Like mother, like daughter?

A dyadic sequence analysis approach to uncover patterns of mothers and daughters careers

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In a *long time* perspective…

I. describe women's employment careers,

II. their evolution through generations;

III. explore mother-daughter lineages

The women interviewed

ACTIVITÉS

Âge	A1	Activité détaillée de l'enquêté A2	Statut A3	Activité de l'entreprise A4	Temps A5	Dépt. ou pays A6	Commune (arrt) A7	A8	Année	Périodes transitoires Activités et Remarques
00									19	
01									19	
02									19	
03									19	
04									19	
05									19	
06									19	
07									19	
08									19	
09									19	
10									19	
11									19	
12									19	
13									19	
14	1	Apprentie couturière	5	Maison couture -10	100	45	Olivet		19	
15									19	
16	2	Ouvrière qualifiée	3	Confection +10	100	45	Olivet	M	19	"ma mère a demandé une
17									19	place pour moi à son chef"
18									19	
19	3	Vendeuse	3	Boutique Vêtements	100	45	Orléans		19	
20									19	
21									19	
22									19	
23									19	
24									19	
25	4	Mère au foyer	12			75	Paris 7ème		19	
26									19	
27									19	
28									19	
29									19	
30									19	
31	4P	Secrétaire bénévole	19	Association	-50	93	Bagnolet		19	
32									19	
33									19	
34									19	
35									19	
36									19	
37									19	
38									19	
39	5	Secrétaire salariée	3	Association	80	93	Bagnolet		19	
40									19	
41	6	Secrétaire vacataire	29	Mairie	100	93	Bagnolet		1984	: Pb financiers de l'associa-
42									19	-tion ; 4 mois de chômage
43									19	
44									19	
45									19	
46									19	
47	7	Secrétaire	9	Mairie	100	93	Bagnolet		1990	: réussite au concours
48									19	
49									19	
50										
51										
52										
53										
54										
55										
56										
57	8	Retraite	12							"Avec 3 enfants, j'ai pu
58										partir plus tôt"
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70										

1487 women,
aged between 50 and 70
(born between 1930 and 1950),
living in Paris region

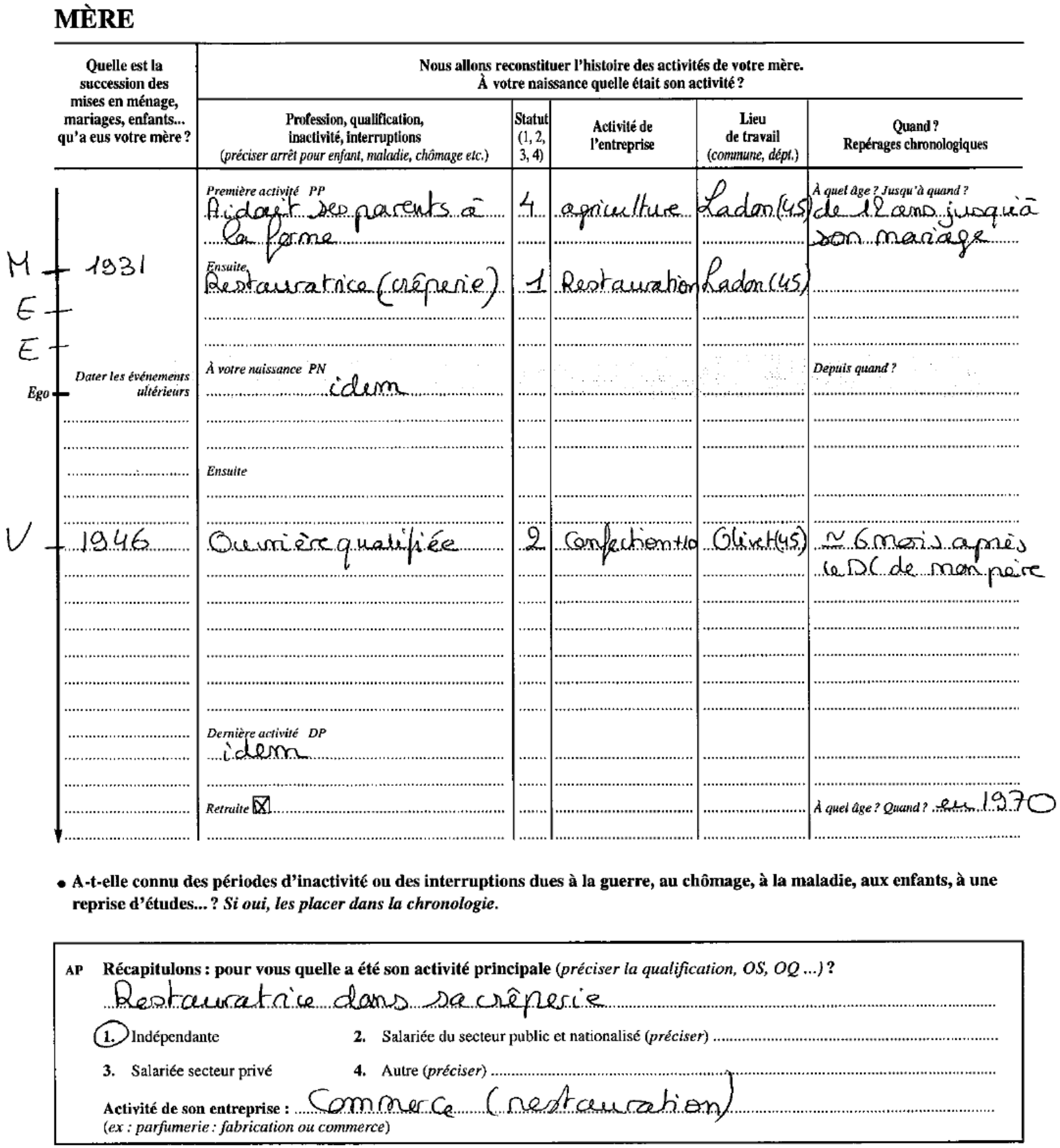
from 14 to 50 (i.e. 37 years)

4 situations:

- studies
- full-time job
- part-time job
- inactivity

Biographies & entourage survey (INED, 2001)

Their mothers



MÈRE

Quelle est la succession des mises en ménage, mariages, enfants... qu'a eus votre mère ?	Nous allons reconstituer l'histoire des activités de votre mère. À votre naissance quelle était son activité ?				
	Profession, qualification, inactivité, interruptions (*préciser arrêt pour enfant, maladie, chômage etc.*)	Statut (1, 2, 3, 4)	Activité de l'entreprise	Lieu de travail (*commune, dépt.*)	Quand ? Repérages chronologiques
M — 1931	*Première activité PP* Aidait ses parents à la ferme	4	agriculture	Ladon (45)	*À quel âge ? Jusqu'à quand ?* de 12 ans jusqu'à son mariage
E	*Ensuite* Restauratrice (crêperie)	1	Restauration	Ladon (45)	
E					
Ego — *Dater les événements ultérieurs*	*À votre naissance PN* idem				*Depuis quand ?*
	Ensuite				
V — 1946	Ouvrière qualifiée	2	Confection	Olivet (45)	≃ 6 mois après le DC de mon père
	Dernière activité DP idem				
	Retraite ☒				*À quel âge ? Quand ?* en 1970

• A-t-elle connu des périodes d'inactivité ou des interruptions dues à la guerre, au chômage, à la maladie, aux enfants, à une reprise d'études... ? *Si oui, les placer dans la chronologie.*

AP **Récapitulons : pour vous quelle a été son activité principale** (*préciser la qualification, OS, OQ ...*) ? Restauratrice dans sa crêperie

(1.) Indépendante — 2. Salariée du secteur public et nationalisé (*préciser*)

3. Salariée secteur privé — 4. Autre (*préciser*)

Activité de son entreprise : Commerce (restauration)
(*ex : parfumerie : fabrication ou commerce*)

1402 women,

born between 1886 and 1935

From 14 to 50 (i.e. 37 years)

3 situations:

- studies
- job (part- & full-time)
- inactivity

Biographies & entourage survey (INED, 2001)

Sequence analysis (1)

- Individual trajectories are built as sequences of positions (or *states*)

- Grouped together according to their degree of similarity

  techniques = *optimal matching analysis (OMA), …*

  → Typology of trajectories

Optimal Matching Analysis (1)

- Method used in molecular biology (DNA strings)
- Introduced in social sciences by Andrew Abbott (80's)
- **Principle**: measuring dissimilarity between pairs of sequences by calculating the cost of the transformation of one sequence into the other

See for instance Macindoe & Abbott, 2004

Optimal Matching Analysis (2)

- 3 elementary operations:
  - o insertion
  - o deletion
  - o substitution
- each operation is assigned a **cost**
- the distance between two sequences is equal to the minimal cost needed to transform one sequence into the other

Sequence analysis (2)

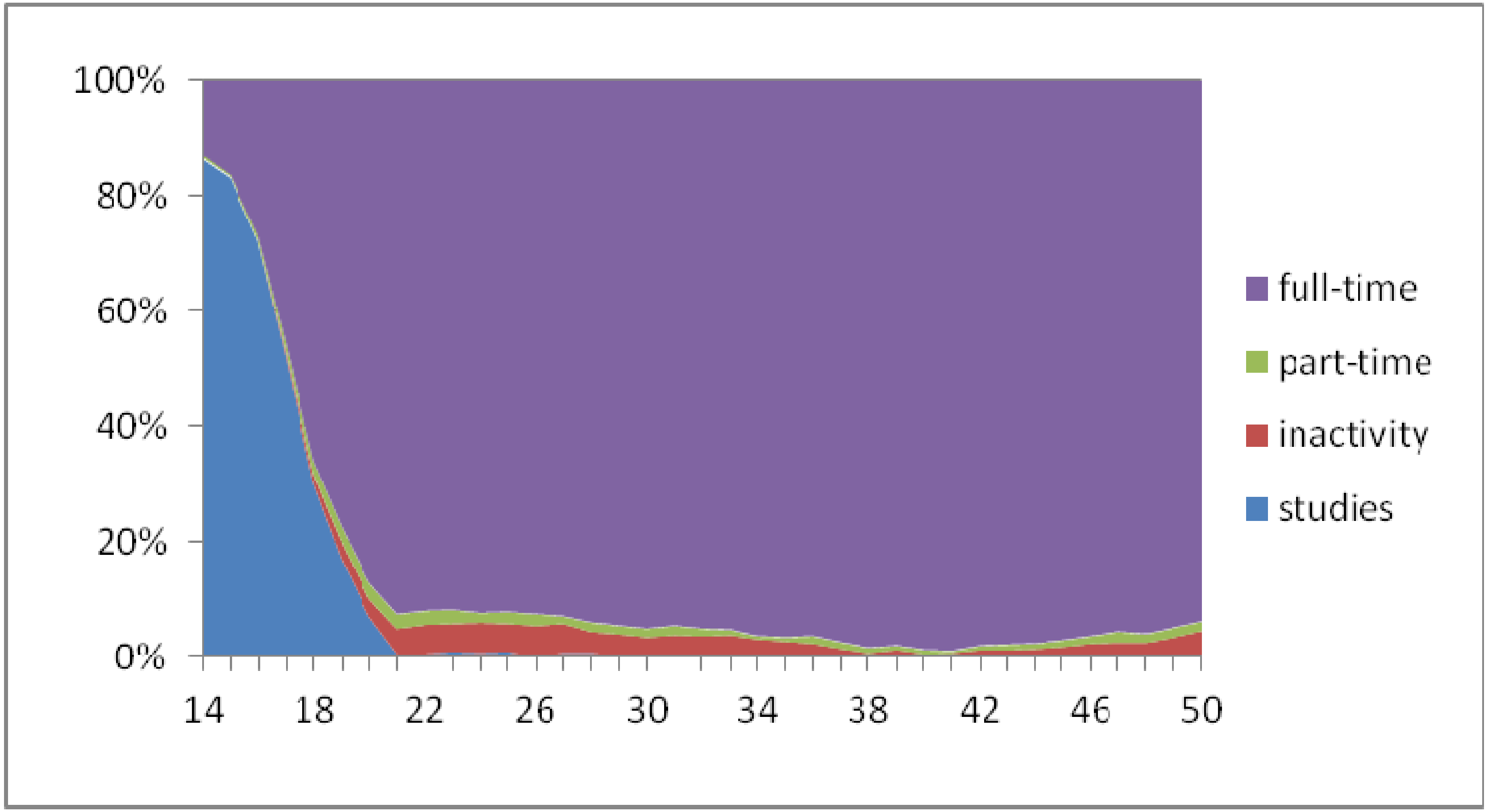
Comparison between all pairs of sequences

→ distance matrix

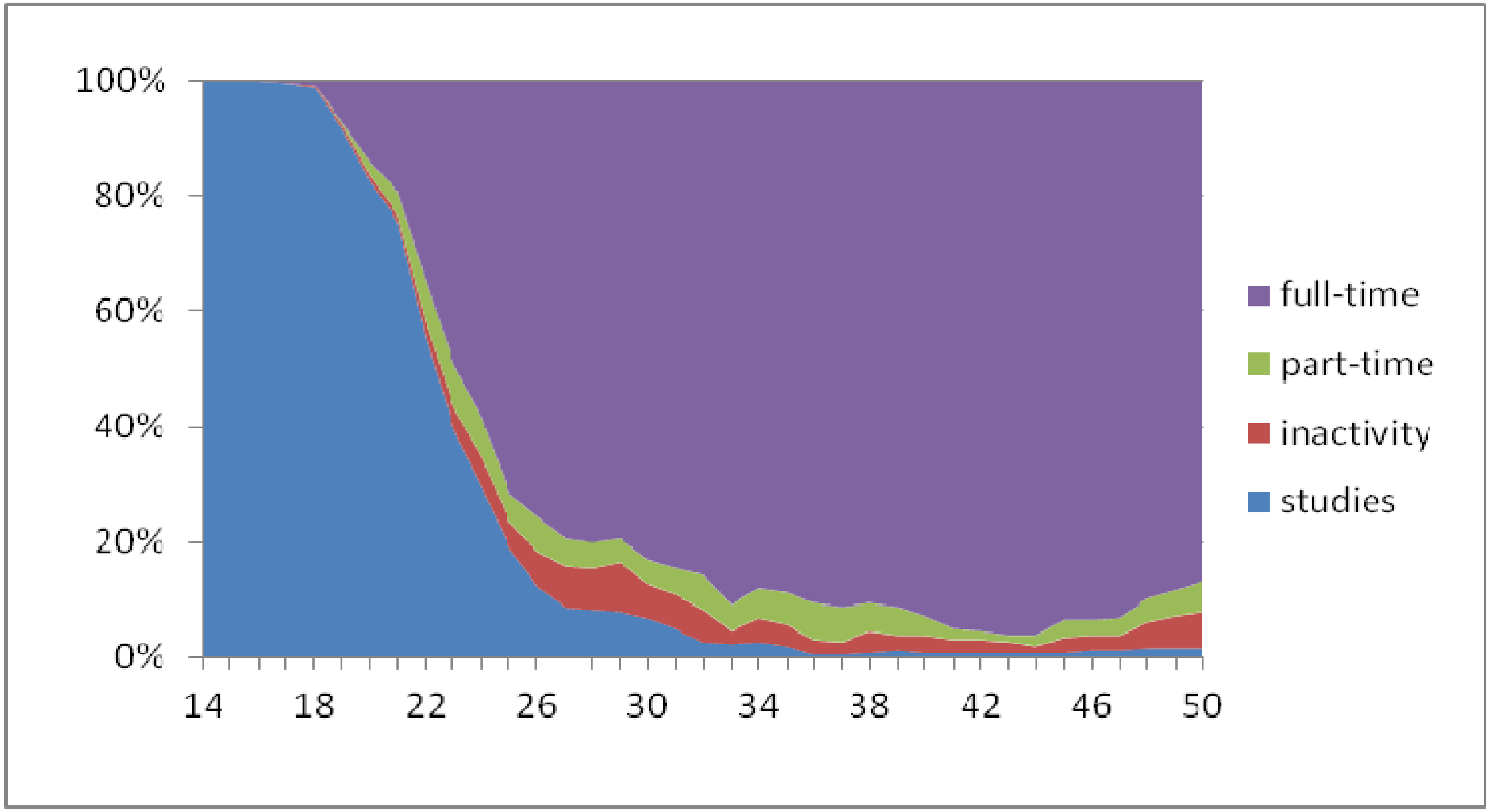
→ clustering (HCA, …)

→ typology of trajectories

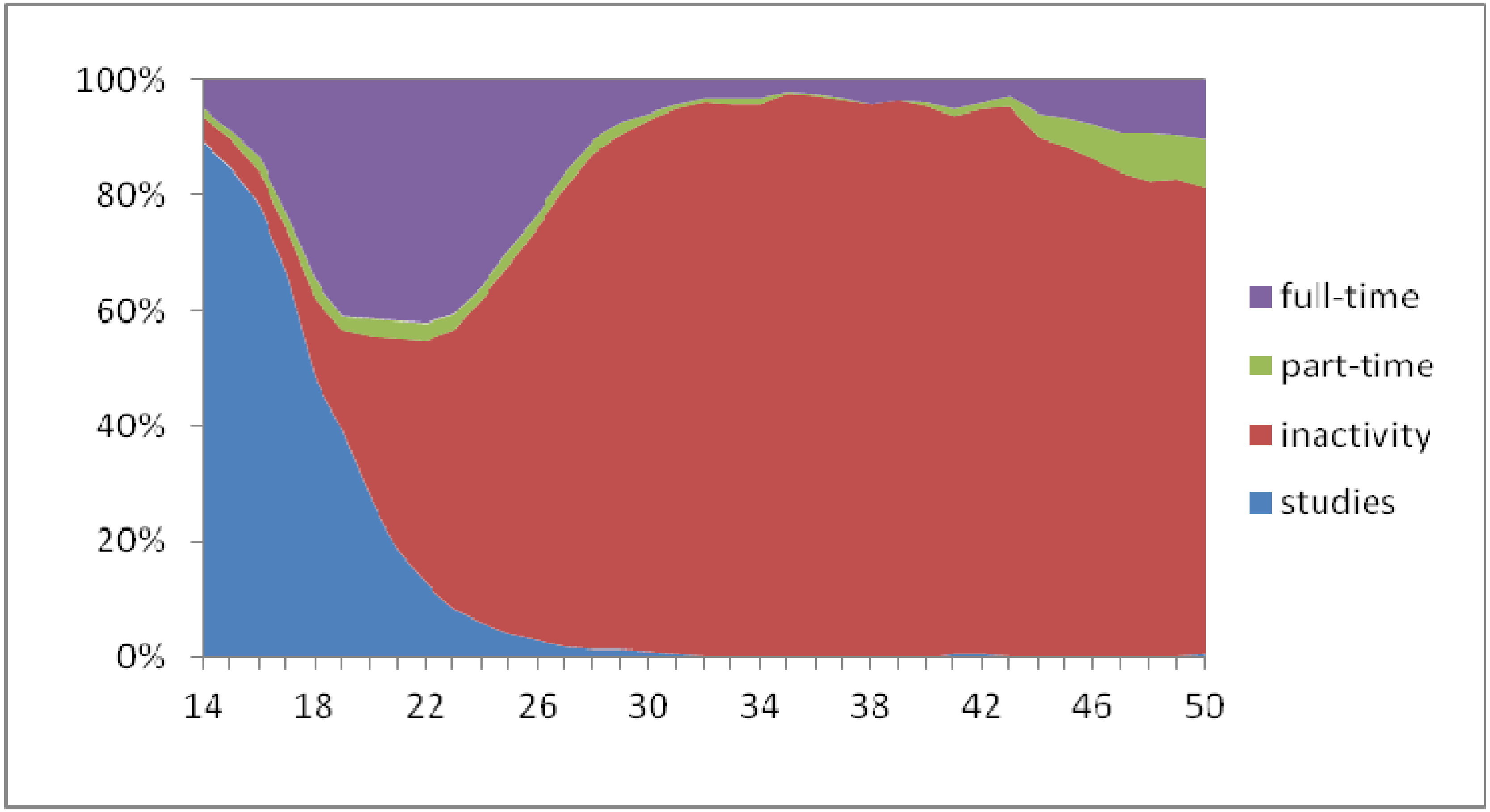
Early full-time job (37%)



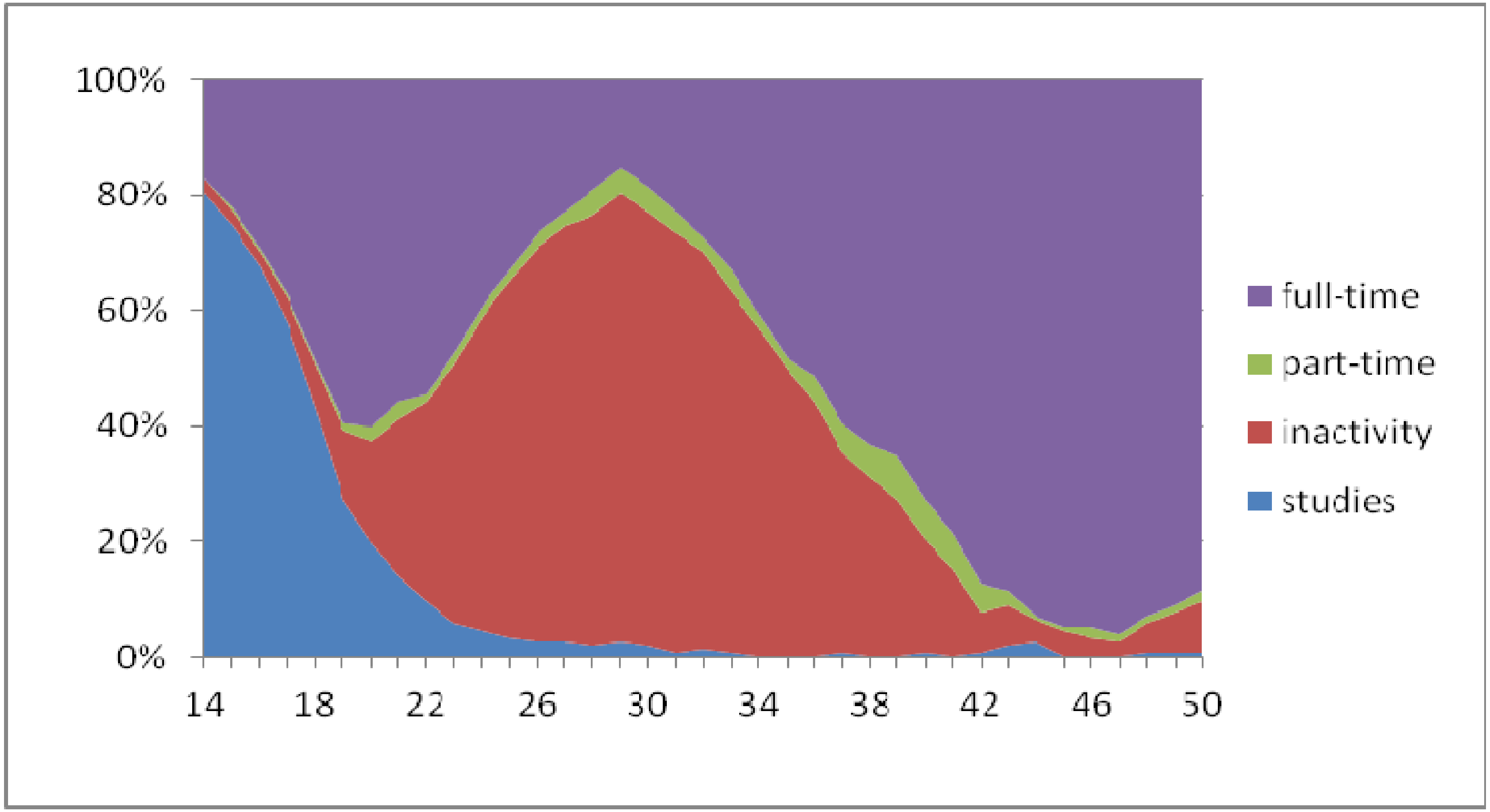
Late full-time job (18%)



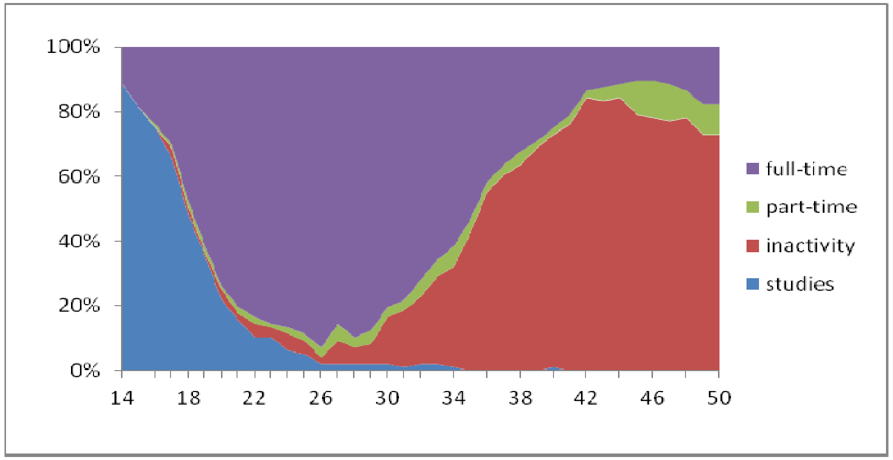
Inactivity ou early stop (18%)



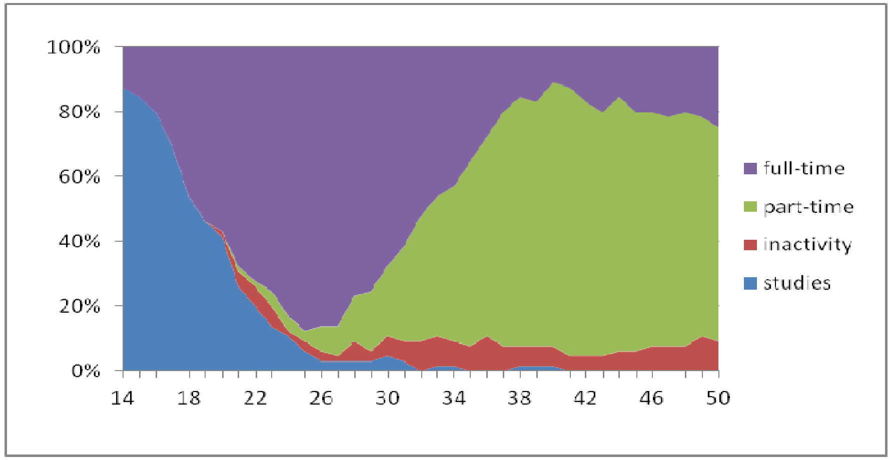
Interruption (11%)



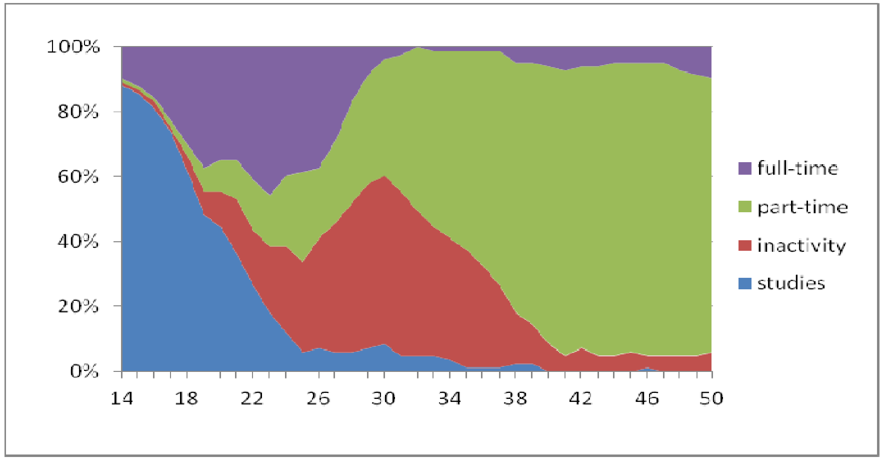
Late stop (after 30) (6%)



Switch to part-time job (4%)



Interruption, re-entry part-time (6%)



Evolution over cohorts

- Early full-time : **=**
  stability around 38%
- Late full-time : **+**
  from 14% (1930-1939) to 22% (1946-1950)
- Inactivity or early stop : **-**
  from 24% (1930-1939) to 12% (1946-1950)

Mothers' trajectories

Type of career	***%***
always active	35,3
stopping (at around 26)	33,7
always inactive	23,0
interruption (between around 21 and 32)	7,9
Total	*100,0*

1402 women born between 1886 and 1935

How to associate mothers' and daughters' trajectories ?

- Mother and daughter trajectories placed « side by side » in a single sequence

- Creation of a state combining « mother's situation X daughter's situation », then of a single sequence per lineage

- Cross-tabulation « typology of mothers X typology of daughters »

A dyadic sequence analysis (DSA)

A. Resemblance measure (OMA) → 2 distance matrices *(mothers and daughters separately)*

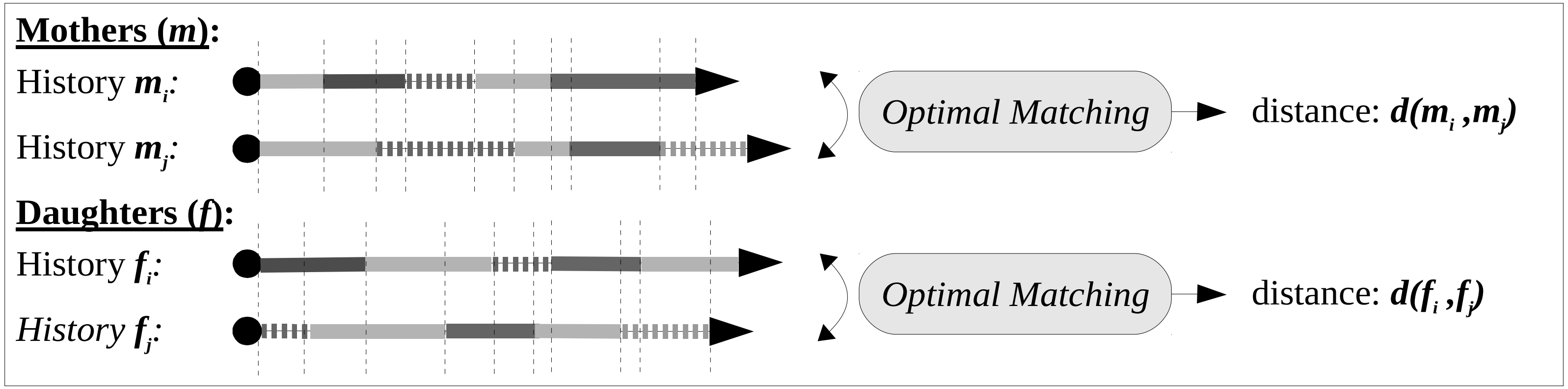
B. Data reduction (MDS) → 2 sets of principal components *(mothers and daughters separately)*

C. Multiple factor analysis (canonical PLS) → 1 set of principal components *(mothers and daughters separately)*

D. Clustering (HCA) → typology of mother-and-daughter trajectories

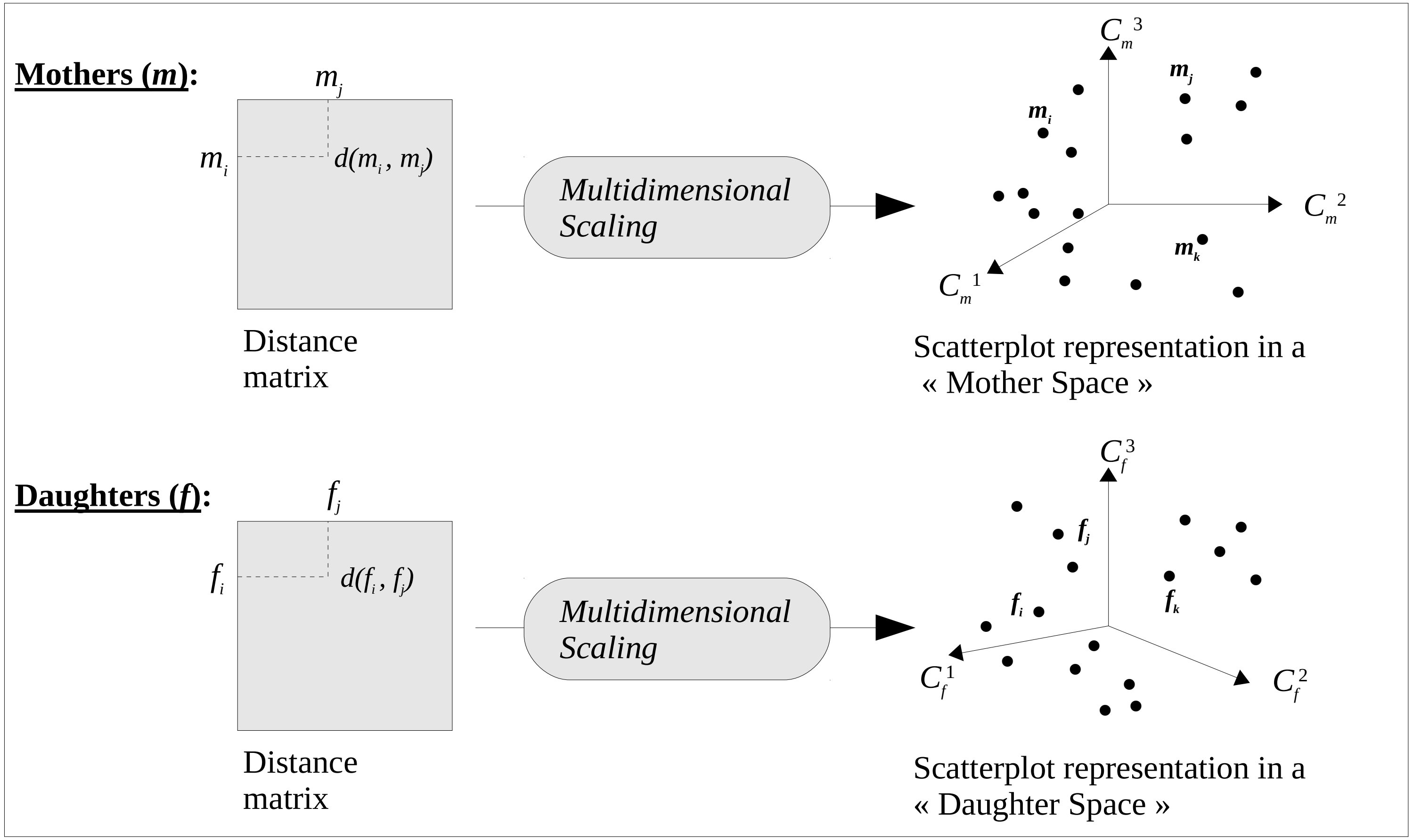
A dyadic sequence analysis (DSA)

A



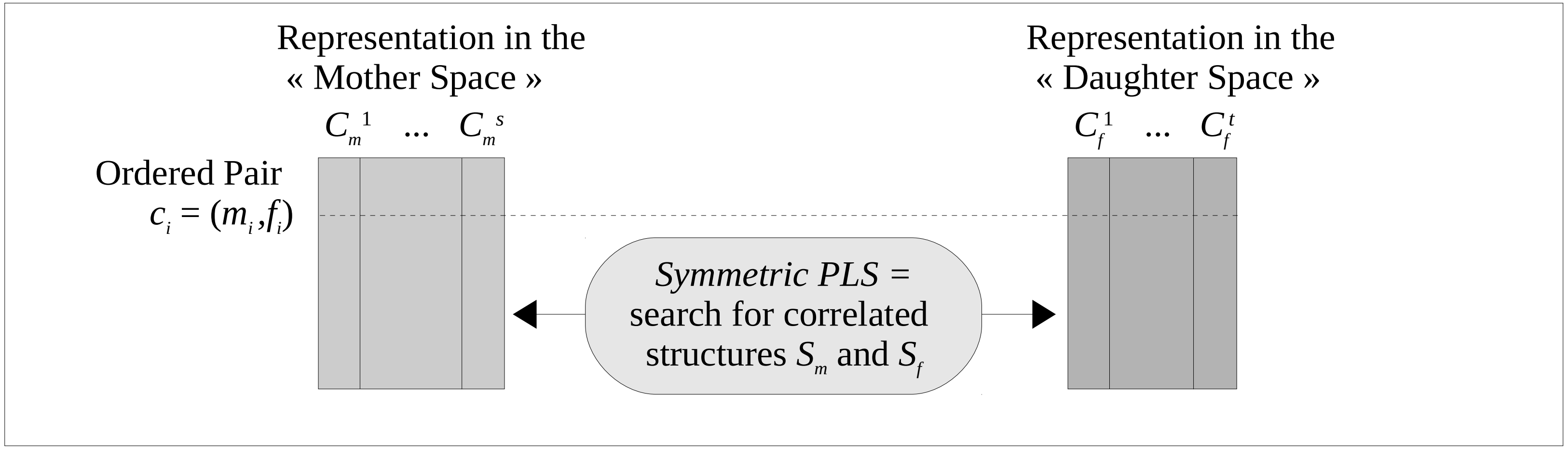
A dyadic sequence analysis (DSA)

B



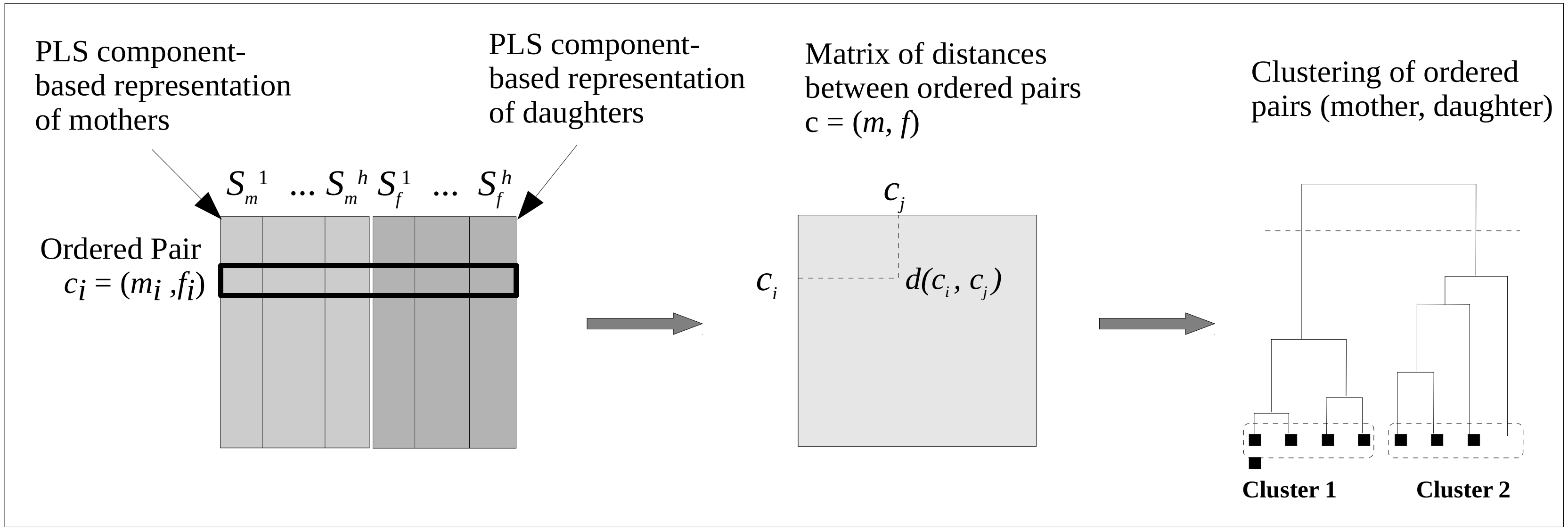
A dyadic sequence analysis (DSA)

C



A dyadic sequence analysis (DSA)

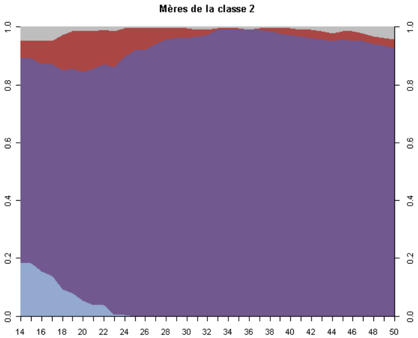
D

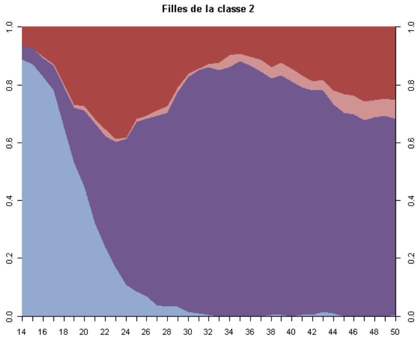


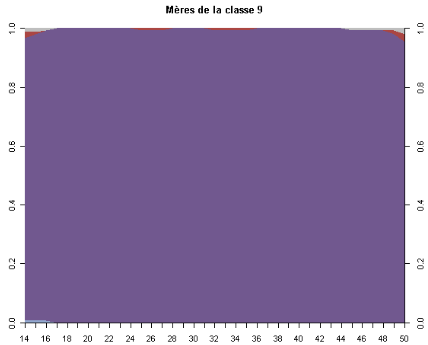
Typology of mother-and-daughter trajectories

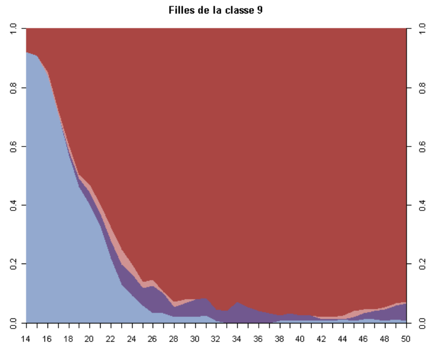
Dyads' main characteristics		N	%
mothers	*daughters*		
always active	from full to part-time job	75	5
always active	always active	346	23
always active	alternating job/inactivity	148	10
always inactive	always inactive (or for long)	186	13
always inactive	long spell of part-time	82	6
always inactive	always active	151	10
alternating job/inactivity	early stop (before 30)	101	7
stop (before 35)	always active	251	17
interruption	always active	147	10
Total		*1487*	*100*

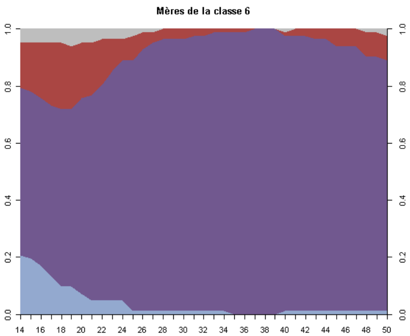
Dyads inactive mothers

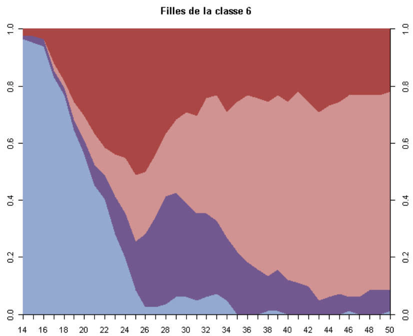




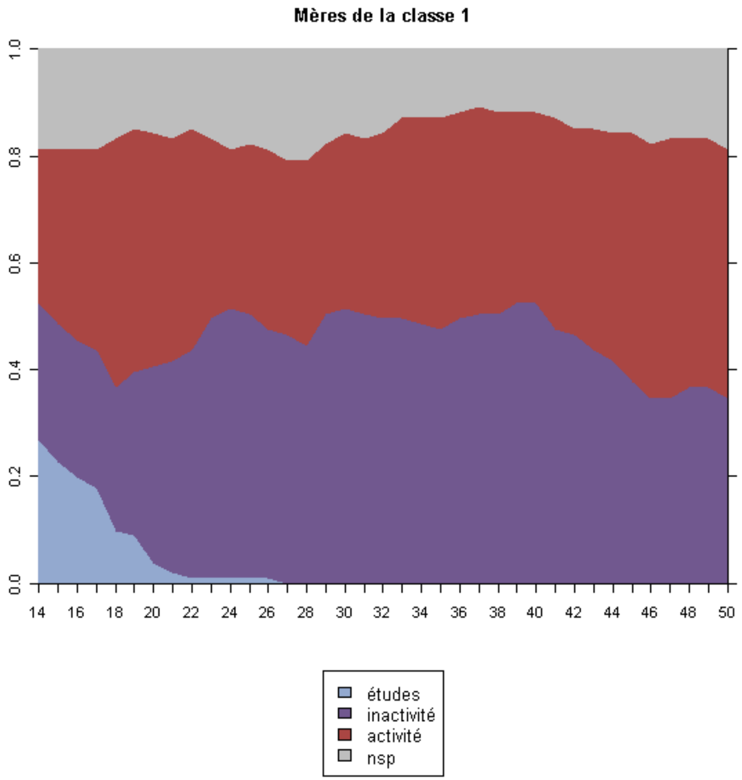


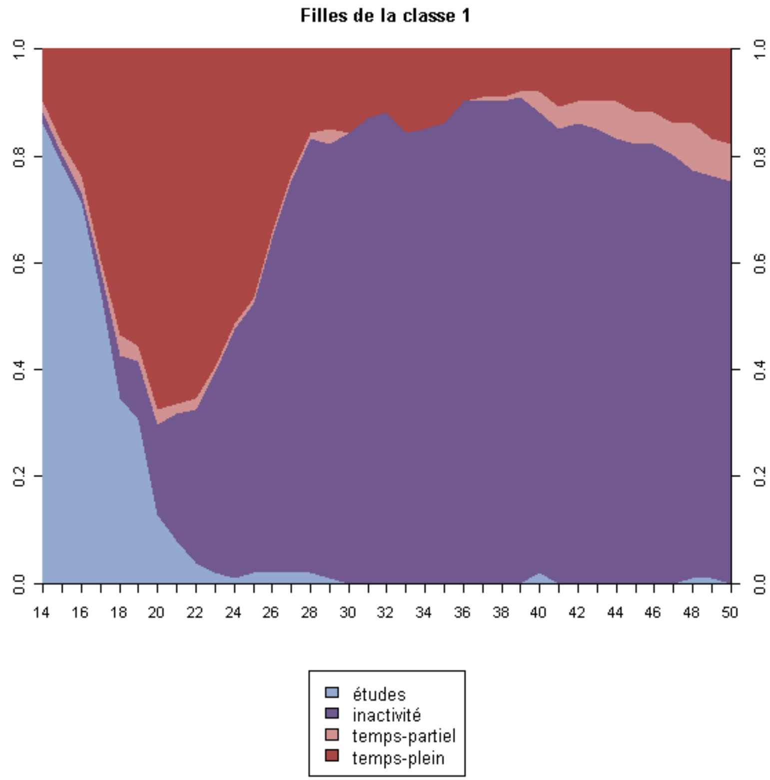






A more marginal dyad





Conclusion

Dyadic sequence analysis (DSA) :

- sequences do not have to be contemporaneous
- nor of the same nature

Applications:

- transmission of life courses (family histories, etc.)
- social mobility

Data availability ?

Bibliography

webpage: http://nicolas.robette.free.fr/Publis.htm

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