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RESEARCH IN ECONOMICS AND RURAL SOCIOLOGY

**OBESITY, CORPULENCE AND SOCIAL STATUS: A FRENCH/AMERICAN COMPARISON  
(1970-2000)**

*For 30 years, corpulence (frame 1) has developed differently in France to the States. Even if, these past years, the phenomenon has seen quicker growth in France, obesity can be compared neither by its extent nor by age or gender. On either side of the Atlantic, obesity is linked to social status, particularly women, and though it extended in every social milieu between 1970 and 2000, no real weakening of the part played by social factors in obesity is noticeable. The survey on attitudes to weight, varying according to social categories, shows that the most affected individuals belong to social groups where average corpulence is higher and where attention to weight is lower. Should there not be a preventative public health policy focusing on all middle to lower classes?*

Although today, obesity appears as a major issue in the food sector, it is still difficult to define the outlines of the phenomenon, especially from a sociological point of view. And occasionally, it has been asserted a little hastily that what had been observed in the states was also valid for France. This assertion is brought into question here by way of an examination of the relationship between obesity and social status in France and in the United States between 1970 and 2000: Does the United States really symbolize the future of France? Can we find any French specificity? This international comparison will allow us to observe the differences between France and the United States, and

measure the extent of the relation between obesity and social status. Can attention given to the body in the different social groups shed light on the links between corpulence and social status?

**Corpulence and obesity: significant differences between France and the United States**

Between 1970 and 2000, corpulence developed differently in France and the USA. In the former, a form of stability was observed for 30 years: average weight changed little, men were and remained stouter than women (see figure 1).

Frame 1

Here, corpulence refers to Body Mass Index (BMI), i.e. the weight ratio in kilos per height (in meters) squared. It helps specify the following corpulence: underweight: BMI < 18,5; normal weight: 18,5 < BMI < 24,9; overweight: 25 < BMI < 29,9; obesity: BMI > 30. BMI is a performing tool to control the impact of differences in body fat, specifically linked to social rank, generation and male/female gender.

In the latter, the situation is quite different: average corpulence increased a lot from 1970 and the disparities between men and women became more marked. In 30 years, the proportion of slim or thin persons, as well as those of normal body size decreased considerably, noticeably among women (see figure 2). Obesity, and more specifically severe obesity, spread markedly, especially among women. Therefore, nowadays, significant differences exist between France and the United States. In France, the average body size is smaller, and the variety of cases fewer: the weight normality margin (BMI between 18,5 and 25) represents 50% of the male/female population. This is a type of widely shared standard to which most French people belong. On the contrary, in the United States, the average body size is in the overweight margin and extremities are much more prevalent.

In France, even if the situation is worsening, the problem of obesity - at least in adults - is far less worrying than in the United States, and the gap seems to be widening: twice as high in the United States in 1970 (15% obese persons

for 7% in France). Obese people are today three times more numerous (30% for 10% in France). Here, the increasing attention given to the problem, these past years, comes from the recent rise in obesity in France since the mid-1990s. Nevertheless, it is not yet clear whether this will be a long-term occurrence, at the end of which France would catch the United States, or a short-term one (see figure 3).

Obesity according to gender and age is also different in both countries (see figure 4). In the United States, mostly women are concerned (33% women for 27% men) whereas in France both men and women are equally affected (10%). Finally, though the lineation shows the same pattern, obesity hits American people sooner than French people in their life cycle: at 20 years of age, obesity already affects 20% of men and 24% of women in the United States against less than 5% for both genders in France.

Beyond these differences, some similarities are evident, such as links between female obesity and social status, in particular with regard to social status.

## Obesity and social status

From a descriptive point of view, social factors play a central role in female obesity both in France and the United States, whereas this link is weaker in males in France and almost inexistent in the United States. Thus, in France, in 2000, obesity followed the levels of social and professional status, for instance, profession and socio-professional category (SPC). However, the relationship was more significant in women (see figure 5).

A finer analysis requires checking, all other things being equal, the part played by different factors linked to social status: age, standards of living, education standards, SPC, ethnicity, etc (see frame 2).

In 2000, in the United States (these results being confirmed by previous works), obesity is marked by an ageing effect in men and women alike (see figure 6): obesity is, on average, more prevalent among individuals aged between 40 and 70. Moreover, male obesity is essentially linked to education standards and, thus, ethnicity is hardly significant. However, in women, these variables, with the exception of education standards, play an important role. Thus, all things considered, ethnic origin and standards of living are closely linked to obesity. Both coloured women and those from the first income quartile are on average quite significantly more obese, whereas those from the fourth quartile are fewer in number.

In France, in the case of a logistical regression of obesity risk per age, SPC, birthplace and place of abode, obesity is relative to age, affecting the youngest individuals noticeably less than the rest of the population. Similarly, SPC plays its own role in obesity: executive men are, on average, significantly less obese, whereas farmers and manual workers are more numerous. In women, obesity is significantly lower among executives and tertiary-sector workers than unemployed women and female manual workers.

In the United States, ethnicity appears to be the most important factor in female obesity, in a society where, according to social differences, it plays a major role. However, in France, birthplace is not linked to obesity in women and is a minor factor in men (only men of French origin are more obese than the average): stratification

depends more on socio-professional status or qualifications.

Poor qualifications are significantly linked to obesity (see figure 7): less qualified people are, on average, significantly more obese. Likewise, standards of living themselves play a slight role in female obesity: all things considered, the higher the family income, fewer the number of obese women. Yet, cultural capital has a greater impact on obesity than economic capital.

Hence, in France and the United States alike, the analytical role played by social factors in female obesity is an outstanding feature. How have these connections between obesity and social factors developed since 1970? Has obesity increased in every social category, or has it only affected certain categories? France and the United States appear to be in opposition here. In the United States the general impression is that of a levelling off. Obesity has mostly increased in what used to be the most privileged milieus: among the wealthiest women, with the highest qualifications, in whites. In France, social differences are generally widening. Male obesity has mostly increased in the lower classes - among the most badly off, manual workers and the less qualified. In women, the rise is more consistent - women from all social classes are more obese - but female workers and the less qualified form those categories where the obesity threshold has risen the most (respectively + 7 and + 6 points). In both countries, no real decrease in the role played by social factors has been observed, especially in women where social status is still a determining factor.

These links between obesity and social status are found in a more general way in corpulence which, in France and the United States alike, steadily respects the social hierarchy. It may appear tautological to assert that the bigger the average corpulence of a group, the higher the obesity rate; but a slight increase in corpulence (a BMI transfer of 23 to 25 from executive women to female manual workers) in a group is enough to witness a dramatic rise in obesity risk (BMI transfer of 3,6% to 15,6%, that is to say a quadrupling). This observation leads us to take an interest not only in corpulence but also in body representations and the relationship with social hierarchy: are the different social groups marked by strong differences in the care they take of their body?

### Data

Six representative surveys of the population, including people's weight and height have been used: for France the INSEE Health and Care studies from 1970 (n=14842) and 1990 (n=15794) and the EPCV permanent survey on family living standards from 2001 (n=5113); for the United States, the National Health and Nutrition Examination Survey (NHANES) from 1970 (n=23808), 1990 (n=16305) and 2000 (n=9965).

### Methods

The role of obesity risk factors has been assessed by logistic regression models of obesity risk in accordance with the following variables. In the United States: age, education, income and ethnicity; in France, either age, SPC, birthplace, place of abode, or age, education, income, place of abode.

The care given to the body has been analysed through a logistic regression of the desire to loose weight (NHANES, 2000 and EPCV, 2001 surveys). It is characterized in NHANES (2000) by the following question "Would you like to weigh more, less or keep the same weight?" In EPCV (2001), the variable "How much would you like to weigh?" helps, by differentiating between people's real weight and ideal weight, to highlight those individuals wishing to loose weight and estimate their desired weight loss as well as their ideal corpulence.

## Corpulence, body representation and social hierarchy

The care given to the body by members of different social groups unequally affected by obesity (measured through the will to loose weight) helps to highlight the social

distribution of obesity. In France, as in the United States, when a logistical regression is carried out, analysing the will to loose weight according to age, living and education standards, the variables linked to social hierarchy do not show up as significant explicative variables. The level of

will to loose weight (see frame 2, methods) is, paradoxically, the same whatever the social background: 59% of executive women and 54% of female manual workers wish to loose weight (this gap being insignificant at the threshold of 5%). But corpulence differs markedly from one social group to another. When BMI is introduced into the model, all the variables, particularly those of social hierarchy, undergo a significant increase. Thus, on either side of the Atlantic, for a given corpulence, the wealthiest and the most qualified are, on average, more numerous in wishing to loose weight: the wealthiest categories pay more attention to weight gain than most popular categories, and for this reason do not go beyond certain limits broken by other more insouciant or tolerant groups. Would social pressure towards thinness be different according to social backgrounds?

As for France, the EPCV survey of May 2001 helped to measure more precisely care given to the body. In men and women alike, farmers represent the category in which we notice a much stronger adequacy between real corpulence and ideal corpulence, both being high. Executive men and women even more so (as well as women from the tertiary sector) have the lowest real corpulence, but also the lowest ideal weight. Less affected by obesity, having a lower corpulence than others, women in these categories also pay more attention to their weight. More are inclined to reduce body weight, weigh themselves more often and engage more regularly in a physical activity (43% of executive women assert to undertaking some physical activity once a week as opposed to 18% of female manual workers and 7% of unemployed women). The women in the highest categories demonstrate a great interest in respecting a body standard, that of slimness. In this case, does the body participate in a distinction process, the body techniques

spreading from the upper social classes down to the lower? In the exercise of a more severe weight control one can see strong social pressure as to body form, expressed in the place of work, the favoured place of socialization. Indeed, on the contrary, among unemployed women and female manual workers, obesity is more prevalent and the care given to physical appearance (attention to weight gain, less frequent weighing, and physical training), is less. Does this attention to slimness come from a weak valorisation of the body image, or does it come from a freedom and tolerance that women from popular categories might enjoy towards weight control, or even from social pressure against putting on weight, which is weaker in a social group where the average corpulence is high? The milieus most concerned by obesity are also those where representations lead to greater tolerance of the overweight: henceforth, individuals here would be slowed later in their obesity.

*The international comparison reveals noticeably similar links in France and in the United States, particularly in women, between obesity and social hierarchy. It also shows differences in the mechanisms activated in these relations. Particularly, from 1970 until 2000 in the United States, obesity progressed steadily and quickly from a very high start level while France clearly showed stability over the same period, but a deterioration over the 1990s leading to a certain vigilance. We should point out the important phenomena noticed in popular categories less affected by social pressure towards weight control. Shouldn't we raise public awareness about the risks of obesity in these popular categories through public education and health policies aimed specifically at these categories, instead of disjointed alarmist discourse, or target exclusively the most precarious populations?*

*These results come from a survey commissioned and financed by the National Observatory against poverty and social exclusion. The author also thanks Lasmus/Centre Quételet for helping her acquire the INSEE's surveys.*

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*Published by the INRA Department of Social Sciences, Agriculture and Food, Space and Environment*

*Publishing unit*

*Editorial Director: Hervé Guyomard – Editor: Didier Aubert (Chief Editor), translation and composition: Ariel Gille*

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Figure 1 - BMI histogram, France 2001

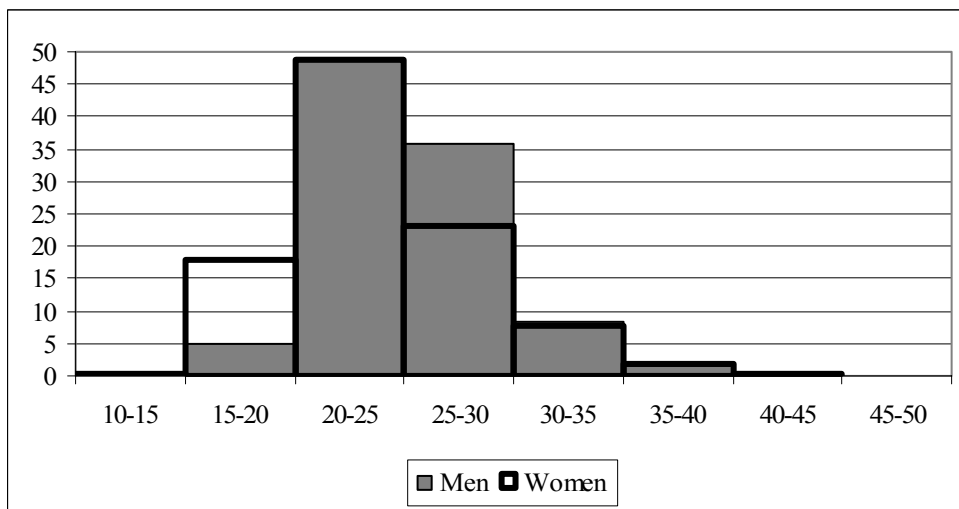


Figure 2 - BMI histogram, United States, 2000

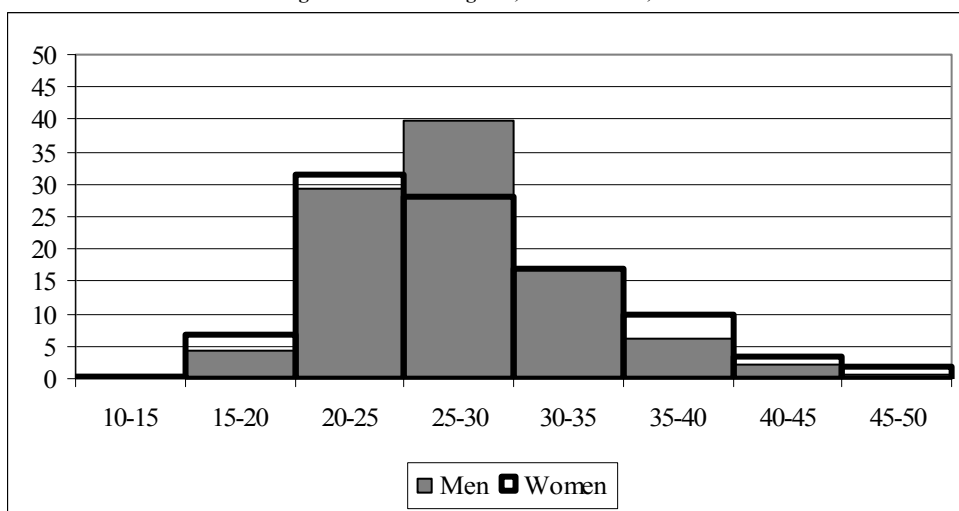


Figure 3 - Male and female obesity rates in France and the United States

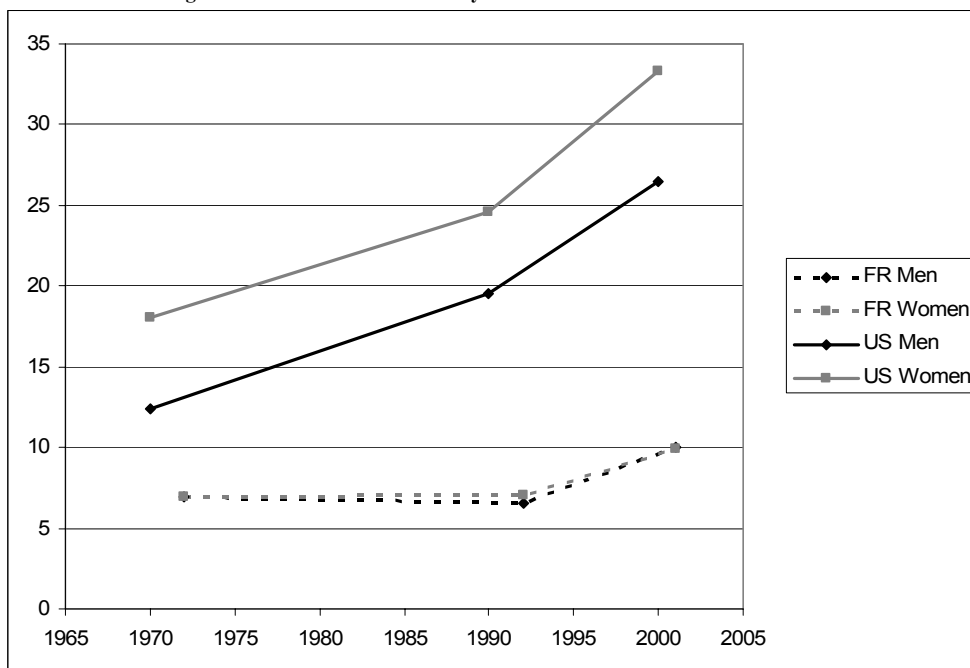


Figure 4 - Male and female obesity rates, per age, in France and the United States

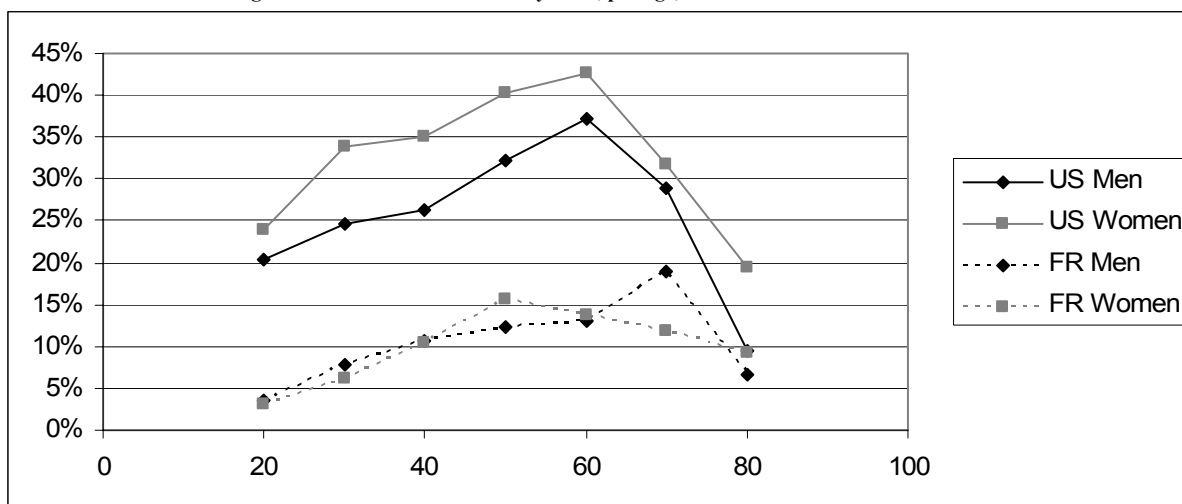


Figure 5 – Obesity rates according to socio-professional category, France 2001.

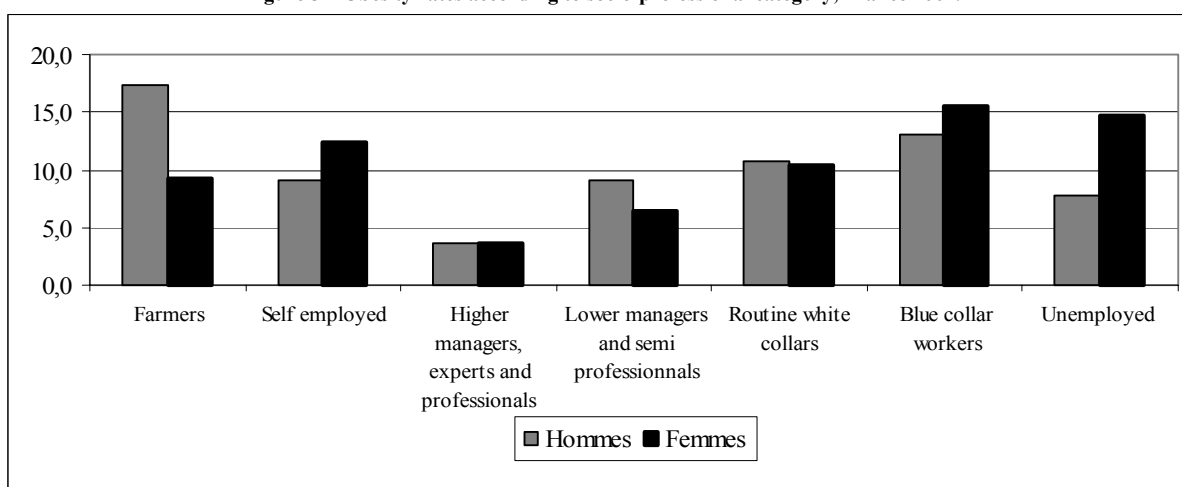


Figure 6 - Factors linked, all other things being equal, to obesity risk: logistic regression, U. S. 2000

	Men	Women
	Coefficient	Coefficient
<b>Age</b>	***	***
20-29	-0,131	-0,443***
30-39	-0,046	0,041
40-49	0,160	0,246***
50-59	0,503***	0,541***
60-69	0,582***	0,434***
70-79	0,101	-0,181
80 et +	-1,169***	-0,639***
<b>Ethnic group</b>	*	***
Non-Hispanic White	-0,009	-0,165
Non-Hispanic Black	0,028	0,552***
Mexican-American	0,151	0,166
Others and mixed	0,326	-0,425*
Other Hispanic	-0,495***	-0,128
<b>Education</b>	***	n. s.
Lower than High school	0,037	-0,081
High school	0,184**	0,087
Higher	0,221***	-0,005
<b>Income</b>	n. s.	***
1 <sup>st</sup> quartile	-0,014	0,421***
2 <sup>nd</sup> quartile	0,144	0,221***
3 <sup>rd</sup> quartile	-0,120	-0,223**
4 <sup>th</sup> quartile	-0,010	-0,439***
Constant	-1,034	-0,704

Summary of significant figures:\*= significant link at the level of 0,5%; \*\*= at the level of 1%; \*\*\*= at the level of 0,5%.  
Income: scale of living standards drawn from the amount of the family income divided by the family number of persons.

Figure 7 - Factors linked, all other things being equal, to obesity risk: logistic regression, France 2001

	Men	Women
	Coefficient	Coefficient
<b>Age</b>	***	***
20-29	-0,921***	-0,954***
30-39	-0,140	-0,385*
40-49	0,187	0,185
50-59	0,267	0,648***
60-69	0,275	0,353*
70-79	0,709***	0,255
80 et +	-0,376	-0,102
<b>Education</b>	*	***
No qualifications	0,524***	0,803***
Primary school certificate	0,323	0,184
GCSE or Technical training short certificate	0,199	0,073
High school diploma or Technical long certificate	0,017	-0,003
<=Bachelor's degree	0,000	-0,248
>Bachelor's degree	-1,062***	-0,809*
<b>Income</b>	n. s.	*
1 <sup>st</sup> quartile	0,083	0,132
2 <sup>nd</sup> quartile	0,129	0,296**
3 <sup>rd</sup> quartile	-0,100	0,020
4 <sup>th</sup> quartile	-0,112	-0,448***
<b>Living area</b>		*
Paris and surroundings	-0,147	0,336*
Paris basin	0,272	0,192*
North	-0,043	0,466
East	0,527	0,147
West	-0,070	-0,265
South-West	-0,276	-0,185
Centre-East	-0,059	-0,205
Mediterranean Basin	-0,204	-0,486*
Constant	-2,444	-2,610

Source: EPCV 2001