

Comprendre les interactions homme-milieus / territoire au travers des dessins d'enfants

- « Observation d'un système complexe : la représentation de l'environnement par les enfants » - OHM- Bassin Minier de Provence

Batteau P., Boutin N., Gachet S., Raynal J-C., Rotereau A.

- « De l'observation à la projection, comment les enfants dessinent-ils leur territoire ? » - OHM Videssos

Calvet A., Chalmeau R., Julien M-P., Léna J-Y., Vergnolle C.

Observation d'un système complexe :

La représentation de l'environnement par les enfants

N. Boutin, P. Batteau, JC Raynal, A. Rotereau, S. Gachet, ...

Why studying environmental representations?

- They command attitudes and preferences and eventually, they influence individual and collective decisions and are keys to understanding Man-environment Interactions

Ex : What is this lake?



Anais (eco-activist), pristine nature to be sanctuarized

Bob, (IMBE), a juicy ecosystem for publications

Camille, (CEREGE): An extinct volcano to be explored for its structure

Edouard, (Boy Scout): A camping place for next summer

Frantz (Deutch tourist): A place for canoeing

Desna (Iroquois Indian): a reserve for fishing

Galia (civil servant at the Water Agency): The water supply for the nearby city

Hubert, (Forest guard): A dangerous zone needing restricted access

What is the environment?

Generic definitions : Reference to a set of issues

New Environmental Paradigm (Dunlop et al), Stern report, MEA

- Environment = Nature as a provider of resources and generator of welfare for Man
- Environment = milieux = Nature at risk, threatened by anthropogenic action
- Environment = source of risks for human deeds (eccorev)
- Environment = ecosystemic services

Subjective definition : Referring to a specific human person or group of human persons

- Environment = **collection of objects and relationships** surrounding the subject(s): inert objects, living objects, other human beings, in interaction



Complex Socio-Ecosystem



Why focus on children's environmental representations?

- Decision makers/actors of tomorrow
- Homogeneity of sample, easier to collect
- Children as (partly) mirrors of parental representations
- Long term follow up: ten years later
- Comparison of generations
- Originality : few studies

Questionnaire

- School, Gender, Residence, Transportation, Parental social status, mining links, ...

Protocol : On a sheet of A4

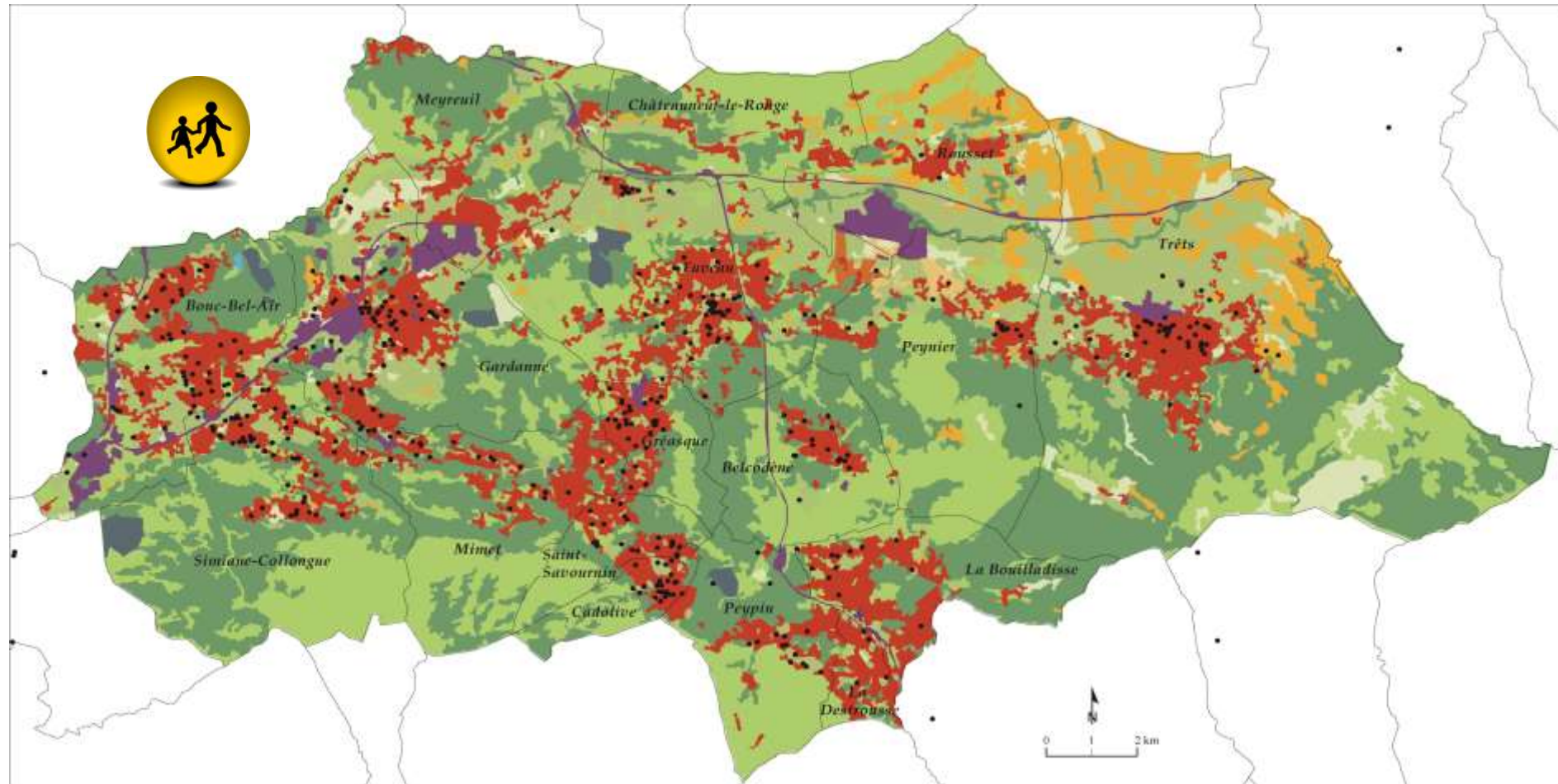
- 1. Draw your environment**
- 2. Give a short description**

Survey:

28 elementary schools
2238 children (8-10 y)

Respondant:

821 answers (37,49%)
50% F - 50% M



Representation: Mental and Artistic Construction

We **observe** a complex system

Black box: unobserved conditions ...

Observatoire Hommes-Milieux
Bassin minier de Provence
IDENTIFIANT N°
ID0006_E

Culture

+

Knowledge

+

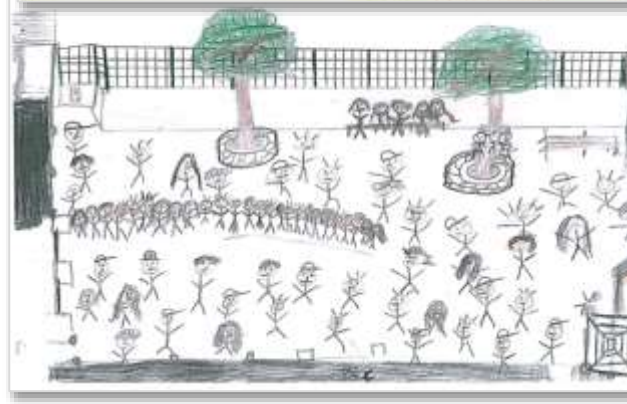
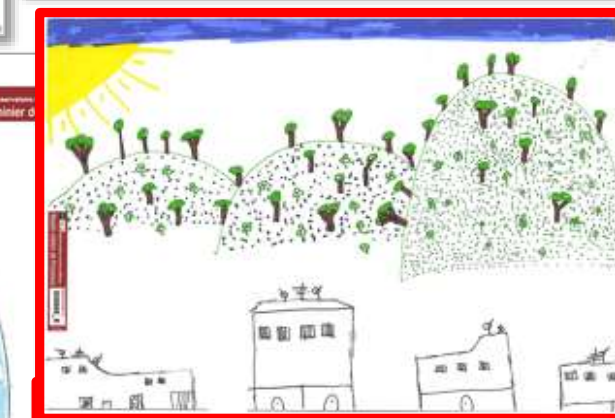
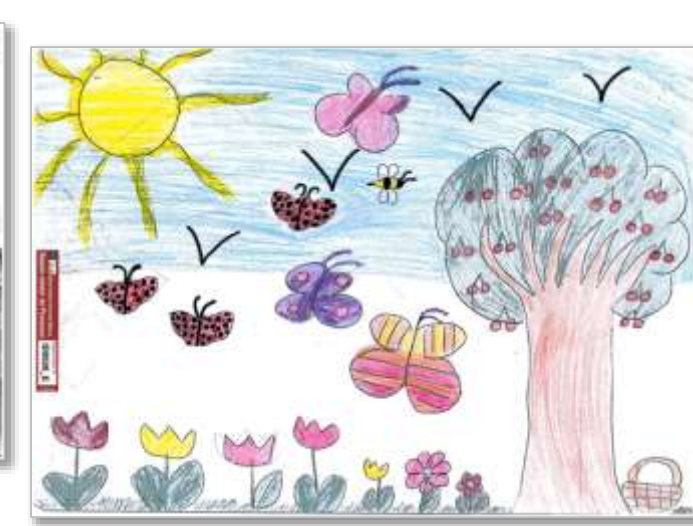
Experience

+

Imagination

Representation





Some example of analysis

Bonjour Nathalie !

Liste des classements effectués

Sélection du n° de dessin souhaité :

0017 ↕

ATTENTION : L'image n° 0017 a déjà été classée !

Expert Classification

PROTOCOL

1. Give a short description



Sexe : un garçon

Ecole : GARDANNE, Ecole LUCIE AUBRAC

Commentaire : J'habite au milieu de la colline et je vois les arbres, les lignes électriques, la cheminée de la centrale, le pylon du Roy, les cheminées de Péchiney, le teril de Bivers, le puy de la mine, les lavandes de mon jardin. Il y a plein d'animaux sauvage : renard, lapin, tortue, hérisson, sanglier. Quand je ferme les yeux je vois que j'ai de la chance.

Thématique du dessin :

	Dominant	Présent	Absent	Sans réponse
Physique (réseau de circulation, paysages artificialisés ou non : territoires urbanisés/agricoles/forêts/montagnes/milieus naturels/surfaces en eau, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Industriel (centrale électrique, usines, entrepôts, friches industrielles, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Héritage minier (chevalements, puits/tunnels, terrils, cités minières, toutes représentations de l'histoire minière)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Biodiversité (faune/flore : végétaux, champignons, animaux hors animaux de compagnie, insectes, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Grandes thématiques environnementales (planète en tant que système, problématiques, risques et catastrophes pour l'environnement : pollution, déchets, climat, incendies, érosion de la biodiversité, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Social (représentation de la famille ou de la maison familiale ou de l'école, amis, voisins, animaux de compagnie, environnement domestique, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Ludique (aires de jeu, loisirs) : foot, tennis, parcs de loisirs, piscines, randonnée loisir, camping, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Inclassable / hors sujet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Dessin polychrome ? Oui Non

Degré de sophistication du dessin ?

Valider

Some example of analysis

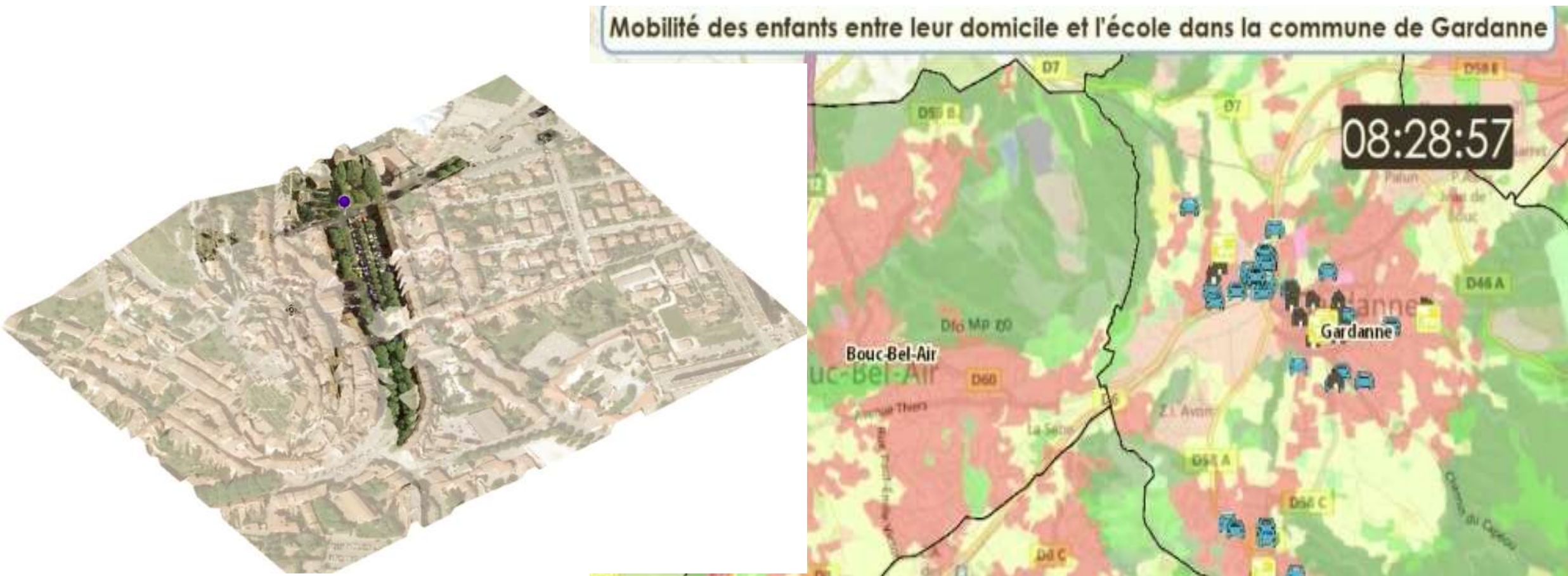
The screenshot shows the ArcMap interface with a map of Jules Coeur. The map features various buildings and structures, with one area highlighted in cyan. The interface includes a menu bar, a toolbar, a Table of Contents, and a Table window. The Table window displays the following data:

OBJECTID*	Shape*	FID ID0399 E PAY VECT Clip	Num	ID ELEVES	POURCENTAGE	FID ID0399 E PAY VECT Clip 1
1	Polygone	1	6000	ID0399	49,41454	
2	Polygone	2	0999	ID0399	0,915489	
3	Polygone	3	2112	ID0399	0,632464	
4	Polygone	4	0999	ID0399	1,482394	
5	Polygone	5	1114	ID0399	0,218901	
6	Polygone	6	1115	ID0399	0,128988	
7	Polygone	7	1114	ID0399	0,144881	
8	Polygone	8	5111	ID0399	0,959186	
9	Polygone	9	1113	ID0399	0,055794	
10	Polygone	10	6000	ID0399	0,058221	
11	Polygone	11	2011	ID0399	0,791592	
12	Polygone	12	2011	ID0399	0,181669	
13	Polygone	13	2011	ID0399	0,190681	
14	Polygone	14	3310	ID0399	0,047215	
15	Polygone	15	3110	ID0399	0,292037	
16	Polygone	16	5414	ID0399	0,328318	
17	Polygone	17	1112	ID0399	0,697828	
18	Polygone	18	1114	ID0399	0,184103	
19	Polygone	19	2616	ID0399	0,1886	
20	Polygone	20	0711	ID0399	1,514244	
21	Polygone	21	5112	ID0399	0,668975	
22	Polygone	22	4611	ID0399	19,05768	
23	Polygone	23	4610	ID0399	20,61043	
24	Polygone	24	0711	ID0399	0,002359	
25	Polygone	25	3110	ID0399	0,860478	
26	Polygone	26	3110	ID0399	0,372939	

Quantitative analysis

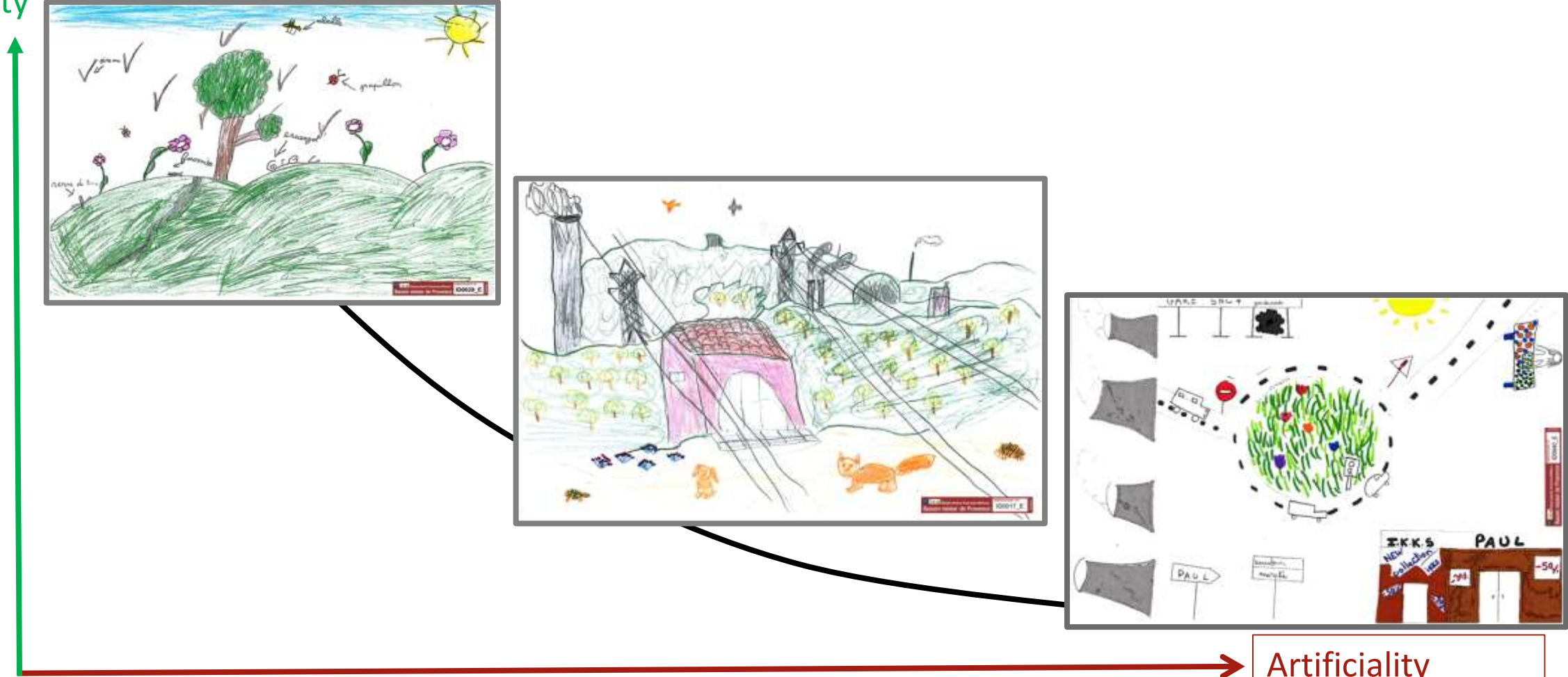
ArcMap analysis: vectorization

Children : what they see from their place to their school Does it determine their representations ?



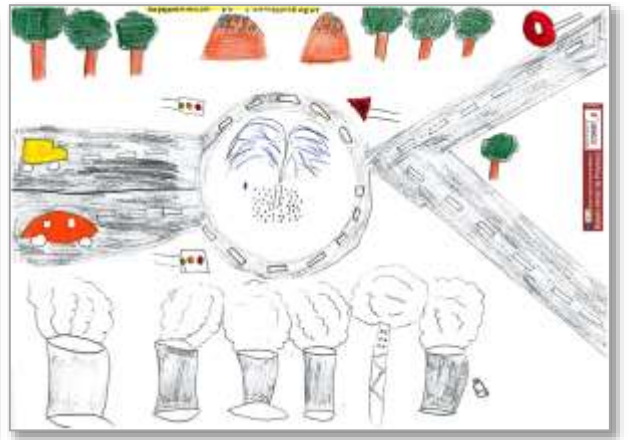
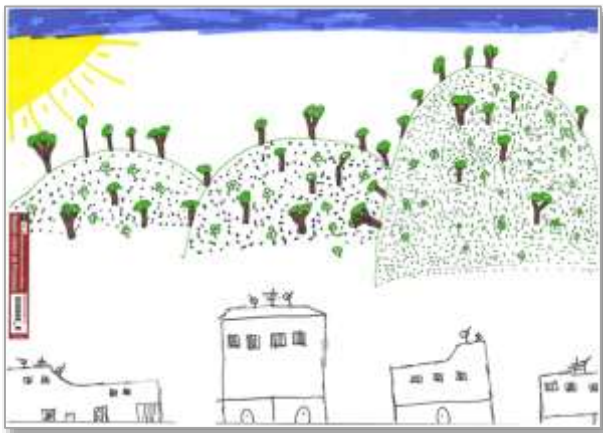
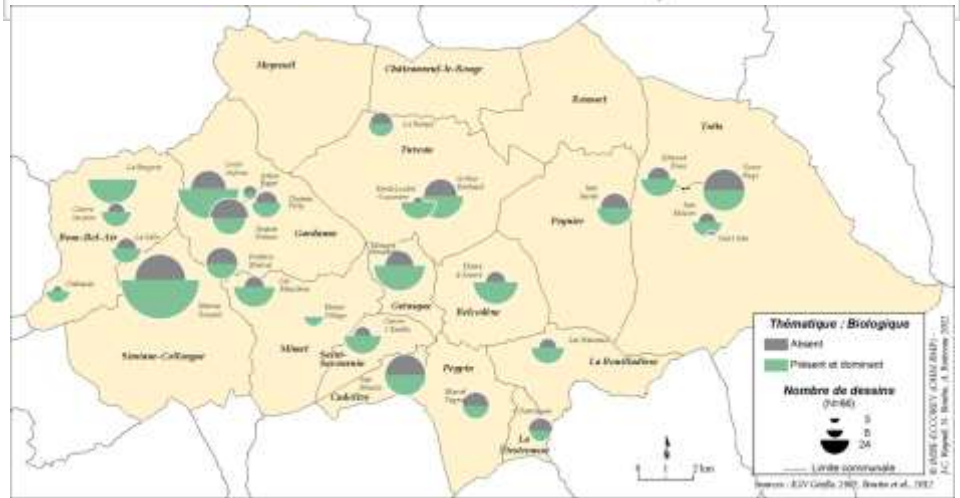
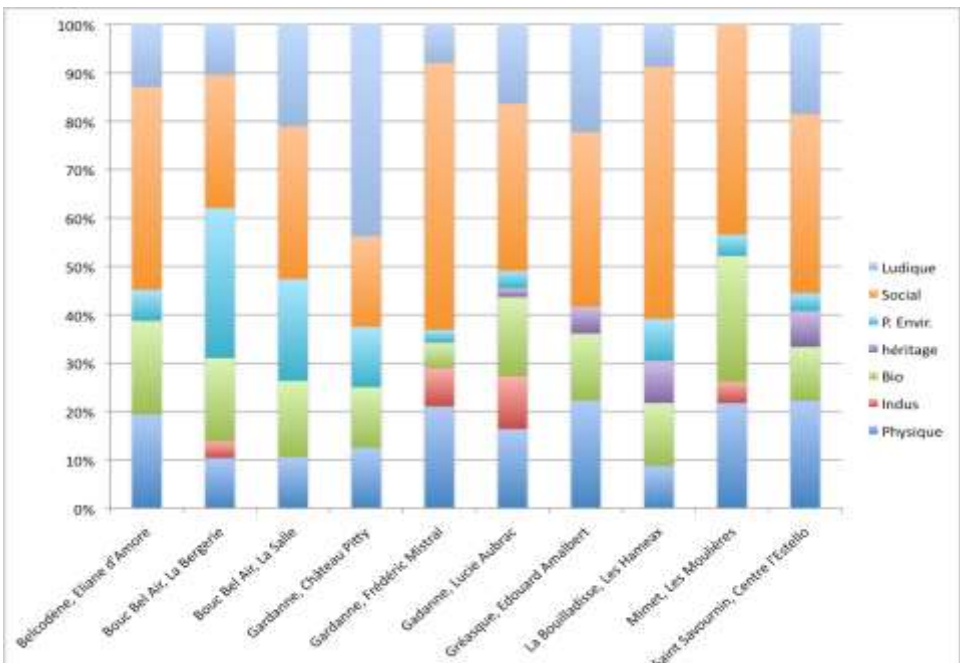
Some example of analysis

Naturality



Artificiality

Questions... regularities and distances



- BOTTOM-UP approach
- COOPERATION (aggregate wide range of « views » and disciplines)
- LONG TERM RESEARCH (320 followed)
- FROM PRESENT TO FUTURE

Voilà !

