

## *Autour des populations du passé : les migrations humaines*

Séminaire bi-mensuel coordonné par  
**Isabelle Séguy (INED/Cepam) et Luc Buchet (Cepam/INED)**



### **Séance 8 : « Migrations et patronymes »**

organisée par Anna Degioanni, LAMPEA, et Isabelle SEGUY



**Mardi 2 juin 2015 - de 14h15 à 18h00**

**INED Paris- salle 433**

**Maison des Sciences de l'Homme Sud-Est, Nice- salle 009**

(Attention au changement de lieux, renseignements pratiques en dernière page)

### **Programme**

**14h30-15h15**

**Silvia PAROLO et Antonella LISA (Institute of Molecular Genetics, Pavie, Italie).** *Italian surnames analysis: a tool to improve the study of population genetics*

**15h15- 16h00**

**Pierre DARLU (MNHN, Paris) et Pascal CHAREILLE (Centre d'Études Supérieures de la Renaissance, Tours).** *Patronymes et migrations : un bref état des lieux des méthodes. Illustration par quelques exemples.*

**16h30- 17h15**

**Franz MANNI (MNHN, Paris).** *Footprints of Middle Ages kingdoms are still visible in the contemporary surname structure of Spain*

**Discussion générale**



## Séance 8 : « *Migrations et patronymes* »

### Résumés

#### ITALIAN SURNAMES ANALYSIS: A TOOL TO IMPROVE THE STUDY OF POPULATION GENETICS

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The study of how the genes vary within and among the human populations is extremely important because it can give useful information to understand the differences in complex disorders predisposition among subjects and eventually contribute to personalized medicine. However, the reconstruction of how the genetic differences vary according to geography is a difficult task because the information about the individual's place of origin is often missed due to migration events that have moved individuals and broken the genetic isolates. Therefore, to perform a genetic study a fundamental, preliminary step is to redraw the boundaries of the ancient communities of people who lived in specific areas for a long period of time and putatively shared a distinctive genetic heritage. This task can be performed using surnames that are patrilineally transmitted and have followed individuals in their movements leaving "footprints" that allow us to reconstruct their pattern of dispersion and obtain the probable origin of surnames and consequently of the individuals that bring those surnames.

In our study, we combined the study of surnames with genome-wide genetic studies. Specifically, we applied the analysis of surnames to divide the Italian population into subgroups which were then analyzed for their genetic characteristics.



The surname analysis was based on a frequency-based approach combined with linguistic derivations which allowed to determine the probable place of origin of the surnames with a monophyletic origin.

The individuals of our cohort were then assigned, on the basis of their surnames, to macro-areas corresponding to the northern, central and southern areas of the Italian peninsula and to the Sardinia Island.

The subsequent analysis of the genetic structure of the Italian population led us to identify 210 loci spread across the human genome showing North-South differences. Moreover, a bioinformatics analysis allowed us to integrate information from several sources and led us to identify the immune system as main shaper of Italian population differentiation likely as a consequence of selective forces triggered by host-pathogen interactions. Future studies could investigate the effect of these differences in disease predisposition.



## PATRONYMES ET MIGRATIONS : UN BREF ETAT DES LIEUX DES METHODES. ILLUSTRATION PAR QUELQUES EXEMPLES

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Historiens, démographes et généticiens utilisent différentes méthodes pour rendre compte des mouvements de population à partir des stocks anthroponymiques. Elles constituent des approches précieuses en l'absence de données démographiques relatives aux migrations. La première méthode, dite méthode synchronique, s'applique à des données qui ne couvrent qu'une seule tranche temporelle. Dans ce cas, la migration est inférée à partir de l'analyse de la distribution des noms. La deuxième méthode, dite méthode diachronique, suppose des données disponibles pour au moins deux tranches chronologiques. Les variations de fréquence des noms d'une aire géographique à une autre et d'une période à l'autre apportent des informations sur les déplacements spatio-temporels des noms et donc des personnes qui les portent.

Ces méthodes et leurs particularités seront discutées et illustrées à partir de corpus anthroponymiques variés, tirés de sources anciennes et récentes, et couvrant divers espaces géographiques (Île de France, Normandie, Pyrénées, Savoie, Québec...).



## FOOTPRINTS OF MIDDLE AGES KINGDOMS ARE STILL VISIBLE IN THE CONTEMPORARY SURNAME STRUCTURE OF SPAIN

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To assess whether the present-day geographical variability of Spanish surnames mirrors historical phenomena occurred at the times of their introduction (13<sup>th</sup> - 16<sup>th</sup> century), and to infer the possible effect of foreign immigration (about 11% of present-day population) on the observed patterns of diversity, we have analyzed the frequency distribution of 33,753 unique surnames (tokens) occurring 51,419,788 times, according to the list of Spanish residents of the year 2008.

Ionymy measures and surname distances have been computed for, and between, the 47 mainland Spanish provinces and compared to a numerical classification of corresponding language varieties spoken in Spain. The comparison of the two bootstrap consensus trees, representing surname and linguistic variability, suggests a similar picture; major clusters are located in the east (Aragón, Cataluña, Valencia), and in the north of the country (Asturias, Galicia, León). Remaining regions appear to be considerably homogeneous.

We interpret this pattern as the long-lasting effect of the surname and linguistic normalization actively led by the Christian kingdoms of the north (Reigns of Castilla y León and Aragón) during and after the southwards reconquest (*Reconquista*) of the territories ruled by the Arabs from the 8<sup>th</sup> century to the late 15<sup>th</sup> century, that is when surnames became transmitted in a fixed way and when Castilian linguistic varieties became increasingly prestigious and spread out.

The geography of contemporary surname and linguistic variability in Spain corresponds to the political geography at the end of the Middle-Ages. The synchronicity between surname adoption and the political and cultural effects of the *Reconquista* have permanently forged a Spanish identity that subsequent migrations, internal or external, did not deface.

Key words: Surnames, Family names, Ionymy, Surname distance, Bootstrap, Migrations, Languages, Dialects, History, Computational Linguistics, Spain.



## Renseignements pratiques

Le séminaire se déroule en visio-conférence

entre  
**l'INED- salle 433 (4<sup>e</sup> étage)**

133 Boulevard Davout  
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**Maison des Sciences de l'Homme Sud-Est - la salle 009 (rez-de-chaussée)**

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