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# Biodemography: evolution for 20 years

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## Résumé

The publication in 1996 of Jean-Pierre Bocquet Appel's book, Denise Pumain and I on the spatial analysis of biodemographic data, opened to the French reader a new scientific approach. It developed rapidly later, especially among American authors. We will first seek to define how the union of these two so different sciences, biology and demography, may be possible and may bring new elements in each of them. The answer to these questions leads us to distinguish the negative aspects of this union from its more positive aspects during the twenty years that followed its publication.

The most negative aspect of this union occurred with the introduction of behavioral genetics into demography at the end of the twentieth century, which became more pronounced over the following twenty years. We show that it is based on Eugenics ideas and hypotheses put forward by Fischer in 1918, which are no longer valid today but which are supported by a very powerful current of thought seeking to link genes and behaviors. We will quickly describe the errors caused by this current of thought throughout the biological development of genetics, moving from classical genetics until the early 2000s, genomic studies until the years 2010, and finally during the post-genomics age that is in full expansion.

Among the successes, I would not go back to the presentations of Lyle Konigsberg, Isabelle Séguy and Henri Caussinus, who showed how to relate the biological age of individuals to their civil age in a given population. Another more positive aspect of this union is found in the study of mortality and fertility. These two phenomena are, for different reasons, at the heart of demographic studies and biological studies. The combination of these two approaches makes it possible, if properly conducted, to lead to a deeper understanding. Migration, however, is a phenomenon determined by the society in which individuals live and not by their biology.

The conclusion will extend the reflection to the other approaches, previously distinguished as different, by taking an interest in their foundations. The conclusion will extend the reflection to other essays to bring together approaches, previously distinguished as different, by taking an interest in their foundations.

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