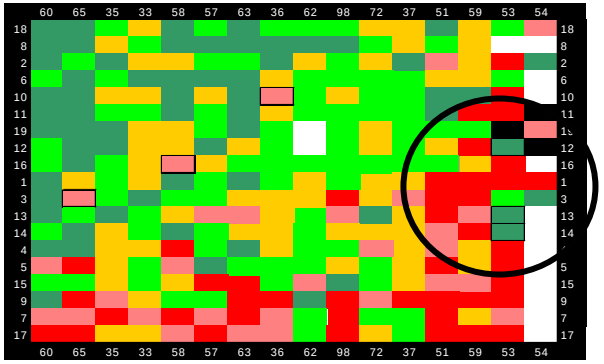


Time (2,9) – **Space** (2,1)

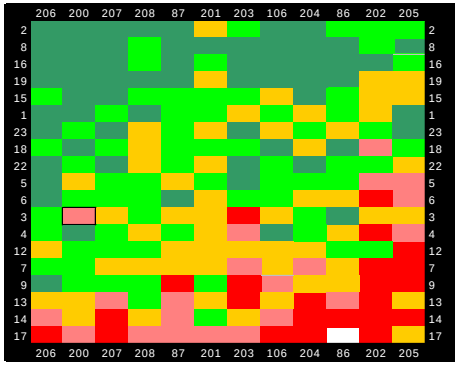
Anomalous Positions



GP:
Chatting vs. visual activity

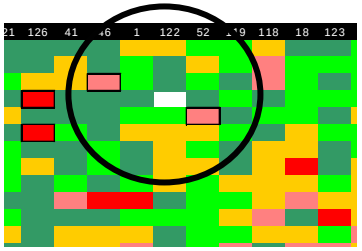


OP:
Mere computation vs. emotional tone



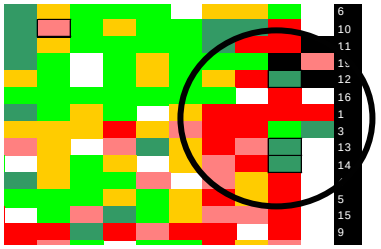
SITO:
Rather homogeneous

Verbal Chatting vs. Visual Activity (GP)



- [6] “My interaction with other participants was guided by the visualization of their activity”
- [2] “I felt that I interacted creatively with others” (light red)
- [7] “My interaction with other participants was guided by my chatting with them” (yellow)

Mere Computation vs. Emotional Tone (OP)



- **[12] “My relationships were affected mainly by the space of interaction”**
- **[13] “My relationships were affected mainly by the time of interaction”**
- **[14] “The outcome of interaction was determined mainly by the computational features of the system”**

Relationships, Feelings and Goals

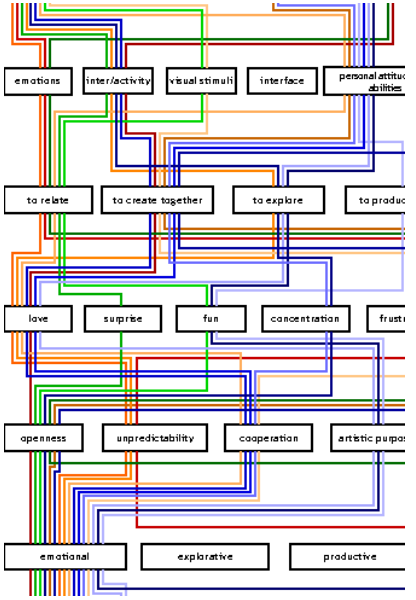
Attractors and Pathways

HOW DOES IT WORK?

- It defines a number of different pathways according to different attractors;
- It is based on qualitative information obtained from an open-ended questionnaire and unstructured interviews.

WHY THIS METHOD?

- It allows to understand different attitudes and motivations by which creative experience is perceived and evaluated;
- It allows to explore information both from the “inside” (point of view of the individual) and from the “outside” (emerging phenomena);
- It visually stresses diversities of subjective interpretations and show different paradigms.



41 respondents
between 25 June and 25 August 2002

Attractors and Pathways

Categories

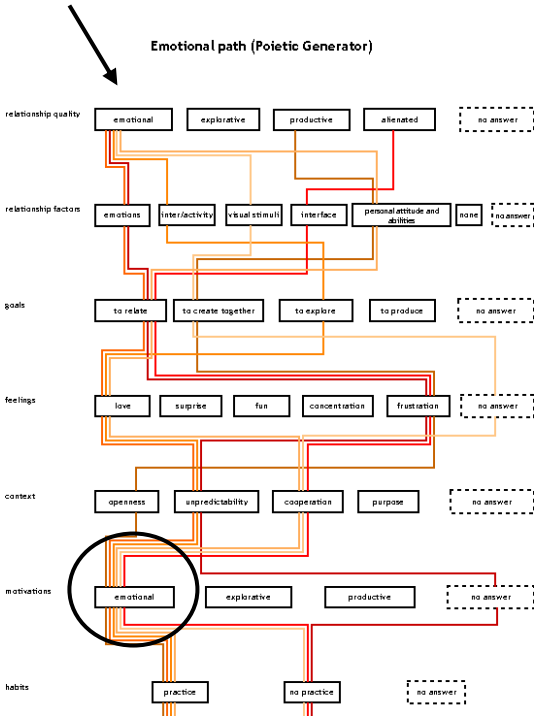
A. Relationship quality

B. Relationship factors
C. Goals
D. Feelings
E. Context features
F. Motivations
G. Habits

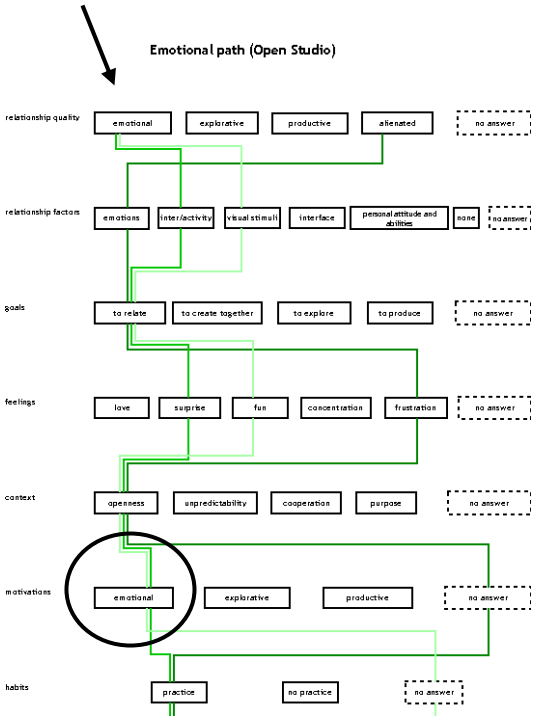
Attractors

1. Emotional
2. Explorative
3. Productive

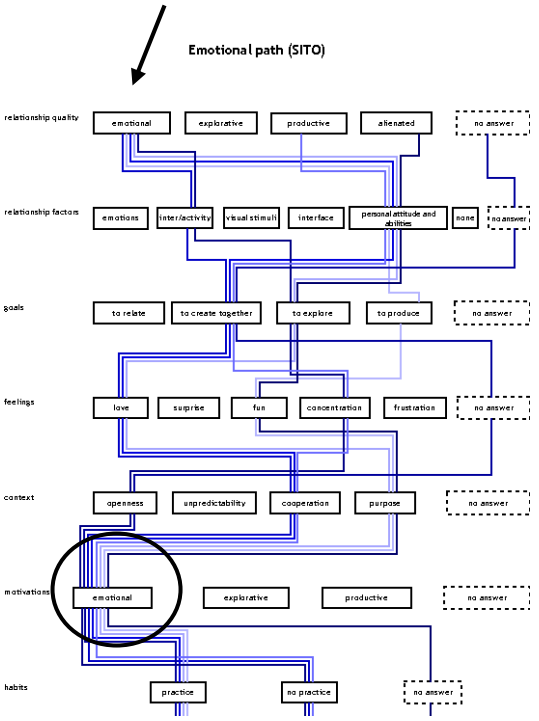
Emotional Path



GP

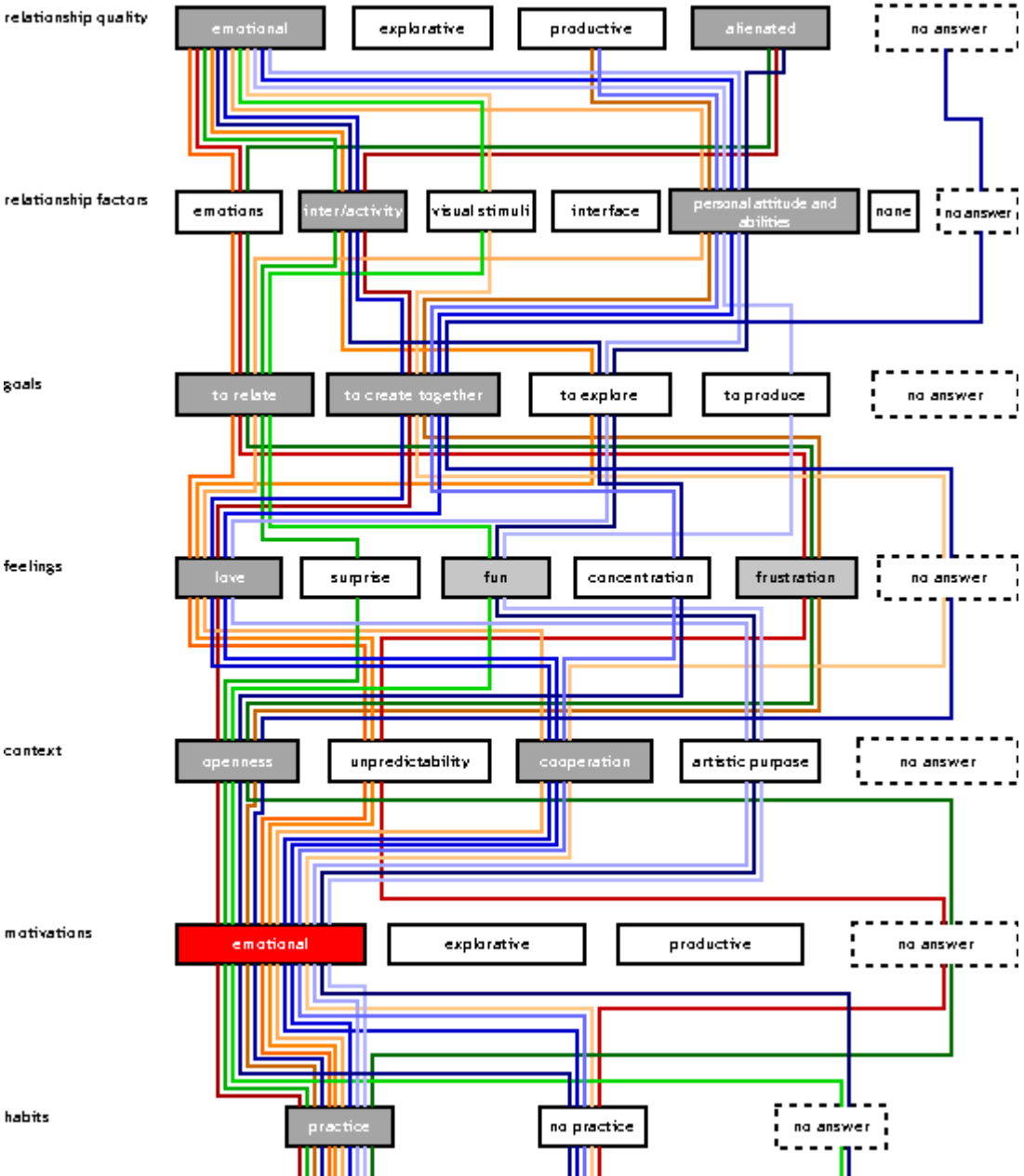


OP



SITO

Emotional Path



Emotional Path: Summary

Goals are to relate and to create together. Co-operation is connected to the perception of a creative environment as open and unpredictable.

Participants are moved by emotions and a wide range of intersubjective feelings, mainly related to an existential dimension. Their personal traits, emotional behaviours, and interactions are strictly interrelated and embodied in their activity.

Emotional Path : Quotations

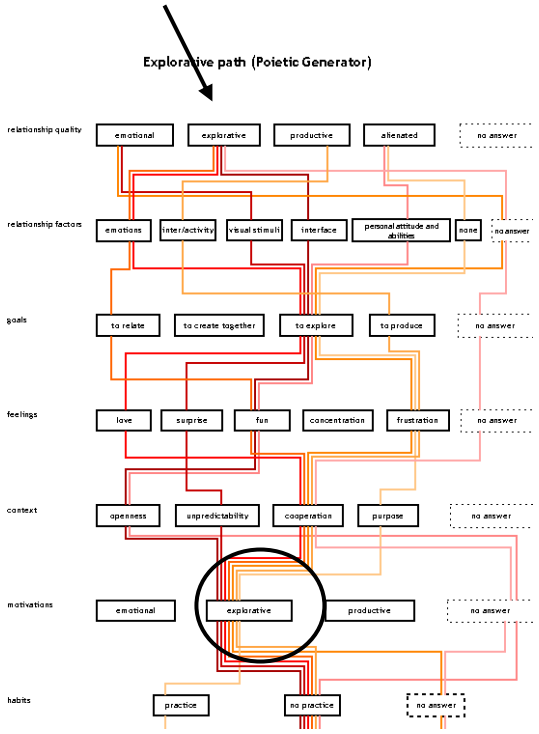
[goals] “Blend the images together, say something with my image, respond to something with my image, incite something on others with my image” (Lenara).

[feelings] “Love/boredom/hate” (Bob); “Agony, ecstasy, silly” (Thomas).

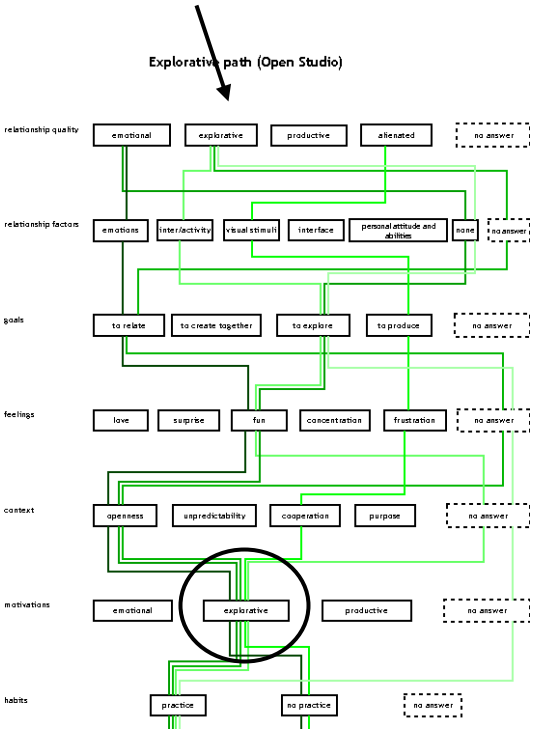
[context features] “Ca dépend des jeux mais àcelui-là, il n' y a pas de gagnant. Ca n'est pas compétitif. Il n' y a pas de règles et de directives précises. C'est de l'auto-organisation comme les fourmis” (Mickael); “L'imagination” (Giulia); “Wider expression of community” (John).

[motivations] “Caratteri dei partecipanti” (Dante); “Feeling people” (Olivier A); “Croire au partage et au collectif. Ne plus être un mais plusieurs. Quelque choçse lié à la dispersion momentanée” (Mickael); “Creative procrastination” (Mark S); “It affords me a chance to be creative in ways which I had not previously been” (Nick)

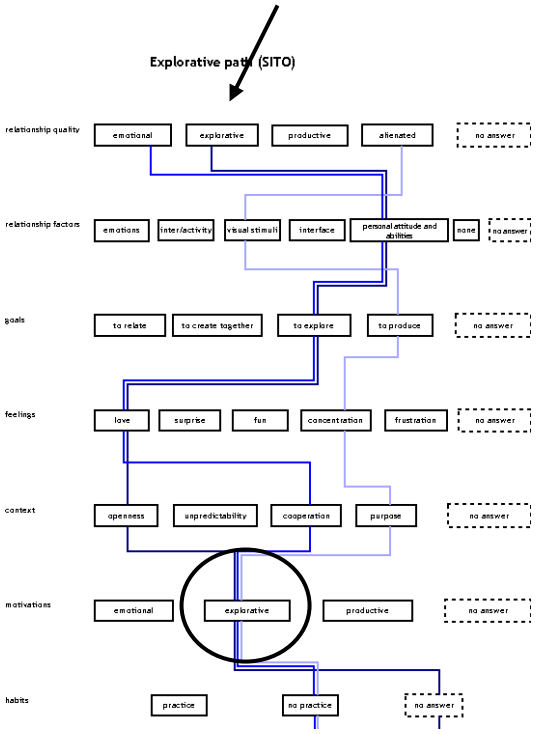
Explorative Path



GP

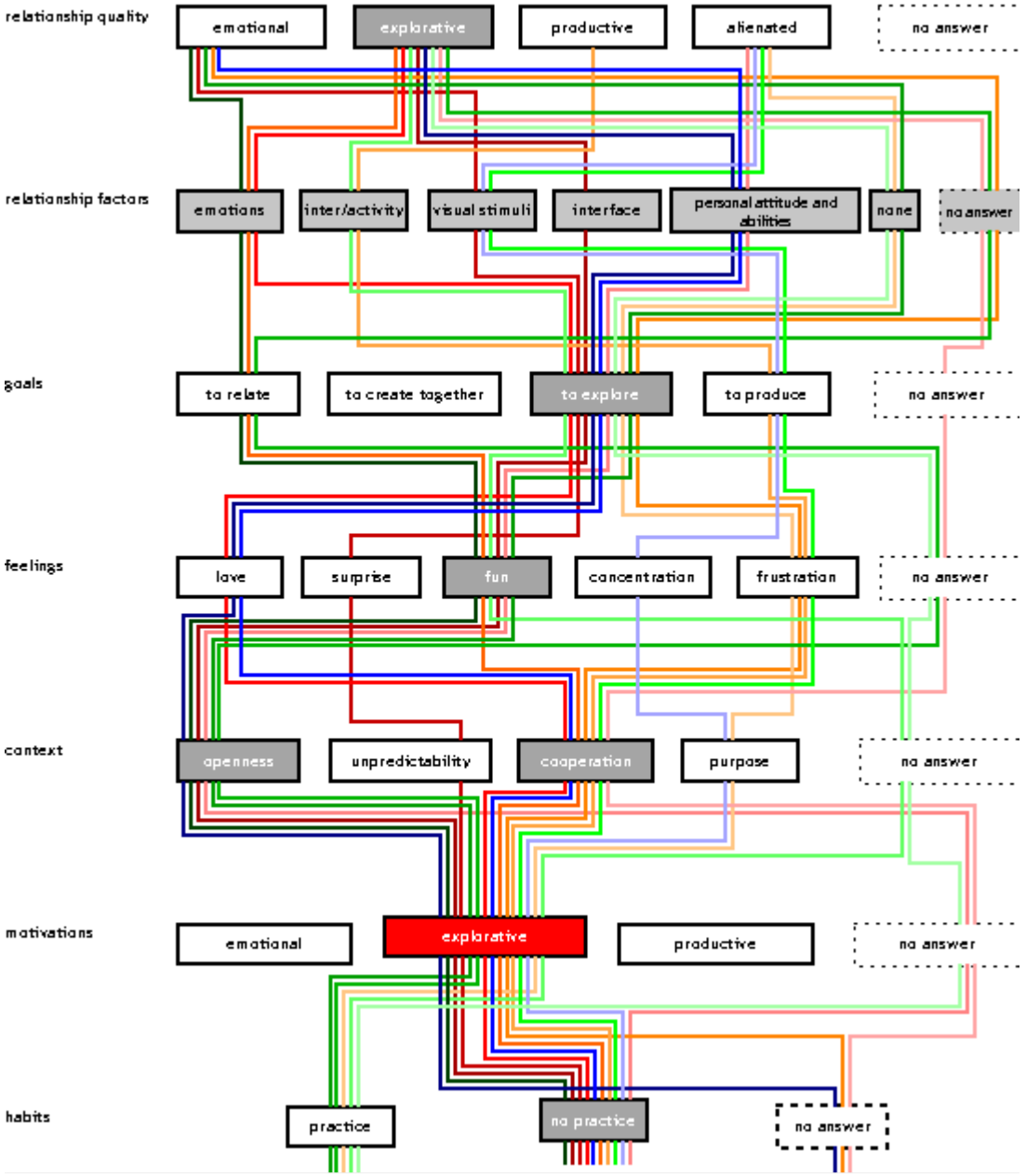


OP



SITO

Explorative Path



Explorative Path: Summary

The goal is to explore. Co-operation is connected to the perception of a creative environment as open and unpredictable.

Participants are moved by emotions and individual feelings, mainly related to fun and discovery. They feel related to each other by many different factors, which go from emotional factors to the features of the environment and the system.

Explorative Path: Quotations

[relationship factors] “La couleur... et surtout la ligne colorée horizontale ou verticale a fini par être perçu comme un appel, une invitation”(Jean-François).

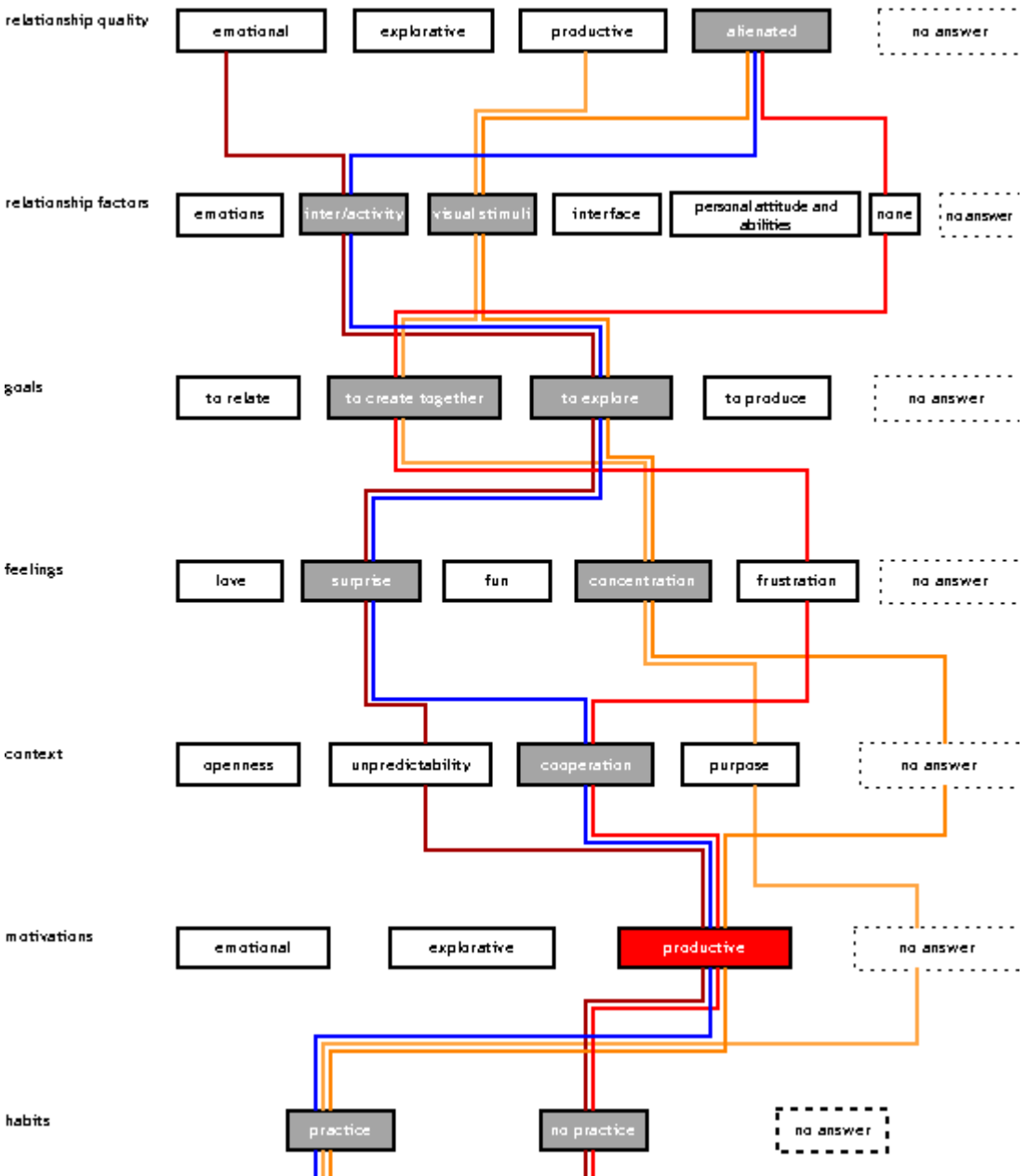
[goals] “Fare un castello di sabbia con gli altri bambini” (Gabriella); “Investigate process” (Margaret).

[feelings] “J'ai été très agréablement surpris. J'ai resenti tout de suite quelque chose de très relaxant, attractif, doux...poétique...bien au delà des mots dans le silence (y avait il du son?)” (Jean-François); “Anxiousness, frustration, elation” (Ed).

[context features] **“**Multiple unspecified goals, no victory conditions, collaboration over competition (Michael); “The goals are not clearly specified. there is a wide latitude to define the meaning of the experience” (Andy) .

[motivations] “I'm learning” (Michael); “It was neat to see how other people would interact with your objects. It was also neat to see what people wouldn't interact with. You get to see what is going on” (Dan); “The people are interesting, its very alive/dynamic, new things always popping up” (John).

Productive Path



Productive Path: Summary

Goals go from exploring to creating together. But co-operation is functional to the production of an outcome, and the environment is not perceived as open and unpredictable.

Participants are focused on their activity and moved by the visual stimuli coming from the environment. But they feel alienated from other participants.

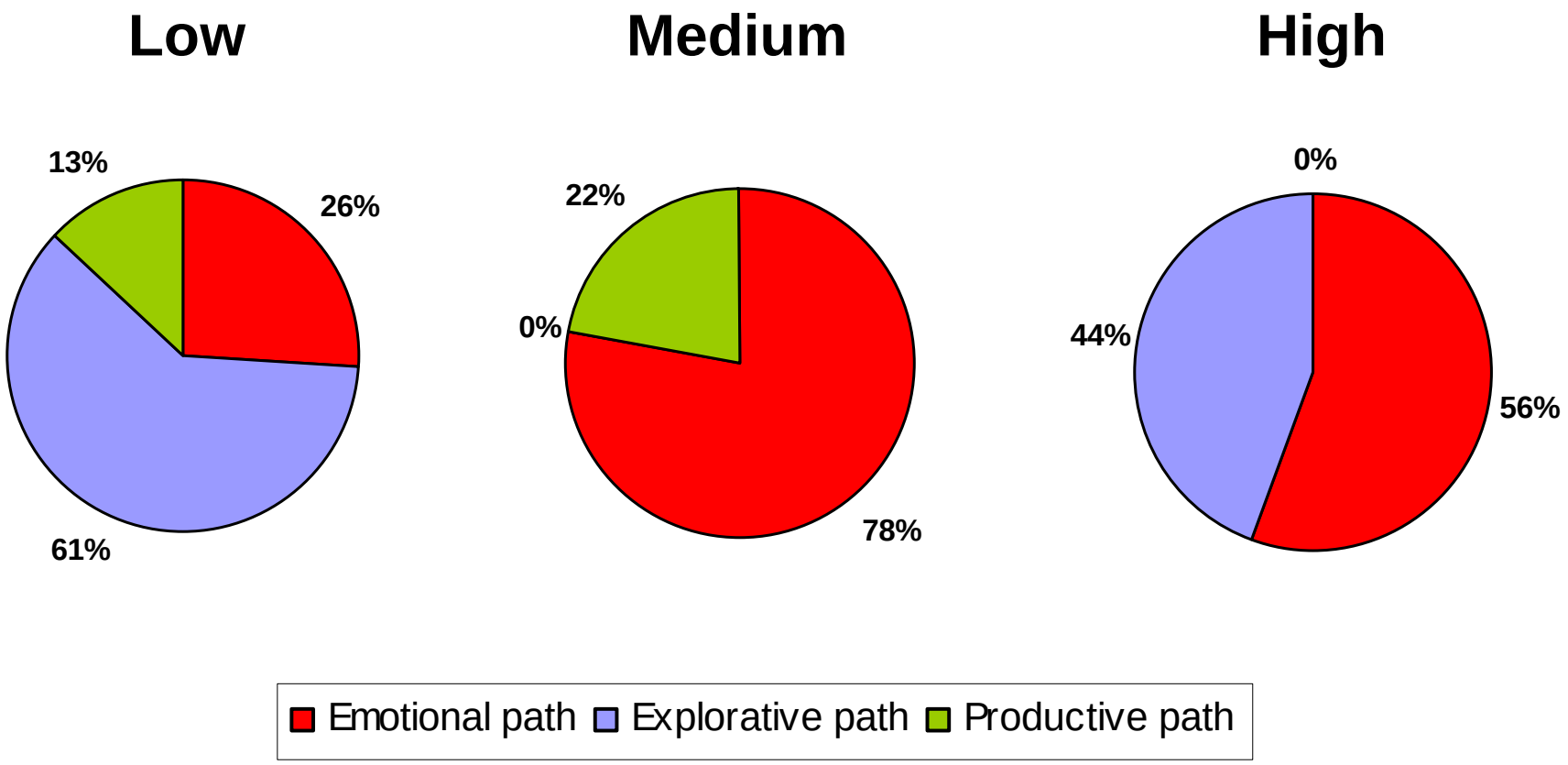
Productive Path: Quotations

[relationship factors] “Blind” (Borg).

[feelings] “I was much too concentrated on the process to realise what my feelings about it were” (Federica).

[motivations] “The discovery of the outcome and the process of building it are interesting and compelling enough for participating” (Matteo).

Frequency of Participation



The Creative Environment

Visual Activity: Phenomenological Analysis

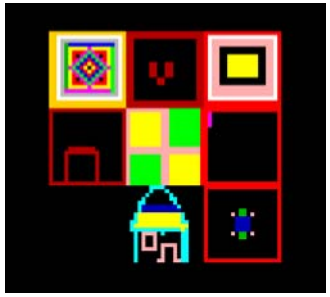
HOW DOES IT WORK?

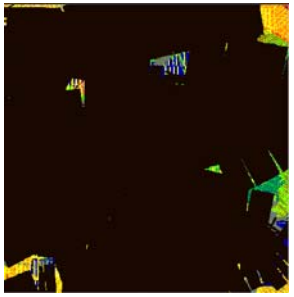
- The analysis is based on a phenomenological observation of the ongoing visual activity;
- It is supported by observations coming from direct participation and unstructured interviews.

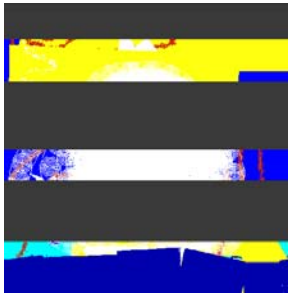
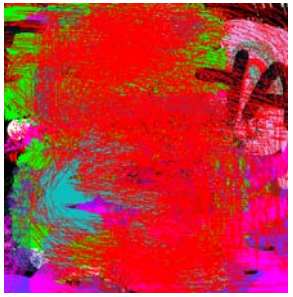
WHY THIS FOCUS?

- The analysis of visual activity in a computational and highly malleable environment allows to study the link between perception and action, sensorium and motorium;
- It allows to explore these intermodal relations in terms of intersubjective and creative interactions.

Visual Activity: Space

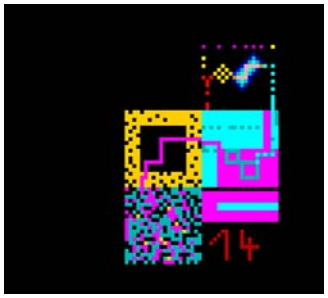


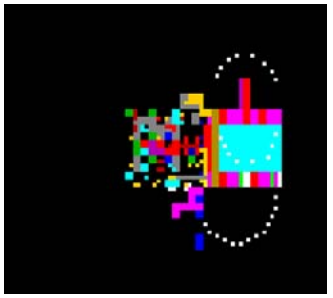



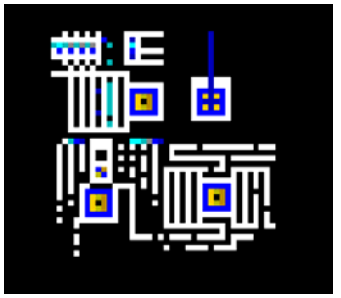
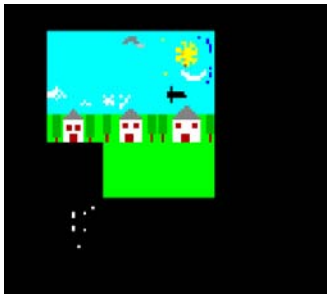





SUMMARY. Space is perceived and experienced as a **proximic field**. Lines (GP) and marks (OP) express participants' **intentions** (like closure and openness). Their mode is **pre-verbal** and based on **sensori-motor perceptions**. For some participants the experience of such a space is "almost like touching".

Visual Activity: Colors

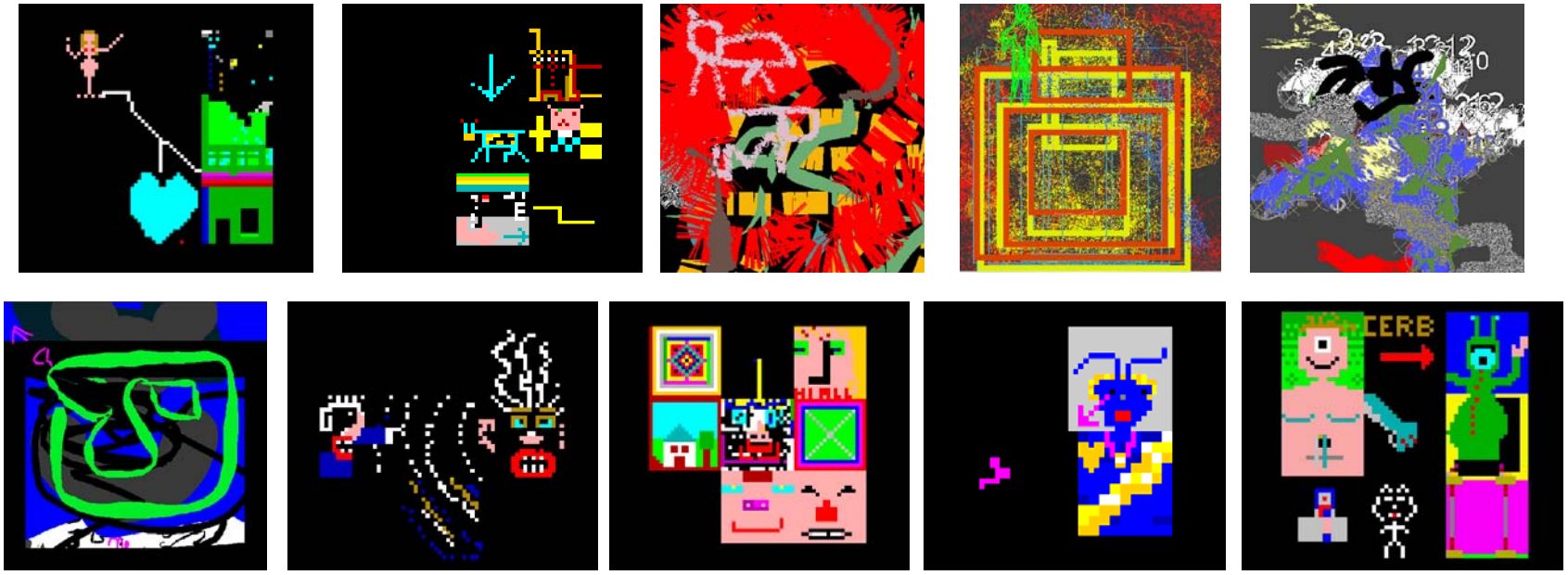




SUMMARY. Colors express participants' intentions and emotional tone. Their mode is relational and they can: a) determine the static or dynamic nature of the relationship; b) trigger collective phenomena and visual empathy; c) work as transitional states or "boundary object" or.

Visual Activity: Visual Elements

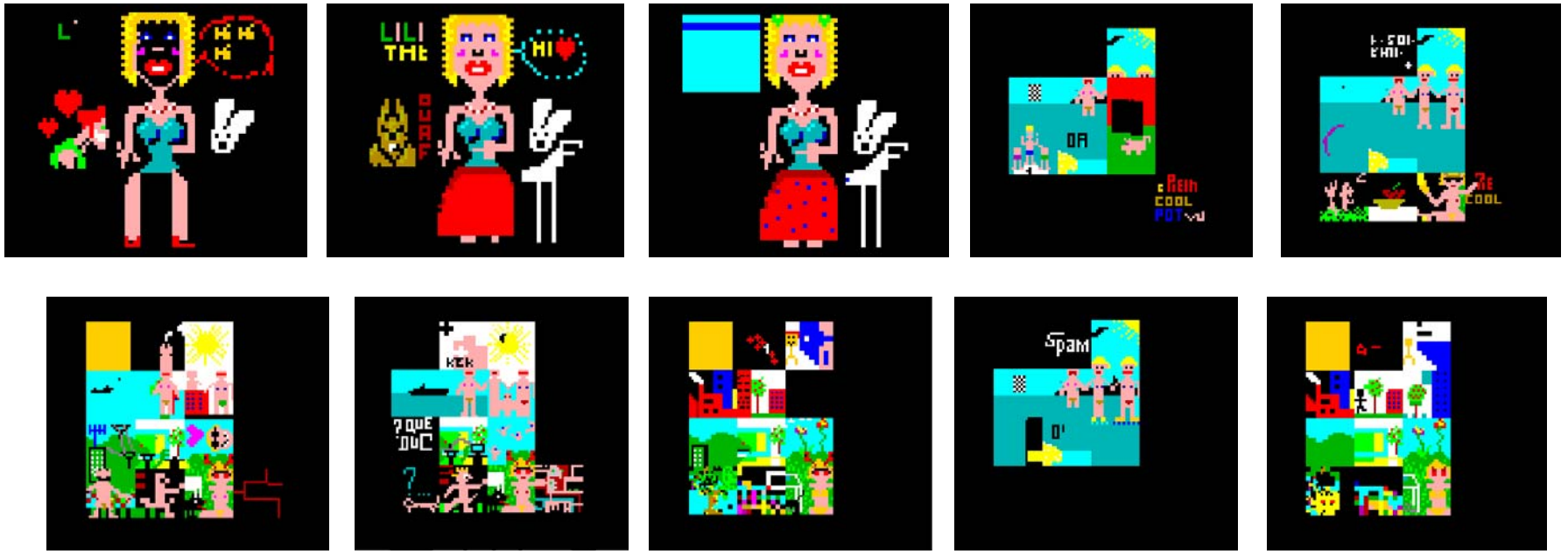


SUMMARY. **Visual elements are archetypal and recursive. They can: a) work as dynamic "boundary object", triggering phenomena of pattern recognition or narrative sequences; b) express participants' emotions, opinions or invitations; c) allow participants' embodiment through elements of auto-representation, like facial expressions and simulated movements (GP) or drawing actions (OP).**

Visual Activity : Textual Elements

SUMMARY. Textual elements represent a form of linguistic embodiment. They can: a) express emotions; b) express opinions and comments on the ongoing result; c) act for a shift in the current emotional tone; d) allow verbal communications among participants.

Visual Activity: Time



SUMMARY. Time is perceived and experienced as a network of intentionalities. It engeders the emotional tone of the ongoing interaction (as disposition for action) and allows shared imaginary and narrative sequences emerge from the embodied and non-linear flow of participants' activity.

Verbal Chatting: Jacobson's Functions

METHOD

According to Roman Jacobson language can be structured in 6 functions.

CONTEXT
(referential)

MESSAGE
(poetic)

ADDRESSER —— **ADDRESSE**
(emotive) **(conative)**

CONTACT
(phatic)

CODE
(metalinguistic)

Functions of Verbal Chatting in GP

Private channels for multiple and simultaneous point-to-point conversations. They can be activated by clicking on the name of a participant or on an individual drawing area.

•**RESULTS**

Emotive (57%) and conative functions (29%) prevail on other functions. The axis addresser-addresse is predominant.

•**SUMMARY**

The verbal chatting is directed towards establishing or stressing a contact between participants, expressing feelings and emotions, rarely towards giving instructions or co-ordinating the drawing activity. It appears fragmented, characterised by conversational lapses, and similar to an aloud stream of consciousness.

Functions of Verbal Chatting in OP

A single chat room for public conversation. It can be activated clicking on a button beside the drawing space.

•**RESULTS**

Emotive (61%) and referential (17%) functions prevail. The poles addresser and context are predominant.

•**SUMMARY**

The verbal chatting is directed towards expressing personal opinions about the system and the current activity, discussing the features of the system, giving explanations about the project and its functioning, rarely towards giving instructions or co-ordinating the drawing activity. It characterised by a clear sequence of ample conversational clusters, contingent to the drawing activity.

Verbal Chatting in SITO

WWW, IRC (ICQ or CUSeeMe), and e-mail.

•**RESULTS**

This summary is based on the ethnographic analysis done by Lenara Verle in "Novas Imagens Para Um Novo Meio: Um Estudo de Caso do *Website* de Arte Interativa SITO", MA 1999.

•**SUMMARY**

The verbal chatting is directed towards expressing opinions about the community and its projects, and discussing about the creative process (concepts, technical aspects, interaction rules, images creation and aesthetical issues, suggestions for development).
It is part of the dinamic continuum represented by the creative process within the community.

Conclusions

- **Co-creation is perceived as an intersubjective experience engendered by collaborative activities.**
- **Main motivational paths to co-creation are emotionally driven and based on the perception of creative environment as open and unpredictable.**
- **Creative environment induces co-creation by allowing emotional seeding through visual embodiment of users' activities and emotional tone. Time, space, and physicality are experienced in intersubjective terms.**
- **On the basis of these observations and related theories coherent design principles can be derived in order to sustain co-creation and allow intersubjective creativity be computationally embodied and exploited.**

A Three-Folded Scheme for Meta-Design