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► **To cite this version:**

| Laurent Gauthier. The Economics of Bullshit Jobs. 2023. hal-04388650

**HAL Id: hal-04388650**

**<https://univ-paris8.hal.science/hal-04388650v1>**

Preprint submitted on 11 Jan 2024

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# The Economics of Bullshit Jobs

Laurent Gauthier\*

January 06, 2024

## Abstract

The notion of “bullshit jobs” was first introduced by anthropologist David Graeber in an article (2013) and later expanded into a book (2018): well paid jobs which are perceived as useless by those holding them, and even as contributing a net negative, leading to substantial job dissatisfaction. Various empirical studies have shown that a large share of all jobs may be qualified as bullshit jobs according to Graeber’s definition (10-40%). However, no theoretical economic model exists that could account for this phenomenon. In this article, we develop a model of high- and low-skill labor, combined with middle management’s specific incentives, and show that a pooling equilibrium can exist where jobs for skilled workers, receiving high wages, effectively are a squandering of resources, and satisfy the stylized facts that characterize bullshit jobs.

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“A bullshit job is a form of paid employment that is so completely pointless, unnecessary, or pernicious that even the employee cannot justify its existence even though, as part of the conditions of employment, the employee feels obliged to pretend that this is not the case” (Graeber [2018] 2019, 9–10). This notion of jobs that would appear to be so utterly useless was first introduced by anthropologist David Graeber in a magazine article (Graeber 2013), later theorized and developed into a book (Graeber [2018] 2019). Graeber paradoxically associates the emergence of these bullshit jobs to the financialization of many aspects of work relationships, along the lines of Chiapello (2015), whereby a form of “managerial feudalism” gives power to managers who then create a retinue of useless jobs.

This theory has led to a variety of research works in sociology, philosophy or organization studies, in order to critique and better frame the notion of bullshit job and bullshit in corporations more generally. There have also been many empirical economics studies into the occurrence of bullshit jobs. However, there has not been any theoretical work in economics that could account for the existence of bullshit jobs and potentially shed light on the fundamental causes for their existence. In a typical labor economics textbook, there is no mention of the possibility of inefficient jobs to the point of being entirely useless, or at least being perceived as such (see for example Ehrenberg & Smith [1981] 2012).

In this article, we develop a model to precisely represent bullshit jobs in a manner consistent with their detailed characterization. We rely on, and join together, two distinct streams of literature, that on equilibria combining higher and lower skill workers and more generally wage inequality (in particular theoretical models, Acemoglu 1999, 2001; Card et al. 2018), and that on the impact of middle management in organizations (in particular Ortín-Ángel & Salas-Fumás 2002; Kemp-Benedict 2015; Dessein & Holden 2022; Wagener 2023). Our analysis is structured as follow. In the first section, we delve into the existing theoretical work in anthropology or sociology around bullshit jobs, and examine the empirical literature on the subject. This allows us to derive stylized facts characterizing them. In the second section, we first construct a simple pooling equilibrium for skilled and low-skill workers, with a basic labor economics approach. Then, we include the impact of middle management, and show that under certain conditions it may lead high-skill, well paid jobs being effectively useless while low-skill jobs compensate for their negative impact. Finally, the third section concludes.

# 1 Identifying Bullshit Jobs

In this section, we begin by examining the concept of bullshit jobs, as first theorized by Graeber and further expanded by others. Then, we look into the empirical research that has tried to measure the occurrence of bullshit jobs, through various surveys.

## 1.1 Why Are These Jobs Bullshit?

Frankfurt (2005) proposed the first epistemological analysis of the notion of bullshit as discourse intended to persuade. The disregard of truth in bullshit distinguishes it from lying, since lying presupposes a relationship to truth, while bullshit does not. Easwaran (2023) argues for a more precise philosophical characterization of bullshit, in particular that only certain performative acts should be qualified as such, and the focus should be on the intention behind bullshit. The epistemology of the notion of “bullshit”, as a “distinctive and problematic form of deception”, has also been examined by Wakeham (2017), who concentrates on the social nature of the knowledge that may be subverted by bullshit. “[Bullshit] emerges from a fundamental tension between our individual pragmatic need to have true beliefs and our social pragmatic need to cooperate with others” (Wakeham 2017, 16). In Wakeham’s analysis, knowledge transmission relies on social relations, and as a result adhering to bullshit, even if it is in some sense factually wrong, serves a social purpose.

The prevalence of bullshit in corporations has been observed in organization studies: “we do suggest that bullshit attains a specific significance in contemporary organizations where increased complexity, multiple interests and conflicting agendas tend to promote particular communicative practices that in some situations may suitably be labelled ‘bullshit’ ” (Christensen, Kärreman, & Rasche 2019, 1597). Spicer (2013) and Spicer (2020) examines the benefits of bullshit from an organizational perspective: it can enhance confidence in the organization, but makes it more brittle. Discourse can shape organizations, even when it is unproductive as is the case with bullshit. McCarthy et al. (2020) offer specific recommendations against bullshit in corporations, and propose a multi-step approach to reduce its occurrence.

Within these perspectives, Graeber’s notion of bullshit jobs effectively considers some jobs to be created due to some hidden intention, distinct from the positive discourse in which the jobs exist. Graeber proposes a taxonomy of bullshit jobs along five categories:

1. *Flunkies*: “Flunky jobs are those that exist only or primarily to make someone else look or feel important” (Graeber [2018] 2019, 28), and are compared with feudal retainers;

2. *Goons*: “People whose jobs have an aggressive element, but, crucially, who exist only because other people employ them” (Graeber [2018] 2019, 36);
3. *Duct Tapers*: “Duct tapers are employees whose job exists only because of a glitch or fault in the organization; who are there to solve a problem that ought not to exist” (Graeber [2018] 2019, 40);
4. *Box Tickers*: “Employees who exist only or primarily to allow an organization to be able to claim it is doing something that, in fact, it is not doing” (Graeber [2018] 2019, 45);
5. *Taskmasters*: “Taskmasters fall into two subcategories. Type 1 contains those whose role consists entirely of assigning work to others. This job can be considered bullshit if the taskmaster herself believes that there is not need for her intervention, and that if she were not there, underlings would be perfectly capable of carrying on by themselves [...]. [Type 2] are taskmasters whose primary role is to create bullshit tasks for others to do, to supervise bullshit, or even to create entirely new bullshit jobs” (Graeber [2018] 2019, 51). Graeber indicated that among all the categories of workers, the least likely to report that their jobs were bullshit were business owners, and everyone else in charge of hiring or firing.

The reference to “paid employment” in Graeber’s definition of bullshit jobs is in fact an understatement, because in many cases commented by Graeber, the workers in question are well paid; according to de l’Estoile & Oudot (2021), the high compensation that many bullshit jobs offer is essential as it helps manufacture the perception that these jobs are necessary. Graeber’s theory of bullshit jobs is based on the notion of “managerial feudalism”, a consequence of financialization, which leads to the appropriation of goods rather than a focus on making them or distributing them (Soffia, Wood, & Burchell 2022, 819). Financialization leads corporations to seek profit maximization, and makes them behave like the financial sector. While this would, in theory, lead to more efficiency, “if elites are only extracting value rather than producing it, they must not be concerned with efficiency” (Walo 2023, 1127). This allows the managers to gather a retinue that helps display their power.

Dean, Dadzie, & Pham (2022), following Gordon (1996) offer an evolutionary explanation for the emergence of bullshit jobs, as an extension of managerial control and surveillance. “Denying workers a share of the returns from increased productivity creates a mandate for constant vigilance against shirking, and hence an expanded system of surveillance and punishment”, and this, in turn, led to the important role of taskmasters. Technological

improvements such as the advent of automation and computers only serves to increase the granularity of control, and does not make administrative jobs obsolete. Following Mills ([1951] 1969), they further point out that “the mechanization of office work merely creates an internal division between those with the authority to make decisions and those whose work is basically routinized and rationalized” (Dean, Dadzie, & Pham 2022, 678), this routinization corresponding to other forms of bullshit jobs. Relying on Veblen ([1914] 1964), Dean, Dadzie, & Pham (2022) also stress that technological progress, such as the typewriter, effectively fosters an arms race in the competition between organizations.

According to some analyses, it is new capitalistic forms of work organization which have precisely led to these bullshit jobs: “the growth [in bureaucracy in US colleges and universities] has occurred not for lack of business-like thinking and processes, but because of them” (Delucchi et al. 2021, 5). Glaser (2014) questions the continuing presence of bullshit jobs, noting that jobs are perceived as a “universal good”, and identifies holding a job as a kind of moral imperative. In what she describes as “austerity”, the dichotomy between those holding a job and those without grows wider; “the ‘cultural fetishisation’ of work has coincided with a huge increase in precarious and unpaid work, which only serves to increase its perceived value” (Glaser 2014, 87). There is hence two opposing injunctions: technological advancement and progress, capitalistic leanness, driving towards less jobs, and the necessity to create jobs, “seemingly for the sake of it”.

One may also understand bullshit jobs as theorized by Graeber through their diametrical opposite: non-bullshit non-jobs, that is volunteering in a way perceived as fruitful and useful. In Graeber’s analysis, computer developers and programmers often complained that their jobs fell in one of the categories we described earlier. However, at the same time, much of the infrastructure, including operating systems and specialized software, relies on open-source code freely contributed by developers (Fuggetta 2003; Von Krogh & Spaeth 2007). “Work that people find genuinely creative and meaningful—such as making music or writing journalism—is now often supposed to be done unpaid” (Glaser 2014, 88). Even though volunteering can offer indirect but extrinsic benefits, such as facilitating access to employment (Day & Devlin 1998; Bougard et al. 2013), an large-scale study has shown that “helping others increases people’s individual wellbeing” (Meier & Stutzer 2008, 55). Hence, carrying out a useless activity must have the opposite effect. Further, since a “charitable production function” that depends on human capital best accounts for empirical data (Freeman 1997), the greater the human capital of workers in bullshit jobs, the more we may expect them to suffer from the situation.

## 1.2 How Prevalent Are Bullshit Jobs?

We know that some anecdotal evidence points out that very high paying and extremely selective jobs, in particular in investment banking, have been described in detail as senseless, boring and useless (Rolfe & Troob 2000), but to what extent could this be generalized to many professional occupations?

Using statistics from the 2016-2017 US State of Enterprise Work Report, Graeber stresses that on aggregate, employees spend less than 40% of their time doing their primary job duties (Graeber [2018] 2019, 25). Apart from that, the qualitative methodology he followed in his book has generally been criticized, and several empirical studies have attempted to measure the incidence of bullshit jobs in a more systematic fashion, using various datasets.

Dahlgreen (2015) showed with a survey that a very large portion of British workers considered their jobs as meaningless, while Moore (2015) showed that was the case for one quarter of Americans. Dur & Van Lent (2019) examine the notion of “socially useless jobs”, which strongly recoups with Graeber’s bullshit jobs, but found that across 47 different countries, only a relatively small share of respondents qualified their jobs as useless, with substantial variations across countries. Dur & Van Lent (2019) show a strong correlation between the perceived usefulness of jobs and job satisfaction. Coutrot (2019) evaluated the rate of bullshit jobs is 17% in France. In any case, even if only around 10% of all workers feel their jobs are useless, and derive poor job satisfaction because of it, this would represent hundreds of millions of “bad” jobs. Given that the full-time job equivalent of all volunteering amounts to about 7 million jobs in the US and in Europe (Meier & Stutzer 2008, 39), the occurrence of bullshit jobs seems indeed quite significant. As bullshit jobs appear in all types of occupations, with a higher rate of occurrence in some particular occupations, and are not only observed on entry jobs, it is not simply the case that “bad” workers would find their jobs are bullshit.

Delucchi et al. (2021) examine bullshit jobs in higher education in the US, and find that Graeber’s theory about the first 4 categories he defined can be verified on this sample: employees in the “other professional” category, which has seen the strongest relative growth over the past 50 years, are the least satisfied with their jobs’ social contribution. The fifth category, taskmasters, report high levels of satisfaction. Delucchi et al. (2021) theorize that those in leadership positions, administrators, can create bullshit jobs according to their needs, which correspond to Graeber’s taxonomy.

Dean, Dadzie, & Pham (2022) empirically test several hypotheses related to bullshit jobs, using data from the 2017 National Survey of College Graduates. They measure the social contribution or usefulness of jobs based on the respondents' evaluation of their jobs. They validate most of Graeber hypotheses, and show that: pay is inversely correlated with perceived social contribution; perceived social contribution declines with employer size; intellectually challenging jobs have more perceived social contribution; the highest perceived social contribution by work type is in education; computer programming has the lowest perceived social contribution; and upper managers have a higher perceived social contribution than middle-managers.

For Soffia, Wood, & Burchell (2022), Graeber's perspective on the damaging experience of having a bullshit job may be understood as a form of alienation through work, as originally defined by Marx ([1932] 1974). Indeed: "Unlike the BS jobs theory, alienation is not premised on the view that the work being undertaken is inherently pointless and of no value. Instead, it highlights the importance of the social relations under which work is undertaken and the degree to which they constrain the ability of workers to affirm their sense of self through the development and recognition of skills and abilities" (Soffia, Wood, & Burchell 2022, 821). They find that "while Graeber's specific account of BS jobs and managerial feudalism cannot be empirically sustained, his work has uncovered an important and largely unresearched social ill." They use the 2005-2015 European Working Conditions Survey in order to empirically test some of Graeber's claims. They find that only a small fraction (around 5%) of workers find their job useless, that this rate is not on an increasing trend, and that there is no particular concentration of jobs perceived as useless in certain fields rather than in others. They nevertheless confirm that the perception of uselessness is related to well-being on the job. Soffia, Wood, & Burchell (2022) determine that the strongest drivers of the perception of usefulness is the extent to which workers feel respected by management, and the ability to use one's ideas at work. Hence, they argue, it is not so much an absolute or objective usefulness measure that is relevant, but rather potential alienation, as measured through the social relationships present at work, especially with managers.

Ferreira et al. (2022) defined a scale to identify and characterize bullshit in organizations. Based on an adhoc survey of full-time employees in the US across industries, they identified three factors triangulating organizational bullshit: regard for truth, the boss and bullshit language. They stress, in particular, that "the second dimension, *the boss*, confirms that employees believe that their superiors are key players in the dissemination of bullshit" (Ferreira



et al. 2022, 459). Using a specifically constructed survey on 267 employees at various corporations in Saudi Arabia, Fallatah (2023) establishes that exposure to bullshit in the organization leads to job dissatisfaction: “employees are less likely to be satisfied when communication within the organization has no regard for truth [and] when bosses are bullshitters, employees’ job satisfaction is more likely to decrease”. With cross-European data, Wang et al. (2022) have well documented the fact that it is not job quantity but rather quality that favors employees’ mental health.

Walo (2023) exploit data from the 2015 American Working Conditions Survey in order to revisit the prevalence of bullshit jobs. Overall, he finds that close to 20% of respondents consider their job as socially useless. The contrast with the findings from Soffia, Wood, & Burchell (2022), he argues, may be due to the greater financialization of Anglo-Saxon economies. Walo finds that the occupations that Graeber identified (office and administrative support, sales, legal, business and finance, and management) are all associated with a greater occurrence of socially uselessness. These results are controlled for a variety of explanatory variables, such as autonomy and degree of routine that can affect one’s perception of the job.

From our discussion of bullshit jobs as defined by Graeber, we can establish several stylized facts from an economics perspective that can characterize them:

- The most salient aspect of bullshit jobs is that they can be demanding in terms of education and be well compensated (employees end up questioning why they had to obtain a demanding education);
- Bullshit jobs may be detrimental to society at large, but most importantly they are perceived by the workers as detrimental to the company itself;
- Bullshit jobs do not exist because “bad” workers are self-selected into them, according to the empirical evidence;
- Employees do not enjoy being in bullshit jobs, and suffer from job dissatisfaction;
- Management is involved in bullshit jobs, because managers create them;
- The share of bullshit jobs may be significant, but it is not the majority.

## 2 A Model for Bullshit Jobs

The existence of bullshit jobs raises an issue with labor economics models, as “the fundamental assumption of labor demand theory is that firms—the employers of labor—seek to maximize profits. In doing so, firms are assumed to continually ask, ‘Can we make changes that will improve profits?’ ” (Ehrenberg & Smith [1981] 2012, 60). An equilibrium in which jobs destroy value necessarily entails a form of imperfection. According to the review by Manning (2010), the standard models for labor economics already include a variety of forms of deviations from perfect competition, leading to rents. Nevertheless, the types of imperfections that are usually allowed in these models do not lead to an equilibrium where bullshit jobs would naturally appear.

In order to account for bullshit jobs, it seems necessary to first allow for “normal” jobs in a setup where there may be possible rents, in particular the ones relating to the fact that workers, by occupying a job, allow firms not to suffer hiring costs again and again (Pissarides [1990] 2000). The further imperfections or rents that may justify bullshit jobs then should appear in addition to this model. Search technology or issues related to on-the-job searches (Rogerson, Shimer, & Wright 2005; Dolado, Jansen, & Jimeno 2009; Lise, Meghir, & Robin 2016) are presumably not directly relevant in representing bullshit jobs, versus other aspects of labor economics. Hence, we first build a model that explains how workers of different skill levels can be hired together at equilibrium, *à la* Acemoglu (1999), even when the cost structure for these jobs may differ. Then, relying on theoretical and empirical accounts of middle management compensation in corporations, we alter the model to account for their specific incentives in hiring, following Kemp-Benedict (2015) in particular. This allows us to derive an equilibrium where high-skill jobs can correspond to bullshit jobs.

### 2.1 A Simple Labor Economics Model

If we want to study bullshit jobs as opposed to non-bullshit jobs, it is necessary to model some differences between jobs. Acemoglu (2001) in particular studied an equilibrium where good and bad jobs coexisted, in the sense that the same workers could have a job paying higher or lower wages, and Acemoglu (1999) looks into the segmentation or pooling of jobs due to differences in worker skills: there are separating or pooling equilibria in which only skilled workers, or both skilled and less skilled workers are employed. Variations in jobs, and especially in wages, from one firm to the next have been examined by Card et al. (2018) both

empirically and theoretically. The empirical evidence on bullshit jobs, however, does not appear to be related to which specific firm employees work for, apart from a dependency through general characteristics of the firm, such as its size.

A salient aspect of bullshit jobs is the fact that well-educated workers end up having these jobs although, according to Graeber ([2018] 2019), lower skill jobs are often less likely to be perceived as bullshit. Therefore, it is logical to start from a distinction between worker types. We hence follow the logic of Acemoglu (1999), itself based on the general framework of labor economics (Diamond 1982; Mortensen 1982; Pissarides [1990] 2000) and, as a start, slightly generalize the one-period model developed in that article, keeping similar notations. In our approach, we allow the job set up costs to depend on the type of worker, so that there may be pooling or separating equilibria, and in the latter it is possible that only low skill workers are employed.

There are high-skill and low skill workers, whom we will denote with subscripts  $H$  or  $L$ , respectively. The overall fraction of high-skill workers is  $\phi$ , and the human capital of these workers is  $\eta > 1$ , while the human capital of low-skill workers is normalized to 1. Production is carried out in working slots with a capital allocation of  $k$ , so that a slot with capacity  $k$  produces with a Cobb-Douglas function  $y(h, k) = k^{1-\alpha} h^\alpha$ , with  $0 < \alpha < 1$ .

The production slot has to be equipped with a certain amount of capital investment *ex ante*, but the proportional cost of implementing it depends on the type of worker who eventually occupies the job. This cost is therefore  $kc_H$  or  $kc_L$ , and may correspond to production lines for example, but also marketing and brand-building investment, or systems equipment. The wages are set as a fraction  $\beta$ , with  $0 < \beta < 1$ , of the utility generated by the job, itself assumed to be equal to the output. Using a linear allocation, as in Acemoglu (1999) or also Mortensen & Pissarides (1994), allows for simpler expressions than using the Nash bargaining solution (Pissarides [1990] 2000; Mortensen 1999). Therefore, given a capital investment of  $k$ , we have:

$$w_H(k) = \beta k^{1-\alpha} \eta^\alpha,$$

$$w_L(k) = \beta k^{1-\alpha}.$$

The matching of production slots with workers is done randomly, so that the probability that a skilled worker is matched is  $\phi$ , and a low-skill one  $1 - \phi$ . After this matching, the firm can decide to start production or not, according to a certain probability: the firm decides to keep a high-skill worker with probability  $x_H$  and a low skill worker with probability  $x_L$ . Hence, the

expected value of a production slot, given the *ex ante* determined capital investment and probabilities can be written:

$$\begin{aligned} V(k, x_L, x_H) &= \phi x_H ((1 - \beta)k^{1-\alpha}\eta^\alpha - c_H k) + (1 - \phi)x_L ((1 - \beta)k^{1-\alpha} - c_L k) \\ &= k [(1 - \beta)k^{-\alpha} (\phi x_H \eta^\alpha + (1 - \phi)x_L) - (\phi x_H c_H + (1 - \phi)x_L c_L)]. \end{aligned}$$

It is the expected firm's share of output, net of costs. Acemoglu (1999) makes the simplifying assumptions that  $c_H = c_L = 1 - \beta$ , but we need to continue distinguishing between these variables.

**Proposition 2.1** (Pooling Equilibrium Conditions Where All Workers are Hired). *At the equilibrium,  $(x_L^*, x_H^*) \in \{0, 1\}^2$ , and if  $\frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}}}{[\phi c_H + (1-\phi)c_L]^{\frac{1}{\alpha}-1}} > \frac{\phi\eta}{c_H^{\frac{1}{\alpha}-1}} \vee \frac{1-\phi}{c_L^{\frac{1}{\alpha}-1}}$  then  $x_L^* = x_H^* = 1$  and there is a pooling equilibrium.*

*Proof.* Given probabilities  $x_L$  and  $x_H$ , the optimal *ex ante* capital investment verifies  $\frac{\partial V}{\partial k}(k^*) = 0$ . Solving for this equation, we find that

$$k^*(x_L, x_H) = \left[ \frac{(1 - \beta)(1 - \alpha) (\phi x_H \eta^\alpha + (1 - \phi)x_L)}{\phi x_H c_H + (1 - \phi)x_L c_L} \right]^{\frac{1}{\alpha}}.$$

After some simplifications, we can write:

$$\begin{aligned} V(k^*(x_L, x_H), x_L, x_H) &= k^*(x_L, x_H) \frac{\alpha}{1 - \alpha} (\phi x_H c_H + (1 - \phi)x_L c_L) \\ &= \frac{\alpha(1 - \beta)^{\frac{1}{\alpha}}(1 - \alpha)^{\frac{1}{\alpha}}}{1 - \alpha} \frac{[\phi x_H \eta^\alpha + (1 - \phi)x_L]^{\frac{1}{\alpha}}}{[\phi x_H c_H + (1 - \phi)x_L c_L]^{\frac{1}{\alpha}-1}} \\ &= A \frac{[\phi x_H \eta^\alpha + (1 - \phi)x_L]^{\frac{1}{\alpha}}}{[\phi x_H c_H + (1 - \phi)x_L c_L]^{\frac{1}{\alpha}-1}}, \end{aligned}$$

where we write  $A = \frac{\alpha(1-\beta)^{\frac{1}{\alpha}}(1-\alpha)^{\frac{1}{\alpha}}}{1-\alpha}$ . We can first observe that if  $x_L > 0$  or  $x_H > 0$ ,  $V(k^*(x_L, x_H), x_L, x_H) > V(k, 0, 0) = 0$ . The optimal probabilities therefore must verify  $x_L^* + x_H^* > 0$ .

We can compute the derivatives of  $V(k^*(x_L, x_H), x_L, x_H)$  with respect to  $x_H$  and  $x_L$ . If  $x_H + x_L > 0$ , the condition  $\frac{\partial V}{\partial x_H} \geq 0$  is equivalent to:

$$x_H \geq \frac{1 - \phi}{\phi \alpha} \left( \frac{1 - \alpha}{\eta^\alpha} - \frac{c_L}{c_H} \right) x_L,$$

and the condition  $\frac{\partial V}{\partial x_L} \geq 0$  is equivalent to:

$$x_L \geq \frac{\phi}{(1-\phi)\alpha} \left( \eta^\alpha (1-\alpha) - \frac{c_H}{c_L} \right) x_H.$$

If  $x_L = 0$ , then  $V$  is increasing in  $x_H$  and one chooses  $x_H^* = 1$ , and symmetrically if  $x_H = 0$  then  $x_L^* = 1$ .

If  $x_L > 0$  and  $x_H > 0$ , we can see that if  $\frac{1-\alpha}{\eta^\alpha} - \frac{c_L}{c_H} \leq 0$ , then we always have  $\frac{\partial V}{\partial x_H} \geq 0$ . Similarly, if  $\eta^\alpha (1-\alpha) - \frac{c_H}{c_L} \leq 0$ , then we always have  $\frac{\partial V}{\partial x_L} \geq 0$ . When  $c_H = c_L$ , the first condition is always verified and in that case, we always have  $x_H^* = 1$ , as Acemoglu (1999) found.

The form of the condition for  $\frac{\partial V}{\partial x_L} \geq 0$  as a function of  $x_L$ , and for  $\frac{\partial V}{\partial x_H} \geq 0$  as a function of  $x_H$  indicate that for  $x_L \geq 0$ ,  $\frac{\partial V}{\partial x_L}$  and  $\frac{\partial V}{\partial x_H}$  are null at a minimum. In consequence, the maximum value that  $V$  can take for  $(x_L, x_H) \in [0, 1]^2$  is necessarily at the bounds, and  $(x_L^*, x_H^*) \in \{0, 1\}^2$ .

We can compute:

$$\begin{aligned} V_H &= V(k^*(0, 1), 0, 1) = \frac{A\phi}{c_H^{\frac{1}{\alpha}-1}} \eta, \\ V_L &= V(k^*(1, 0), 1, 0) = \frac{A(1-\phi)}{c_L^{\frac{1}{\alpha}-1}}, \\ V_P &= V(k^*(1, 1), 1, 1) = A \frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}}}{[\phi c_H + (1-\phi)c_L]^{\frac{1}{\alpha}-1}}. \end{aligned}$$

Comparing these values gives the optimal choice of probabilities at the equilibrium. As a function of the parameters, the capital investment is set so that both skilled and low-skill workers are accepted for the job (a form of pooling equilibrium), or only one type of worker is accepted. We can note that  $V_H > V_L$  is equivalent to  $\frac{c_L}{c_H} > \left(\frac{1-\phi}{\phi\eta}\right)^{\frac{\alpha}{1-\alpha}}$ . Verifying the following condition:

$$\frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}}}{[\phi c_H + (1-\phi)c_L]^{\frac{1}{\alpha}-1}} > \frac{\phi\eta}{c_H^{\frac{1}{\alpha}-1}} \vee \frac{1-\phi}{c_L^{\frac{1}{\alpha}-1}}$$

is equivalent to the existence of a pooling equilibrium where  $V_P > V_L \vee V_H$ .  $\square$

We can see that if  $\eta$  is large,  $[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}} \sim \phi^{\frac{1}{\alpha}} \eta < \phi\eta$ , so that large differences in productivity, assuming costs are not too dissimilar, lead to a separating equilibrium, which was the main result from Acemoglu (1999).

By extending the logic of this model, and allowing more differences between workers, can we achieve more distinctive situations between the workers at a pooling equilibrium? We

have seen that the conditions so that there exists a pooling or separating equilibrium do not depend on the negotiation power of workers  $\beta$ , but what if low- and high-skill workers had different negotiating powers, represented by  $\beta_H \neq \beta_L$ ? In the expression for  $V$ , it translates in fact into an alteration of the productivity gain  $\eta$ . Indeed, we obtain in this case:

$$\begin{aligned} V(k, x_L, x_H) &= \phi x_H ((1 - \beta_H) k^{1-\alpha} \eta^\alpha - c_H k) + (1 - \phi) x_L ((1 - \beta_L) k^{1-\alpha} - c_L k) \\ &= \phi x_H \left( (1 - \beta) k^{1-\alpha} \left( \left( \frac{1 - \beta_H}{1 - \beta} \right)^{1/\alpha} \eta \right)^\alpha - c_H k \right) \\ &\quad + (1 - \phi) x_L ((1 - \beta) k^{1-\alpha} - c_L k), \end{aligned}$$

by setting  $\beta = \beta_L$  and  $\eta = \left( \frac{1 - \beta_H}{1 - \beta} \right)^{1/\alpha} \eta$ . If  $\beta_H > \beta_L$ , this corresponds to a reduction in the contribution of the productivity gain in the evaluation of the job by the firm. While this affects the form of the equilibrium, all else being equal, it does not modify the situation of some workers with respect to others in that equilibrium.

We now consider the presence of fixed costs, so that the setup of a new job costs an amount  $ck + e$ . This costs corresponds to expenses related to a job that are not dependent on the capital invested in setting up that job: for example, the physical amenities in which the job can be carried out, such as an office or a cubicle. We have the following:

**Proposition 2.2** (Pooling Equilibrium Conditions and Fixed Costs). *If  $\eta < \left( \frac{1 - \phi}{\phi^\alpha - \phi} \right)^{\frac{1}{\alpha}}$ , then there is a pooling equilibrium if  $e_H < Ac^{1 - \frac{1}{\alpha}} \frac{[\phi\eta^\alpha + (1 - \phi)]^{\frac{1}{\alpha} - (1 - \phi)}}{\phi}$  and  $e_L < Ac^{1 - \frac{1}{\alpha}} \frac{[\phi\eta^\alpha + (1 - \phi)]^{\frac{1}{\alpha} - \phi\eta}}{1 - \phi}$ . Further, in the case where  $c_L = c_H$ , then if  $\phi < \frac{1}{2}$ , then  $e_H$  may be strictly greater than  $e_L$  at the equilibrium.*

*Proof.* The value of a work slot for the firm now writes:

$$\begin{aligned} V(k, x_L, x_H) &= \phi x_H ((1 - \beta) k^{1-\alpha} \eta^\alpha - c_H k - e_H) + (1 - \phi) x_L ((1 - \beta) k^{1-\alpha} - c_L k - e_L) \\ &= k [(1 - \beta) k^{-\alpha} (\phi x_H \eta^\alpha + (1 - \phi) x_L) - (\phi x_H c_H + (1 - \phi) x_L c_L)] \\ &\quad - (\phi x_H e_H + (1 - \phi) x_L e_L). \end{aligned}$$

The optimal capital  $k^*(x_L, x_H)$  is unchanged by the presence of the constant costs, so that now

$$V(k^*(x_L, x_H), x_L, x_H) = A \frac{[\phi x_H \eta^\alpha + (1 - \phi) x_L]^{\frac{1}{\alpha}}}{[\phi x_H c_H + (1 - \phi) x_L c_L]^{\frac{1}{\alpha} - 1}} - (\phi x_H e_H + (1 - \phi) x_L e_L).$$

The logic for determining the optimal probabilities is now altered relative to the simpler model. The derivatives  $\frac{\partial V}{\partial x_L}$  and  $\frac{\partial V}{\partial x_H}$  are shifted by  $-\phi e_H$  and  $-(1-\phi)e_L$ . However, the second derivative is the same, so that we know that the conditions  $\frac{\partial V}{\partial x_L} = 0$  and  $\frac{\partial V}{\partial x_H} = 0$  are minimums. Hence, the optimal probabilities are also extremal and  $(x_L^*, x_H^*) \in \{0, 1\}$ . In consequence, including the fixed costs  $e_H$  and  $e_L$  only affect the comparison of the values of  $V_P$ ,  $V_L$  and  $V_H$ , and also makes it possible that there may be no investment at all (if fixed costs are high):

$$\begin{aligned} V_0 &= V(k^*(0, 0), 0, 0) = 0, \\ V_H &= V(k^*(0, 1), 0, 1) = \frac{A\phi}{c_H^{\frac{1}{\alpha}-1}}\eta - \phi e_H, \\ V_L &= V(k^*(1, 0), 1, 0) = \frac{A(1-\phi)}{c_L^{\frac{1}{\alpha}-1}} - (1-\phi)e_L, \\ V_P &= V(k^*(1, 1), 1, 1) = A \frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}}}{[\phi c_H + (1-\phi)c_L]^{\frac{1}{\alpha}-1}} - (\phi e_H + (1-\phi)e_L). \end{aligned}$$

The conditions for the existence of a pooling equilibrium rather than separating are modified, but the general pattern remains the same, in that if  $\eta$  is large, the pooling equilibrium will become dominated by the separating equilibrium  $V_H$ , and  $V_H$  also dominates  $V_L$ .

If we assume that  $c_H = c_L = c$ , so that the proportional costs are the same for skilled and low skill jobs, these expressions simplify, and we obtain the following conditions:

- $V_L > 0$  is equivalent to  $e_L < Ac^{1-\frac{1}{\alpha}}$ ;
- $V_H > 0$  is equivalent to  $e_H < Ac^{1-\frac{1}{\alpha}}\eta$ ;
- $V_P > V_L$  is equivalent to  $e_H < Ac^{1-\frac{1}{\alpha}} \frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha} - (1-\phi)}}{\phi}$ ;
- $V_P > V_H$  is equivalent to  $e_L < Ac^{1-\frac{1}{\alpha}} \frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha} - \phi\eta}}{1-\phi}$ .

For the condition  $V_P > V_H$  to be enforceable, it is necessary that  $[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}} - \phi\eta > 0$ , which is the same condition on  $\eta$  as Acemoglu (1999) found for the pooling equilibrium:  $\eta < \left(\frac{1-\phi}{\phi^\alpha - \phi}\right)^{\frac{1}{\alpha}}$ . For the condition  $V_P > V_L$  to be enforceable, so that  $[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}} - (1-\phi) > 0$ , the condition on  $\eta$  is  $\eta > \left(\frac{(1-\phi)^\alpha - (1-\phi)}{\phi}\right)^{\frac{1}{\alpha}}$ , which is always verified, because  $\eta > 1 > \left(\frac{(1-\phi)^\alpha - (1-\phi)}{\phi}\right)^{\frac{1}{\alpha}}$ .

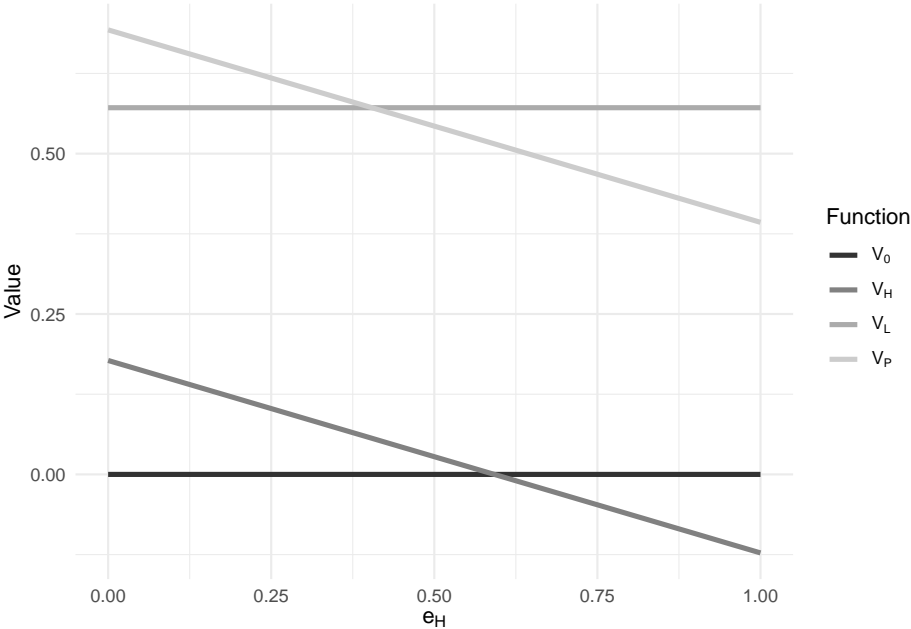
If  $c_L = c_H = c$  and  $\eta$  verifies these conditions, then it is possible to have a pooling equilibrium provided that the fixed costs  $e_L$  and  $e_H$  are low enough. The conditions for a pooling equilibrium imply that  $e_H$  may be strictly larger than  $e_L$  if the following inequality is verified:

$$\frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}} - (1-\phi)}{\phi} > \frac{[\phi\eta^\alpha + (1-\phi)]^{\frac{1}{\alpha}} - \phi\eta}{1-\phi},$$

and this equation is always verified if  $\phi < \frac{1}{2}$ . Hence, if we assume that the share of skilled workers is low enough, and the other conditions on  $\eta$  are verified, then a pooling equilibrium exists in which the fixed cost of skilled workers is higher than unskilled ones.  $\square$

Figure 1 shows the way in which the pooling equilibrium dominates other possibilities when the fixed costs for skilled workers are low enough. In this case,  $\eta$  largely satisfies the constraint so that a pooling equilibrium is possible:  $6.6 > \eta$ , with the parameters used in the chart. In this example,  $V_H$  is quite smaller than  $V_L$  mostly because  $\phi$  is small. If the fixed costs applicable to skilled workers are high, then there is a separating equilibrium where only low-skill workers are kept.

Figure 1: *Pooling and Separating Equilibria as a Function of Fixed Costs for Skilled Jobs*



Note: Other parameters are  $\alpha = 0.3$ ,  $\beta = 0.4$ ,  $\phi = 0.3$ ,  $\eta = 1.5$ ,  $c_H = 0.3$ ,  $c_L = 0.2$ ,  $e_L = 0.2$ .

## 2.2 Accounting for Uselessness Through Middle Management Incentives

We now turn to the modeling of bullshit jobs, through specific assumptions on the incentives of the middle management directly in charge of hiring employees, as both Graeber and the subsequent theoretical and empirical research on bullshit jobs or bullshit in general stressed the importance of middle management in the process.

Although the study of the principal-agent problems in the management of firms has largely focused on high-level management, and CEOs in particular, the issues raised by middle man-



agement have received some attention. It has been well established that middle management has a specific effect on firms. In an empirical study using a survey of German middle management, Wagener (2023) showed that middle managers have a substantial impact on earnings management, independent from firms' leaders. Livijn (2019) also show in a sociological study that middle managers truly effect organizational changes in their organizations, and do not simply replicate the instructions from top management.

Chen, Lu, & Sougiannis (2012) study the asymmetrical patterns in changes in selling, general and administrative costs (SG&A) in corporations: they increase rapidly, but decline slowly. They associate this asymmetry to the benefits managers derive from managing larger organizations. Using a large sample of US firms, they find a strong association between SG&A cost asymmetry and agency problems. Hofmann & Martin (2017), focusing on data from the German chemical industry, point out that middle managers see reduced earnings when they switch firms, which is consistent with an incentive to progress and arise within a given firm. In their theoretical study of power-hungry agents, Dessein & Holden (2022) show that a preference for making decisions rather than delegating them raises the issue of hoarding decision rights. If there are many subordinates, then delegation is more likely to take place.

Middle management is costly for firms: Hjort, Malmberg, & Schoellman (2022) show, with an empirical study across many developed and developing countries, that the compensation cost of middle management does not vary much, and is significant. The empirical relationship between hierarchical span and compensation is well attested. Ortín-Ángel & Salas-Fumás (2002), studying Spanish firms, document an empirical link: "the average estimates of span of control and implicit substitution elasticity between subordinates and their direct managers are greater than one", although human capital variables are also important explanatory factors. Smeets & Warzynski (2008), among other things, show using data from a large European firm, that "the span of control positively impacts wages, promotions and weakly bonuses and [...] a positive relationship between the span as manager and the span once promoted to the next level." Fix (2019) has empirically shown, across multiple firms, that personal income is most strongly related to hierarchical power, defined as the number of subordinates one controls: "relative income within case-study firms scales strongly with hierarchical power [and] grouping individuals by hierarchical rank (across society) affects income more strongly than any other factor tested here". Empirically, he also finds a log-linear relationship. Leonida et al. (2020) focus on the wage premium to supervision in German and British firms, and show

some substantial variations which they attribute to differences in corporate culture between the two countries.

Few models specifically account for the wage distribution among managers at different levels. In their empirical study, Ortín-Ángel & Salas-Fumás (2002) extend the classical hierarchical models of coordination with loss of control from Qian (1994). They assume managers have different levels of human capital, and examine the resulting optimal distribution of spans; they find a log-linear relationship between hierarchical level and manager wages. They also find that, according to their model, “the elasticity of managerial compensation to the size of resources commanded by the manager is lower than one in all managerial positions.” The formal model developed by Kemp-Benedict (2015), partly based on the model from Lavoie (2009), accounts for the span of managerial control and its link with compensation. He assumes that managers’ salaries are a given multiple of the salary of their direct reports, and determines the optimal span and wage distribution.

We now consider that each production slot has a manager, who is in charge of hiring decisions, and of setting up the work. The managers seek to maximize not only the output, but also the amount of workforce they have under their purview, in line with the empirical and theoretical work mentioned above. The utility for the manager is not simply the output  $y(k, h)$ , but  $y(k, h) + \gamma w(k)$ , with  $\gamma < 1$ , following the logic of Kemp-Benedict (2015). According to the empirical and theoretical literature on middle management, this  $\gamma$  should be in the order of 0.20-0.30. The negotiation of wages also reflects the managers’ utility function, and workers obtain a fraction  $\beta$  of the additional utility provided by a job that is occupied through higher wages. We therefore have now:

$$w_H(k) = \beta(k^{1-\alpha}\eta^\alpha + \gamma w_H(k)),$$

$$w_L(k) = \beta(k^{1-\alpha} + \gamma w_L(k)).$$

The wages are therefore higher now than they were in the prior setup:

$$w_H(k) = \frac{\beta}{1 - \beta\gamma} k^{1-\alpha} \eta^\alpha,$$

$$w_L(k) = \frac{\beta}{1 - \beta\gamma} k^{1-\alpha}.$$

It is reasonable to assume that  $\gamma < \frac{1-\beta}{\beta}$ , so that  $\frac{\beta}{1-\beta\gamma} < 1$ , otherwise no finite level of wages can solve for the equilibrium. The lesser the bargaining power of workers, the more latitude there is for managers to have a high  $\gamma$ .

We can now show the following:

**Proposition 2.3** (Pooling Equilibrium with Middle Management). *When management allocates a weight of  $\gamma$  on wages in their utility, the conditions for the existence of a pooling equilibrium are the same as in Proposition 2.2, where  $1 - \beta$  is replaced with  $\frac{1-\beta}{1-\beta\gamma}$ . At the equilibrium, the actual economic contribution of some workers may be negative.*

*Proof.* We consider that the fact that workers benefit from the additional utility of the managers does not reduce that contribution to the managers' utility. Hence, the value to the manager of a production slot now writes:

$$\begin{aligned} V_\gamma(k, x_L, x_H) &= \phi x_H \left( \left( 1 - \frac{\beta}{1-\beta\gamma} \right) k^{1-\alpha} \eta^\alpha + \gamma w_H(k) - c_H k \right) \\ &\quad + (1-\phi) x_L \left( \left( 1 - \frac{\beta}{1-\beta\gamma} \right) k^{1-\alpha} + \gamma w_L(k) - c_L k \right) - (\phi x_H e_H + (1-\phi) x_L e_L) \\ &= \phi x_H \left( \frac{1-\beta}{1-\beta\gamma} k^{1-\alpha} \eta^\alpha - c_H k - e_H \right) + (1-\phi) x_L \left( \frac{1-\beta}{1-\beta\gamma} k^{1-\alpha} - c_L k - e_L \right). \end{aligned}$$

This corresponds to the prior model, where the negotiation power of the firm is expanded by a factor of  $\frac{1}{1-\beta\gamma}$ , although the actual output net of costs for the firm now differs from the value to the manager, because it is in fact the workers' negotiation power that is expanded:

$$\begin{aligned} N(k, x_L, x_H) &= \phi x_H \left( \frac{1-\beta(\gamma+1)}{1-\beta\gamma} k^{1-\alpha} \eta^\alpha - c_H k - e_H \right) \\ &\quad + (1-\phi) x_L \left( \frac{1-\beta(\gamma+1)}{1-\beta\gamma} k^{1-\alpha} - c_L k - e_L \right) \\ &= k \phi \left[ \frac{1-\beta(\gamma+1)}{1-\beta\gamma} k^{-\alpha} x_H \eta^\alpha - x_H c_H \right] + k(1-\phi) \left[ \frac{1-\beta(\gamma+1)}{1-\beta\gamma} k^{-\alpha} x_L - x_L c_L \right] \\ &\quad - \phi e_H x_H - (1-\phi) e_L x_L \\ &= \phi N_H(k, x_H) + (1-\phi) N_L(k, x_L). \end{aligned}$$

In that last equality, we separated the contribution of high- and low-skill workers in the expression of  $N$ .

We assume that the parameters are such that there is a pooling equilibrium, so that both high skill and low skill workers may be hired. In this case the optimal probabilities are (1, 1) and:

$$k_\gamma^*(1, 1) = \left( (1 - \alpha) \frac{1 - \beta}{1 - \beta\gamma} \right)^{\frac{1}{\alpha}} \left[ \frac{\phi\eta^\alpha + (1 - \phi)}{\phi c_H + (1 - \phi)c_L} \right]^{\frac{1}{\alpha}}.$$

We can see that the use of capital is increased relative to the optimal equilibrium without managers: their preferences cause over-investment.

Hence we can write:

$$N(k_\gamma^*(1, 1), 1, 1) = k_\gamma^*(1, 1) (\phi c_H + (1 - \phi)c_L) \left( \frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1 \right) - \phi e_h - (1 - \phi)e_L.$$

The dependency of  $N$  on  $\gamma$  is proportional to  $(1 - \beta\gamma)^{-\frac{1}{\alpha}} \left( \frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1 \right)$ , and the condition so that  $\frac{\partial N}{\partial \gamma} \geq 0$  reduces to  $\gamma \leq -\frac{\alpha\beta}{1 - \beta}$ , so that  $N$  is strictly decreasing in  $\gamma$ , for  $\gamma > 0$ .

We can see that, depending on the parameters, the actual net contribution of the workers can be negative. The condition  $\frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1 < 0$  is equivalent to  $\gamma > \alpha \frac{1 - \beta}{\beta}$  (a condition that is compatible with our initial requirement that  $\gamma < \frac{1 - \beta}{\beta}$ ). Depending on the coefficients, and in particular if  $\beta$  is relatively large, and alpha is small,  $\gamma$  may be substantially lower than 1 and, still,  $\frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1$  may be close to zero.

If we assume, as we did earlier, that  $c_H = c_L = c$ , then we have:

$$\begin{aligned} k_\gamma^*(1, 1) &= \left( \frac{1 - \beta}{1 - \beta\gamma} \right)^{\frac{1}{\alpha}} \left( \frac{1 - \alpha}{c} \right)^{\frac{1}{\alpha}} [\phi\eta^\alpha + (1 - \phi)]^{\frac{1}{\alpha}} \\ N_H(k_\gamma^*(1, 1), 1) &= k_\gamma^*(1, 1) c \left( \frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1 \right) - e_H \\ N_L(k_\gamma^*(1, 1), 1) &= k_\gamma^*(1, 1) c \left( \frac{1 - \beta(\gamma + 1)}{(1 - \beta)(1 - \alpha)} - 1 \right) - e_L. \end{aligned}$$

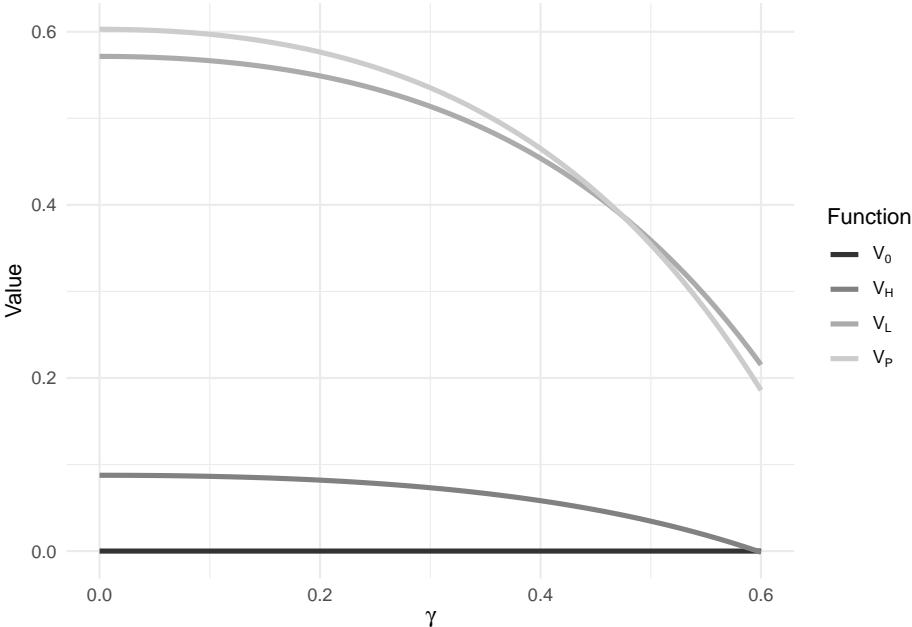
Choosing the same proportional cost coefficient for the low- and high-skill workers makes it clear that a pooling equilibrium exists where  $N_H < 0$  and  $N_L > 0$ , and such that  $N > 0$ , because  $e_H$  can be higher than  $e_L$ . □

Acemoglu (2001) proposed a model where “good jobs” and “bad jobs” coexisted while workers were all of the same type, and the good jobs, also more expensive in terms of capital investment, offered higher wages than the bad jobs. Here, we can qualify the skilled and better paid jobs as “bad”, in the sense that they lead to value destruction, and, by extension, constitute clear examples of bullshit jobs in the sense of Graeber. One important characteristics of

bullshit jobs is that those holding them must pretend they are productive. Although the model does not directly show this pattern, it appears logical that managers would require employees to play along, because the implicit misuse of resources should not be made evident. In this equilibrium, obtaining an education also still brings benefits, since skilled jobs pay better, even though they may be bullshit jobs. The differential in productivity  $\eta$  is important, as it reduces the extent to which skilled jobs contribute a net negative.

Figure 2 shows the impact of  $\gamma$  on the conditions for pooling or separating equilibria. With the parameters in this example, the pooling equilibrium is possible for a large range of values for  $\gamma$ . As in Figure 1, the absolute contribution (according to the managers' estimation) of skilled jobs is low in part because  $\phi$  is low.

Figure 2: *Pooling and Separating Equilibria as a Function of the Importance of Subordinates' Wages for Management*

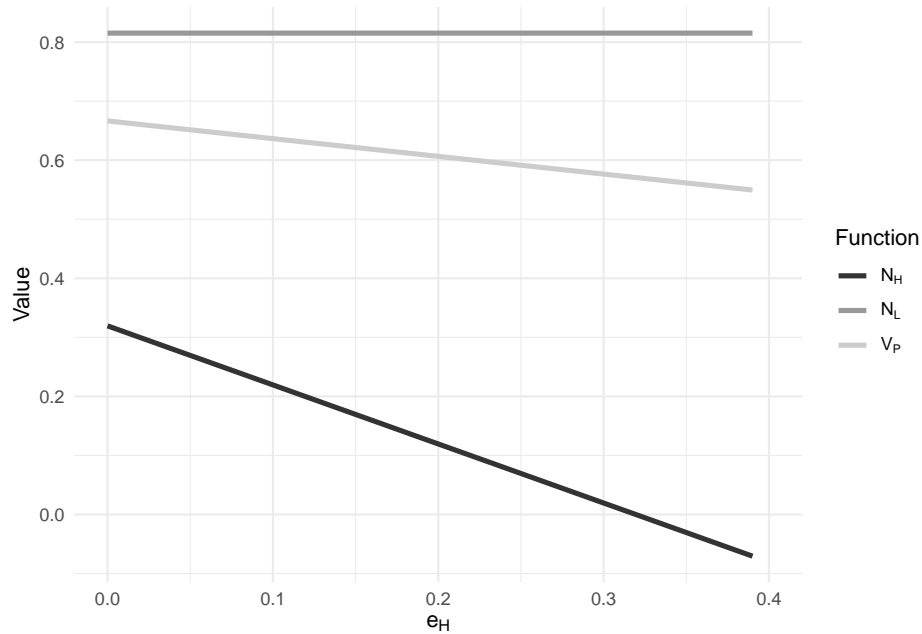


Note: Other parameters are  $\alpha = 0.3$ ,  $\beta = 0.4$ ,  $\phi = 0.3$ ,  $\eta = 1.5$ ,  $c_H = 0.3$ ,  $c_L = 0.2$ ,  $e_H = 0.3$ ,  $e_L = 0.2$ .

Figure 3 displays the actual net contribution of each job type  $N_L$  and  $N_H$ , as well as the combined value of pooling to the manager. Note that in the chart only the cases where a pooling equilibrium is optimal are plotted (that is,  $V_P > V_L \vee V_H$ ). As a function of the fixed cost for skilled workers, the net contribution of low-skill workers is unchanged and positive, while that of skilled workers can drop under 0. Figure 4 shows the same type of information, but as a function of  $\gamma$ , keeping  $e_H$  fixed. Here, for  $\gamma$  above about 0.2, the net contribution of skilled workers drops under 0. In these cases where the costs (fixed and proportional) for

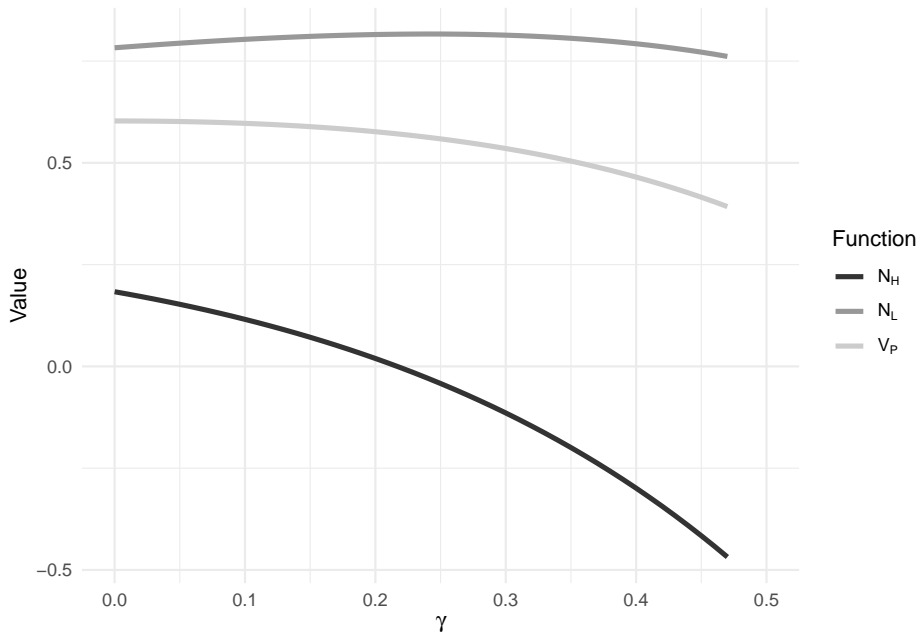
jobs done by skilled workers are higher than those for low-skill workers, the latter end up subsidizing the value destruction brought about by the skilled workers. The skilled workers' jobs effectively correspond to bullshit jobs, since they do not serve a productive economic purpose.

Figure 3: *Actual Contribution of Skilled and Low-Skill Jobs as a Function of Skilled Jobs Fixed Costs*



Note: Other parameters are  $\alpha = 0.3$ ,  $\beta = 0.4$ ,  $\phi = 0.3$ ,  $\eta = 1.5$ ,  $c_H = 0.3$ ,  $c_L = 0.2$ ,  $e_L = 0.2$ ,  $\gamma = 0.2$ .

Figure 4: Actual Contribution of Skilled and Low-Skill Jobs as a Function of the Importance of Subordinates' Wages for Management



Note: Other parameters are  $\alpha = 0.3$ ,  $\beta = 0.4$ ,  $\phi = 0.3$ ,  $\eta = 1.5$ ,  $c_H = 0.3$ ,  $c_L = 0.2$ ,  $e_H = 0.3$ ,  $e_L = 0.2$ .

These considerations allow us to summarize our theoretical findings in the following proposition.

**Proposition 2.4** (The Existence of Bullshit Jobs). *Reflecting the importance of power in the form of the labor mass under their supervision, the preferences of middle management can lead to a pooling equilibrium where skilled workers and unskilled workers are all hired, and skilled workers are paid more than unskilled workers, but their jobs (which they must continue to hold) are a net negative. Unskilled labor, in this case, pays for the the resource squandering that skilled labor represents.*

### 3 Conclusion

David Graeber was known as a “radical anthropologist, provocative critic of economic and social inequality and self-proclaimed anarchist” (Roberts 2020). With his article and his book on bullshit jobs, he asked a fundamental question: why can such jobs exist? He considered this a particularly vexing question: “The moral and spiritual damage that comes from this situation is profound. It is a scar across our collective soul” (Graeber 2013). He proposed an answer that accused the financialization of social and economic relationships, and a form

of unjustified power. This question has been addressed, to some extent, by social science research but, surprisingly this rather important issue has not been tackled at all in theoretical economics, only through empirical work.

In this article, we proposed a simple model that explains, within the logic of labor economics, how there may be such bullshit jobs. It is not, *per se*, related to a financialization of relations, but rather can be seen as cost and rent benefiting middle management. Middle management is indispensable in running large corporations, and is in a position to extract value through the building of larger control spans. A consequence of that is the existence of jobs which, to the psychological detriment of those holding them, serve no other purpose than allowing their managers to benefit more. In this equilibrium, other jobs, presumably less skilled, produce the actual work keeping the whole system afloat.

Further research on this subject could address the specific findings of the empirical research over the past few years. Why are there important differences between countries, and between firms? We have proposed a possible starting point, but more complex theoretical models combining the effect of unemployment, the typical middle management structure, and the particular human resources needs of various economic sectors, could give a more precise account of the phenomenon.



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