

# Men's sizes: its impact on married life and professional careers

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*Couples are less common among shorter men. This is not due to their social status. Although blue-collar workers are smaller on average than executives, the effects of height on couple formation are of the same intensity in these two social groups.*

*Tall height is an economic advantage for men. For the same level of education, taller men have better professional careers because they are entrusted with more managerial responsibilities.*

*When it comes to forming a couple, size is not only taken into account as a leading indicator of future household resources. The choice of spouses is influenced by a social norm that is more difficult for shorter men to meet: the physical matching of couples.*

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Physical appearance matters more to lovers than to sociologists. The exception is an old study based on matrimonial ads. Men who advertise in *Le Chasseur français* often include their height when it is high. De Singly (1984), who statistically analyzed these notices, establishes that, for women looking for a partner, the man's socio-economic status is their main concern. But the man's height, if high, is also an asset. And yet, the impact of male stature on life as a couple can be observed not only on this "secondary market" - as de Singly calls matrimonial ads - and twenty years ago, when this study was published.

### The shadow cast by the social milieu?

The *Continuous Survey on Living Conditions* carried out by Insee in 2001 to gain a better understanding of French health behavior (1) records the self-reported height of respondents. It appears that men of larger stature enter into relationships earlier. Among 20- to 29-year-olds, 47% of those measuring over one meter eighty are in a couple, and only 41% of those measuring between one meter seventy and one meter eighty (see table 1). Medium-sized men catch up in the next age bracket, but not the shortest. Among 30-39 year-olds, three-quarters of tall and medium-sized men live with a partner, but only 60% of those under 1.70 m tall. In the following age brackets, the percentage of short people living in couples increases, but never reaches that of tall people, which increases steadily with each age bracket.

Taking into account generational ageing (see Box 1), among the smallest of each birth cohort aged between 30 and 50 in 2001, 22% were living outside a couple, compared with just 17% among the largest and middle-aged (see Table 2). A similar discrepancy can be seen for those aged between 50 and 69 in 2001: 18% of short men live outside a couple, compared with just 12% of taller men (2). Is this difference in couple life due to short stature? At working ages, it is one of the dimensions that separate men in couples from those living outside them. But this does

not mean that this characteristic is an advantage for taller men or a handicap for shorter ones, or that it is taken into account when choosing a partner.

Charraud and Valdelièvre (1981) use data from the 1970 *health survey to show* that there is a clear difference in size between social classes. However, this gap did not disappear in 2001. Executives and professionals are on average 177.6 cm tall, i.e. 3.2 cm taller than workers or farmers (see table 3). We can therefore make the following hypothesis. If women prefer the best provider of resources as their spouse, and if men's height increases with their economic status, then taller men are relatively advantaged and shorter men disadvantaged, without their height being a factor influencing the formation of the couple. Bourdieu (1962) makes a similar point in an article entitled *Célibat et condition paysanne*. At the village ball, the roughest farmers can't find partners to dance with. Their physical appearance and awkwardness may seem to be the reason why young girls reject their advances. In reality, they are excluded from the dance because of their inability to support a family on their cramped farm, and their dress and appearance are simply a sign of their poverty.

For working men, the probability of living in a couple depends on several factors (see table 4). First of all, age: those under thirty are more likely to live outside a couple. The same applies to the unemployed and residents of towns with over 100,000 inhabitants. The hypothesis that life as a couple varies according to a man's socio-professional background is only partially verified. Employees are relatively more likely to live outside a couple, and business owners and professionals are relatively more likely to live in a couple. But blue-collar workers are no less often in couples than managers or engineers. Lastly, short stature is negatively correlated with couple life, all other things being equal, particularly when the differential effects of social background are taken into account. So men's height does have a clear effect on couple life, and this effect is not the same as that of social background. Being short is a handicap for pair-bonding, whatever the social level, even if it's true that reluctance to pair-bond is stronger among white-collar workers and weaker among entrepreneurs and professionals. Admittedly, blue-collar workers are smaller on average than executives, but they are no less likely to couple up. Social condition therefore doesn't explain why small people are less likely to couple in their private lives. As the choice of spouse is made early in the life cycle, we haven't ruled out the possibility that the man's anticipated career may play some role in this decision. Doesn't height give an indication of professional future (3)?

### **Less beautiful studies for short men**

In pre-industrial societies where machines were rare, short men were at a disadvantage in employment. Taller men are generally stronger, and therefore better suited to work requiring physical strength. The disadvantage of being short for men at the time of marriage formation is due to the fact that they are more likely to be taller than their male counterparts.

Is it due to economic reasons of this nature? Jobs requiring strength did not disappear in France in 2001. However, manual work has become mechanized. In fact, short men of working age do not complain about working conditions that might have been made more strenuous by the specific effect of their stature (cf. table 5). All other things being equal (and in particular occupational category), short men do not declare that the effort they have to put in is greater.

physical demands of their work. They do not report having to stand up more often. To compensate for their relative disadvantage in heavy work, their short stature does not force them into hazardous jobs: they are not more exposed to handling toxic or dangerous products. Generally speaking, they don't feel more nervous or anxious in the workplace.

as part of their professional activities. The physical effort required by today's work is not so demanding as to disadvantage short men.

Nor are smaller men less hard-working. Several factors are correlated with the difficulties encountered in finding and keeping a job (see table 6). Those with no qualifications are more likely to be looking for work than those with school-leaving qualifications. In Northern France,

employment areas have suffered the effects of industrial restructuring more than in other regions, and unemployment is more widespread. Large conurbations attract and retain unemployed people, as employers are more numerous and their demand more varied. Those in managerial and higher intellectual professions are less affected by unemployment than other occupational groups. Once these factors are taken into account, stature is not correlated with unemployment. Men of shorter stature participate in employment as much as taller men during their working lives. On the other hand, they have less successful professional careers.

Their handicap appears before they enter the job market. The acquisition of a diploma as a passport to employment reflects the impact of several well-known factors (see 3rd column of Table 7). Firstly, the lengthening of schooling from one generation to the next: young people are leaving school later and later. Secondly, social background. Sons of farmers have the shortest school careers, followed by sons of blue-collar workers, sons of white-collar workers, and sons of craftsmen, shopkeepers and intermediate professions. The sons of executives and higher intellectual professions are those who have prolonged their studies the most. However, the effects of generation and social origin do not explain everything. The effects of height are just as significant as those of generation or social origin, but are not the same.

Smaller men have fewer qualifications. They also left the school system earlier (see 1st column of table 7). Although survey data are not available, there are several possible explanations. Health problems before birth or in childhood can lead to poor school performance. However, it would be necessary to show that these disorders more frequently affect short-statured men, or contribute to limiting the growth of the children thus affected. However, the Health Behaviour Survey does not collect this type of information to validate this hypothesis. Nor do the education surveys reveal whether short statured boys leave the education system earlier because of poor school results. School life is another reason for early school leaving. In our polite societies, school is the place where physical violence is tolerated, especially between boys. What's more, short teenagers are not, on average, favored in most compulsory sporting activities, where height is often an advantage. Finally, co-education has not helped matters for boys who, because of their short stature, appear younger than their age at a time in the life cycle when young girls are already interested in older boys (Herpin, 1996) and, in the absence of older boys in their classes, in older boys.

### **Professional functions requiring authority and the advancement of tall men**

In the armies of the Ancien Régime, and particularly in the English navy, you had to be tall to become an officer. Today, the police and gendarmerie do not recruit candidates who are too short. Tall people are not always physically stronger, but their authority is more easily asserted. They dominate their interlocutors with their head. Do tall people feel less exposed to aggression in isolated homes? In fact, they are more likely to live in detached houses, while small and medium-sized children are more likely to live in apartments (see table 12, 5th column). The roles that their size makes them play in everyday life lead them to become more assertive. Big size means being able to be heard and obeyed. But it's not just in the army or the police where size is used as a criterion for recruitment or promotion. In contrast to what was said above about short men, tall men complain about certain aspects of their working conditions (see table 5). They claim to be the object of hierarchical surveillance and remarks. They are also more often subjected to customer demands. We may well ask whether these two complaints should not be interpreted as the other side of the coin, reflecting a relatively privileged situation. More often than small and medium-sized employees, the large ones represent their company externally and are in personal contact with the hierarchy. The European panel provides more direct evidence of this same phenomenon.

Those with a job were asked whether they had any supervisory responsibilities and, if so, whether they had any influence on the salary of the people they supervised or on their career development (see table 8). Almost two-thirds (59%) have no supervisory responsibilities. One-fifth have

effective power, since they declare that they have an influence on the salary and/or career of the people they supervise. As might be expected, young people are the least endowed with this power, as responsibilities increase steadily with age. The second obvious factor is qualifications. Those with no qualifications tend to be directed in their work, and graduates of the Grandes Ecoles are the most likely to have supervisory responsibilities. More remarkable is the fact that, once these expected effects have been taken into account, a person's stature, if it's a man, is positively correlated with his managerial responsibilities.

Height does not play a role in the appointment of chefs for all employers. The privilege of high height does not apply to public sector employees (cf. table 8). We can assume that this is a consequence of administrative competitive examinations. Recruitment to all jobs is carried out in anonymous written tests, where the jury only sees the candidates when, for the most part, the chips are down. In the private sector, on the other hand, bureaucratic rules play a lesser role in recruitment and promotion. When recruitment is outsourced to agencies, candidates come forward for interviews. Interviews with future employers are a decisive stage in the selection process. In the case of internal promotion, the assessment of a candidate's ability to lead depends on the sense of contact and relationships that can be observed in the work unit. The impression the candidate makes "in the flesh" to his or her superiors is even more decisive for responsibilities at lower levels in the private sector. If the top of the hierarchy - private-sector executives - is excluded from the scope of the analysis, and only intermediate professions, private-sector employees and blue-collar workers are retained, the correlation between the size of the person and his or her responsibilities is even stronger. Finally, among the self-employed, men are more often in charge of managing staff when they have a higher level of education; but here too, for a given level of education, age and region, the head of the business is larger.

Two other facts confirm the hypothesis that high height is an implicit qualification for promotion. Some men without any qualifications nevertheless became technicians or foremen. Others, with primary, secondary or technical diplomas, became senior managers or bosses. These upwardly mobile individuals represent 10% of working men aged between 40 and 69 in 2001, who had no university qualifications. They are more numerous in the 60-69 age group on the eve of retirement. The fact that they live in a large city or in the Paris region is not significantly linked to their professional success. However, their height is (see table 9). Tall men are more successful than medium and small men among those who have not attended university. Career mobility is therefore favored by the fact of being tall.

A phenomenon in favor of taller people - the extent of which should not be exaggerated, but which is similar in nature - is also emerging in terms of intergenerational mobility. In 2001, 20.5% of working-class sons were under 1.70 m tall. However, among those who remained blue-collar workers, more were short (24.4%) than among those who became managers and higher intellectual professions, intermediate professions, craftsmen, shopkeepers and bosses (16.6%) (cf. table 10). Among the sons of craftsmen, shopkeepers and other non-agricultural self-employed people, 12.6% are under 1.70 m tall. This figure rises to 18.5% among those who are downgraded to blue-collar workers, and to just 9.3% among those who are upwardly mobile and occupy senior management or intermediate professions. Tall height is positively associated with upward social mobility among men for whom this type of mobility makes sense, i.e. sons of blue-collar and white-collar workers.

### **The short man must compensate in order to seduce**

Short men appear to be less of a "catch" than tall men in terms of career expectations at the time of coupling. But short stature is not just a leading indicator of future professional careers. Certainly, as shown by work on socio-economic homogamy (Bozon and Héran, 1987) or on expectations expressed in matrimonial ads (de Singly, 1984), and as confirmed by the results previously commented on in table 4, the man's abilities as a "provider of resources" are primordial factors. On the other hand, it is doubtful whether short stature is interpreted by future spouses only in this way. In fact, this *ex-post* information on the professional future is not

available *ex-ante* when the spouses choose each other. Nor is it an explicit part of commonplace stereotypes about marriage. Last but not least, during the marriage process, women don't just have their partner's career in mind, or even the desire to see him devote himself too exclusively to it. Other, more privately-oriented skills are also weighed in the balance, especially when the process of pairing up, which is gradual and informal, allows these qualities to be tested. And yet, as we said earlier, short men are no less hard-working than taller men, and don't combine traits that would make them more difficult companions to bear in married life.

Short men do not differ from medium or tall men in terms of unbalanced diet, higher consumption of alcoholic beverages, more frequent obesity (4), or less participation in sport (cf. table 11). Large men outnumber small and medium men in the number of cigarettes smoked per day. In other words, short men do not accumulate physical traits and lifestyle habits that, in collective representations, are described as nuisances or defects that hinder married life.

The INSEE survey does not provide much information on personality or character traits. However, this is obviously a second type of element that is taken into account when the couple is formed and throughout their life together. Here too, the findings are not unfavorable to shorter men. They don't complain about their standard of living any more than medium-sized or large men (all other things being equal, in particular education and profession, see table 12). They are no more reckless with their money, and their bank overdrafts are no more frequent than those of medium-sized or large men (all things being equal, including age, qualifications and professional category). Their personal lives don't make them more anxious or stressed (all things being equal, including profession and marital status). Admittedly, they do experience more loneliness than the medium and large age groups. But this feeling is due to the fact that they more often live outside their couple. Once their marital status is taken into account, they don't feel any more lonely than older people.

While they don't appear to be less suited to married life, shorter men are less likely to be in a relationship. Admittedly, many of them have escaped loneliness and found a partner. But they have had to compensate for this. The delay in pairing up, which is so marked in the case of short men (see table 1), can be interpreted in this way. By remaining single for longer, these men have acquired more maturity when it comes to forming a couple. Particularly in the workplace, they have demonstrated their seriousness and appear to be reliable providers of resources. They are therefore in a position to compensate for their small size. But they have had to age a little more than the taller ones before succeeding in forming a couple. The age gap between spouses may give way to a similar strategy (see table 13). Men are more likely to partner younger women the smaller they are (5). Whatever their age, shorter men have a better chance of seducing younger women. Some young and not-so-young women subscribe to the traditional view that much older men offer better guarantees of forming a stable couple (Bozon, 1990).

### **The social norm of the physically well-matched couple**

Men's short stature makes it more difficult to form a couple, as long as the partners respect a social convention: the height difference between men and women. A couple must be physically "well matched". The social norm makes it desirable for a man to be taller than his wife, without the gap being either too small or too large. Admittedly, this is not a criminal law. However, when this convention is not respected, it gives rise to informal sanctions in everyday life. Couples who don't match in height are noticed in the street. Comic strips and "humorous" advertising play on the comic effects of this marital flaw. This characteristic can get in the way of a couple's social or friendship aspirations. If you don't respect this social convention, you'll be punished for the rest of your life as a couple.

Short men are no more likely than tall men to form a mismatched couple, but this situation is more detrimental to them. On average, men are 12 cm taller than women, with a standard deviation of 8 cm. The definition of

"Stature-matched couples" are those where the height difference between the spouses is within the standard deviation: the man's height is then 4 to 20 cm greater than the woman's. This social norm is less respected by the sons of workers and farmers than by men from middle-class and lower-middle-class backgrounds. This social norm is less respected by the sons of workers and farmers than by men from bourgeois and petit bourgeois backgrounds (see table 14). The fact that a man in a couple has a smaller but not much smaller spouse (between 4 and 20 cm) is also less frequent among younger people, as this tradition of size matching tends to be perpetuated more among couples of older generations. It is also less respected in the Paris region - more cosmopolitan and with less conventional mores - than in the rest of France.

Men whose height is close to the average, due to the concentration of this population around the central values, have more choices for forming a "matched couple". Three quarters of men of average height form assorted couples. Among tall men, only half form matched couples, the other half being made up of men at least 21 cm taller than their partner. Less than 1% of tall men (over 1.80 m) are surpassed or equalized by their partner's height. This reversal of the height gap is least frequent among tall men and most frequent among short men. Among the latter, 53% form matched couples, 11% are the same height as their partner, but 15% are shorter. Compared to men of average height, short men are more likely to attract the attention and jokes associated with mismatched couples.

Some short men with spouses escape the mismatched couple. But then again, successful pairing is expensive. It requires free time (6). The social convention is relatively better followed if the short man didn't work too early (cf. table 14). He has therefore been able to devote his youth to cultivating his friendships, multiplying the number of opportunities to meet new people and thus giving himself the means to choose his spouse from a larger number of candidates. On the other hand, among the self-employed, where the work tool represents capital and the union has not lost its patrimonial dimension, the difference in size between spouses is sacrificed to a greater extent than among salaried workers (among salaried workers, however, blue-collar workers are the exception, and show relatively little respect for the convention of the physically matched couple). The journeyman or farm worker marries the boss's daughter and takes over from the father-in-law, even if the daughter is taller than him.

Taller men have just as much difficulty as shorter ones in following the matching rule within the couple. But they don't seem to suffer to the same degree as short men from informal sanctions when their couple is mismatched (cf. table 14). Among large men - this correlation is not found among medium-sized men - couple assortment is strongly linked to homogamy. There are two types of mismatched couples. The first is the classic case of female hypergamy, where a young girl from a modest background marries a bourgeois son. The second case of heterogamy is more remarkable, as it seems to indicate that the man's tall stature is not only a resource for him, but is also perceived as such by his partner. The tall man then comes from a lower social background than his wife. His tall stature is one of the positive resources that contribute to his upward social mobility through marriage or partnership, either through beauty or a promising career. In support of this hypothesis, it should be noted that this behavior is that of economically more independent women who, among other characteristics, give priority to looks when choosing a spouse. They are relatively wealthier, but also relatively freer. Their preferences are taken into account by their spouses, both during the couple's life and at the time of its formation, to a greater extent than those from more modest social backgrounds.

### **Beauty and equality in the choice of spouse**

If the men from a given region (see Box 2) or social or ethnic origin are tall, a woman who prefers a husband from her region or social or ethnic origin also has a good probability of having a tall husband, even if she is insensitive to the seduction of tall stature. If regional, ethnic or social homogamy plays an equivalent role, whatever the man's height (which is not the case for the Béarn farmers studied by Bourdieu), then the shadow of the group does not disadvantage short men in the formation of couples.

A second attitude characterizes advanced industrial societies. A man's tall stature is perceived as an ability to command, a hidden skill that is not measured by educational qualifications, but which counts in the pursuit of a professional career. So if women prefer tall men as partners, it's not because the latter possess one of the characteristics of masculine beauty, but rather because they anticipate their spouse's professional success to benefit their household. In this second behavior, shorter men are at a disadvantage, without being stigmatized for their physique. Height as an indicator of male beauty is a third hypothesis, similar to that outlined by Michel Bozon (1990) to explain the age gap between spouses. This gap is greater when women are unemployed, and tends to diminish in environments where women have high educational qualifications. As the conditions for choosing a spouse change, women have more power in the decision and place less value on the spouse as a provider of resources. The growing importance of male beauty - and in particular tall stature - in the formation of a couple is part of the same explanation. Women, better educated and better integrated into the job market, behave towards men in the same way as men behaved towards women in previous generations. Relations between men and women are tending to become more egalitarian, but on the other hand, inequality between men and women in access to spouses is on the increase (7). In the future, more than in the past, shorter men are likely to be discriminated against in marriage because of their stature. Unless the couple feels more socially obliged to be physically matched.

## Notes

1. *The Enquête Permanente sur les Conditions de Vie (EPCV) (Continuous Survey on Living Conditions) of May 2001 questions, for metropolitan France, one person among household members over 15 years of age on their health behaviors. For metropolitan France, the 2001 wave of the European Panel contains information on all household members aged 15 and over, including spouses when the household includes one. This completes the analysis.*
2. *Among those aged 30 to 50, short women in their birth cohort are no less likely to be in a couple than medium women, while tall women are more likely to be in a couple (see table 2). Between the ages of 51 and 69, on the other hand, women of short stature in their birth cohort are less likely to be in a couple than those of medium or tall stature. At this point in the life cycle, the effects of men's earlier mortality reduce women's opportunities to couple (or re-couple). Smaller women suffer more from this situation on the "secondary market" (de Singly, 1984).*
3. *Height is an important physical characteristic when women recount their first encounter with their future spouse (Bozon and Héran, 1987).*
4. *It's the big kids who watch their weight the most, judging by their more frequent use of the scales to weigh themselves.*
5. *Managers and higher intellectual professions, more than other social classes, are in couples with women younger than themselves (cf. table 13). As a result, as de Singly (1982) has shown, women whose long studies delay their entry into a couple have more difficulty finding a partner with the same level of education.*
6. *Education, on the other hand, is not compensated for. Among working men living with a partner, 32% have higher qualifications than their spouse, and 28% have lower. The gap in favor of men is relatively greater among older working people, and it evolves in favor of women in the younger generations. It is in favor of men among executives and higher intellectual professions, and in favor of their spouses among white-collar and blue-collar workers. But there is no effect of height. A highly educated man does not compensate for his short stature by marrying a woman whose qualifications are lower than his own.*
7. *Houellebecq has been railing against this trend since his first novel (1994). He has his hero say: "Just like unbridled economic liberalism, and for similar reasons, sexual liberalism produces phenomena of absolute impoverishment".*



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### Box 1 THE GROWTH OF GENERATIONS: FASTER IN MEN

On average, younger generations are taller than older generations (see table A). Men and women do not progress in height at the same speed. Charraud and Valdelièvre noted in 1980 that *"the difference in stature between generations is much less marked among women"*. Men are taller on average than women, and increase this relative advantage. In France, for example, the difference in men's height was 12.2 cm on average among adults in 2001 (men are considered to have reached their full height by the age of 20). This difference has increased over the last thirty years. It was only 9.7 cm in 1970, rising to 11.0 cm in 1980 and 11.6 cm in 1991, the dates of the last three *Health Surveys* (Bodier, 1995). We may wish to correct this calculation, which does not take into account the mortality differential between men and women. However, the lesser growth of women is just as clear-cut for 20-29 year-olds observed successively at ten-year intervals. Women aged 20-29 measured an average of 161.6 cm in 1970, and had gained just 3 cm by 2001. Among men of the same age, average height reached 172.5 in 1970 and 177.0 in 2001, an increase of 4.5 cm over the same thirty-year period.

There are various explanations for this growth. The most common explanation is the decline in poverty. As early as the mid-19th century, Villermé formulated this hypothesis with precision: *"The height of men becomes all the higher (...) that, all things being equal, the country is richer, ease more general; that housing, clothing and especially food are better and that the pains, fatigues and especially privations experienced in childhood and youth are less great; in other words, misery, that is to say the circumstances that accompany it, produces small heights (...)"* (Sutter, Izac and Toan, 1958). (Sutter, Izac and Toan, 1958). Height depends on material living conditions, especially diet during childhood and adolescence. This thesis, which remains true for poor countries, is not sufficient to account for the growth in wealthy countries where, like France, the incomes of families with children have been the focus of special attention from public authorities for over half a century. The 20-29 year-olds in 1980 were born in the middle of the *Trente Glorieuses*. Barring exceptional situations, their childhood deprivations were not comparable to those experienced by families during the Second World War. It is therefore understandable that these young people are 1.0 cm taller than the 20-29 cohort in 1970, who were children during the war and the immediate post-war period. On the other hand, malnutrition in childhood and adolescence does not explain why the 20-29 year-olds of 1991 gained 2.3 cm more than those of the same age in 1980. It explains even less well why the increase in height continued in the following decade. Young men in 2001, compared with the same age group in 1991, gained on average just under a centimeter.

A second hypothesis frequently put forward is that of manual labor. When a young boy starts working in manual jobs before he has finished growing, his final height is reached later. *"In 1850, a 20-year-old conscript with a stature of 1.62 m would reach his definitive height, say 1.65 m, at around 25 years of age. The conscript of the 1970s, on the other hand, generally reached this height by the age of 19-20"* (Charraud and Valdelièvre, 1980). The precociousness of hard work does not only have the effect of delaying growth. When these jobs place excessive demands on muscular strength at a time when the bones have not yet reached full development, the final height is lower than it would have been if the person had been educated throughout childhood and adolescence, instead of working in jobs requiring physical strength.

This hypothesis is compatible with what we know about the lengthening of schooling over the decades following the Second World War, and in particular the age of compulsory education. As long as they are in school, children and teenagers are protected from working conditions in agriculture and industry that are detrimental to their growth, especially when it comes to male jobs. In fact, a large proportion of the older generations in 2001 did not benefit from this situation: 32% of the over-30s in 2001 started work before the age of 15.

Final height is sensitive to several factors, whose respective effects are established all things being equal (see table B). Men and women are taller the younger they are. The North (Nord and Pas-de-Calais departments) and East have taller inhabitants, and those in the West (Brittany, Poitou-Charentes and Val-de-Loire) shorter, than those living in other regions (a regression of height on the same explanatory factors but carried out on the population of those living in their region of birth gives the same results). Workers are smaller and stand out from men in other occupational categories (including farmers). Social background contrasts middle-class men (sons of employees and intermediate professions), who are taller, with other social backgrounds. The sons of managers are not differentiated by height from the sons of farmers, craftsmen or shopkeepers, and the sons of blue-collar workers. Finally, early work - for which the age at which a person leaves school is an indicator - has a negative effect on final height for men, all things being equal.

La comparaison avec les femmes fait ressortir peu de différence. Cependant, la précocité au travail ne semble pas avoir des effets aussi forts ni aussi réguliers que chez les hommes. Les filles aident au travail domestique davantage dans les milieux populaires. Mais leur travail rémunéré ne nécessite pas autant de force que celui des hommes lorsqu'il commence avant la fin de l'adolescence. On peut alors comprendre pourquoi l'amélioration des conditions du travail celui des femmes. Mais (cf. tableau B), il faut attribuer le plus rapide grandissement générationnel des hommes à leur entrée de plus en plus tardive sur le marché de l'emploi.

Table A

**Average height at ten-year intervals by gender and age****1 - Men**

	1970	1980	1991	2001
20 to 29 years old	1,725	1,741	1,764	1,770
30 to 39 years old	1,708	1,730	1,748	1,763
40 to 49 years old	1,700	1,712	1,732	1,750
50 to 59 years	1,691	1,704	1,719	1,728
60 to 69 years	1,681	1,688	1,701	1,726
70 and over	1,678	1,691	1,690	1,703
<b>Set</b>	<b>1,701</b>	<b>1,716</b>	<b>1,731</b>	<b>1,741</b>
<i>Standard deviation</i>	<i>0,072</i>	<i>0,068</i>	<i>0,072</i>	<i>0,071</i>

In m

**2 - Women**

*Reading: this table completes for 2001 the one published by M. Bodier (Insee Première n° 356, 1995). The rows show generation growth, the columns show differences in size between generations, and the diagonals show the same birth cohorts from one decade to the next.*

*Sources: Santé surveys, 1970, 1980 and 1991 and Enquête permanente sur les conditions de vie, May 2001, Insee.*

Table B

## Socio-economic size factors

	The men		The women	
	Parameter	Standard deviation	Parameter	Standard deviation
Constant	181,9***	0,74	168,0***	0,68
Build	0,15	0,17	- 0,57***	0,14
Age of person	- 0,16***	0,01	- 0,09***	0,01
<b>Inhabited area</b>				
Paris region	- 1,10*	0,58	- 2,44***	0,52
Paris Basin	- 1,23***	0,48	- 1,85***	0,43
Mediterranean	- 1,58***	0,54	- 1,78***	0,49
East	- 0,52	0,60	- 0,89	0,54
West	- 2,21***	0,51	- 2,89***	0,45
Southwest	- 1,74***	0,55	- 2,60***	0,49
Center-East	- 1,65***	0,54	- 1,93***	0,49
<i>North</i>	<i>Ref.</i>		<i>Ref.</i>	
<b>Person's occupation</b>				
Farmer	2,26***	0,54	0,79	0,53
Craftsman, merchant, contractor	2,16***	0,45	1,60***	0,53
Executive, liberal profession, higher intell. prof.	2,67***	0,40	2,35***	0,50
Intermediate occupation	2,01***	0,33	1,38***	0,38
Employee	1,72***	0,41	1,08***	0,31
<i>Worker</i>	<i>Ref.</i>		<i>Ref.</i>	
<b>Father's occupation</b>				
Farmer	- 0,17	0,37	0,55*	0,32
Craftsman, merchant, contractor	0,49	0,40	0,14	0,36
Executive, liberal profession, higher intell. prof.	0,69	0,49	0,67	0,43
Intermediate occupation	0,94**	0,43	0,95***	0,36
Employee	1,10***	0,40	0,51	0,35
<i>Worker</i>	<i>Ref.</i>		<i>Ref.</i>	
<b>School-leaving age</b>				
13 and under	- 1,06***	0,39	- 0,55*	0,33
14 or 15 years	- 1,04**	0,48	- 0,44	0,41
16 or 17 years old	- 0,71	0,49	- 0,77*	0,43
18 or 19 years old	- 0,33	0,47	- 0,62	0,40
20, 21 or 22 years old	- 0,35	0,48	- 0,81**	0,39
<i>23 and over</i>	<i>Ref.</i>		<i>Ref.</i>	

Reading: men's and women's height are regressed separately on the same set of variables. \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, Réf. : reference category.

Scope: 30 years and over, metropolitan France. Source: European Panel, wave 2001, Insee.

## Box 2

**BIG IN THE NORTH AND SMALL IN THE WEST**

Among European populations, men and women in the North are taller than those in the South. A similar contrast emerges, even when we look at France alone (1). In the 2001 permanent survey on living conditions, men living in the Nord and Pas-de-Calais departments had an average height of 176.1 cm, and those living in the West (Brittany, Pays de la Loire and Poitou-Charentes) 172.6 cm (see table). For women living in these two large regions, the average difference is smaller, but in the same direction as that between men in these two regions. The Paris region, where the intermingling due to geographic mobility is both older and higher than in the rest of France, occupies an intermediate position in terms of average height, among both men and women. In the 1970 *Health Survey* (Charraud and Valdelièvre, 1980), the average difference between this region and the West, to the advantage of the North, is also observed, but is less significant (2 cm in 1970 instead of 3.5 cm in 2001 for men, and 1 cm in 1970 for women instead of 2.4 for women in 2001). These disparities, linked to the genetic characteristics of the population according to region of birth, are therefore not tending to diminish.

*1. Foreigners living in France mainly come from southern Europe (Spain, Portugal) and North Africa. There are too few of them in the survey to give rise to any specific analysis of their average size.*

Table **Region of residence and average height by gender and age****1 – Men**

In m

	Paris region	East	North	West
20 to 29	1,774	1,767	1,778	1,751
30 to 39	1,765	1,782	1,799	1,750
40 to 49	1,745	1,732	1,775	1,746
50 to 59	1,727	1,725	1,738	1,712
60 to 69	1,744	1,725	1,738	1,715
70 and more	1,708	1,716	1,709	1,680
<b>All</b>	<b>1,748</b>	<b>1,743</b>	<b>1,761</b>	<b>1,726</b>

**2 - Women**

In m

	Paris region	East	North	West
20 to 29	1,644	1,649	1,665	1,635
30 to 39	1,641	1,641	1,645	1,634
40 to 49	1,627	1,627	1,628	1,617
50 to 59	1,627	1,633	1,623	1,605
60 to 69	1,608	1,615	1,615	1,592
70 and more	1,591	1,580	1,623	1,587
<b>All</b>	<b>1,625</b>	<b>1,624</b>	<b>1,633</b>	<b>1,609</b>

*Reading: information for all regions is given in table B of box 1. Scope: 20 years and over.*

*Source: Enquête permanente sur les conditions de vie, May 2001, Insee.*

Table 1

**Men living in the household with their spouse**

In % of category by size and age

	Less than 1.70 m	From 1.70 m to 1.80 m	Over 1.80 m	Set	<i>Workforce</i>
20 to 29 years old	n.s.	41	47	42	319
30 to 39 years old	60	76	74	73	435
40 to 49 years old	66	77	78	75	395
50 to 59 years	65	73	79	72	374
60 to 69 years	72	71	82	73	281
70 and over	66	59	n.s.	64	332

*Reading: 41% of men aged between 20 and 29, with a height between 1.70 m and 1.80 m, live in their household with their spouse. Men living alone and young (and not so young) people living with their parents or in another type of household, without knowing whether or not they have a spouse, make up the 100% complement. n.s.: not significant. not significant.*

*Scope: men aged 20 and over, metropolitan France.*

*Source: Enquête permanente sur les conditions de vie (EPCV), May 2001, Insee.*

Table 2. Living with or without a partner by gender, birth cohort and age group

	Small in their birth cohort	Means in their birth cohort	Large in their birth cohort	Set
<b>Between 30 and 50</b>				
<b>Men</b> ( <i>headcount</i> )	229	1 441	225	1 895
In couple	78	82	83	82
Outside couple	22	18	17	18
Set	100	100	100	100
<b>Women</b> ( <i>headcount</i> )	268	1 418	263	1 949
In couple	79	80	84	81
Outside couple	21	20	16	19
Set	100	100	100	100
<b>Between 51 and 69</b>				
<b>Men</b> ( <i>headcount</i> )	169	921	139	1 229
In couple	82	88	88	87
Outside couple	18	12	12	13
Set	100	100	100	100
<b>Women</b> ( <i>headcount</i> )	192	989	170	1 351
In couple	69	75	74	74
Outside couple	31	25	26	26
Set	100	100	100	100

Reading: observed height is related to the height distribution of the birth cohort to which the respondent belongs. Small people are those whose height is below the average height of their birth cohort, minus its standard deviation. Large is defined as those whose height is above the mean height of their birth cohort, to which has been added their standard deviation. This corrects for generation creep. Scope: men and women aged between 30 and 69. Source : European Panel, wave 2001, Insee.

Table 3. Average height by socio-professional category and gender in 1970 and 2001

In cm

	Men		Women	
	2001	1970	2001	1970
Agricultural employees	176,3	167,5	/	/
Farmers	174,2	169,0	162,3	162,0
Craftsmen, shopkeepers, business owners	175,2	171,0	162,7	160,5
Senior executives, professionals	177,6	173,0	163,6	162,5
Middle management	175,0	172,5	163,6	161,5
Employees	174,5	171,0	162,6	161,0
Workers	174,4	170,0	161,8	160,5
Service personnel	176,8	169,5	162,3	160,0
Retirees	175,5	168,0	159,9	158,5
Housewives	/	/	160,8	160,5
Students	176,0	175,5	165,1	162,0
<b>Set</b>	<b>174,1</b>	<b>170,1</b>	<b>161,9</b>	<b>160,4</b>

*Scope: over-20s, metropolitan France.*

*Sources: Santé survey, 1970 (Charraud and Valdelièvre, 1981) and Enquête permanente sur les conditions de vie, May 2001, Insee.*



Table 4. Life as a couple: men's height and other socio-demographic factors

	Estimated parameter	Standard deviation
Constant	2,11***	0,35
<b>Size</b>		
Grande	0,09	0,15
<i>Average</i>	<i>Ref.</i>	
Small	0,55***	0,17
Normal <b>build</b> <i>Overweight</i>	- 0,30** <i>Ref.</i>	0,13
<b>Age of person</b>		
20 to 29 years old	- 0,86***	0,18
30 to 39 years old	0,16	0,16
<i>40 to 49 years old</i>	<i>Ref.</i>	
50 to 59 years	0,17	0,18
60 to 69 years	- 0,24	0,23
<b>Inhabited area</b>		
Paris region	- 0,28	0,22
<i>Paris Basin</i>	<i>Ref.</i>	
North	0,56*	0,31
East	0,01	0,24
West	- 0,10	0,22
Southwest	- 0,07	0,24
Center-East	- 0,23	0,23
Mediterranean	- 0,46*	0,25
<b>Municipality of residence</b>		
Urban units of 100,000 inhabitants or more	- 0,39***	0,14
<b>School level</b>		
No diploma	0,09	0,27
Primary/secondary or technical	0,01	0,23
Primary/secondary and technical	0,15	0,23
<i>Undergraduate</i>	<i>Ref.</i>	
2nd and 3rd cycles	- 0,21	0,31
Grandes écoles	- 0,45	0,36
<b>Person's occupation</b>		
Farmer, craftsman, shopkeeper	0,08	0,25
Business owner, liberal profession	0,95*	0,58
Public service executive, teacher	- 0,17	0,65
Private sector executives and information and entertainment professionals	- 0,63	0,62
Engineer	- 0,76	0,64
<i>Intermediate occupation</i>	<i>Ref.</i>	
Employee	- 0,72***	0,21
Worker	- 0,24	0,18
<b>Nationality</b>		
French born in France	- 0,61***	0,21
<b>Activity status</b>		
Unemployed	- 0,81***	0,23

Reading: the dependent variable is dichotomous. The first modality (68%) is that of the man living with his spouse. For the second modality (32%), the man lives alone or with a child (possibly with one of his parents) but without a spouse. Active children over 20 years of age who have not left their parents' home are also classified in this modality. \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, Réf. : reference category.

Scope: working men aged 20 to 69, including those unemployed at the time of the survey. Source: Enquête permanente sur les conditions de vie, May 2001, Insee.

Table 5. **Opinions on working conditions**

	Significant physical effort	Staying on your feet for long periods	Being exposed to major nuisances	Handling toxic or hazardous products	At work feeling nervous, anxious, stressed	Immediate response to external demand	Hierarchical control and supervision
Constant	- 1,75***	- 0,64**	- 0,87***	- 1,14***	- 1,99***	0,01	- 0,85***
<b>Size</b>							
Grande	- 0,03	- 0,03	0,03	0,03	0,19	0,42**	0,49***
<i>Average</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	0,38**	0,37**
Small	0,27	- 0,06	0,09	0,14	0,07	<i>Ref.</i>	<i>Ref.</i>
Normal build <i>Overweight</i>	0,13 <i>Ref.</i>	0,17 <i>Ref.</i>	0,13 <i>Ref.</i>	0,01 <i>Ref.</i>	- 0,18* <i>Ref.</i>	0,00 <i>Ref.</i>	- 0,14 <i>Ref.</i>
<b>Age</b>							
20 to 29 years old	0,13	0,09	- 0,14	- 0,08	- 0,32**	- 0,19	0,12
30 to 39 years old	0,14	- 0,02	- 0,11	0,02	- 0,12	0,15	- 0,20
<i>40 to 49 years old</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
50 to 59 years	- 0,30	0,03	- 0,33*	- 0,03	- 0,10	0,27	- 0,39**
60 to 69 years	- 0,04	- 0,02	- 0,89	- 1,02	- 0,70*	0,99*	- 0,62**
<b>Inhabited area</b>							
<i>Paris region</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Paris Basin	- 0,05	0,16	- 0,08	0,17	0,09	- 0,05	0,01
North	0,15	0,34	0,31	0,38	0,01	0,00	0,01
East	- 0,16	0,19	0,07	0,18	- 0,00	- 0,15	- 0,15
West	- 0,01	0,28	0,16	0,35	- 0,13	- 0,27	0,05
Southwest	/	/	/	/	/	- 0,23	0,17
Center-East	- 0,11	0,43*	- 0,12	0,16	0,10	- 0,34	0,18
Mediterranean	0,09	0,33	0,41*	0,38*	0,20	- 0,15	0,20
<b>Municipality of residence</b> UU 100,000 + inhabitants	- 0,08	- 0,15	- 0,10	0,03	0,22*	0,15	0,00
<b>School level</b>							
No diploma	1,011***	0,43	0,48*	- 0,32	0,01	- 0,81***	0,28
Primary/secondary or techn.	0,58**	0,40*	0,40*	- 0,21	0,11	- 0,19	0,08
Primary/secondary and technical	0,52**	0,27	0,35	- 0,06	0,09	- 0,04	- 0,01
1st cycle univ.	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
2nd and 3rd cycles univ.	0,03	0,35	- 0,40	- 1,14***	- 0,23	- 0,35	- 0,52*
Grandes écoles	- 0,39	- 1,27***	- 0,81*	- 2,41***	- 0,17	- 1,14***	- 1,19***
<b>Profession</b>							
Independent	1,42***	0,85***	0,60***	1,34***	0,42**	- 0,21	- 3,25***
Executive, professional, higher intel.	- 0,80***	- 0,48**	- 0,56**	- 0,34	0,37*	1,03**	- 1,26**
<i>Intermediate prof.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Employee	0,34	0,37*	- 0,16	- 0,37	- 0,21	0,10	0,44*
Worker	1,23***	1,28***	1,36***	0,87***	- 0,18	- 0,92***	0,62***
<b>Family situation</b> Single person	- 0,21	- 0,15	- 0,28*	- 0,32*	- 0,09	- 0,03	0,01

Reading: \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, *Ref.* : reference category. Scope : working men aged 20 to 69, excluding those unemployed at the time of the survey.

Source: Enquête permanente sur les conditions de vie, May 2001, Insee.

Table 6. Unemployment does not affect shorter men more

	Estimated parameter	Standard deviation
Constant	- 0,379***	0,61
<b>Size</b>		
Grande	- 0,18	0,35
<i>Average</i>	<i>Ref.</i>	
Small	0,08	0,30
Normal <b>build</b> <i>Overweight</i>	0,28 <i>Ref.</i>	0,23
<b>Age of person</b>		
20 to 29 years old	0,11	0,32
30 to 39 years old	- 0,24	0,30
<i>40 to 49 years old</i>	<i>Ref.</i>	
50 to 59 years	0,22	0,30
60 to 69 years	- 0,41	1,07
<b>Inhabited area</b>		
<i>Paris region</i>	<i>Ref.</i>	
Paris Basin	0,15	0,40
North	0,71	0,44
East	- 0,68	0,54
West	0,59	0,39
Southwest	0,30	0,42
Center-East	0,42	0,50
Mediterranean	0,49	0,40
<b>Municipality of residence</b>		
Urban unit 100,000 inhabitants or more	0,39	0,25
<b>School level</b>		
No diploma	1,13**	0,50
Primary/secondary or technical	0,26	0,47
Primary/secondary and technical	0,37	0,47
<i>Undergraduate</i>	<i>Ref.</i>	
2nd and 3rd cycles	- 0,09	0,60
Grandes écoles	0,44	0,62
<b>Profession</b>		
Independent <i>Managers, professionals and higher intellectual professions and intermediate professions</i>	- 0,46 <i>Ref.</i>	0,49
Employee	0,20	0,37
Worker	0,29	0,30
<b>Family situation</b>		
Single person	0,28	0,25

Reading: the table studies the possible influence of height on unemployment (among working men aged 20-69, 7% are unemployed). \*\*\* : significant at 1% level, \*\* : significant at 5% level, Réf. : reference category.

Scope: working men aged 20-69, including those unemployed at the time of the survey. Source: Enquête permanente sur les conditions de vie, May 2001, Insee.

Table 7. Early school-leaving age and low level of qualifications

	Early school leaving		Low level of education	
	Estimated parameter	Standard deviation	Estimated parameter	Standard deviation
<b>Size</b>				
Grande	- 0,28***	0,09	- 0,26***	0,07
Average	Ref.		Ref.	
Small	0,50***	0,08	0,48***	0,08
<b>Age of person</b>				
20 to 29 years old	/		- 0,60***	0,11
30 to 39 years old	- 0,34**	0,11	- 0,20**	0,10
40 to 49 years old	Ref.		Ref.	
50 to 59 years	0,20***	0,10	- 0,20**	0,10
60 to 69 years	1,03***	0,11	0,54**	0,10
70 and over	1,95***	0,12	0,76***	0,11
<b>Father's profession</b>				
Farmer	1,37***	0,12	0,83***	0,11
Craftsman, shopkeeper and other self-employed	- 0,06	0,13	- 0,09	0,12
Managers and professionals	- 1,63**	0,16	- 1,64***	0,13
Intermediate occupation	Ref.		Ref.	
Employee	0,40***	0,14	0,11	0,12
Worker	0,85***	0,11	0,57**	0,08

Reading: early school-leaving age is an ordered variable. The most precocious left school before age 14, the least precocious after age 22. Low level of schooling is a second ordered variable. Levels are lowest for those who left school without a diploma. It is highest for graduates of grandes écoles. \*\*\* : significant at 1% level, \*\* : significant at 5% level, Réf. : reference category.

Fields: 1) men aged 30 and over in 2001 for the first polytomous regression (population = 2,767);

2) men aged 20 and over for the second (headcount = 3,807). Source: European Panel, 2001, Insee.

Table 8. Supervisory responsibilities in the job

	Estimated parameters				
	Independent (n = 328)	Public sector employee (n = 695)	Private-sector employee (n = 1,864)	Intermediate professions, employees and workers in the private sector (n = 1,610)	All employed at the time of the survey
Constant 1	- 0,53	- 2,02***	- 1,72***	- 1,74***	- 1,55***
Constant 2	- 0,26	- 0,34	- 0,59***	- 0,44***	- 0,50***
<b>Size</b>					
Grande	0,45*	0,24	0,22	- 0,08	0,26**
<i>Average</i>	<i>Ref.</i>	0,15	0,24*	<i>Ref.</i>	0,17
Small	0,50	<i>Ref.</i>	<i>Ref.</i>	- 0,29*	<i>Ref.</i>
<b>Build</b>					
<i>Normal (incl. too skinny)</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Overweight	0,22	0,06	- 0,04	- 0,14	0,05
Obesity	0,76	0,28	- 0,14	0,04	0,06
<b>Age of person</b>					
20 to 29 years old	- 1,48***	- 1,07***	- 0,86***	- 0,55***	- 1,04***
30 to 39 years old	- 0,03	- 0,42**	- 0,28**	- 0,11	- 0,31***
<i>40 to 49 years old</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
50 to 59 years	- 0,32	0,26	- 0,13	- 0,28	0,00
60 to 69 years	- 0,69	0,93	0,53	- 0,17	0,45
<b>Inhabited area</b>					
Paris region	0,55	0,08	0,04	- 0,32	0,12
<i>Paris Basin</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
North	0,58	0,29	- 0,05	- 0,06	0,06
East	0,03	0,18	0,25	0,15	0,26*
West	- 0,34	- 0,06	0,01	0,02	0,01
Southwest	- 0,36	0,08	- 0,09	- 0,07	0,07
Center-East	- 0,46	- 0,17	0,10	0,01	0,05
Mediterranean	- 0,14	- 0,24	- 0,25	- 0,24	- 0,05
<b>School level</b>					
No diploma	- 0,35	- 1,12***	- 0,75***	- 0,65***	- 0,78***
Primary/secondary or technical	0,02	0,20	- 0,33**	- 0,32**	- 0,14
<i>Primary/secondary and technical</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Undergraduate	1,27**	0,27	0,55***	0,49**	0,42***
2nd and 3rd cycles	2,10**	0,32	1,25***	0,64*	0,73***
Grandes écoles	1,96**	1,37***	1,01***	0,54	1,01***

Reading: in the polytomous regression, the dependent variable is ordered according to three response modalities: 1. supervisory responsibility with power over the salary and/or career of those supervised; 2. supervisory responsibility but without power over the career or salary of those supervised; 3. without supervisory responsibility. \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, Ref. : reference category.

Scope: working men aged 20-69, excluding those unemployed at the time of the survey. Source: European Panel, 2001, Insee.

Table 9. Upward mobility of men aged 40 and over without qualifications

	Estimated parameter	Standard deviation
Constant	- 3,38***	0,67
Size		
Grande	1,20**	0,53
Average	0,61	0,48
<i>Small</i>	<i>Ref.</i>	
Age of person		
<i>40 to 49 years old</i>	<i>Ref.</i>	
50 to 59 years	0,27	0,33
60 to 69 years	1,50**	0,76
Municipality of residence		
Urban unit 100,000 inhabitants or more	0,48	0,36
Inhabited area		
<i>Paris region</i>	<i>Ref.</i>	
Paris Basin	0,12	0,55
North	- 0,40	0,71
East	- 0,15	0,63
West	0,33	0,58
Southwest	- 0,55	0,67
Center-East	- 0,18	0,63
Mediterranean	- 0,90	0,83
School level		
No diploma	0,29	0,43
Primary, secondary or technical	0,12	0,35
<i>Primary, secondary and technical</i>	<i>Ref.</i>	

Reading: the dependent variable is dichotomous. The first modality is upward career mobility. The first type of itinerary is that of non-graduates who have become entrepreneurs, senior executives or professionals. The second type, which is grouped with the first, is that of those with no qualifications who became foremen or technicians. \*\*\* : significant at 1% level, \*\* : significant at 5% level, *Ref.* : reference category.

Field: working men aged 40-69 with no higher education qualifications.

Source: Enquête permanente sur les conditions de vie, May 2001, Insee.

Table 10. Career mobility for a given social background

in % of sales

Father's occupation	Less than 1.70 m	From 1.70 m to 1.80 m	Over 1.80 m	Set	Workforce % of C.S
<b>Farmers</b>					
Set	22,4	53,4	19,2	100,0	286
Upwardly mobile	17,8	60,3	21,9	100,0	26 %
<b>Craftsman, merchant, contractor</b>					
Set	12,6	68,5	18,9	100,0	254
Upwardly mobile	9,3	70,4	20,3	100,0	38 %
<b>Employee</b>					
Set	14,9	63,0	22,1	100,0	262
Upwardly mobile	10,0	75,0	15,0	100,0	24 %
<b>Worker</b>					
Set	20,5	64,6	14,9	100,0	799
Upwardly mobile	16,6	68,3	15,2	100,0	36 %

*Interpretation: upward social mobility is defined as a function of social origin. Among sons of the self-employed (farmers, shopkeepers, craftsmen, other entrepreneurs) and among sons of white-collar workers, those who have risen up the social ladder are those who have become managers or intermediate professions. Among sons of blue-collar workers, those on the way up are managers and intermediate professions, as well as craftsmen, shopkeepers and other entrepreneurs. 22.4% of farmers' sons are of small stature, and only 17.8% of those on the rise.*

*Scope: working men aged 20-69 in employment at the time of the survey. Source: European Panel, 2001, Insee.*

Table 11. Lifestyle

	Estimated parameters				
	Balanced diet (1)	No alcohol today (2)	Low stature (3)	Frequent sports activity (4)	Non-smoking (5)
Constant 1	- 1,76***	- 0,32	- 4,34***	1,27***	0,89***
Constant 2	0,15	1,22***	0,45	- 0,45	1,12***
Constant 3	2,34***	3,35***	2,62***	- 0,01	1,54***
Constant 4	/	/	/	/	2,97***
<b>Size</b>					
Grande	- 0,03	0,01	0,01	0,07	- 0,22*
<i>Average</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Small	0,05	- 0,21	0,05	- 0,19	0,01
<b>Build</b>					
Normal	0,60***	0,01	/	0,40	- 0,33***
<i>Overweight</i>	<i>Ref.</i>	<i>Ref.</i>	<i>/</i>	<i>Ref.</i>	<i>Ref.</i>
<b>Age of person</b>					
20 to 29 years old	- 0,39**	0,50***	0,95***	0,44***	- 0,03
30 to 39 years old	- 0,22*	0,17	0,43***	0,28**	- 0,21
<i>40 to 49 years old</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
50 to 59 years	0,29**	- 0,41***	- 0,29*	- 0,09	0,32**
60 to 69 years	0,67	0,24	0,55	0,16	1,31**
<b>Inhabited area</b>					
<i>Paris region</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Paris Basin	0,42**	0,14	- 0,24	0,08	0,04
North	0,40*	- 0,53**	- 0,43*	- 0,24	0,04
East	0,51***	- 0,20	- 0,32	0,35*	0,14
West	0,23	- 0,20	0,35*	0,14	0,11
Southwest	0,30	0,03	0,07	0,16	0,06
Center-East	/	/	/	/	/
Mediterranean	0,02	0,07	0,06	0,06	0,14
<b>Municipality of residence</b>					
Urban unit 100,000 inhabitants or more	- 0,11	0,06	0,20*	0,03	- 0,06
<b>School level</b>					
No diploma	- 0,06	0,32	- 0,39	- 0,47**	- 0,62***
Primary/secondary or technical	0,03	0,21	- 0,33	- 0,20	- 0,36*
Primary/secondary and technical	0,05	0,02	- 0,52**	- 0,05	- 0,32
<i>Undergraduate</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
2nd and 3rd cycles	0,38	0,23	- 0,29	0,43*	- 0,14
Grandes écoles	0,28	0,13	- 0,11	- 0,03	0,07
<b>Profession</b>					
Independent	0,20	- 0,37*	- 0,11	- 0,46**	0,25
Executive, higher intellectual prof.	- 0,25	- 0,44**	0,06	- 0,03	0,01
<i>Intermediate occupation</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Employee	- 0,03	- 0,24	- 0,12	0,08	0,14
Worker	- 0,22	- 0,23	- 0,07	0,66***	- 0,38***
<b>Marital relationship</b>					
<i>Non-couple and single</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Couple	0,50***	- 0,14	- 0,16	- 0,45**	0,14
Outside couple in family of origin	0,31	0,56**	0,85***	0,06	0,39*
<b>Activity status</b>					
Unemployed	- 0,24	0,39*	0,30	- 0,40*	- 0,45**
1. The dependent variable orders several response modalities: the respondent's diet is 1) well-balanced ; 2) fairly balanced; 3) not very balanced; 4) not at all balanced. • The dependent variable orders several response modalities: 1) no alcoholic beverage at all; 2) only one type of alcoholic beverage; 3) two types of alcoholic beverage; 4) wine, aperitif and beer. • The dependent variable orders several response modalities: 1) lean calculated by body mass index; 2) normal; 3)					



overweight; 4) obese.

- The dependent variable orders several response modalities: sports activity 1) several times a week; 2) once a week; 3) a few times a month; 4. more rarely or never.
- The dependent variable orders several response modalities: daily cigarette consumption 1) none; 2) 1 to 5; 3) 6 to 10; 4) 10 to 20; 5) 20 and over including cigars, pipes and cigarette/cigar/pipe combination.

*Reading: \*\*\* : significant at 1% threshold, \*\* : significant at 5% threshold, \* : significant at 10% threshold, Réf. : reference category. Scope : working men aged 20-69, including those unemployed at the time of the survey.*

*Source: Enquête permanente sur les conditions de vie, May 2001, Insee.*

Table 12. **Personality and character**

	Estimated parameters				
	Positive opinion on standard of living (1)	Frequency of bank overdraft (2)	High nervousness in personal life (3)	Strong feeling of loneliness (4)	Lives in a single-family home (5)
Constant 1	- 2,24***	- 2,44***	- 2,94***	- 3,02***	0,12
Constant 2	0,10	- 1,45***	- 1,66***	- 1,86***	/
Constant 3	2,26***	- 0,74***	- 0,41	- 0,54	/
Constant 4	4,57***	/	/	/	/
<b>Size</b>					
Grande	0,10	- 0,04	0,15	0,27	0,50***
Average	Ref.	Ref.	Ref.	Ref.	Ref.
Small	- 0,10	- 0,15	0,07	0,18	0,32
<b>Build</b>					
Normal	- 0,02	- 0,12	- 0,01	0,03	- 0,15
Overweight	Ref.	Ref.	Ref.	Ref.	Ref.
<b>Age of person</b>					
20 to 29 years old	0,28*	0,55***	- 0,28*	- 0,56**	- 1,56***
30 to 39 years old	0,26*	0,23*	- 0,26*	- 0,21	- 0,38*
40 to 49 years old	Ref.	Ref.	Ref.	Ref.	Ref.
50 to 59 years	0,46***	- 0,95***	- 0,41***	0,21	0,51**
60 to 69 years	0,83**	- 0,39	- 0,49	0,04	0,22
<b>Inhabited area</b>					
Paris region	Ref.	Ref.	Ref.	Ref.	- 1,31***
Paris Basin	- 0,05	- 0,08	0,12	0,14	Ref.
North	- 0,58**	- 0,12	- 0,01	- 0,03	1,00***
East	0,33	- 0,07	- 0,06	- 0,07	- 0,87**
West	0,01	0,09	0,02	0,01	0,10
Southwest	- 0,13	- 0,10	0,32	0,05	0,06
Center-East	/	/	/	/	- 0,48*
Mediterranean	- 0,15	- 0,16	0,25	0,20	- 0,06
<b>Municipality of residence</b>					
Urban unit 100,000 inhabitants or more	0,06	0,21*	0,14	0,12	- 1,86***
<b>School level</b>					
No diploma	- 0,77***	0,61***	0,52**	0,16	- 0,06
Primary/secondary or technical	- 0,54***	0,48**	0,54***	0,17	0,08
Primary/secondary and technical	- 0,45**	0,40*	0,25	- 0,29	0,53*
Undergraduate	Ref.	Ref.	Ref.	Ref.	Ref.
2nd and 3rd cycles	- 0,14	0,36	0,11	0,61*	0,08
Grandes écoles	0,68**	- 0,36	0,11	0,61	- 0,23
<b>Profession</b>					
Independent	- 0,50***	0,06	0,17	0,26	0,48
Executives and professionals	0,65***	0,24	0,26	0,01	n.s. (6)
Intermediate occupation	Ref.	Ref.	Ref.	Ref.	Ref.
Employee	- 0,48***	- 0,28	- 0,10	0,30	- 0,68***
Worker	- 0,90***	- 0,01	0,03	0,24	- 0,25
<b>Marital relationship</b>					
Non-couple and single	Ref.	Ref.	Ref.	Ref.	Ref.
Two-earner couple	0,59***	- 0,04	- 0,30** (7)	- 2,17*** (7)	1,50***
Single-earner couple	- 0,12	0,04	- 0,32	- 1,17***	1,26***
Outside couple in family of origin	0,19	- 0,57**			2,49***
<b>Activity status</b>					
Unemployed	1,38**	0,36*	/	0,95***	/
<p>1. The dependent variable orders several response modalities: opinion on standard of living 1) you are comfortable; 2) it's going ;</p> <p>3) it's fair, you have to be careful; 4) it's hard to do; 5) you can't avoid debt.</p> <p>2. The dependent variable orders several response modalities: frequency of bank overdrafts 1) once a month ;</p> <p>2) more than twice a year; 3) once or twice a year; 4) never.</p> <ul style="list-style-type: none"> <li>The dependent variable orders several response modalities: in his/her personal life, the person feels nervous, anxious, stressed 1) very often; 2) often; 3) occasionally; 4) rarely or never.</li> </ul> <p>The dependent variable orders several response modalities: a feeling of loneliness is experienced 1) very often ;</p>					

2) often; 3) occasionally; 4) rarely or never.

- The dependent variable is dichotomous. The first modality is where the person lives in a detached house. The second is where the person lives in a collective dwelling.

Several modalities.

Grouped with "Person in bi-active couple".

*Reading: \*\*\* : significant at 1% threshold, \*\* : significant at 5% threshold, \* : significant at 10% threshold, Réf. : reference category. Scope: working men aged 20-69, including those unemployed at the time of the survey .*

*Source: Enquête permanente sur les conditions de vie, May 2001, Insee.*

**Table 13 Age gap within couples**

	Parameter	Standard deviation
Constant	- 128,18***	5,33
Man size	0,83***	0,02
Male build	- 0,07	0,17
Age of man	0,05***	0,01
<b>Home region</b>		
Paris region	1,45***	0,55
Paris Basin	1,46***	0,46
Mediterranean	1,11**	0,52
East	- 0,02	0,57
West	2,14***	0,48
Southwest	1,96***	0,52
Center-East	1,33***	0,52
<i>North</i>	<i>Ref.</i>	
<b>Man's profession</b>		
Farmer	0,74	0,53
Craftsman, merchant, contractor	- 0,41	0,44
Executive, liberal profession, higher intellectual profession	- 1,08***	0,39
Intermediate profession	- 0,29	0,31
Employee	- 0,26	0,39
<i>Worker</i>	<i>Ref.</i>	
<b>Father's profession</b>		
Farmer	- 0,75**	0,36
Craftsman, merchant, contractor	- 0,79**	0,39
Executive, liberal profession, higher intellectual profession	- 0,68	0,47
Intermediate profession	- 0,77*	0,41
Employee	- 0,57	0,39
<i>Worker</i>	<i>Ref.</i>	
<b>Age at which man left school</b>		
13 and under	0,17	0,38
14 or 15 years	0,14	0,47
16 or 17 years old	- 0,08	0,48
18 or 19 years old	0,61	0,46
20, 21 or 22 years old	0,14	0,46
<i>23 and over</i>	<i>Ref.</i>	
<b>Spouse's activity</b>		
Employed spouse	- 7,12*	4,12
<i>Spouse at home</i>	<i>Ref.</i>	

Reading: men are more likely to be in couples with older women the taller they are. The measurement of the age gap is ordered from women taller than their spouse. \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, *Ref.* : reference category.

Field: working men in couples.

Source: European Panel, wave 2001, Insee.

Table 14. Couples matched by stature

	Overall (n = 2,494)		Large (n = 289)		Small children (n = 300)	
	Parameter	Standard deviation	Parameter	Standard deviation	Parameter	Standard deviation
Constant	0,48	0,41	0,11	1,46	0,38	1,93
<b>Size in birth cohort</b>						
Grand	- 1,34***	0,14	/		/	
Medium	Ref.		/		/	
Small	- 1,14***	0,13	/		/	
<b>Homogamy</b>						
Hypogamous men	- 0,58***	0,24	- 1,70***	0,68	- 2,77*	1,47
Homogamous men	Ref.	0,14	Ref.	0,44	Ref.	0,64
Hypergamous man	- 0,26*		- 0,84**		- 0,60	
<b>Build</b>						
Slim	- 0,65	0,47	(1)		(1)	
Normal	Ref.		Ref.		Ref.	
Overweight	- 0,11	0,09	0,29	0,30	- 0,82**	0,33
Obese	- 0,37**	0,15	- 1,25**	0,57	- 0,82*	0,44
<b>Age of person</b>						
20 to 29 years old	Ref.		Ref.		Ref.	
30 to 39 years old	0,54	0,34	0,06	1,34	2,36*	1,32
40 to 49 years old	0,40	0,34	- 0,34	1,34	1,88	1,30
50 to 59 years	0,82**	0,34	0,55	1,32	2,36*	1,31
60 to 69 years	0,78**	0,35	0,95	1,36	1,71	1,33
70 and over	0,79**	0,35	1,41	1,36	2,32*	1,34
<b>Inhabited area</b>						
Paris region	- 0,29*	0,18	- 0,74	0,55	- 0,19	0,59
Paris Basin	Ref.		Ref.		Ref.	
North	- 0,21	0,18	0,25	0,51	- 1,16	0,72
East	- 0,10	0,18	0,81	0,57	- 1,36**	0,60
West	- 0,03	0,14	0,76	0,51	- 0,09	0,41
Southwest	0,10	0,16	0,26	0,55	- 0,02	0,49
Center-East	- 0,04	0,15	0,62	0,56	- 1,43**	0,59
Mediterranean	0,08	0,16	1,02**	0,51	0,56	0,58
<b>School level</b>						
No diploma	- 0,01	0,14	- 0,07	0,58	- 0,22	0,39
Primary/secondary or technical	0,07	0,12	0,29	0,37	- 0,34	0,38
Primary/secondary and technical	Ref.		Ref.		Ref.	
Undergraduate	0,12	0,20	1,01*	0,55	0,36	1,07
2nd and 3rd cycles	0,38	0,25	0,40	0,60	3,70**	1,55
Grandes écoles	- 0,09	0,26	0,20	0,77	1,79	1,49
<b>Father's occupation</b>						
Farmer	- 0,50**	0,24	- 1,37*	0,71	- 1,95	1,38
Craftsman, merchant, contractor	- 0,33	0,24	- 0,90	0,69	- 2,44*	1,41
Executive, professional, higher intel. prof.	0,14	0,23	0,15	0,71	- 0,44	1,15
Intermediate occupation	Ref.		Ref.		Ref.	
Employee	- 0,01	0,24	- 0,89	0,64	- 1,45	1,41
Worker	- 0,37*	0,22	- 1,36**	0,61	- 2,26*	1,35
<b>Person's occupation</b>						
Farmer	- 0,08	0,21	- 0,13		- 0,80	0,72
Craftsman, merchant, contractor	- 0,26	0,17	- 0,44	0,56	- 1,11*	0,64
Executive, professional, higher intel. prof.	- 0,01	0,16	0,72	0,46	0,42	0,70
Intermediate occupation	Ref.		Ref.		Ref.	
Employee	0,07	0,16	0,25	0,51	0,85	0,57
Worker	- 0,09	0,13	- 0,60	0,47	- 0,39	0,42

School-leaving age						
13 and under	Ref.		Ref.		Ref.	
14 or 15 years	0,20	0,15	- 0,55	0,54	0,30	0,49
16 or 17 years old	0,22	0,18	0,28	0,63	0,01	0,53
18 or 19 years old	0,12	0,18	- 0,62	0,60	1,41**	0,61
20, 21 or 22 years old	0,53***	0,19	- 0,33	0,61	2,16**	0,67
23 and over	0,49***	0,20	- 0,68	0,64	1,54*	0,87
1. Grouped with the reference modality.						

Reading: Small children are those whose height is below the average height of their birth cohort, minus the standard deviation. Tall people are those whose height is above the average height of their birth cohort, to which we have added their standard deviation. This corrects for generation creep. \*\*\* : significant at 1% level, \*\* : significant at 5% level, \* : significant at 10% level, Réf. : reference category.

Scope: men, aged 20 to 70, in a couple. Source: European Panel, wave 2001, Insee.