Introduction – Health and Gender Inequalities in Retirement and Ageing

Camille Chaserant* and Ronan Mahieu**

The third edition of the international symposium on "Retirement and Ageing", jointly hosted by the Social Policy Department of the *Caisse des Dépôts et Consignations*, the *Institut des politiques publiques*-IPP and the Chair for "Social Economy, Protection and Society" (*Chaire ESoPS*) at Université Paris I Panthéon-Sorbonne, was held on 19-20 October 2023. The three articles presented hereafter are versions of presentations given at that event. They are united by a shared interest in health inequalities and their influence on retirement and the latter stages of professional careers.

Since the early 1990s, rising life expectancy has been a core argument used to justify pension reforms in France. The first of these reforms, such as the measures adopted in 1993, were primarily concerned with the need to ensure the financial viability of the pension system in preparation for the massive wave of retiring baby-boomers, and the resulting deterioration of the ratio of payroll taxpayers to pensioners. Since the 2003 reform, the objective has gradually shifted towards managing the distribution of the increase in life expectancy at 60, striking a balance between longer careers and a sustainable period of retirement, so as to ensure the equilibrium of the system while preserving intergenerational equity (Aubert & Rabaté, 2014). Since the 2014 reform, the absolute and relative duration of retirement have been used as monitoring indicators, updated annually by the Pensions Advisory Council (French *Conseil d'orientation des retraites*, or COR) and examined by the Pensions Monitoring Committee (French *Comité de Suivi des Retraites*) (Blanchet, 2023).

According to the COR forecasts based upon the central scenario for life expectancy, derived from the INSEE's latest demographic forecasts, this reform has had mixed results in terms of intergenerational equity: length of retirement as a proportion of total life span peaked at 30% for the generation born in the early 1950s, and is now expected to fall back to 27% for those born in the late 1960s, largely because people are spending more time in education and careers have become more precarious. The average length of retirement should increase once more for those generations born in the 1970s and after, as the average retirement age stabilises at around 64.5 and life expectancy continues to improve, with girls and boys born in 2022 expected to have life expectancies of 93 and 90 years respectively (Blanpain, 2022). If this trend continues, it might at first sight appear to justify further reforms designed to raise the retirement age for these generations.

*Chaire ESoPS, Université Paris 1 Panthéon-Sorbonne ; **Caisse des Dépôts.
Correspondence: *ronan.mahieu@caissedesdepots.fr*

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Nonetheless, as Blanchet (2023, p. 10) has noted, any future reform should "devote much greater attention to inequalities in retirement duration within generations." This is precisely the ambition of the three articles collected in this publication. Each of these articles examines, from a specific angle, the ways in which social, health and gender inequalities determine our access to retirement, the duration of that retirement and the redistributive dynamics of the pension system.

Reconciling a Universal Retirement Age With Major Social Inequalities in Matters of Health: The Impossible Equation

The question of social inequalities in relation to illness and death, and the way these inequalities are explicitly or implicitly handled by the pensions system, is by no means a new issue. Over a century ago, it was a subject of much debate during discussions of the 1910 Act establishing a funded pension system for workers and farmers (COR, 2022). In that instance the legislator set the retirement age at 65, a bar which was criticised for being far too high when compared with the actual life expectancy of the groups the new system was intended to help: in 1900, the probability that an 20-year-old individual would live to see 65 was just 46% for men (indeed that figure had declined over the past half-century, from 49% in 1850), and a barely superior 54% for women. Moreover, these figures are averages for the population as a whole: the chances of survival were undoubtedly even worse for the working classes.

Given the circumstances, the new scheme appears to have been less concerned with establishing a right to retirement than with guaranteeing a minimum income for the minority of the population reaching an age (65) at which it seemed virtually unthinkable to continue with any professional activity. The slogan adopted by the *Confédération Générale du Travail* – "Too late to retire when you're dead!" – became a rallying cry for those keen to see a retirement age which better reflected the reality of their living conditions, particularly workers. The retirement age was subsequently lowered to 60 in 1912. Nevertheless, these debates are testament to the difficulty (or impossibility) of finding a retirement age which constitutes an appropriate response to a wide variety of individual circumstances. This difficulty led to a campaign for the creation of a separate system of disability insurance – along the lines of the scheme introduced in Germany in 1889 – but no such system was established in France until the Social Security Act of 1928 (and only became universal in 1945). On this point it is worth quoting Edouard Vaillant, at that time an SFIO member of parliament: "*An urban worker is often old by the age of 40 or 45. Any attempt to set an age is arbitrary. What may be enough for some will not be enough for others. Retirement should begin when people are no longer able to work. […] As such, in addition to the more substantial resources which must be found for the budget each year, one urgent, necessary reform is to introduce a disability insurance act. I will say it again: retirement should not begin when a man reaches a certain, arbitrarily determined age, even if that age is 50, but when his forces begin to wane.*" (quoted in Candar & Dreux, 2011).

Of course, the demographic context has changed considerably in the intervening hundred-plus years. When the Social Security system was established in 1945, the probability that a 20-year-old would live to see 65 stood at around 65% for men and close to 80% for women (Vallin & Meslé, 2001). By 2022 that probability had risen to 86%: an increase of 40 points in just over a century for men, made possible by improvements in hygiene, vaccination and the advent of antibiotics, which have slashed the number of premature deaths (before the age of 65) caused by infectious diseases. But while enjoying a retirement has become the norm, social inequalities in terms of life expectancy – and thus, indirectly, the duration of that retirement – still exist. This has become all the more evident as the increase in life expectancy at 65, after several decades of spectacular progress, has slowed considerably. By way of an example, the probability that a 65-year-old woman will still be alive at 80 increased by 31 points (from 48% to 79%) between 1950 and 2000, but then grew by just 4 points between 2000 and 2022, to stand at 83%.

In addition to the problem of social inequalities affecting length of retirement, there are increasing concerns about the capacity of employees to remain in employment until the legal retirement age, which has been pushed back further by the trend for longer periods of study and successive reforms to the pensions system. In this respect, the last twenty years have witnessed a significant turning point: until the early 2000s, public policy tended to subsidise early retirement, awarded on the basis of criteria which often had little to do with the health of the individuals involved. Certain sectors had their own early retirement schemes (very widespread in the steel and automobile industries), but there were also more general schemes motivated by the idea that allowing older workers to retire early would make it easier for young people to get started in the labour market (for example the "Workforce Renewal Allowance" or ARPE of the late 1990s).

The current uneasiness among employees regarding their capacity to "hold on" until the legal retirement age is informed by various factors: negative stereotypes about seniors (not flexible enough, too expensive, etc.) are still stubbornly rooted in many people's minds, not to mention health complications (whether or not they can be attributed to a person's employment history) which may make it impossible to continue working without, at the very least, some adjustments to working conditions. But the likelihood of experiencing health problems increases with age, and also follows a pronounced social gradient: the less well-off are more liable to chronic conditions – developing into multimorbidity as they grow older – and depression (Bagein *et al.*, 2022). In this context, studying social inequalities of health, and the way they interact with retirement rules and pension schemes, is more pertinent than ever.

Social Inequalities in Health and Disability

The article penned by **Anam Mohammad, Delphine Roy, Maxime Tô and Todor Tochev** approaches the issue of health inequality not from the familiar angle of life expectancy, but instead from the perspective of disability – the correlation between disability and reduced life expectancy has been clearly established (Bulcourt *et al*., 2022). To this end, the study makes use of the cross-scheme sample of contributors (the EIC, *Échantillon interrégimes de cotisants*) for 2009 and 2017, published by the DREES, matched with the all-employee panel (*Panel tous salariés*, PTS) and the permanent demographic sample (*Échantillon démographique permanent*, EDP). These data allow for longitudinal observation of the careers of all employees (including civil servants), identifying connections between eligibility for disability payments and earlier career characteristics.

The authors focus on the occurrence of premature disability, i.e. the probability that a 35-year-old will experience a period of disability before reaching the age of 60. Their study focuses more specifically on the links between premature disability and the position of individuals within the pay scale before the age of 35 (using the income decile measurement), while also integrating an array of control variables such as level of education, socio-professional category and sector of activity before the age of 35, along with two vulnerability indicators for those pre-35 years: periods of registered unemployment, and periods of sick leave (and maternity leave for women).

The study reveals a clear gradient in the occurrence of premature disability depending on individuals' position on the pay scale before the age of 35. For both men and women, the likelihood of receiving disability benefits before the age of 60 is almost 2.5 lower for the top two income deciles than it is for those in the middle deciles. For men alone, that probability is 1.5 times higher in the lower deciles than it is in the middle deciles. The gradient is still visible, albeit in attenuated form, when we take into consideration other factors such as level of education, socio-professional category, sector of activity and vulnerability indicators observed before the age of 35. In particular, men who experience extended periods of sick leave before the age of 35 have a 2.5 times greater probability of experiencing a period of disability before the age of 60. As the authors rightly note, this result suggests that there may be unobserved health factors in play, simultaneously affecting both position within the pay hierarchy at 35 and the occurrence of premature disability, meaning that we cannot definitively conclude that there is a causal link between individuals' earned income and their risk of disability.

The authors provide additional perspective by looking at how these results vary from one generation to the next, and depending on the age at which the disability rate is measured. One key finding is that the gradient for disability risk in relation to pre-35 earning power is much steeper when we focus on individuals receiving disability allowances very prematurely. Although no significant gradient is detected at the lower end of the income scale if we focus on the likelihood of experiencing disability before the age of 60, lowering the age bar reveals a massive social gradient: for men, the probability of being declared disabled before the age of 40 is four times greater in the lowest decile than it is in the fifth decile, while for women the probability is doubled. Furthermore, if we consider those receiving disability allowances for the first time before the age of 45, for both men and women the additional disability risk for the first decile compared with the fifth decile rises significantly between the 1950-1958 and 1967-1975 generations.

These evolutions may well be correlated with developments in working conditions. Since the 1980s, indicators measuring working conditions have deteriorated, particularly for those on the lowest wages: the proportion of workers carrying heavy loads, spending long hours in uncomfortable positions or performing arduous tasks at work increased between 1984 and 2019 (Algava & Nass 2023). Difficult working conditions in highly female-dominated professions in the health, medical-social and personal services sectors also increase the level of psycho-social risks, with well-known consequences in terms of mental health and the risk of work-related accidents (Boini *et al.,* 2024). Barnay & Defebvre (2021) have also demonstrated that retirement improves our health, and that the difference is most evident for workers who were exposed to physical and/or psycho-social risks during their careers.

The deterioration of the disability risk gradient for the most recent generations could be indicative of a future exacerbation of social inequalities in relation to life expectancy. In this regard, it should be noted that the rise in disability claims among older workers, which could be attributed to recent pension reforms – as documented by Solard (2016) in a study which excludes civil servants, and more recently by Joubert & Langevin (2025) in a paper focusing on local civil servants – should not be interpreted as a sign that life expectancy is set to decline. In fact, it reflects a trend for using disability allowances to support individuals whose health is too poor by the age of 60 to continue with their professional activities, but who are nonetheless no longer able to retire at 60 as a result of reforms to the pension system. On a similar note, Caroli *et al.* (2023) have shown that the first generations affected by increase of the retirement age from 60 to 62 entailed by the 2010 reforme saw an increase in both sick leave and specialist consultations, and thus an increase in their health expenditure.

Social Inequalities in Life Expectancy and Retirement Age

The second article in this collection also deals with social inequalities pertaining to health, but this time focuses on the pensions system and the series of reforms which have sought to restore its financial equilibrium, particularly by raising the legal retirement age. In this article, **Patrick Aubert** begins by retracing the key developments since 1945 in the criteria used to determine who is entitled to retire on a "full pension" before reaching the legal age at which everybody is entitled to their "full pension".[1] The bar was set at 65 in 1945 and remained there until the 2010 reform, which progressively raised it to 67. This revealing approach lays bare the balancing act at play between, on the one hand, health criteria determining people's ability to remain in work and, on the other hand, criteria pertaining to the length of their careers.

The system set up in 1945 combined elements of both. The right to retire at 60 on a full pension was available to "*beneficiaries who have been in work for at least thirty years and who have spent at least twenty years engaged in particularly difficult work likely to*

1. In quotation marks here because the term only gradually entered common parlance, as further changes were made to the legislation governing pension entitlement calculations.

lead to premature physical exhaustion, and those recognised as being unfit for work by the old age insurance fund."[2] This approach prevailed until the 1970s, when the right to retire on a full pension at 60 was expanded. In 1971, the length of career requirement was scrapped for workers being declared unfit for work. In 1975, the right to retire on a full pension at 60 was extended to *"salaried manual labourers who have been in employment for a long period of time,"* a period initially set at 43 years and subsequently reduced.[3] In 1977, the right was extended to women who had worked full careers (37.5 years).

From then on, exemptions based primarily on length of career would flourish. A 1982 ministerial order reduced the required number of years, allowing everybody to retire on full pension at the age of 60 as long as they had worked 37.5 years. The 2003 reform increased the number of years in employment required to qualify for a full pension, but also introduced the "long career" clause entitling some people to retire earlier, even before the age of 60, if they entered the labour market before a certain age and worked for a certain number of years. These criteria were introduced with a view to reducing social inequalities with regard to length of retirement, as noted in the preliminary report attached to the 1982 order.

As well as offering this invaluable perspective, another major contribution of this article is its evaluation of the extent to which the assumptions which underpinned these regulatory changes – namely, that the number of years in employment and the age at which individuals started work are pertinent parameters when it comes to reducing social inequality in retirement – are actually borne out by the statistical data. To this end, the author looks at successive waves of the DREES inter-pension scheme samples in order to study the links between the age at which people start work, the age at which they qualify for their full pension, and life expectancy for the generations born between 1906 and 1950. This provides empirical confirmation that those who start work earlier do indeed have a lower life expectancy. There is, however, no clear link between life expectancy at 60 and the age at which people are entitled to claim their full pension. In other words, the rules currently used to determine when people can retire on their full pension do not really succeed in offsetting social inequalities in life expectancy. This result can be ascribed to the fact that length of career is a far-from-perfect way of measuring disparities in the age at which people start work, especially since not everybody is in work continuously throughout their career. Indeed, among women (who are more likely to have stop-start careers, especially those with few qualifications who also have the lowest life expectancy), those who are entitled to retire earlier do generally tend to have a higher life expectancy at 60 than their peers.

Pensions and Gender Inequality

Frédérique Nortier-Ribordy's article, the third in this short collection, adopts a life cycle approach in order to evaluate the capacity of the pensions system to redistribute income between men and women. In 2022, the average value of pensions received directly by women remained 38% lower than the pensions received by men, a gap which remains substantial but has nonetheless narrowed over recent generations. This article allows for a more nuanced understanding of that figure, integrating the impact of gender disparities in earnings, retirement age and life expectancy to measure the return on contributions, also known as the return rate on contributions, i.e. the ratio between the updated sum of pension contributions paid into schemes over the course of one's career and the value of the pension payments received during retirement.

Return rates on contributions are calculated for nine representative case studies indicative of different careers in the private sector, and varying in terms of socio-professional category, gender, time worked, career breaks for women and, of course, level of income. All are assumed to retire on a full pension, either once they have completed the necessary

2. *Article 64 of Order No. 45/2454 dated 19 October 1945 pertaining to the social insurance scheme applicable to beneficiaries in non-agricultural professions.*
3. *At the same time it was also extended to working class mothers with at least three children, not for reasons of health or length of career, but in support of the government's natalist family policy.*

number of years in employment (43 for those born post-1965), or else at the age when the penalty discount no longer applies. Length of retirement is calculated based on life expectancy at retirement age. The return rates on contributions thus calculated are, for any given category of executive/non-executive workers, systematically higher for the female cases than they are for their male counterparts. Nonetheless, the gap between men and women is much more pronounced for non-executives than it is for executives, with very high return rates on contributions (in the region of 250%) for women on minimum wage.

The great advantage of this approach is that it allows us to determine how much of the gap can be attributed to explicit solidarity measures (the MiCo minimum pensions, bonuses for time spent raising children, pension bonuses for people with three or more children, old-age insurance contributions for stay-at-home parents (AVPF)), and how much must be ascribed to other factors. F. Nortier-Ribordy thus demonstrates that the core pension system, before explicit solidarity measures are taken into consideration, operates a strong, implicit redistribution from men to women, via two main channels.

The first of these channels is the existence of partial exemptions on employer contributions for low-paid workers: women are over-represented among those employees working for close to minimum wage (DARES, 2023), with weaker wages and career prospects than men. This means that women by and large contribute less to the pension system than men, which has the effect of boosting their return rate on contributions. In other words, the redistributive effect of the pension system (in favour of women) is largely a reflection of gender inequality in the labour market.

The second channel is the higher life expectancy on retirement of women, although the redistributive impact of this factor is less substantial than the inequalities which exist in the labour market. The average age at which women are entitled to retire is still slightly above the male average (COR, 2024), but women's average life expectancy at 65 was 3.7 years greater than the male average in 2024. Taking explicit solidarity measures into consideration naturally accentuates male-female redistribution, as such measures are predominantly beneficial to women – with the notable exception of pension bonuses for parents of three or more children. In particular, the article reveals the existence of extremely high return rates on contributions (over 800%) for women with lengthy career breaks who qualify for the AVPF benefit.

Nonetheless, the article does not take the impact of survivor benefits into account. These benefits are comparatively generous in France, although the rules vary significantly from one scheme to the next, making the system hard to understand even for beneficiaries. And yet, in 2022, 88% of beneficiaries of survivor benefits were women (DREES, 2024): this overwhelming majority of women can be linked to demographic factors (greater longevity, and the fact that men are, on average, older than their spouses), but also to the means-tested conditions applied to survivor benefits under certain pension schemes, including the general scheme: these conditions are more likely to disqualify widowers (whose average income is higher, whether from earned income or pensions) than widows. Taking these mechanisms into account would thus further widen the gap in retrieval rates between men and women. We might nonetheless wonder how the impact of these survivor benefits might evolve in the future, due to the decline in the number of marriages (a necessary condition for reversionary rights) and the gradual closing of the gap between the average direct pensions received by men and women (Di Porto & Ghernaout, 2020).

Finally, while women's greater longevity undoubtedly represents a quantitative advantage with regard to the return rate on contributions, it is by no means sure that the impact of greater life expectancy is unequivocally positive in term of well-being: the prevalence of disability among the over-65s is systematically higher for women than it is for men (Deroyon, 2024), and the extra years of life which women experience compared with men are largely spent in poor health (Cambois, 2019). Women and men tend to develop different illnesses, with men prone to more lethal conditions while women are more exposed to incapacitating pathologies. These differences in the face of ageing can be primarily attributed to professional and non-professional gender inequalities: women are

over-represented in poorly qualified jobs, with little career progress and more frequent interruptions to their employment, conditions which have been significantly linked with an increased risk of mental and physical ill health (Cambois *et al.*, 2017). Moreover, women are far more likely than men to have to juggle their professional careers with their family lives (Pailhé *et al.*, 2022), and are more likely to become carers for family members who are no longer autonomous, with negative consequences for their own health (Toulemon, 2024). The comparative advantage bestowed by a greater life expectancy thus needs to be reconsidered in the light of social inequalities of health. □

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