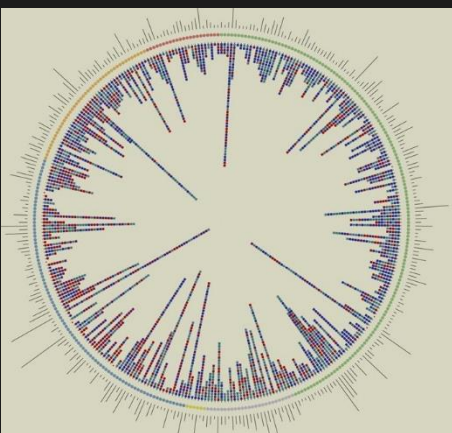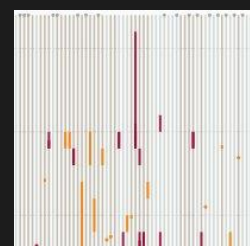# Citizen contributions and minor heritage:
feedback on modeling and visualising an information *mash-up*
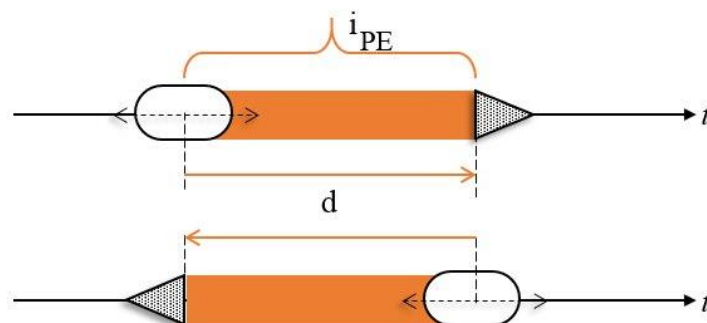
J.Y Blaise, I.Dudek, G.Saygi
UMC CNRS/MC 3495 MAP

Mucem   Région Provence-Alpes-Côte d'Azur

Our research area: ~~Data science~~ Heritage studies

Taking inspiration from InfoVis methods and practices in order to renew (or at least complement) the way historical evidence can be analysed, cross-examined, and given to reason on.

➢ A strong concern for the *time* parameter (chronology but also cycles, rythms, etc.)

➢ A strong concern for the *quality* of the data (lacks, whole range of uncertainties)

G. Saygi, J.Y. Blaise, I. Dudek *Temporal hints in the cultural heritage discourse: what can an ontology of time as it is worded reveal?* Revue des Nouvelles Technologies de l'Information RNTI-E-34

Our research area: ~~Data science~~ Heritage studies

Taking inspiration from InfoVis methods and practices in order to re[...]
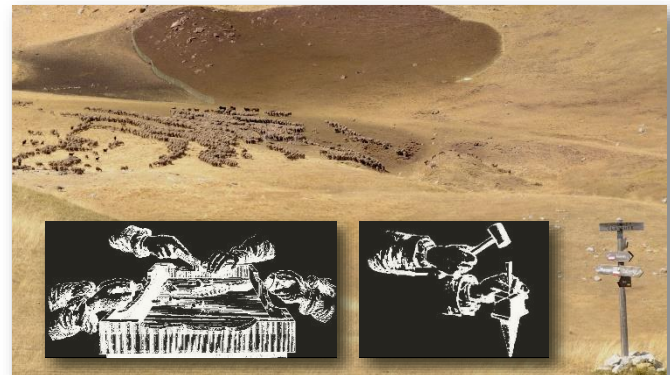evidence can be analysed, cross-examined, and given to reason on.

Rural chapels

➤ A strong concern for the **time** parame[...]

➤ A strong concern for the **quality** of the[...]
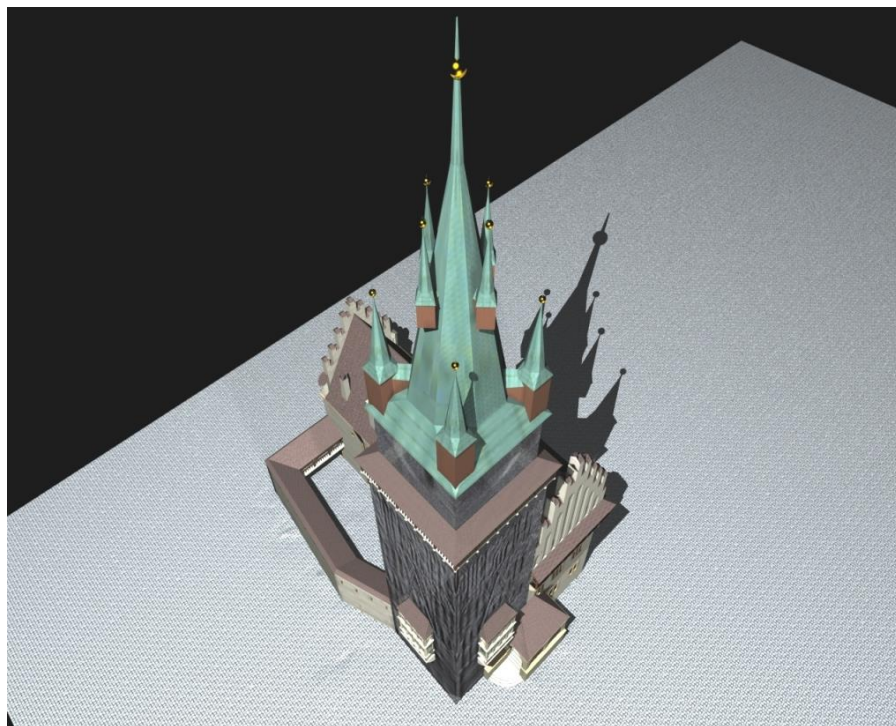

Farming tools

A focus on the architectural heritage (but not only).

Traditional crafts

Our job: pulling together evidence and hints in order to read or re-read data and information sets
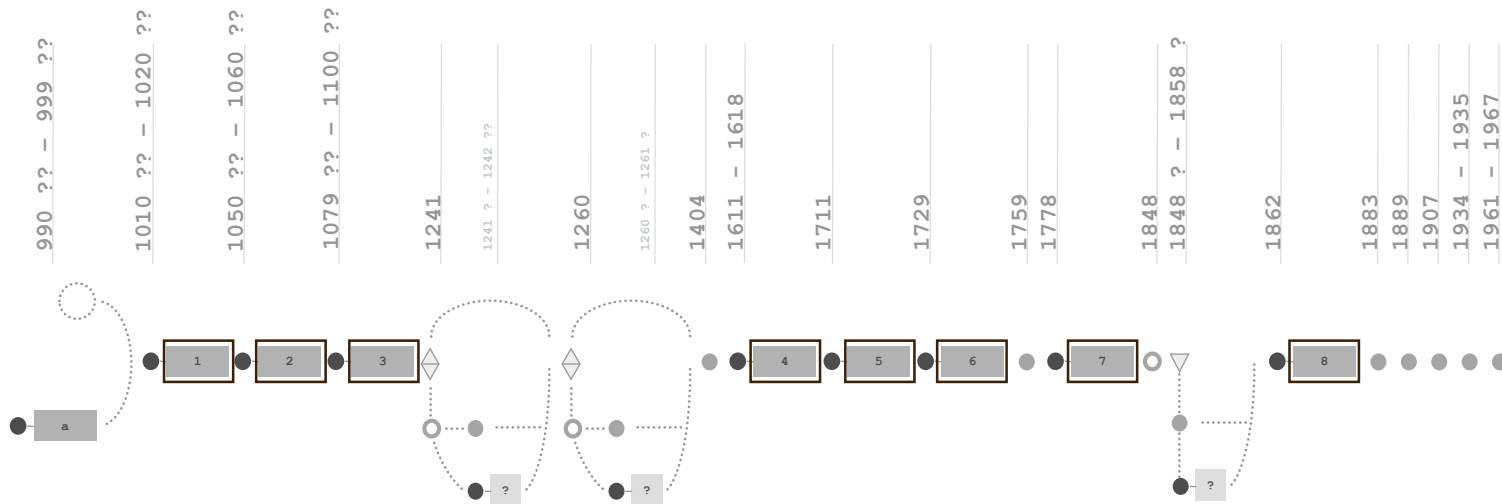
NOT in an attempt at pushing to the fore and propagating false beliefs (virtual reconstructions)
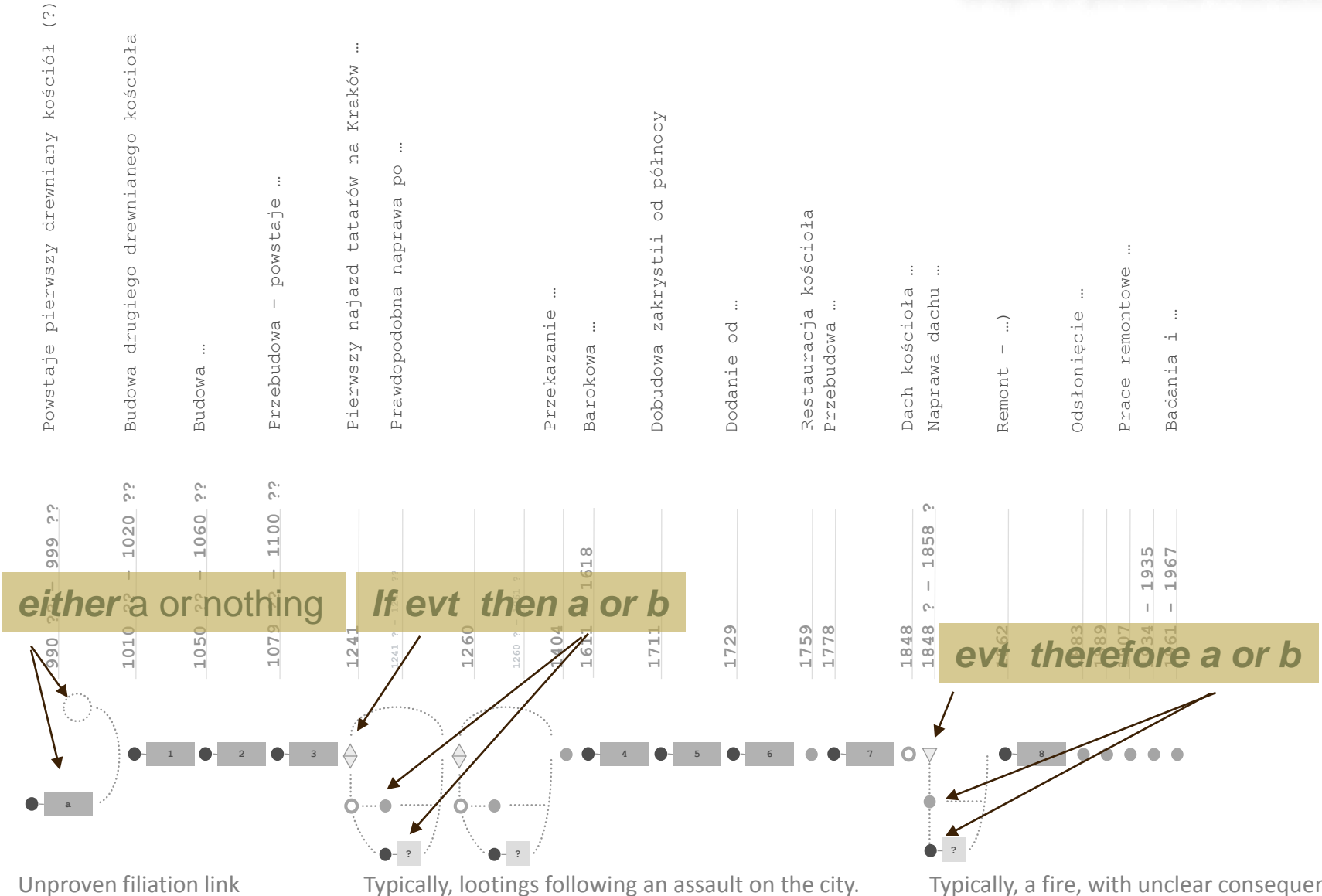
Our job: pulling together evidence and hints in order to read or re-read data and information sets

rather in an attempt at laying on the table « what we really know, », *i.e.* at formalising and cross-examining pieces of data and information >> enhancing relations

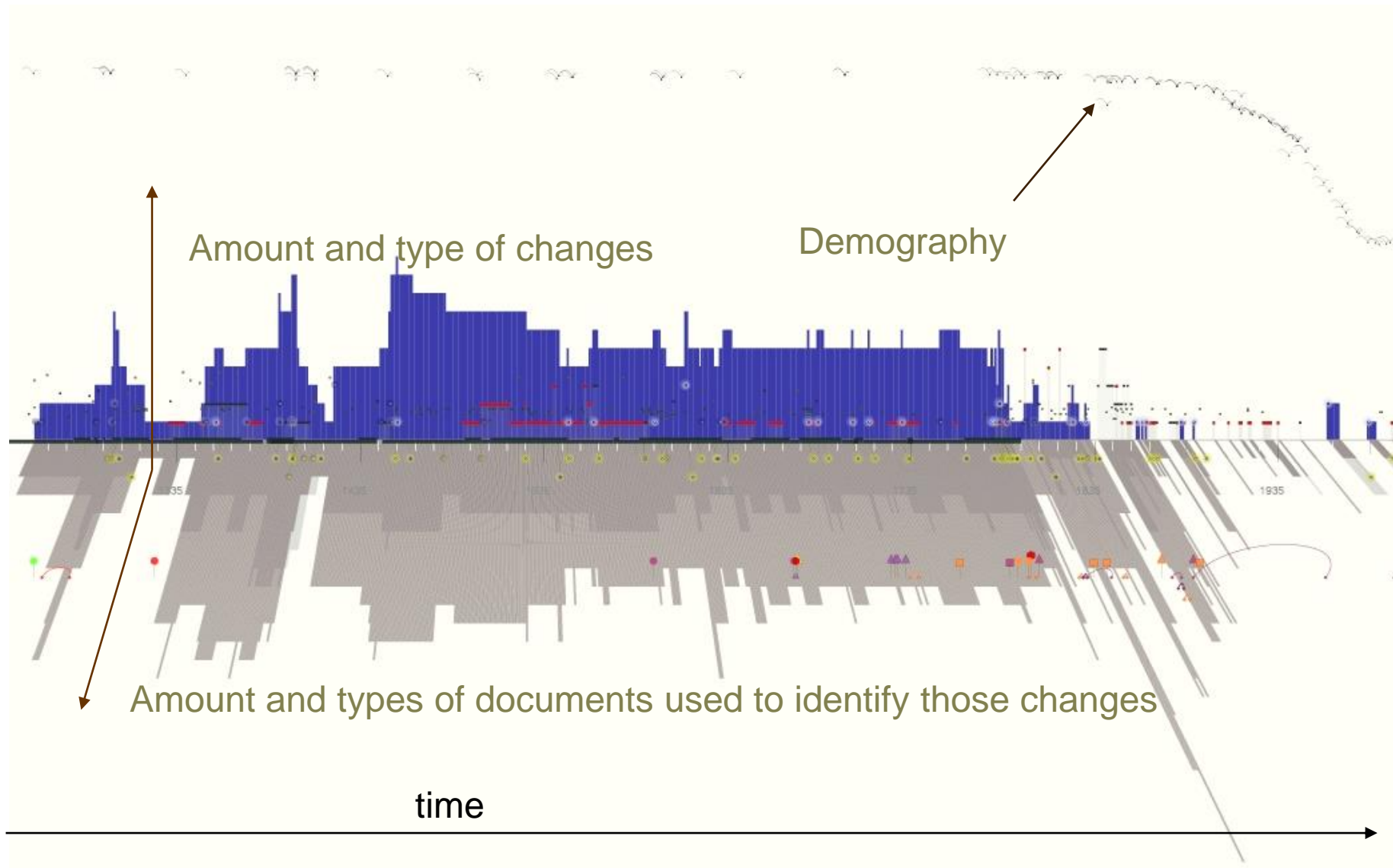Successive documented "versions" of an edifice as time passes by.


Blaise J. Y., Dudek I., Komorowski, W., Węcławowicz, T. Architectural transformations on the Market Square in Krakow - A systematic visual catalogue. A. Frycz-Modrzewski Krakow Academy

Graph of potential interactions

Powstaje pierwszy drewniany kościół (?)

Budowa drugiego drewnianego kościoła

Budowa ...

Przebudowa – powstaje ...

Pierwszy najazd tatarów na Kraków ...

Prawdopodobna naprawa po ...

Przekazanie ...

Barokowa ...

Dobudowa zakrystii od północy

Dodanie od ...

Restauracja kościoła

Przebudowa ...

Dach kościoła ...

Naprawa dachu ...

Remont – ...)

Odsłonięcie ...

Prace remontowe ...

Badania i ...

999 ??
1020 ??
1060 ??
1100 ??

1618

1848 ? – 1858 ?

990
1010
1050
1079
1241
1260
1404
1611
1711
1729
1759
1778
1848
1934 – 1935
1961 – 1967

either a or nothing

If evt then a or b

evt therefore a or b

1
2
3
4
5
6
7
8
a
?
?
?

Unproven filiation link   Typically, lootings following an assault on the city.   Typically, a fire, with unclear consequences

Blaise J. Y., Dudek I., Komorowski, W., Węcławowicz, T. Architectural transformations on the Market Square in Krakow - A systematic visual catalogue. A. Frycz-Modrzewski Krakow Academy

historySkyline

Amount and type of changes

Demography

Amount and types of documents used to identify those changes

time

Blaise, J.-Y., & Dudek, I.. Spotting temporal co-occurence patterns: the historySkyline visual metaphor. [Proc. Metrology for Archaeology. 2015].

historySkyline

Context (laws, epidemics, floods, *etc.*)

Military events (occupations, sieges, *etc.*)
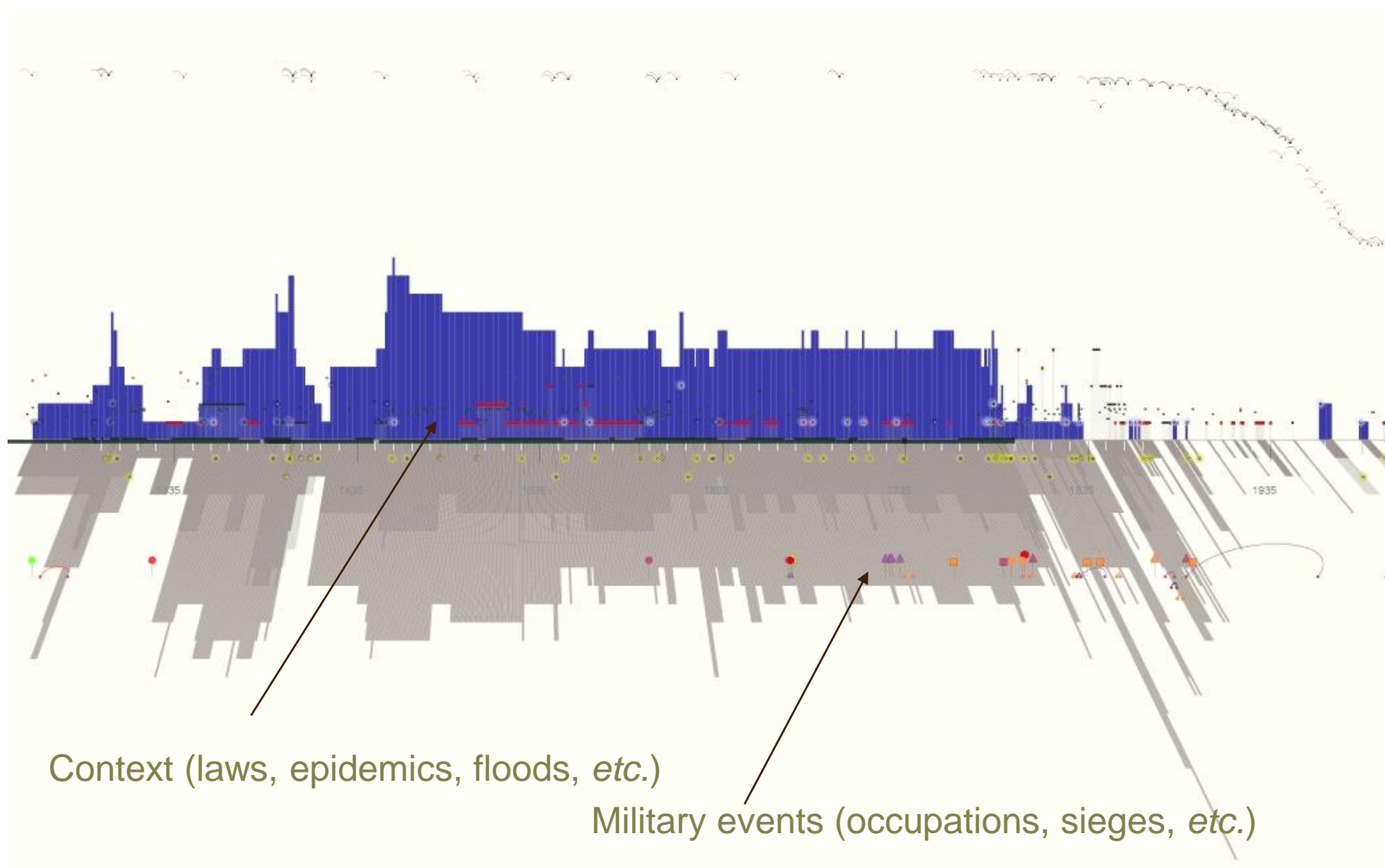
Blaise, J.-Y., & Dudek, I.. Spotting temporal co-occurence patterns: the historySkyline visual metaphor. [Proc. Metrology for Archaeology. 2015].

historySkyline
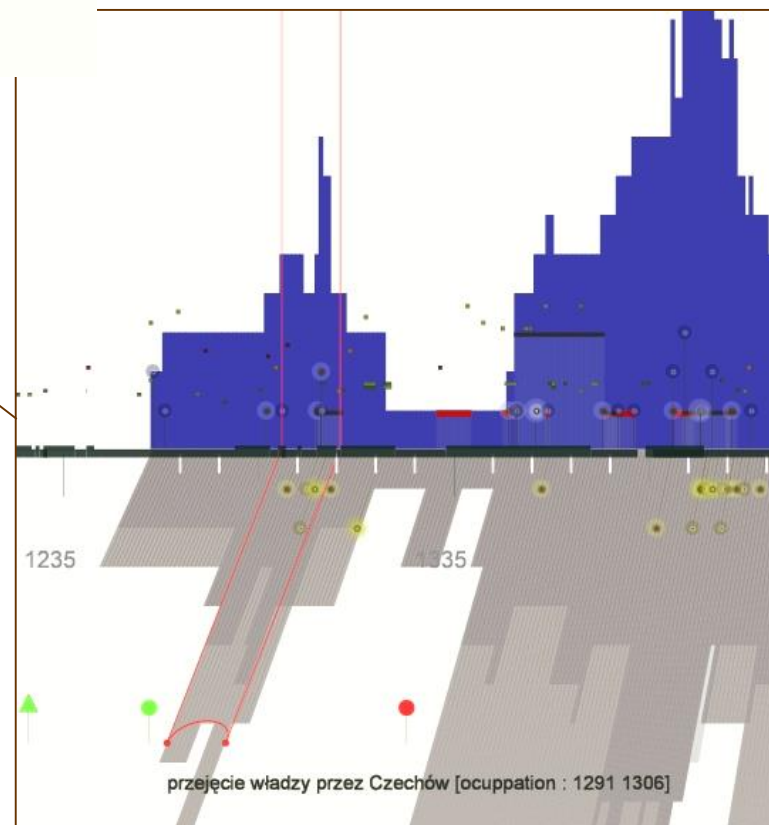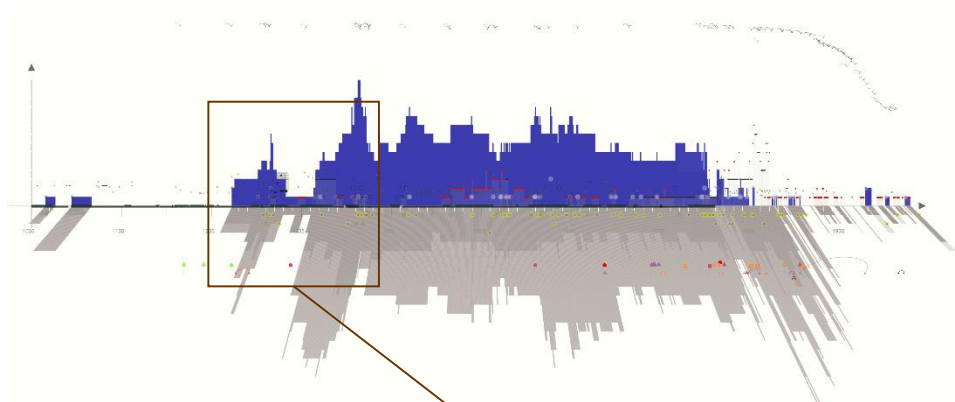
Correlation: observing the impact of the Czech army's presence in Krakow on the building activity

1235   1335

przejęcie władzy przez Czechów [ocuppation : 1291 1306]

Blaise, J.-Y., & Dudek, I.. Spotting temporal co-occurence patterns: the historySkyline visual metaphor. [Proc. Metrology for Archaeology. 2015].

Our research area: ~~Data science~~ Heritage studies

Taking inspiration from InfoVis methods and practices in order to renew (or at least complement) the way historical evidence can be analysed, cross-examined, and given to reason on.

➢ This presentation may well not be fully inline with the scope of DSAA, but research paths such as ours imply taking the risk of being the ugly duckling

Context and motivation

Range of issues raised

A focus on the visualisation effort

Yet to come (*i.e.* shortages)
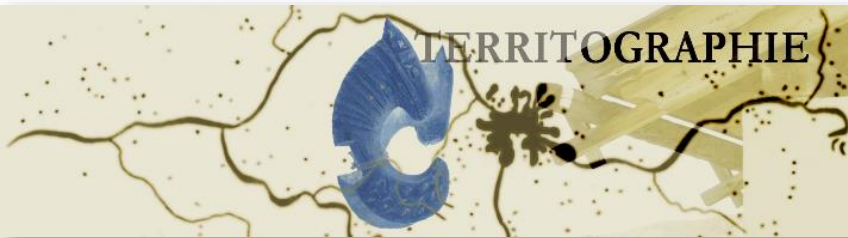
A research programme that introduces a number of constraints:

> Numbers - yet « small data » :
    - over 1200 edifices (rural chapels, southeast of France)

    - Over 3300 web pages documenting these edifices

1265 edifices
16 unnlocalised edifices
122 ill-localised edifices (textual hint)

1092 chronological hints
263 contradictory chronological hints
468 edifices undated

3438 web ressources
624 information providers
52 edifices undocumented (no web resource available)

A research programme that introduces a number of constraints:

> numbers:

> Nature of the objects : ***Minor heritage***

- NOT likely to be documented by public authorities or academics in a normative, consistent way

Service Public
Associatif
Personnel
Communautaire
Commercial

A research programme that introduces a number of constraints:

> numbers

> Nature of the objects : ***Minor heritage***

- NOT likely to be documented by public authorities or academics in a normative, consistent way

- We rely on (often local-based) enthusiasts
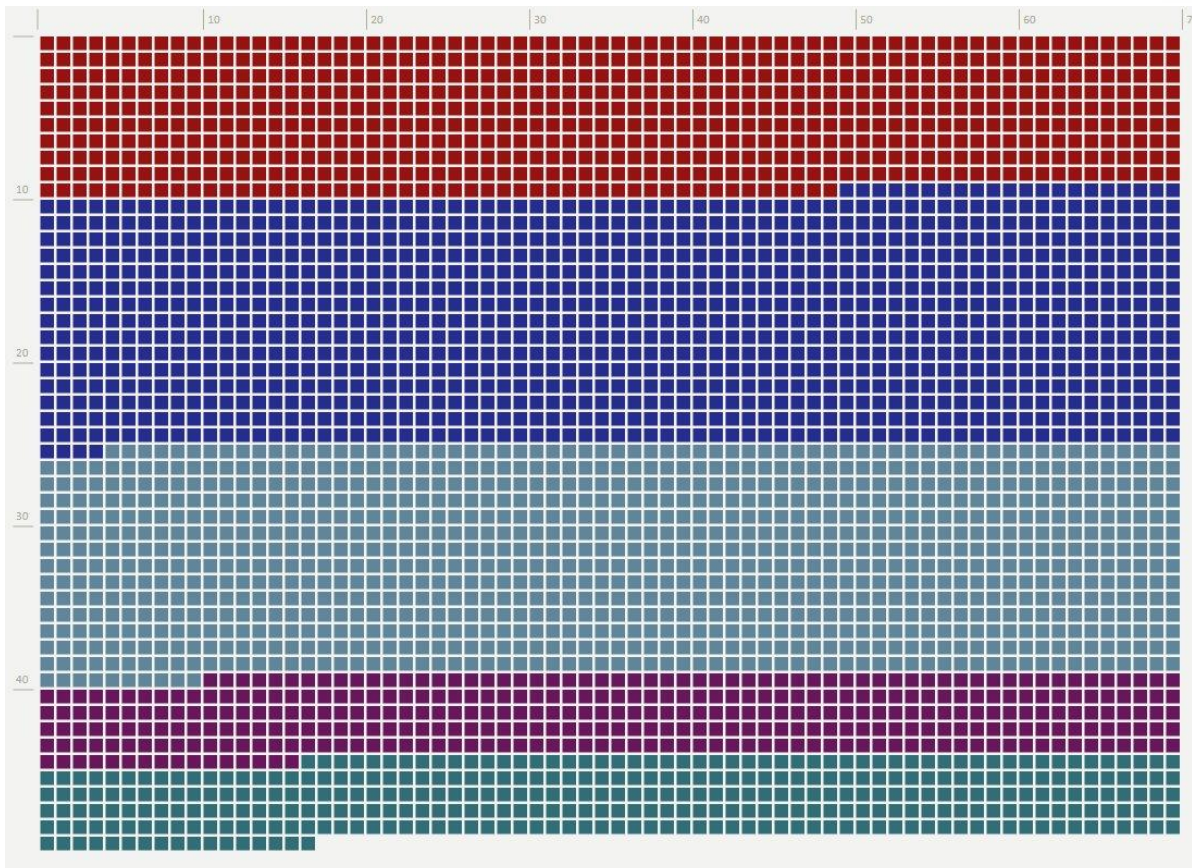
Daniel Thiery
Recherches Historiques et Partage

ACCUEIL | EGLISES ET CHAPELLES RURALES

Entrages

ENTRAGES

Faisait partie du diocèse et de la viguerie de Digne, aujourd'hui dans le canton de Digne Est. Situé à l'est de Digne, traversé par l'ancienne voie impériale, le territoire compte un peu plus de 2200 hectares, s'étageant dans un milieu montagneux. Il est cité dès 1035 lors de la donation faite à Saint-Victor du prieuré Saint-Michel de Cousson sous la forme de villa Tragilas avec deux cabanes et un jardin (CSV 2, n° 743, p. 91-92). Puis, c'est aux alentours de 1040 qu'est donné à Saint-Victor un manse dans le lieu appellé Traguilas (CSV 2, n° 745, p. 94). On sait ensuite que l'église d'Entrages est sous la dépendance du chapitre de Digne lors de la confirmation de 1180. Cette dépendance est réaffirmée en 1350 avec la prebenda de Autragelis et le cappellanus de Antragelis, retrouvant ce dernier en 1376 (Pouillés, p. 255-256 et 259). Ce n'est qu'en 1683 que l'on apprend que l'église est sous la titulature de saint Pons avec saint Julien comme patron (1 G 5). Mais il n'est pas sûr que cette église soit la première église du castrum cité en 1252, castrum de Antragenis (Enquêtes, n° 520, p. 351). En effet, sur la colline qui domine le village, subsiste les ruines d'une chapelle dédiée à Notre Dame qui pourrait être l'église originelle du castrum.

158. La chapelle Notre-Dame

Elle n'est pas citée par l'évêque en 1683, mais seulement en 1857 où parmi les chapelles rurales il y en a une près du village dédiée à Notre Dame de la ... Notre-Dame de Consolation comme stip... Consolation sur une colline au dessus d... patronale et l'Assomption. Aujourd'hui, ... été fondée au XIe siècle.

159. La chapelle Saint-Joseph à Cha...

Le 22 juin 1683, le curé d'Entrages ... Chabrières une chapelle bastie et bie... ameau, laquelle chapelle est sous le ... attandu l'incomodité qu'il y a de porter ...
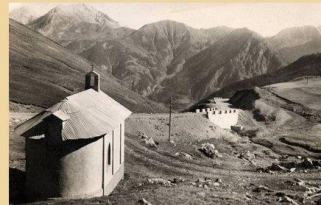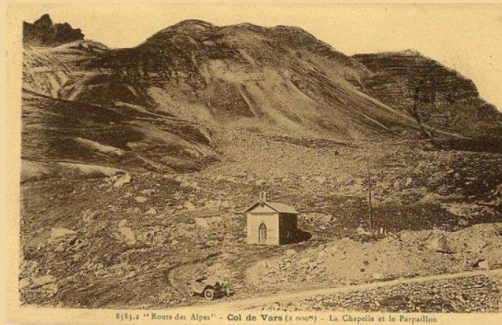
From historical research to collectors of old postcards : two examples of web pages harvested

Au Col de Vars

Chapelle Ste-Marie-Madeleine [coll. JFD]

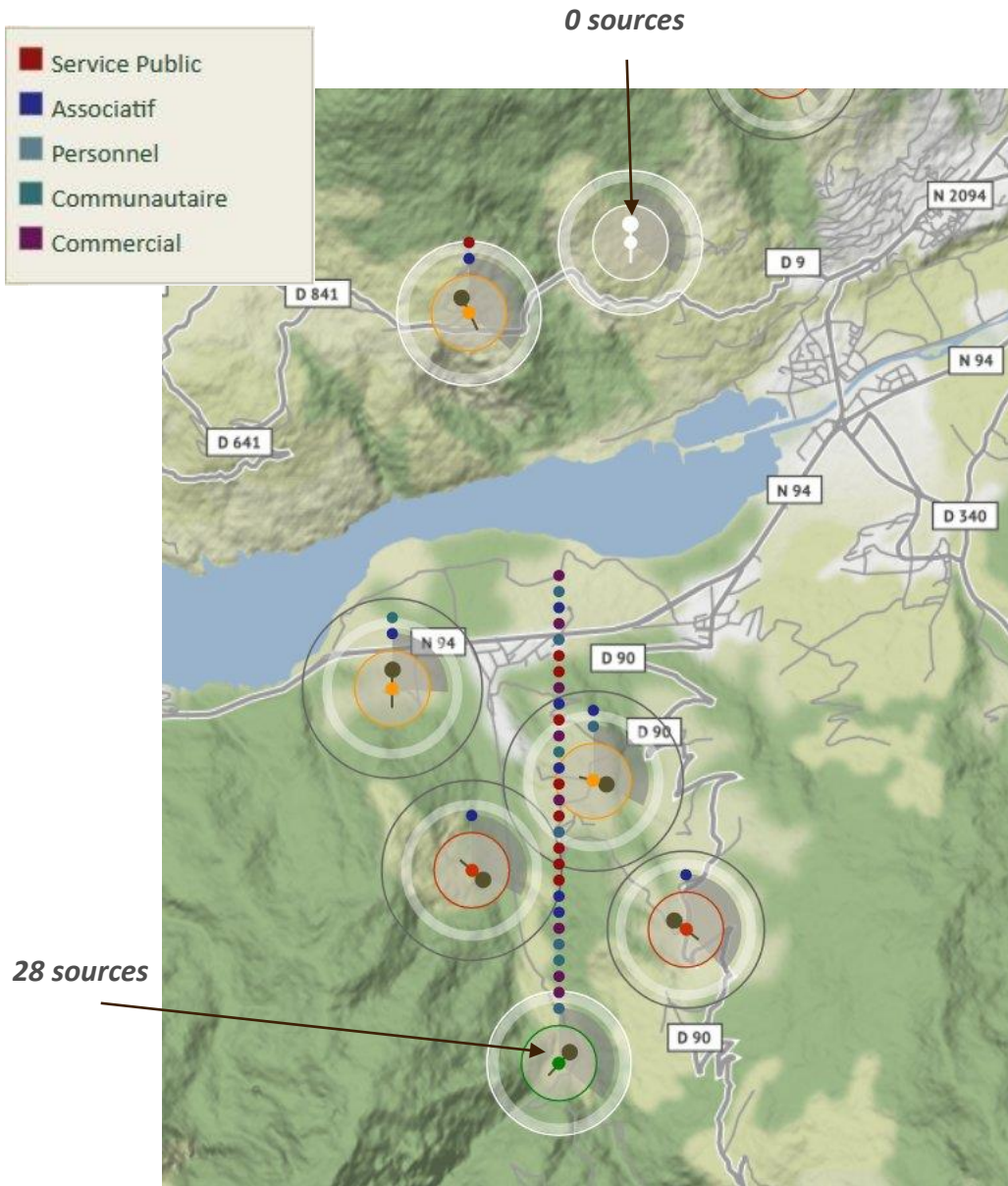A research programme that introduces a number of constraints:

> numbers

> Nature of the objects : *Minor heritage*

> Profile of the information providers

- Variety in motivation, and in practices: the nature of the data they are likely to publish is far from being easy to foresee.

- A whole range of uncertainties

0 sources

Service Public
Associatif
Personnel
Communautaire
Commercial

28 sources

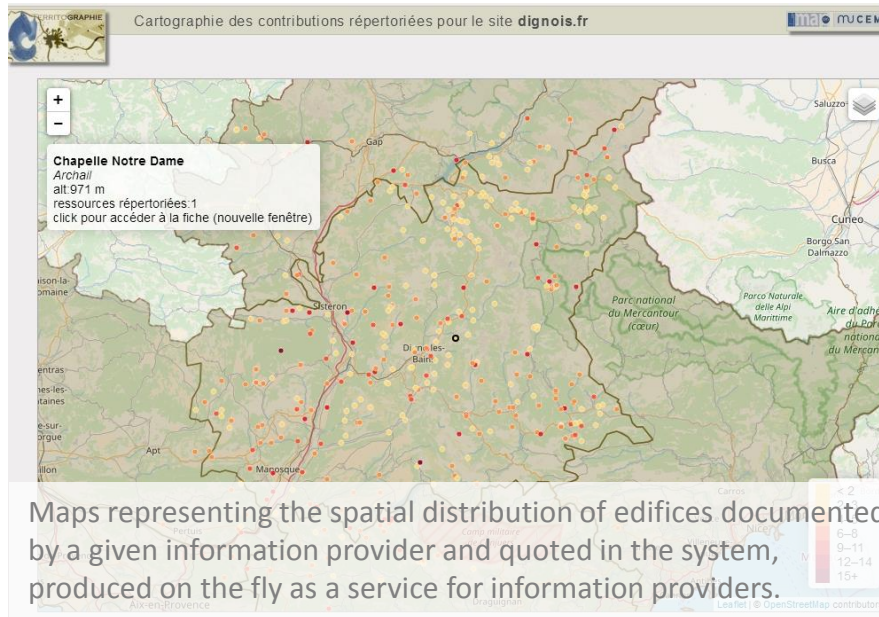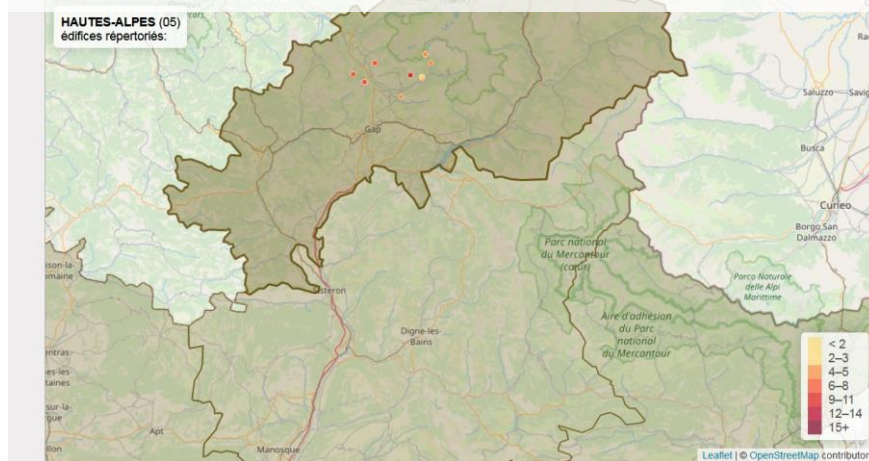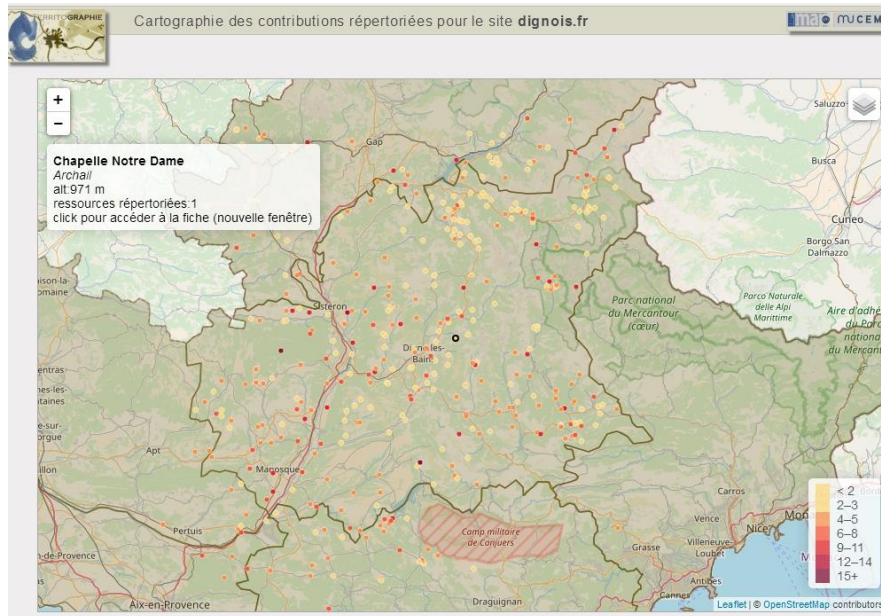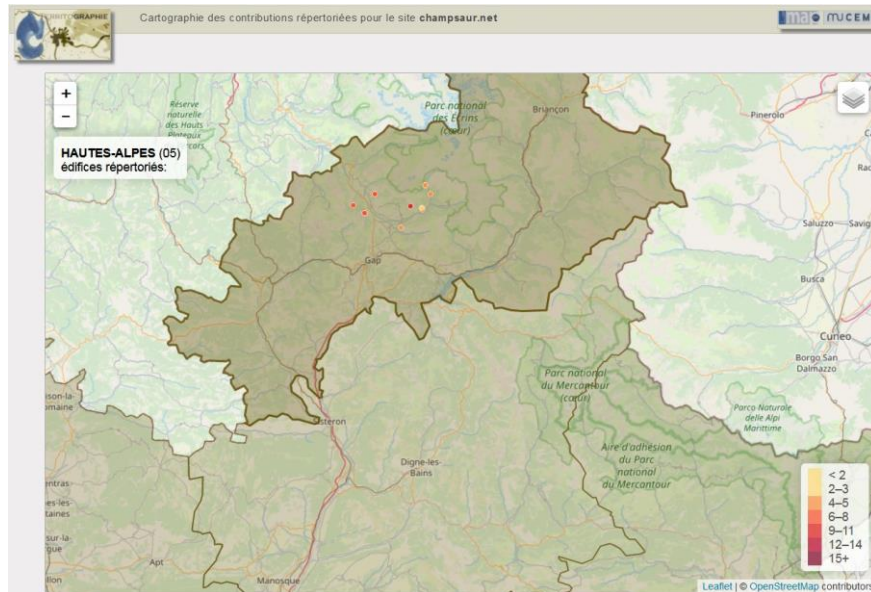A research programme that introduces a number of constraints:

> numbers

> Nature of the objects : *Minor heritage*

> Profile of the information providers

> Density of hints per edifice

> - Variety in the amount of data available for this of that edifice, including inside a small perimeter .

Maps representing the spatial distribution of edifices documented by a given information provider and quoted in the system, produced on the fly as a service for information providers.

Top, the information provider proposes a systematic "survey" of rural chapels

Bottom, the information provider documents various aspects of a given alpine valley, beyond the corpus of rural chapels

A research programme that introduces a number of constraints:

> numbers

> Nature of the objects : ***Minor heritage***

> Profile of the information providers

> Density of hints per edifice

> Intensity of activity of information providers

- a typical *citizen science* pattern (10/90 ratio - 10 % of the contributors do 90 % of the job)

- also, a variety of "behaviours" from those engaged in a systematic "survey" of such edifices to people only interested in the history of their village or valley.

Cartographie des contributions répertoriées pour le site **dignois.fr**

Chapelle Notre Dame
Archail
alt:971 m
ressources répertoriées:1
click pour accéder à la fiche (nouvelle fenêtre)

Cartographie des contributions répertoriées pour le site **champsaur.net**

HAUTES-ALPES (05)
édifices répertoriés:

A research programme that introduces a number of constraints:

> numbers

> Nature of the objects : ***Minor heritage***

> Profile of the information providers

> Density of hints per edifice

> Intensity of activity of information providers

> Finally, considering the numbers above, at this stage of the research we do not analyse the information, but simply pull it together, and **echo initiatives** of citizens (a cornerstone of a sound and balanced relation between academics and information providers)

A research programme that introduces a number of constraints – so what is the motivation?

> Get a better understanding of what can be gained, at scientific (and cultural) level from this information *mash-up*

> Our aim was not to document and analyse thoroughly the corpus, but to somehow weigh, in terms of methodology, the potential impact of citizen-birthed data and information sets on the documentation and analysis of minor heritage items.

> A web portal used as a tool to foster discussions, share data, experiment contribution modalities, and promote visual reasoning.

http://www.map.cnrs.fr/territographie/

determinacy	Whether the value of a variable is known at all or not.	[18]
An edifice that cannot be localized (only mentioned in archives, without hints on its position), or that cannot be dated.		
credibility	Judgment made by the human consumer of the information about the information source.	[19]
Association of a craft and a territory basing on the sole recollections of a witness.		
approximation	Attempt to come close to measuring or describing a phenomenon […].	[19]
Measuring the orientation of an edifice bases on the presumption that the nave is actually straight, and the apse unambiguously positioned.		
incompleteness	The idea that the observed evidence is likely to only be a small portion of the whole.	[21]
None of the collections we handle is complete, hence the necessity to be cautious in any interpretation. Furthermore, as mentioned by [19], the unidentified unknowns are the worst kind of missing information, and one of the sub-goals of a citizen science approach to minor heritage can be to try and diminish the amount of unidentified unknown.		
interrelatedness	Source independence from other information.	[21]
When two e-sources make a common statement, yet without quoting each other or the common initial source they based on.		
currency	Temporal gaps between occurrence, info collection & use.	[21]
Temporal gaps between the period of use of a farming tool, and the moment when it was collected.		
multivocality	When several hints appear as contradictory.	[18]
The literature sometimes mentions inconsistency or disagreement [21] to name such imperfections – a typical occurrence is opposite contradictory dates given for an event.		

The paper reflects the fact that we have been pulling several wires all along the research.
A brief overview of the research issues raised, and a focus on the visualisation effort.

> A grid of uncertainty factors: do such data sets contain factors of uncertainty that are met in "classic" historical research?
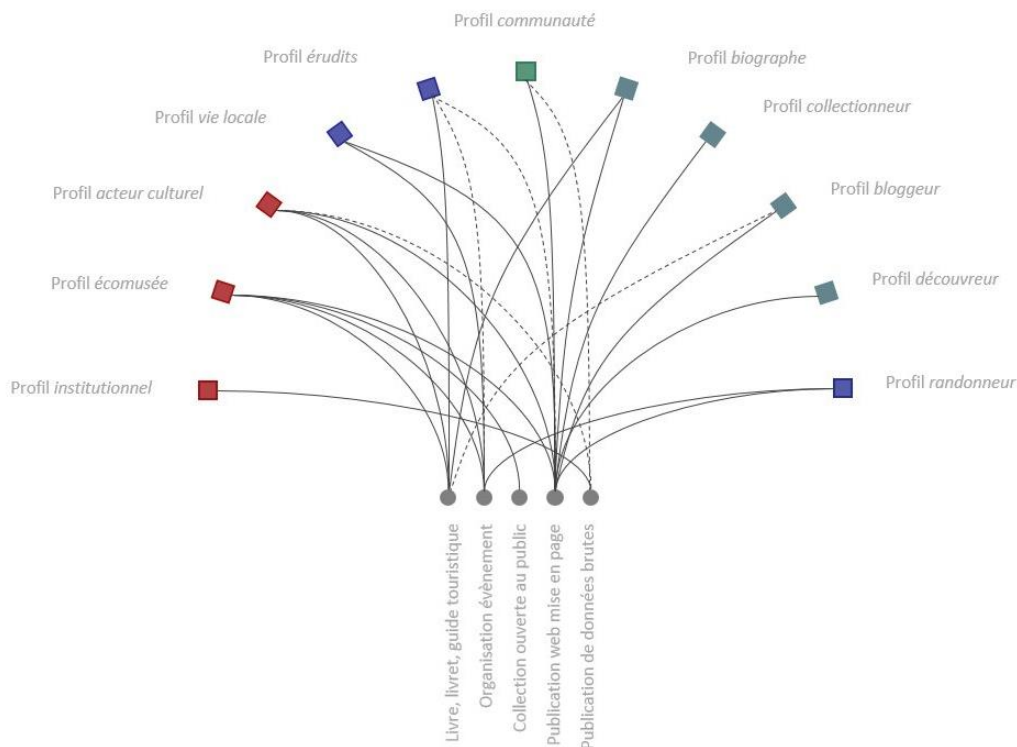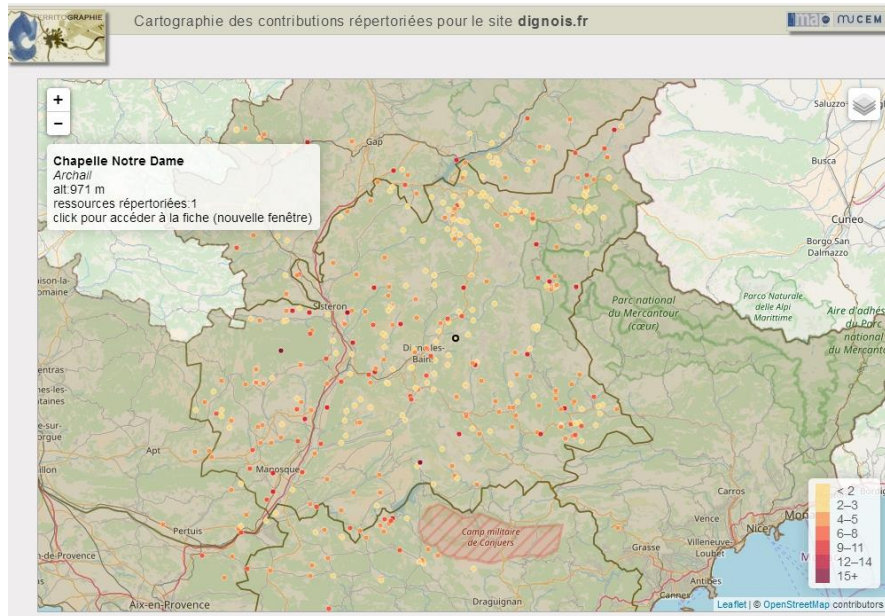
The paper reflects the fact that we have been pulling several wires all along the research.

A brief overview of the research issues raised, and a focus on the visualisation effort.

> A set of contribution modalities needing experimentation – What would be the best-suited technological environment for information providers?

Service Public
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Communautaire
Commercial

The paper reflects the fact that we have been pulling several wires all along the research.
A brief overview of the research issues raised, and a focus on the visualisation effort.

> An attempt at profiling information providers – who are they? Is there a way to group them by clusters? According to which division lines?

> If there are profiles, can they be aligned with "types" of data sets that a given profile is likely to provide?

e.g. are those who provide dates of construction of an edifice (linear time) the same as those who tell us when a religious parade is organised for that edifice (cyclic time).
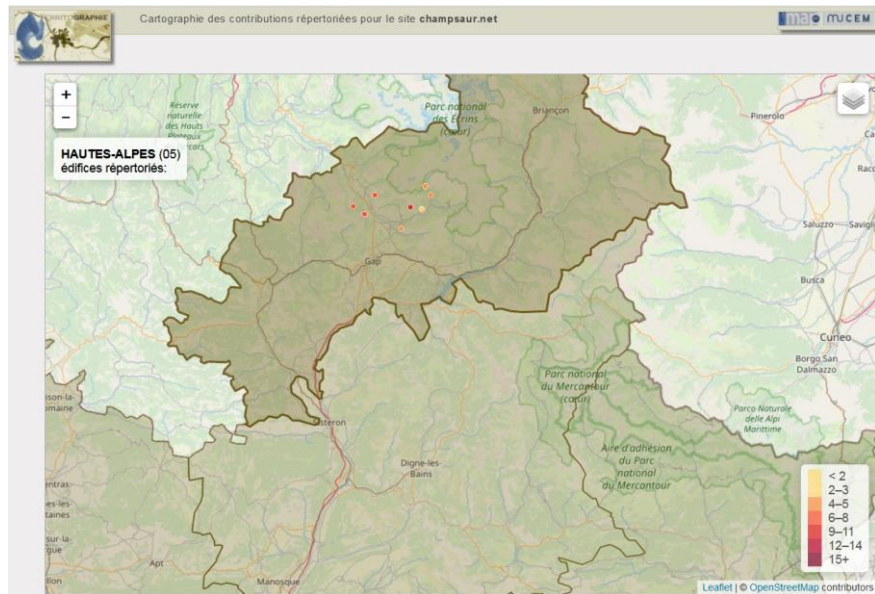
A clustering of web pages basing on the « status » of informations providers: a coarse-grained analysis that requires further investigation

The paper reflects the fact that we have been pulling several wires all along the research.
A brief overview of the research issues raised, and a focus on the visualisation effort.

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e.g. are those who provide dates of construction of an edifice (linear time) the same as those who tell us when a religious parade is organised for that edifice (cyclic time).

Relations between profiles of information providers and types of dissemination activities they are likely to participate in (or to organise).

Cartographie des contributions répertoriées pour le site **dignois.fr**

Chapelle Notre Dame
Archail
alt:971 m
ressources répertoriées:1
click pour accéder à la fiche (nouvelle fenêtre)

Cartographie des contributions répertoriées pour le site **champsaur.net**

HAUTES-ALPES (05)
édifices répertoriés:

The paper reflects the fact that we have been pulling several wires all along the research.
A brief overview of the research issues raised, and a focus on the visualisation effort.

> How do information providers react to an academic or "official" research targeting a corpus they were the first to investigate?

> What would they expect in a move from "crowdsourcing" practices (citizens called in to back up the initiative of academics) to citizen science practices (where they act as initiators)?

Maps representing the spatial distribution of edifices documented by a given information provider and quoted in the system, produced on the fly as a service for information providers.

Top, the information provider proposes a systematic "survey" of rural chapels

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TERRITOGRAPHIE

Atelier 1

Sur le site *Territographie*, partie contributions

Comment jugez-vous les 2 modes (*en ligne, avec compte utilisateur, hors ligne, fichiers PDF*)

en ligne (Compte utilisateur)	☐ pertinent	☐ non pertinent
hors ligne (Anonyme)	☐ pertinent	☐ non pertinent
proposer deux modes	☐ pertinent	☐ non pertinent

Connaissez-vous ou imaginez-vous d'autres modes de contribution?

La plateforme-test exemplifie trois types de questions qui pourraient être posées aux contributeurs potentiels. Si vous deviez expérimenter pour vous-même une telle plateforme quel type de questions poseriez vous :

☐ *Annotations* – observer un document existant, pour répondre à une question sur ce qu'il montre (ex: matériaux employés dans la fabrication d'un objet)

☐ *Note épinglée* – Associer à un élément existant une référence sur la toile, une référence bibliographique, *etc.*

☐ *Extension* – Référencer un nouvel item, ou apporter des précisions sur sa chronologie, son mode de fabrication, *etc.*

Visual support of a series of workgroup discussions organised in the flow of the project so as to get feedback from information providers.

The paper reflects the fact that we have been pulling several wires all along the research.
A brief overview of the research issues raised, and a focus on the visualisation effort.

> How do information providers react to an academic or "official" research targeting a corpus they were the first to investigate?

> What would they expect in a move from "crowdsourcing" practices (citizens called in to back up the initiative of academics) to citizen science practices (where they act as initiators)?

The paper reflects the fact that we have been pulling several wires all along the research.

A brief overview of the research issues raised, and a focus on the visualisation effort.

> Finally – what kind of lesson can we learn about such heritage items basing on such data and information sets? Will we manage to identify an added-value?

An illustration through two examples, concerning the edifices collection:

- One that focuses on what we can learn about the data quality

- One that focuses on what we can learn about the edifices themselves

To start with, some definitions and a clarification concerning the data considered.

> Spatial data (edifices only)

Geographical positions

Longitude, latitude

Hierarchical structure

edifice, commune, département (~200 to 300 communes)

Altitude

in meters, above sea level

Orientation

in theory, Christian churches are "oriented" (the apse to the east, the Altar there)

Chapelle Saint Léger | Montclar (Alpes de Haute Provence) ‹ ›

mao mucem

Longitude: 6.338, Latitude: 44.420, Altitude: 1354 m

localisation spatiale

Ressources répertoriées

--> chapelles.provence.free.fr
--> dignois.fr
--> fr.wikipedia.org
--> www.cardalines.net
--> www.haut-vernet.com
--> www.stleger.info

vue en 2010
© UMR CNRS/MCC 3495 MAP

comparatif altitude et orientation

Ancrage temporel

3 date(s) répertoriée(s) - 3 source(s) - 3 divergence(s)

500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

Funded by the Order of the Knights Templar, at a time still being discussed

TERRITOGRAPHIE

Chapelle Saint Martin | Le Vernet (Alpes de Haute Provence) ⟩
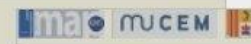
Longitude: 6.384, Latitude: 44.266, Altitude: 1302 m

IMA MUCEM

localisation spatiale

Ressources répertoriées

--> dignois.fr

vue en 2018
© UMR CNRS/MCC 3495 MAP

comparatif altitude et orientation

Ancrage temporel

1 date(s) répertoriée(s) - 1 source(s) - pas de divergences

500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000

To start with, some definitions and a clarification concerning the data considered.

> Temporal data
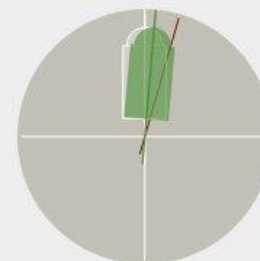
Time anchors - a concept developed as the actual hints we meet may refer to the construction of the edifice itself ("built in the 17th century"), but also to its "first mention in archives", etc.. Basically the association of the edifice to a verbal or quantitative expression of a date.

e.g. "probably built in 1766" ; "beginning of the 17th century", *etc.*

Expression > rule > YYYY Integer(s)

1 edifice <> 0 to n Time anchors

Temporal cycles of use, changes, etc.

To start with, some definitions and a clarification concerning the data considered.

> Thematic layers

Toponymy (alternative names)

Architectural analysis
(*e.g.* shapes, components)

To start with, some definitions and a clarification concerning the data considered.

> Thematic layers

Toponymy (alternative names)

Architectural analysis (*e.g.* shapes, components)

Work practices in traditional crafts (*e.g.* who, learning, places of practice, *etc.*)

Data quality: does it depend on the commune considered? (partial view)

Jausiers [6]

Rectangles: communes

Colours: départements

Vertical lines: edifices

Chapelle des Payans (227)

The localisation information (where?)
The orientation information (how?)
The chronology information (when?)

● *The information exists*
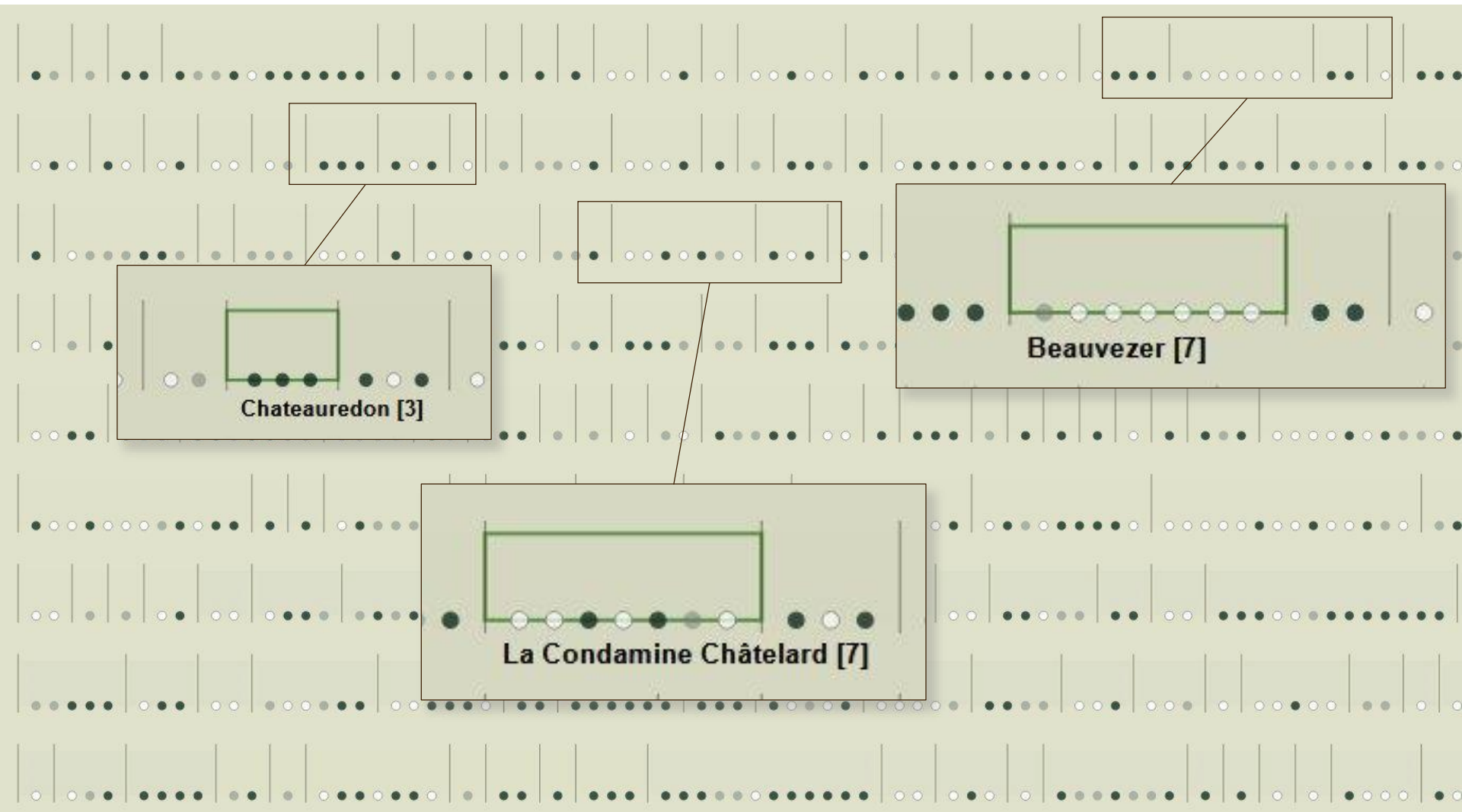● *Contradictory information found*
○ *No data*

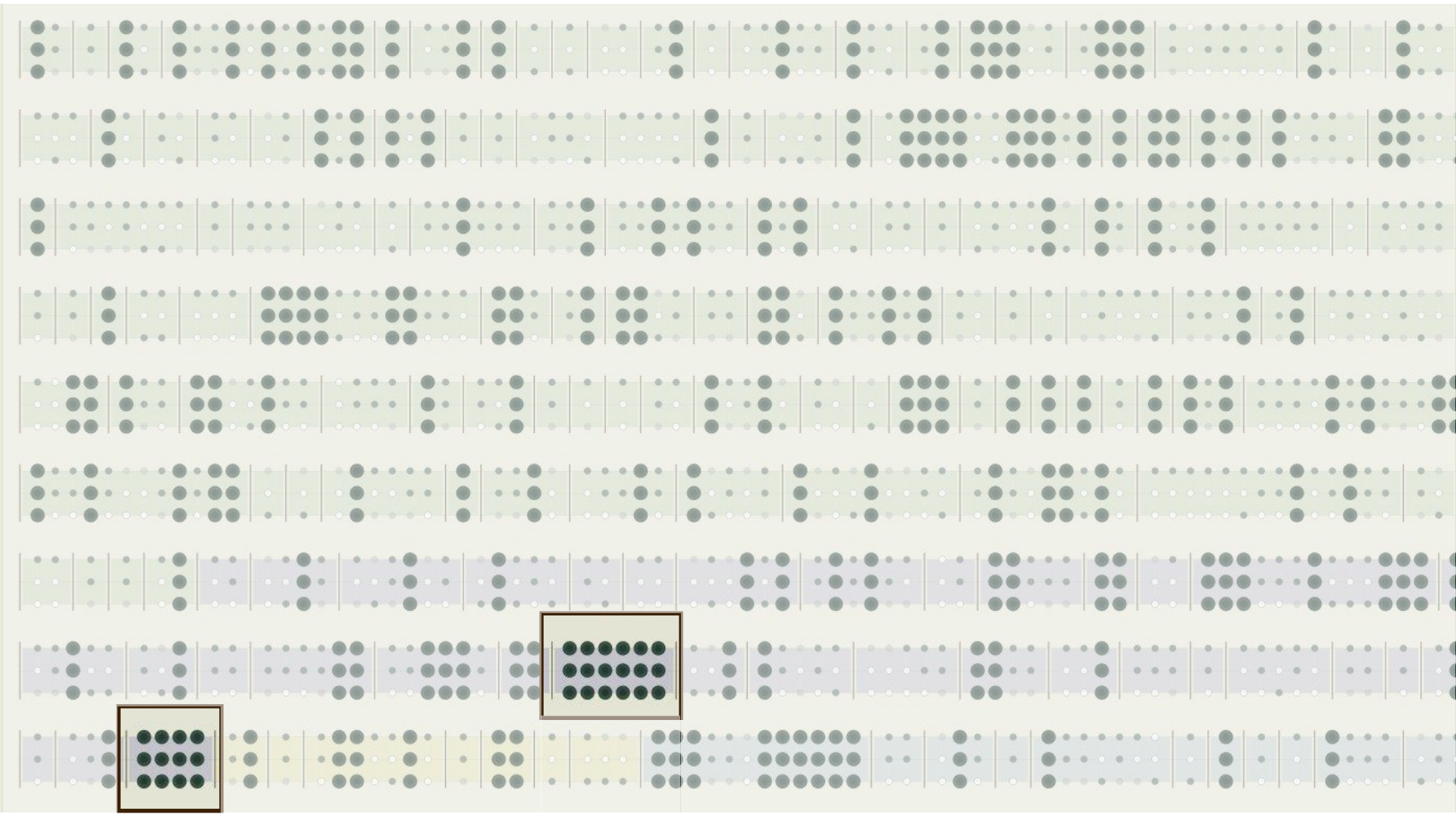*An overall picture, that can then be filtered*

● *The information exists*

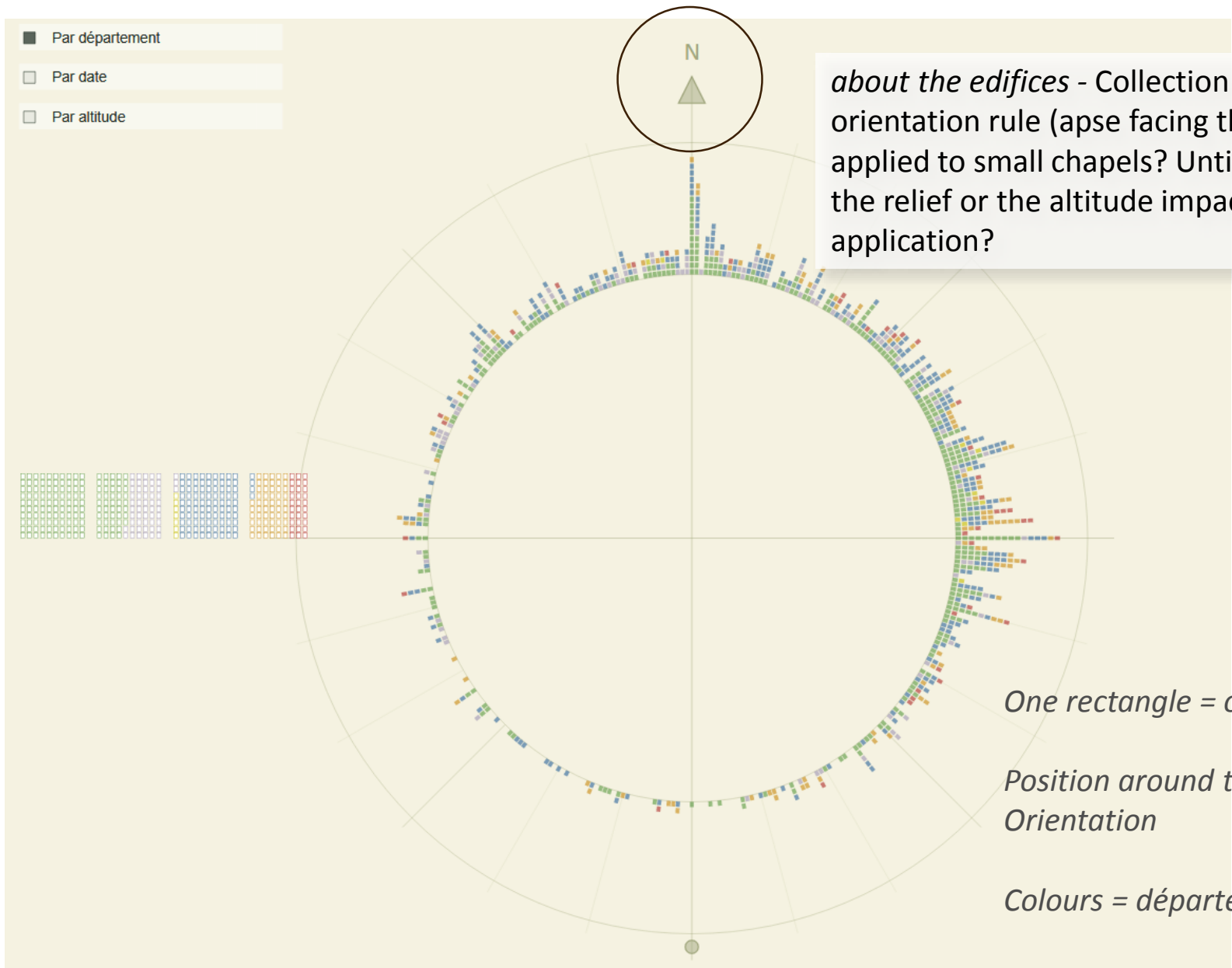● *Contradictory information found*

○ *No data*

A focus on dates alone

Chateauredon [3]

Beauvezer [7]

La Condamine Châtelard [7]

Pattern analysis: « all correct »

Pattern analysis: « all wrong »
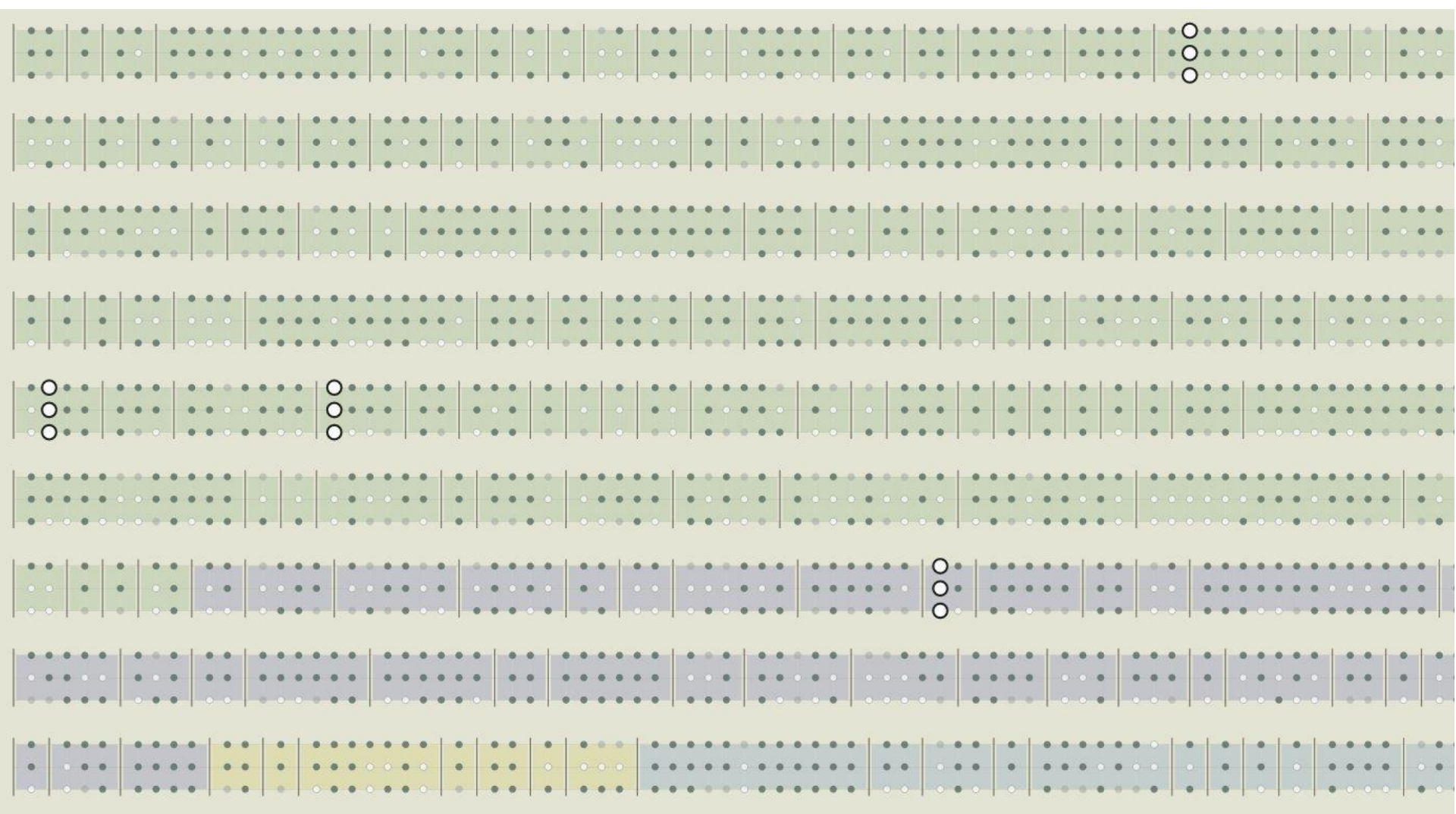
Par département

Par date

Par altitude

N

about the edifices - Collection reading: Is the orientation rule (apse facing the east) really applied to small chapels? Until when? Does the relief or the altitude impact its application?

One rectangle = one edifice

Position around the compass: Orientation

Colours = département

TERRITOGRAPHIE

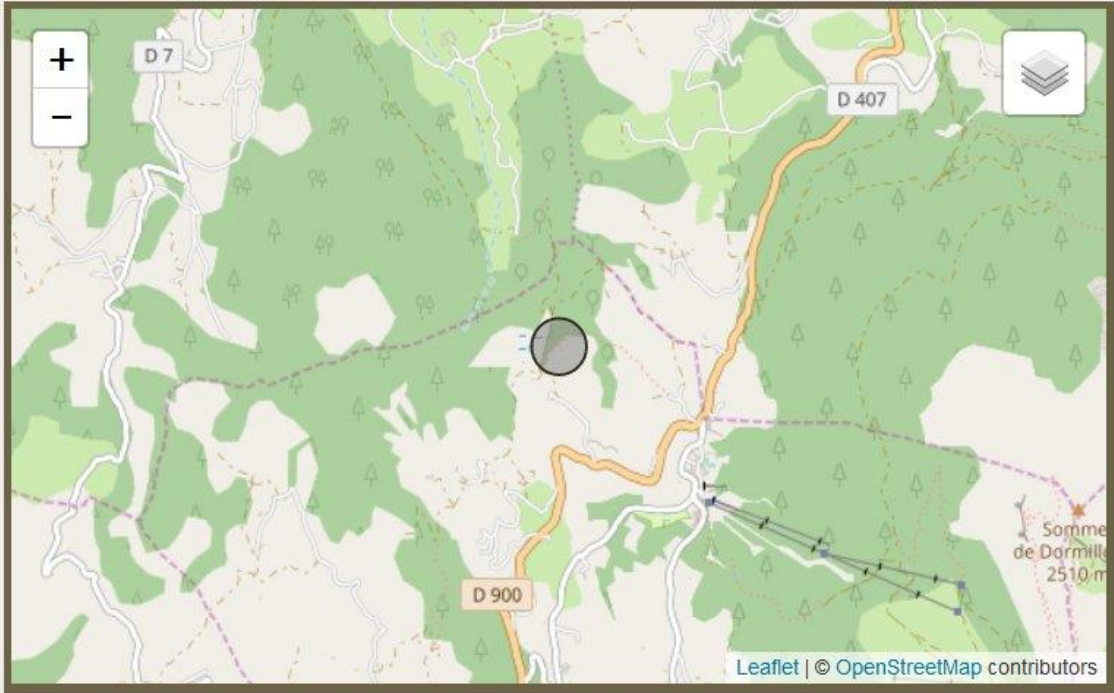**Chapelle Saint Léger** | Montclar (Alpes de Haute Provence) 〈 〉

ma● MUCEM

Longitude: 6.338, Latitude: 44.420, Altitude: 1354 m

localisation spatiale

D 7
D 407
D 900

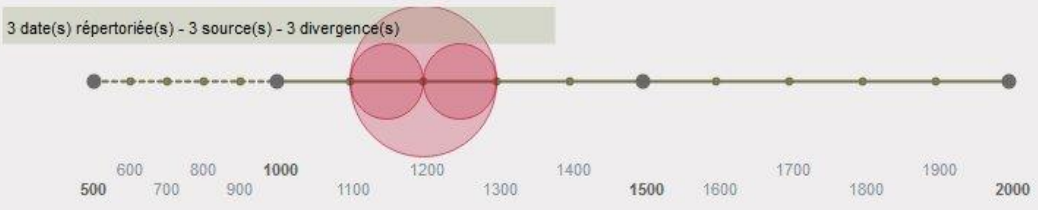Leaflet | © OpenStreetMap contributors

Somme de Dormille 2510 m

Ressources répertoriées

--> chapelles.provence.free.fr
--> dignois.fr
--> fr.wikipedia.org
--> www.cardalines.net
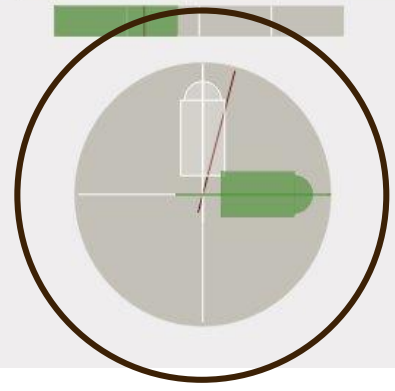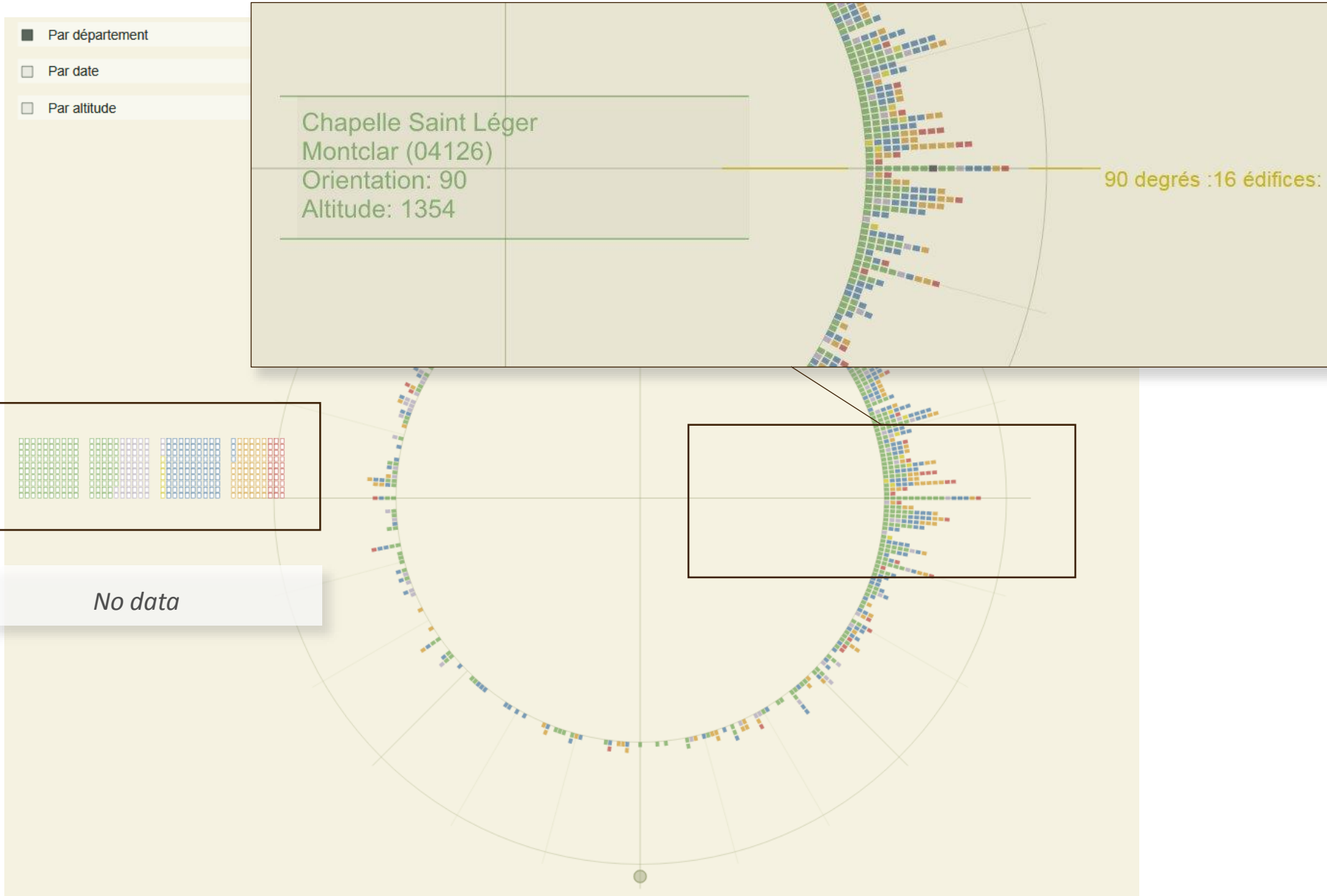--> www.haut-vernet.com
--> www.stleger.info

vue en 2010
© UMR CNRS/MCC 3495 MAP

comparatif altitude et orientation

Ancrage temporel

3 date(s) répertoriée(s) - 3 source(s) - 3 divergence(s)

500   600   700   800   900   **1000**   1100   1200   1300   1400   **1500**   1600   1700   1800   1900   **2000**

Par département

Par date

Par altitude

Chapelle Saint Léger
Montclar (04126)
Orientation: 90
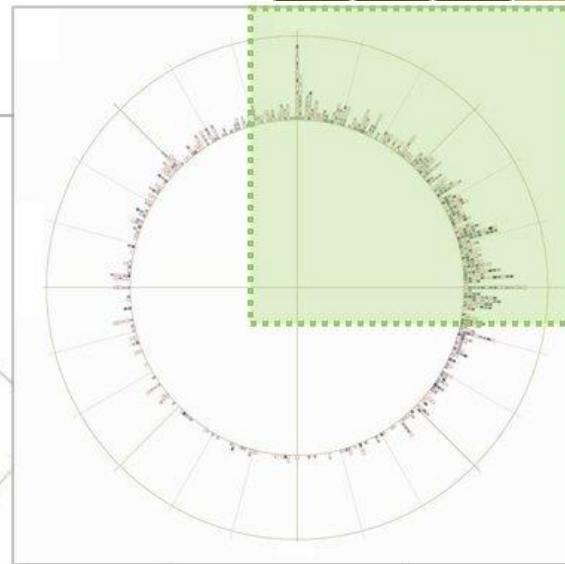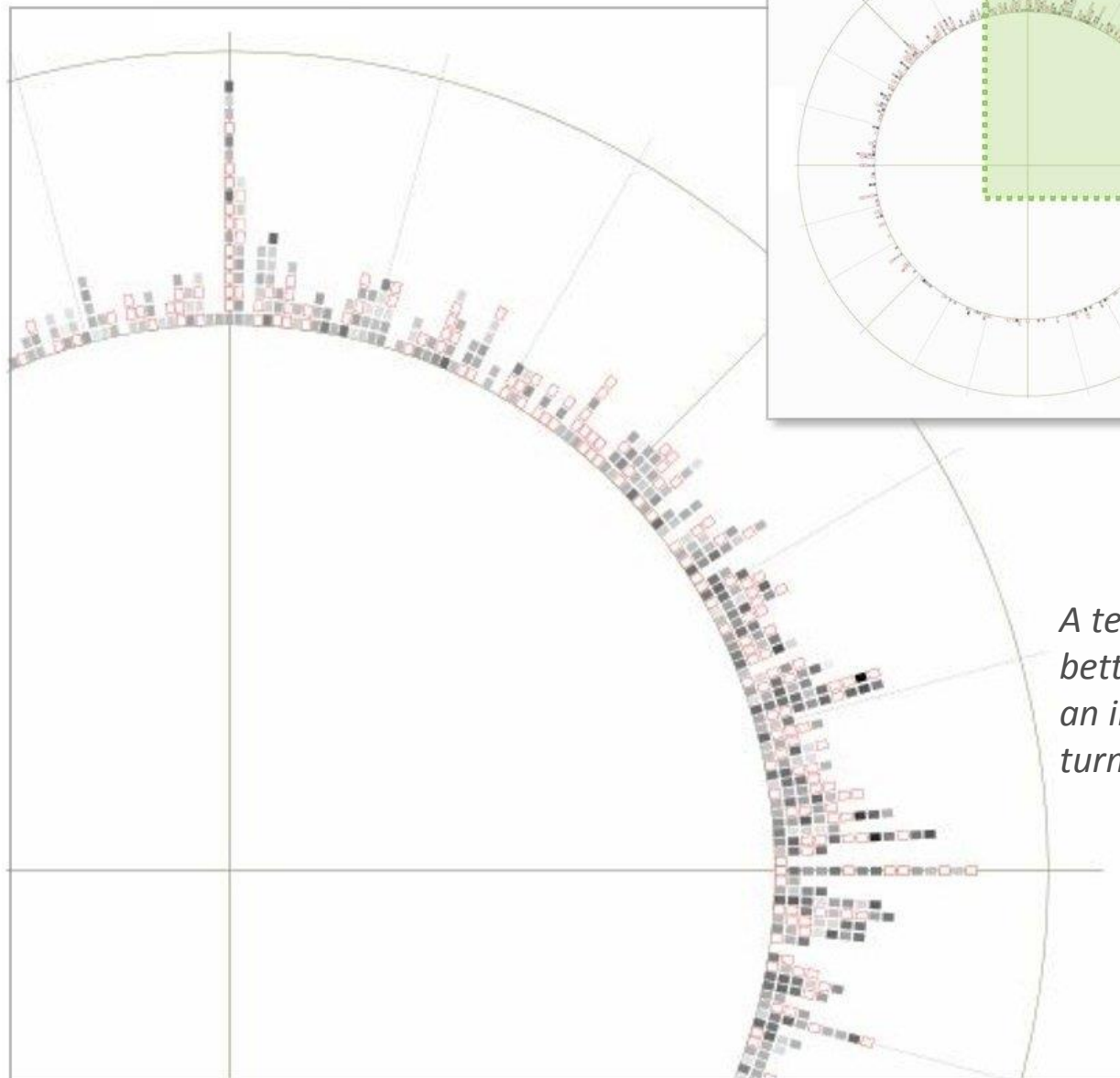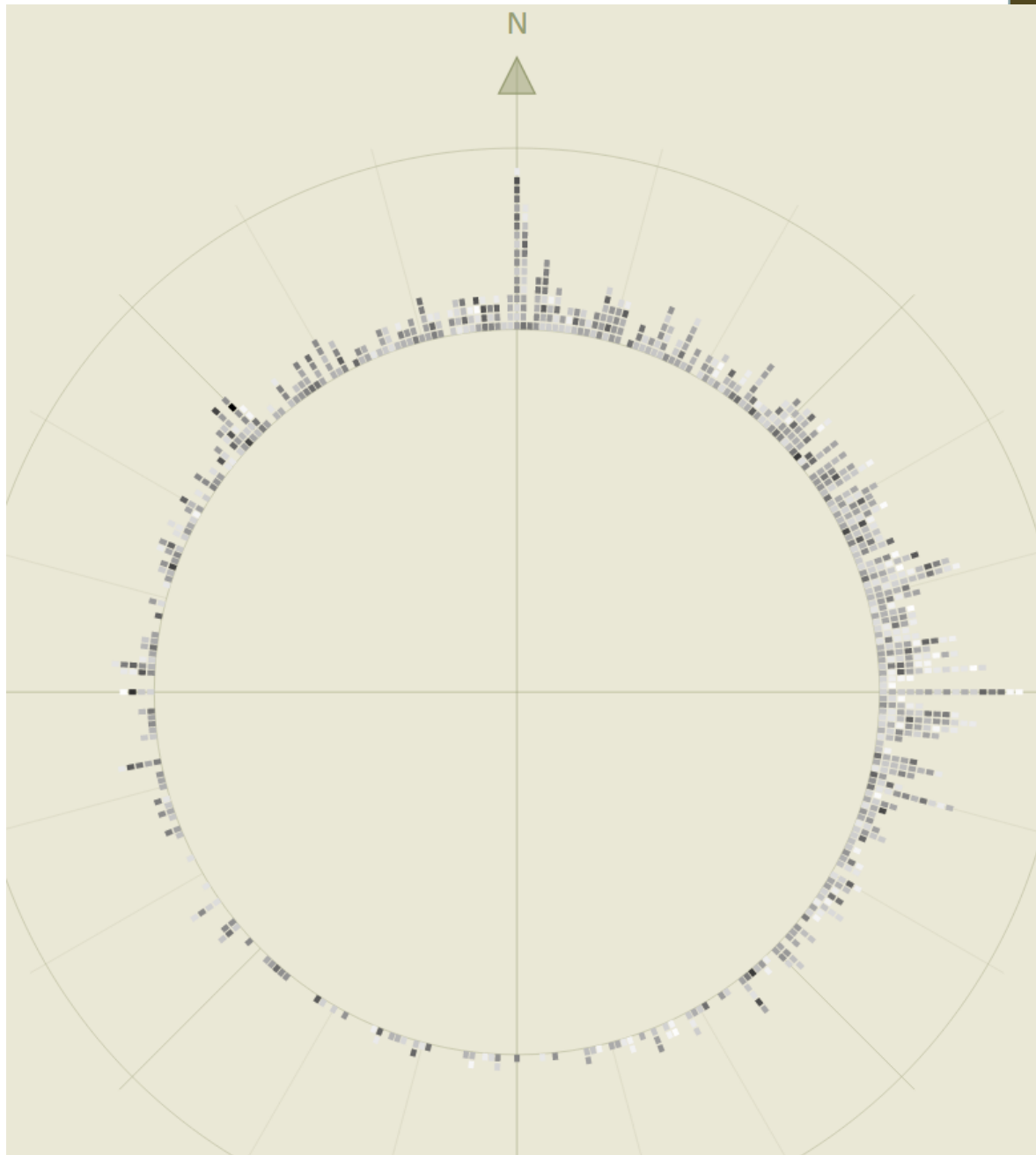Altitude: 1354

90 degrés :16 édifices:

No data

Par département

Par date

Par altitude

N

The same, but this time showing dates : the darker the older. Outlined in red: non-dated edifices)
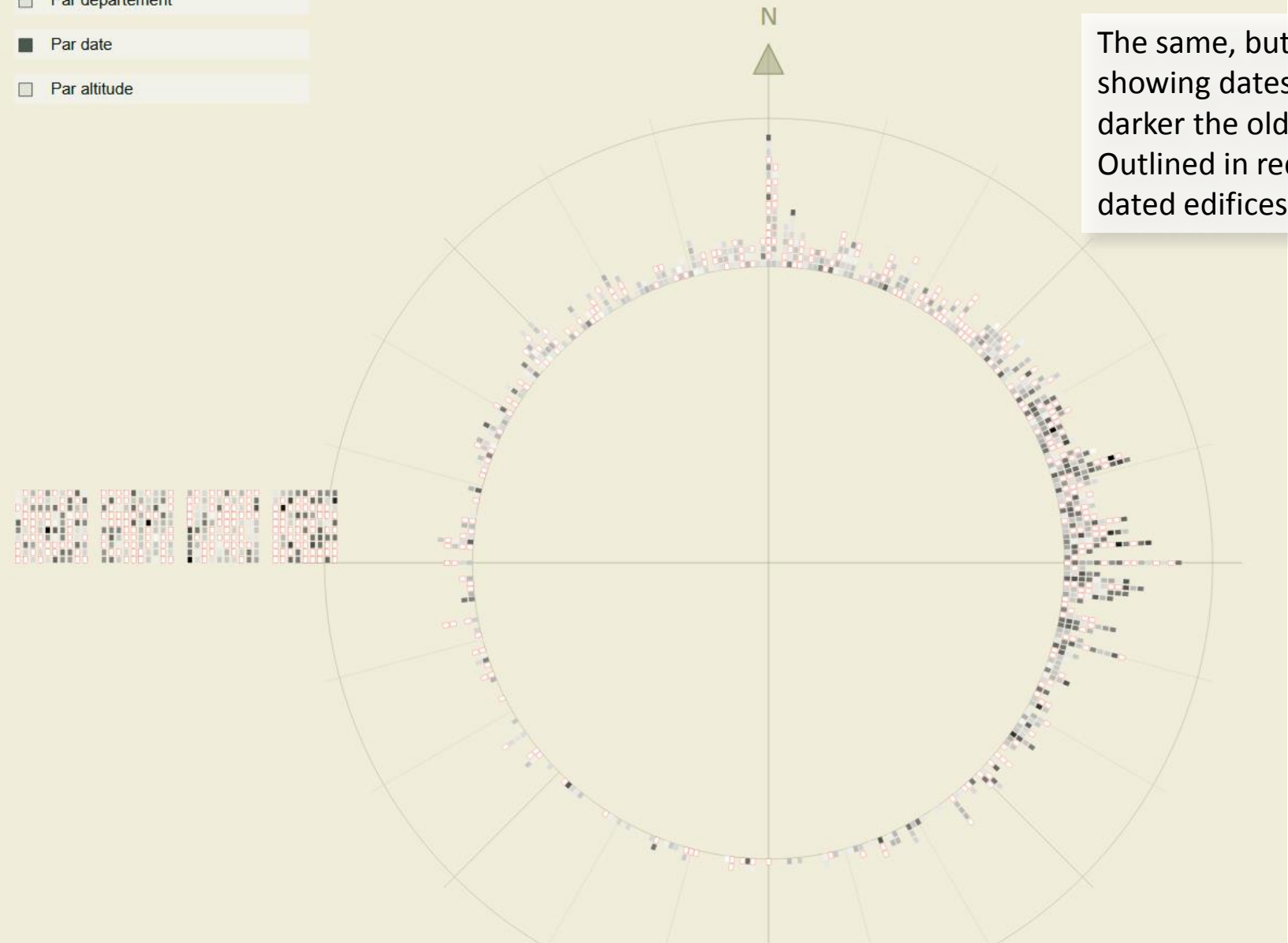
*A tendency of older edifices to be better in line with the rule but also an inclination of later builders for turning the apse towards the north*

The same, but this time showing altitudes: the darker the higher.

De-correlates the orientation and altitude parameters (in other words, denies the common sense belief that because of stronger relief constraints builders are more keen to step out of the rule).
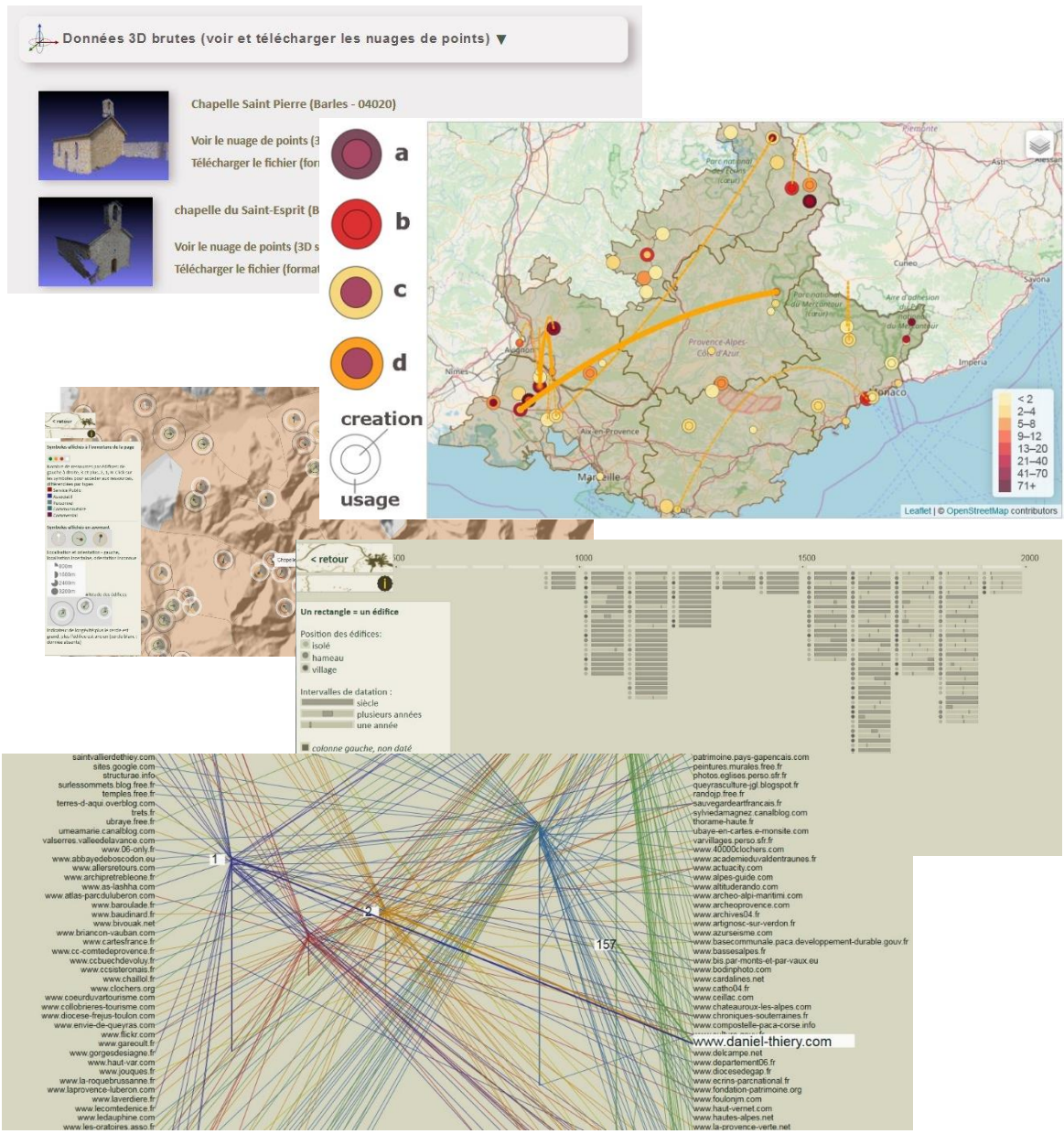
An ongoing research.

> Understanding and foreseeing the consequences of relying on citizen-birthed data when trying to document and analyse minor heritage items.

> First outcomes: data sets, visualisations, feedback on the expectations and practices of information providers.

> More needs to be done, in particular in terms of analysis of the information providers' profiles
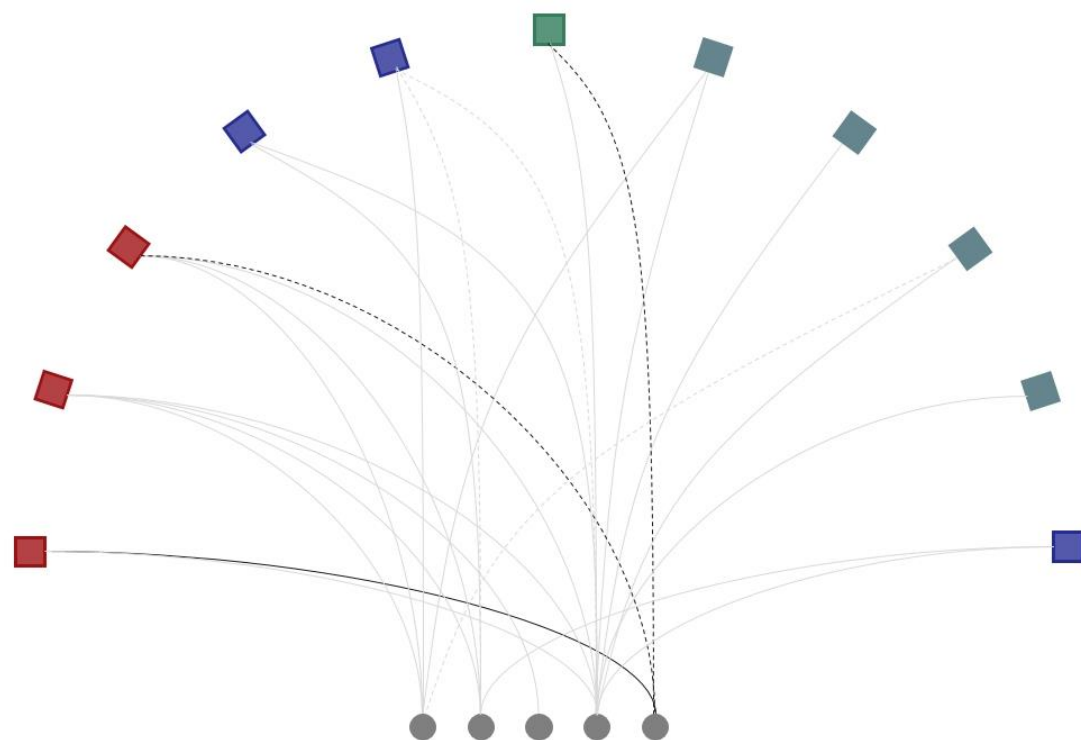
An ongoing research.

> *Understanding and foreseeing the consequences of relying on citizen-birthed data when trying to document and analyse minor heritage items.*

> *First outcomes: data sets, visualisations, feedback on the expectations and practices of information providers.*

> *More needs to be done, in particular in terms of analysis of the information providers' profiles*

Relations of IP profiles to publication practices.

The circle on the right represents "publication of raw data" – only three profiles do consider the publication of such data sets, and two of them occasionally only (dashed line).

Two key observations:

- *Minor heritage, because of the data quality / heterogeneity issues that are met, is a challenging area of research for both information sciences and heritage sciences*

- *An unforeseen picture of the situation, born in the flow of the project: the main challenge today may not be this of developing crowdsourcing practices, harvesting « new data » - but may well be to oppose the volatility of the pieces of information and knowledge « already there » - somehow a paradox given the technology at hand.*

Thank you

http://www.map.cnrs.fr/territographie