

TimeWheel est un formalisme proposé par Tominski et al.* - une ligne de temps est combinée avec des segments sur lesquels sont portées des valeurs d'attributs.

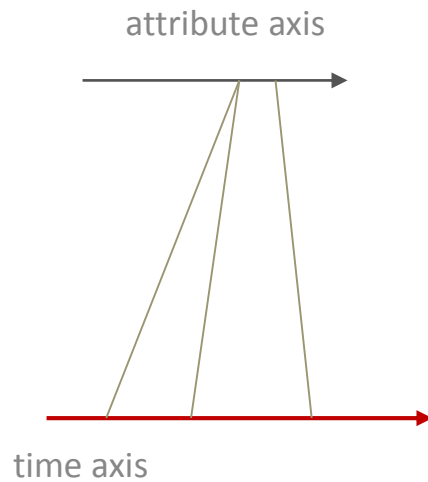
* C. Tominski, J. Abello, and H. Schumann, "Axes-Based Visualizations with Radial Layouts," in Proc. of ACM Symp. on Applied Computing, ACM Press, 2004, pp. 1242–1247.

Appliqué à une relecture de la classification de l'architecture de Dmochowski

Zbigniew Dmochowski
The architecture of Poland / an historical survey, (1956).

Réinterprétation du formalisme TimeWheel
J.Y. Blaise, I. Dudek (2012-2013)

J.Y. Blaise, I. Dudek, *Can Infovis tools support the analysis of spatio-temporal diffusion patterns in historic architecture?*, Archaeology in the Digital Era, G.Earl, et al. (Ed.), Papers from the 40th Annual Conference of Computer Applications and Quantitative Methods in Archaeology (CAA), Southampton 2012, Amsterdam University Press, Vol. II, 2013, pp. 912-925



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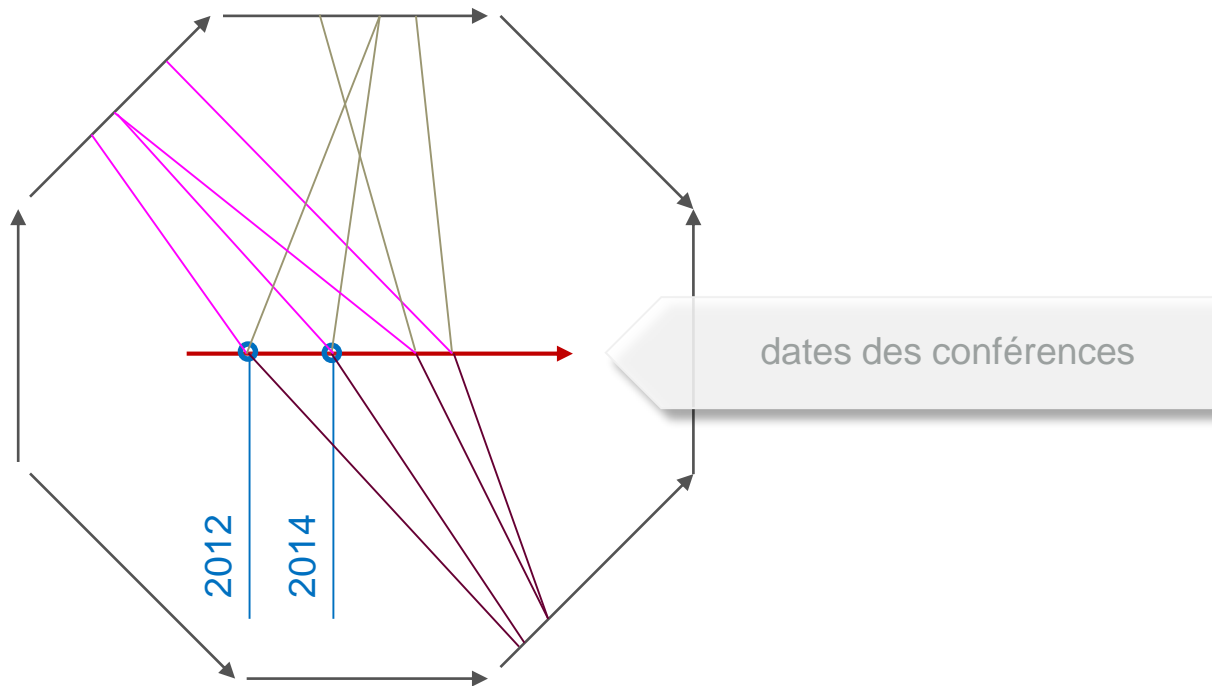
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Le principe

TimeWheel
C. Tominski et al. (2004)

<http://www.mgvis.com/Papers/Visualization/Greece_MMV-06.pdf>

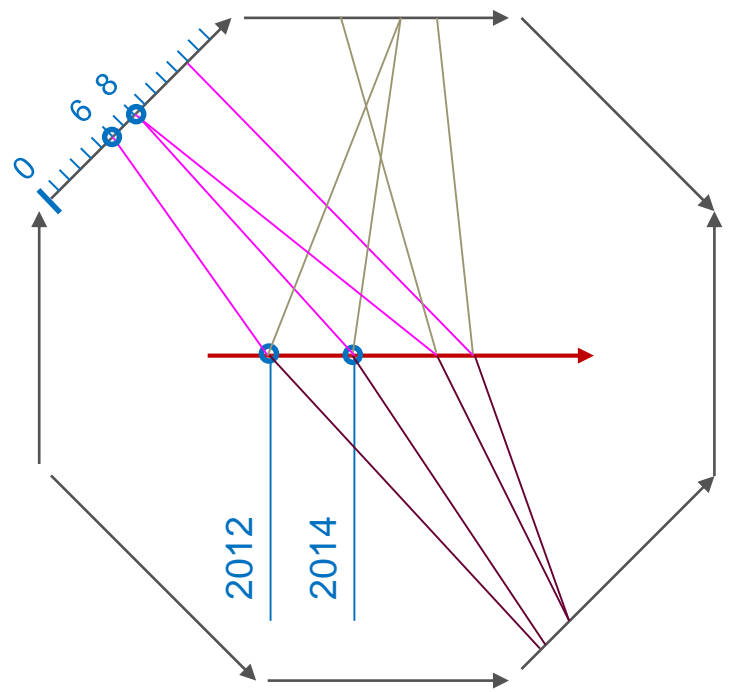
Exemple de réutilisation possible
du concept, en groupant
différentes données relatives à
l'organisation de conférences.



TimeWheel
C. Tominski et al. (2004)

http://www.mgvis.com/Papers/Visualization/Greece_MMV-06.pdf

nombre de sessions



dates des conférences

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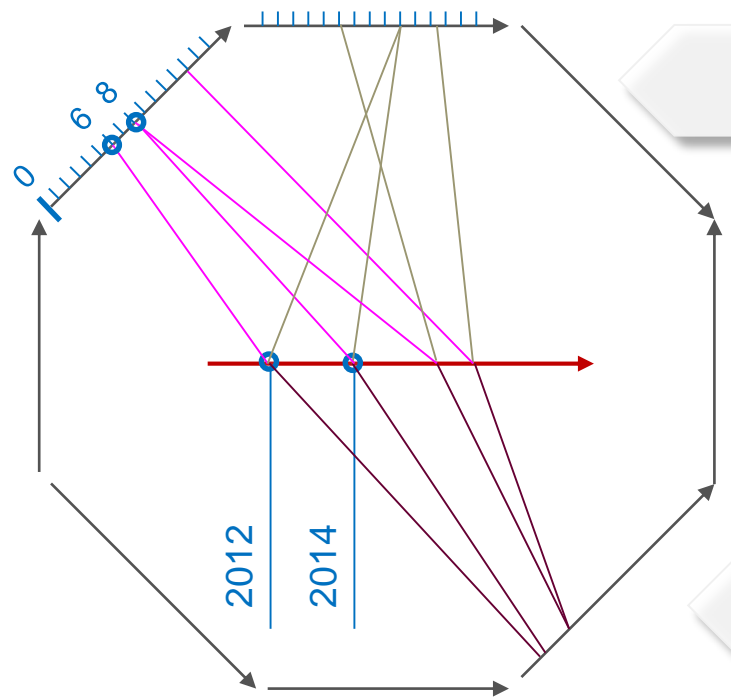
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nombre de sessions

nombre de participants



nombre d'articles soumis

dates des conférences

nombre d'articles acceptés

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TimeWheel appliqué à la classification Dmochowski (50 édifices religieux étiquetés Roman/Gothique)

the source: Z. Dmochowski, *"The architecture of Poland – an historical survey"* published by The Polish research centre, London 1956

the objective: show the development of architecture within the Polish state from the 10th to the 19th century

Not only a survey, a classification.
But very little indications on the division lines used.

Some hints given in the introduction:

"... the book divides the material (the edifices) according to style, but the distinctions should not be pressed too far ..."

"... It is a great help, in studying the history of architecture of any country, to know something of its political [...] background ..."

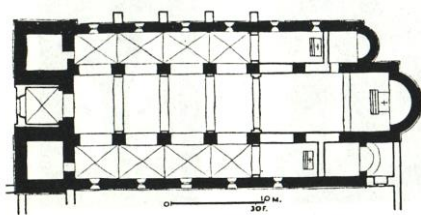
"... architecture, which of all the arts is the most socially conditioned ..."

Réinterprétation du formalisme TimeWheel *J.Y. Blaise, I. Dudek (2012-2013)*

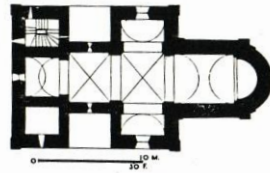
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TimeWheel appliqué à la classification Dmochowski

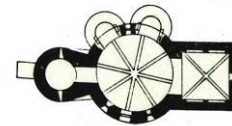
A survey, a classification of individual edifices.



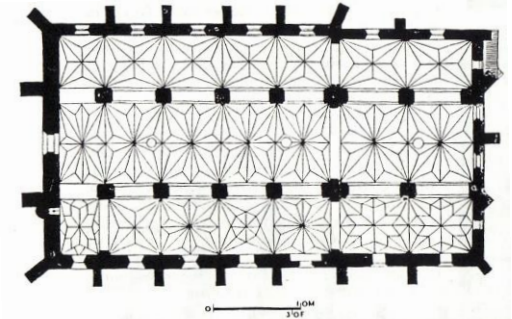
[54]. Czerwinski. Abbey. The church. Plan.



[48]. Cracow. St. Andrew. Plan at clerestory level. Reconstructed.



[73]. Strzelno. St. Procopius. Plan.



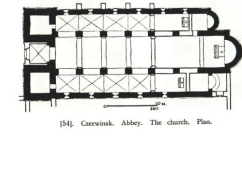
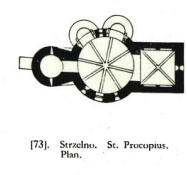
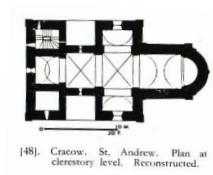
[250]. Szamotuły. St. Stanislaus. Plan.



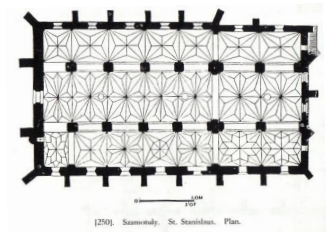
Plans from Dmochowski's book
Images from Wikipedia

> First step of the classification : styles as the main division line

Romanesque

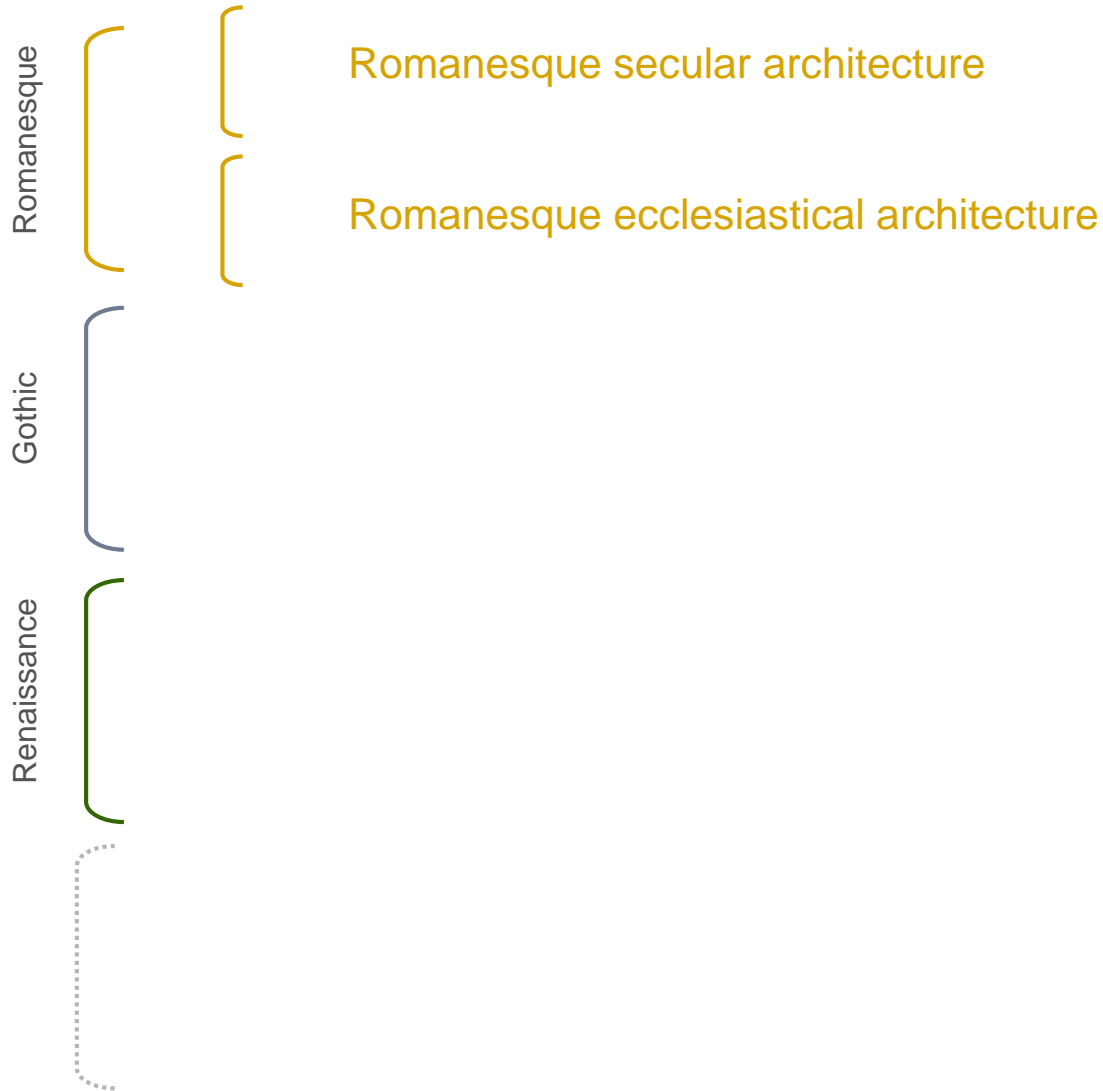


Gothic

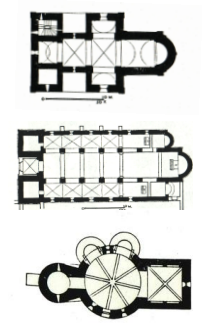
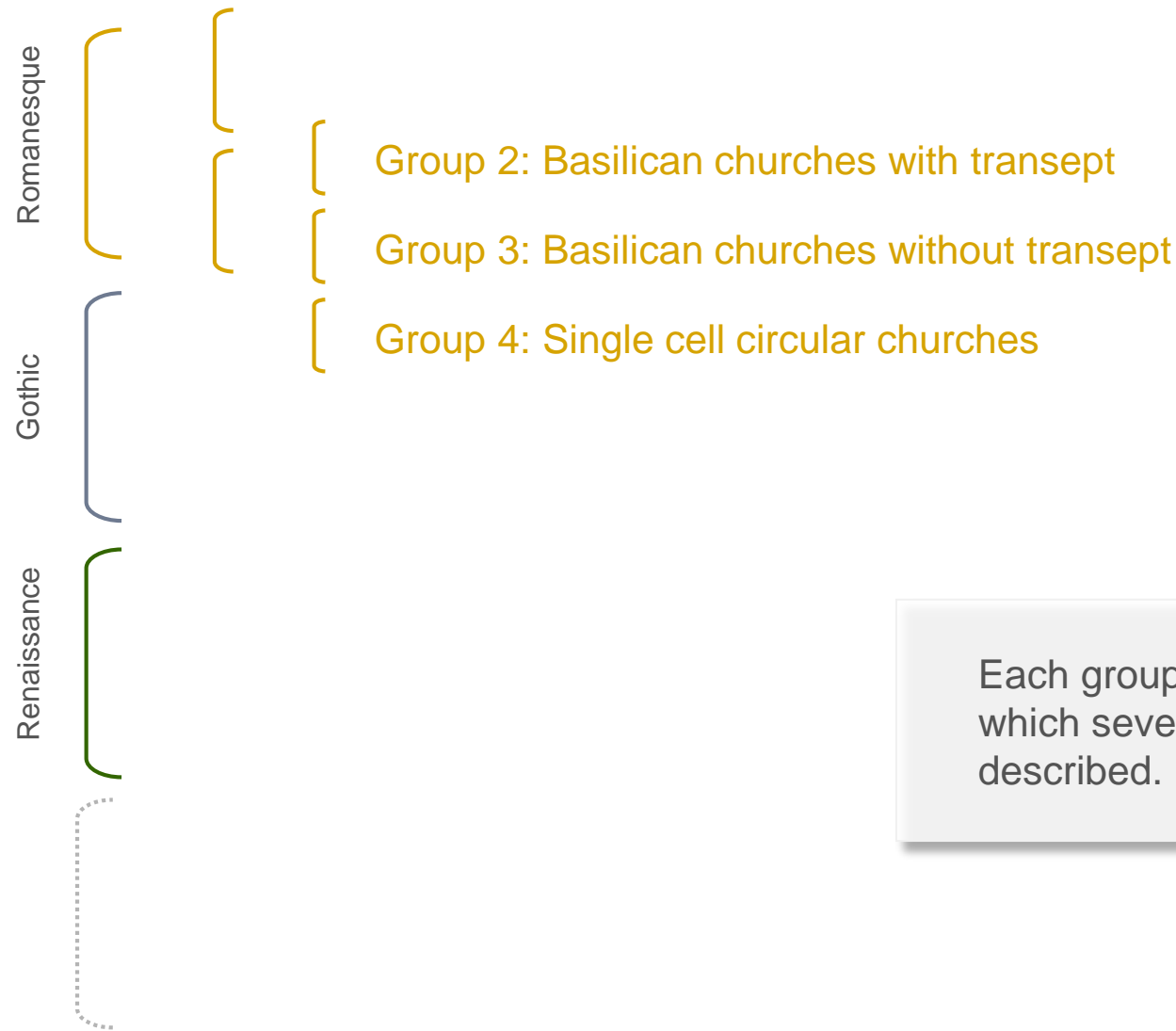


Renaissance

> Second step : use / destination



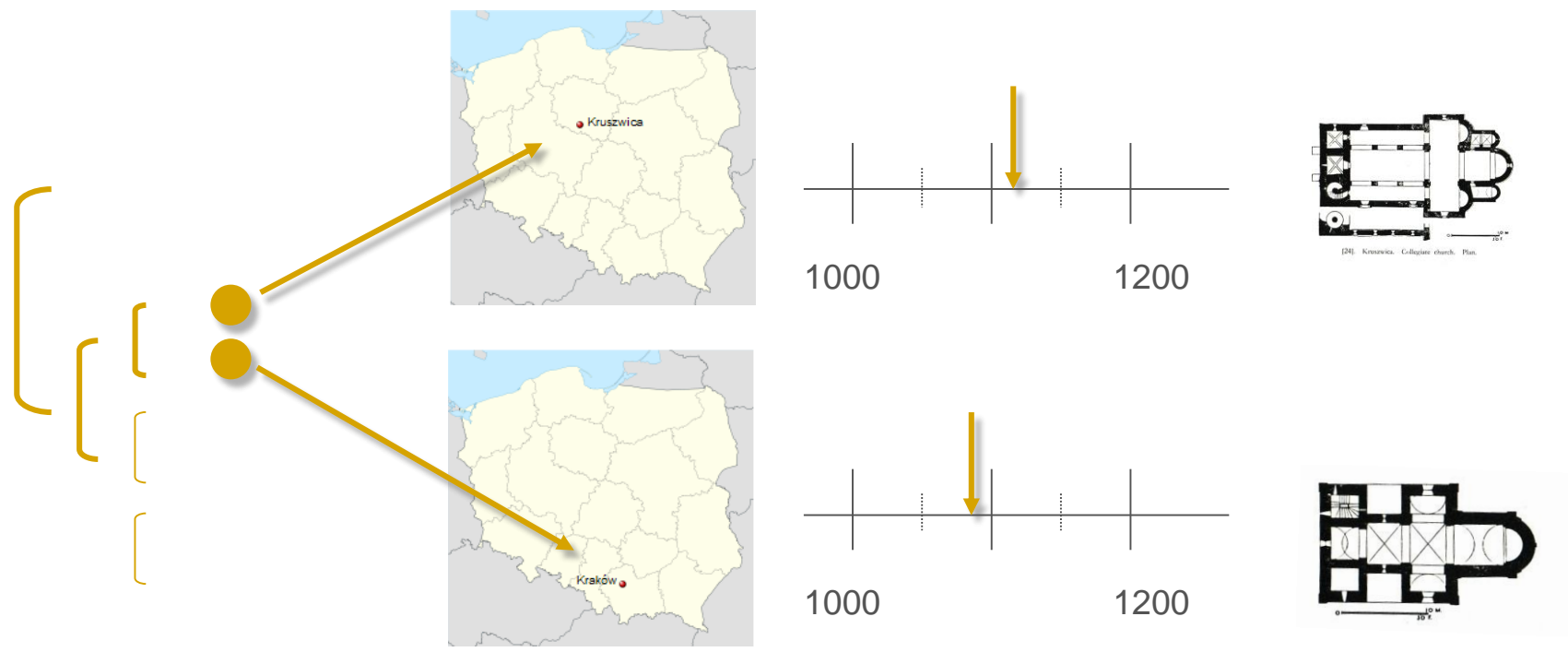
> Third step : a classification by general architectural composition / choices



Each group is a chapter inside which several edifices are described.

- > Three clear steps : style, use, +- architectural composition
- > Another, underlying step : space and time, not used as division lines, but present in the author's introduction

Romanesque / ecclesiastical architecture
 Group 2: Basilican churches with transept

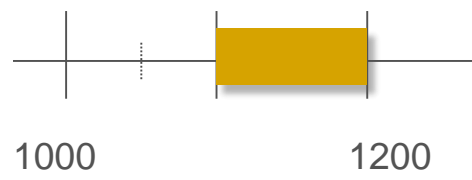
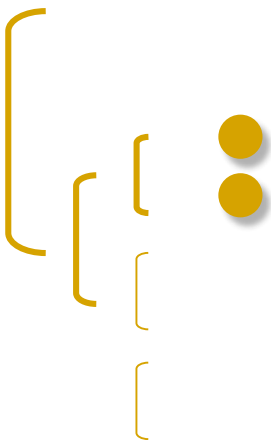


TimeWheel appliqué à la classification Dmochowski

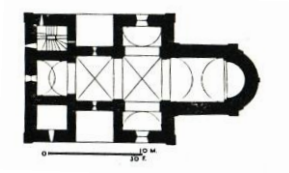
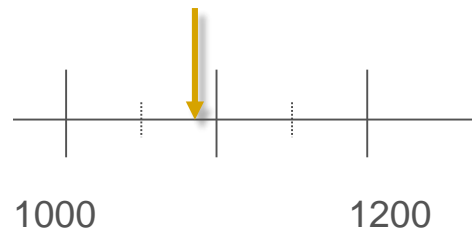
- > Three clear steps : style, use, +- architectural composition
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However indications given by Z. Dmochowski are heterogeneous:

Romanesque / ecclesiastical architecture
Group 2: Basilican churches with transept



12th century



1086

The variability differs from group to group.

Our goal: not an exhaustive analysis of the survey, or of Polish architecture, but more like a proof feasibility experiment.

The experiment was carried out on a subset : 50 edifices, 2 styles (Romanesque /Gothic) 10 groups, time and space , plus a subjective selection of features – step 5.

Romanesque ecclesiastical architecture

Group 2: basilican churches with transept



Group 3: basilican churches without transept



Group 4: single cell circular churches



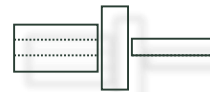
Group 5: single cell rectangular cell



Group 6: Cistercian churches and monasteries



Group 9: early churches of the mendicant /preaching orders



Group 10: basilican churches



Group 11: Three nave hall churches



Group 12: Double-nave hall churches



Group 13: Single-nave hall churches

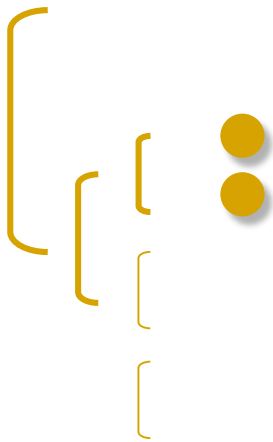


Gothic ecclesiastical architecture

TimeWheel appliqué à la classification Dmochowski

- > Three clear steps : style, use, +- architectural composition
- > Another, underlying step : space and time, not used as division lines, but present in the author's introduction
- > A fifth step – an interpretation step: architectural features, corresponding to heterogeneous variables

Romanesque / ecclesiastical architecture
Group 2: Basilican churches with transept

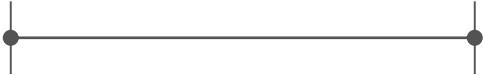
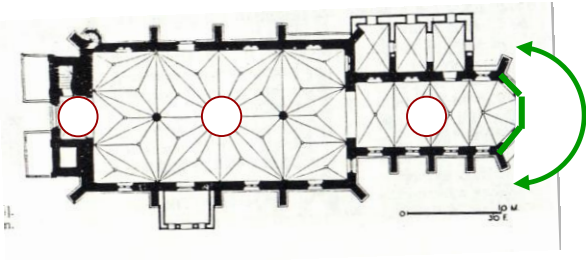



- length *float or integer*
- shape of the apse *lexical scale*
- number of chapels *numerical scale*
- number of interior volumes *numerical scale*

Indications not systematically present in the Dmochowski's survey.

Eight variables to combine : an example

style : gothic
group : Double-nave hall churches
foundation : 1350
Max. length : 51,1 m
Volumes: 3
Apse: round
Number of chapels : 0



length (approx.)

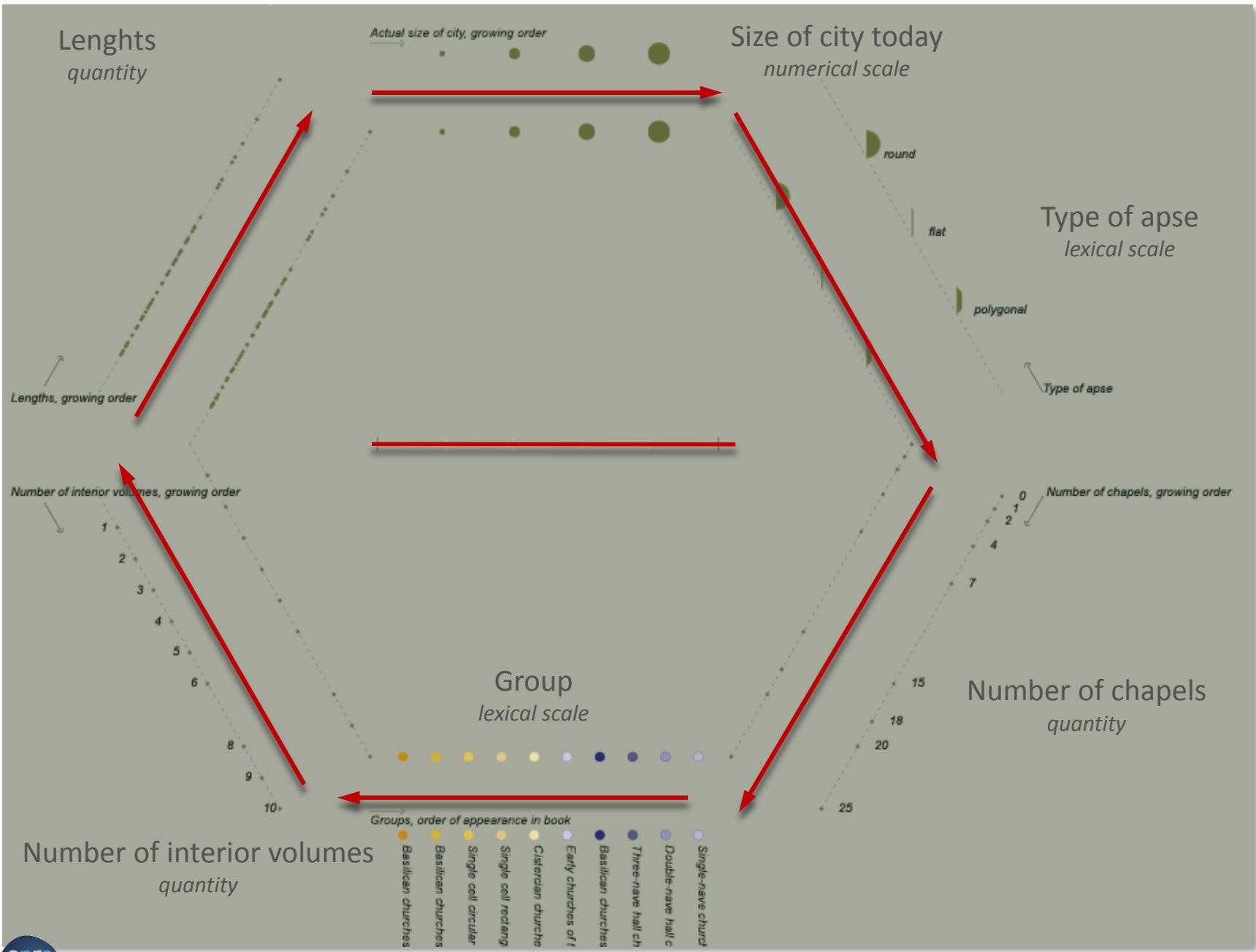
- style
- group
- foundation date
- localisation (2D coordinates)
- length
- shape of the apse
- number of chapels
- number of interior volumes



Each of the 50 edifices is represented by a series of connections between the time axis and the attributes axes

fondation dates

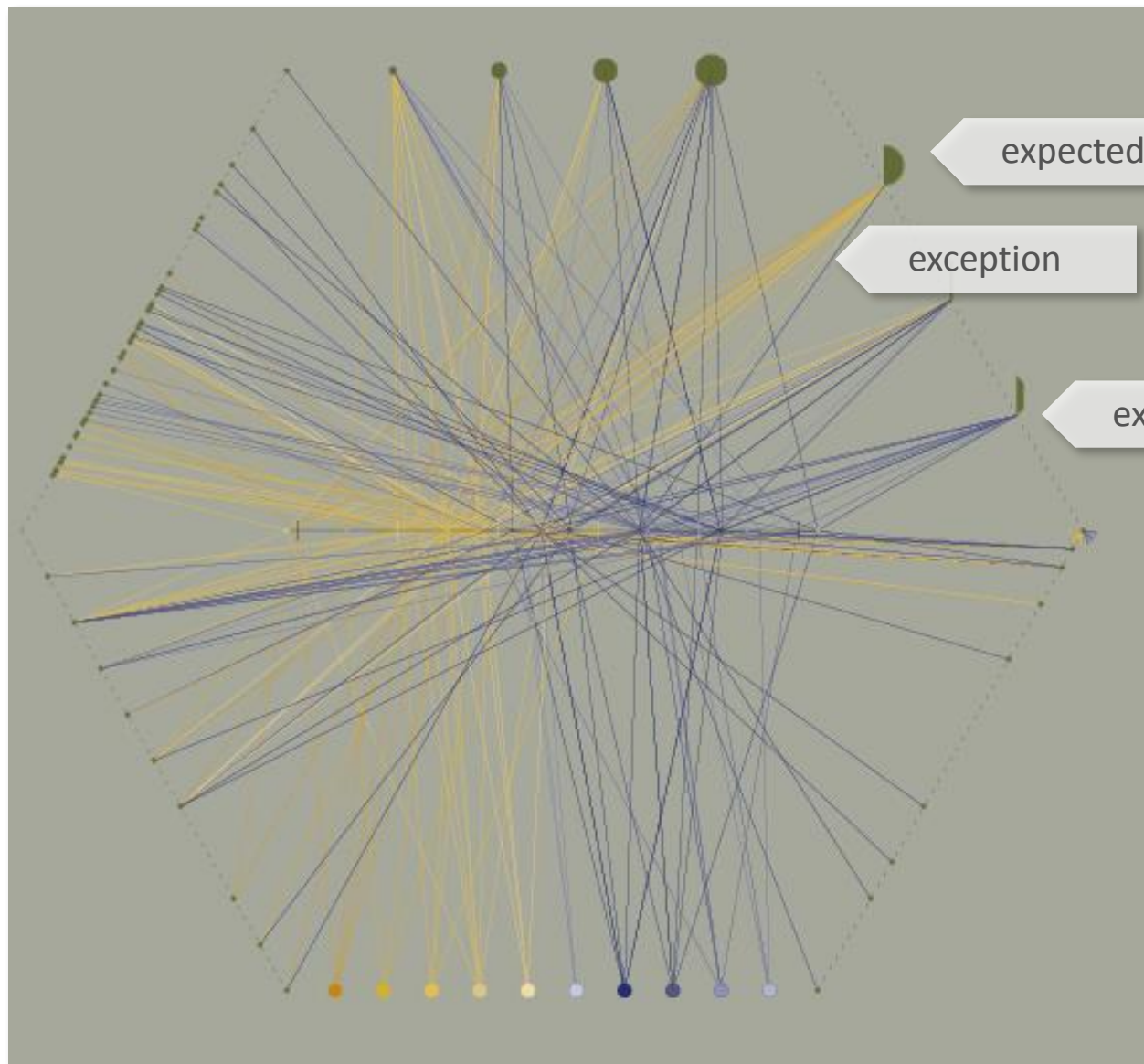
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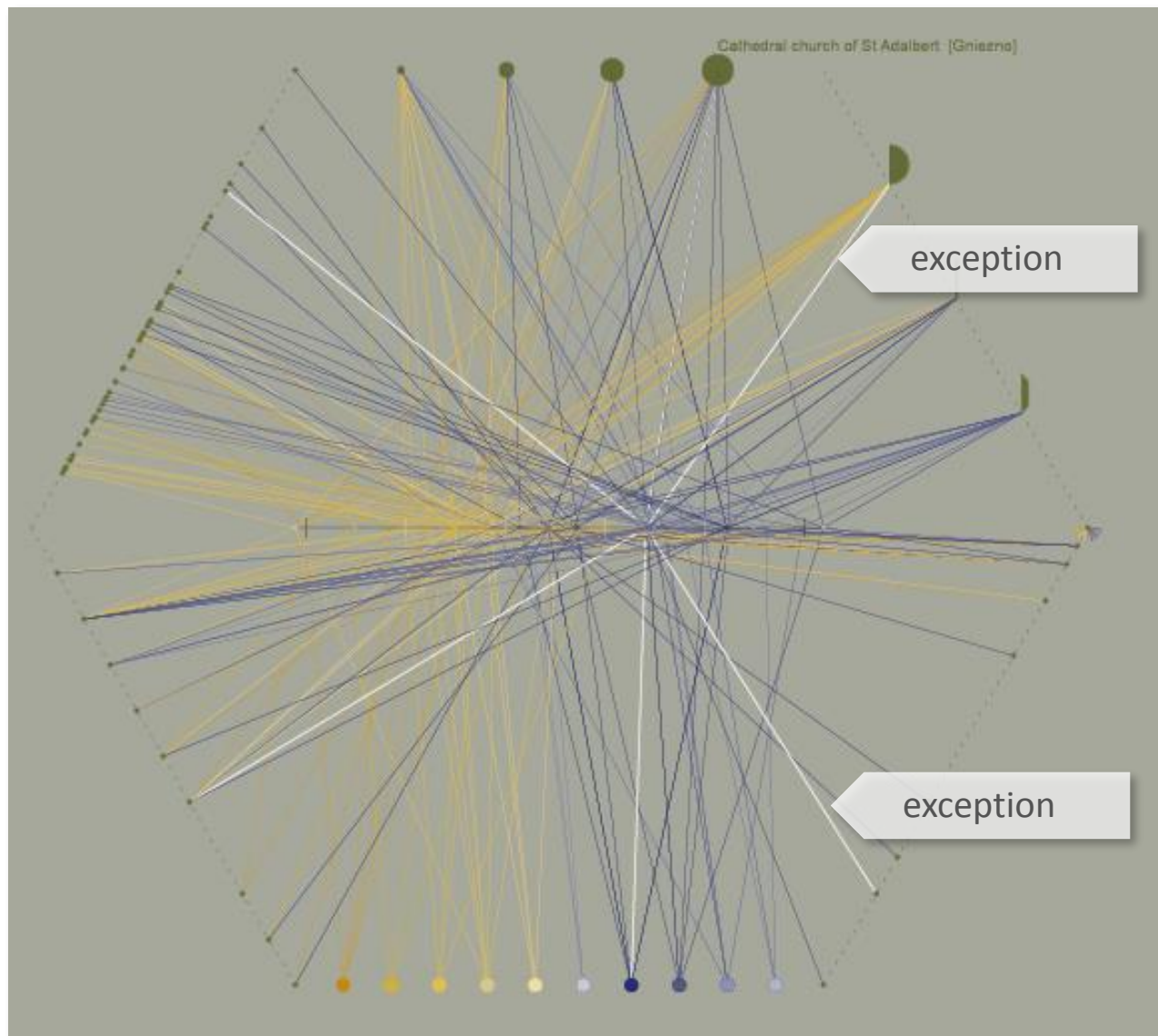
Dmochowski's classification is time-oriented

Observations made possible.



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formalisme TimeWheel
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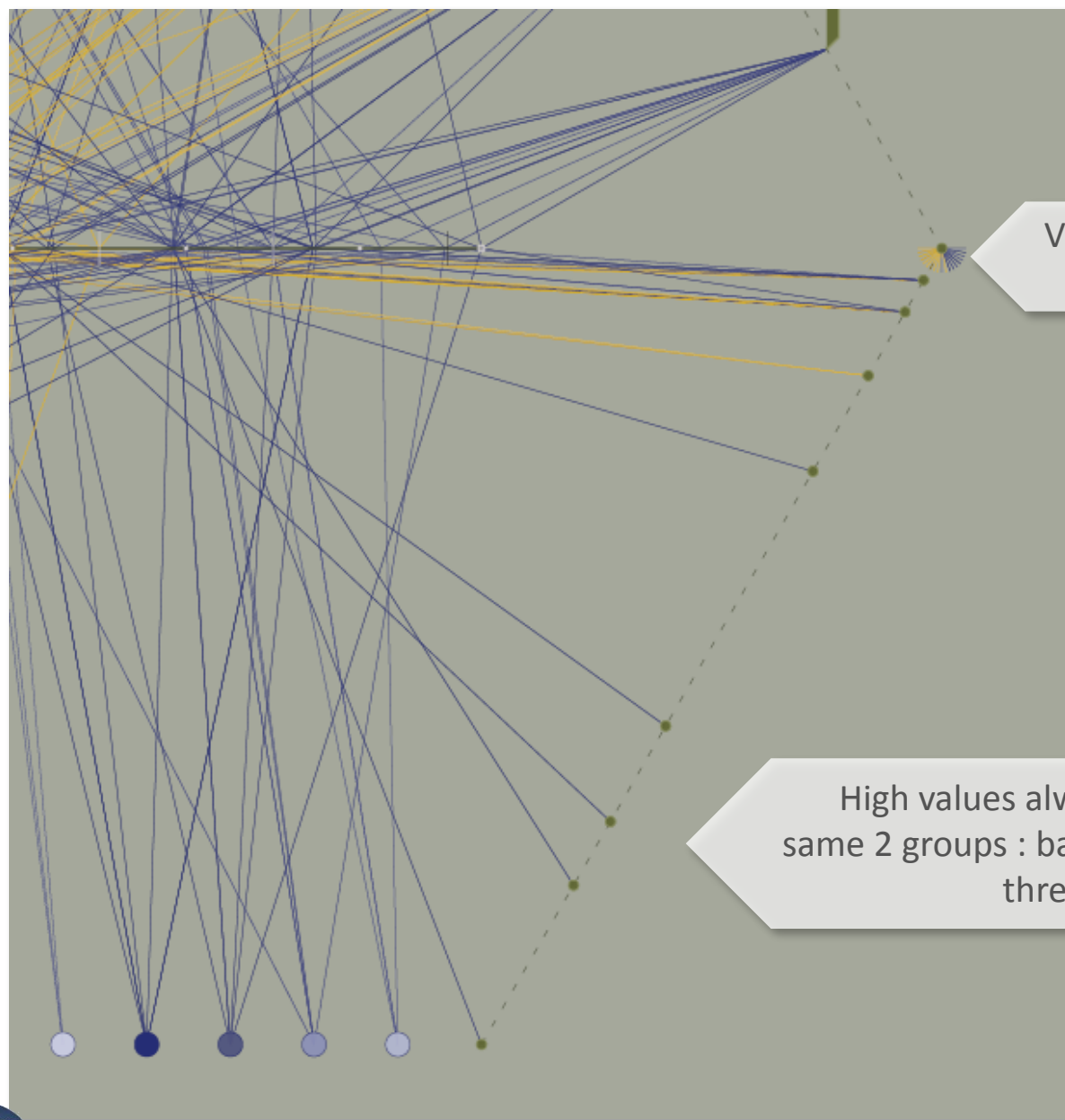
Observations made possible.



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Observations made possible.

Number of chapels



Value "zero" occurs almost in every group and style

The formalism helps analysing the value of a given variable (here number of chapels) over the whole collection.

High values always occur inside the same 2 groups : basilican churches and three-nave hall churches

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