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Meaningful Work in Historical Perspective

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Abstract

Meaningful work is an area of growing interest for economists, sociologists, and psychologists focused on recent trends and possible future developments. This chapter looks backward to historical analysis of work, exploring how historians have discussed work meaningfulness, past changes in work meaning, and whether historical experiences offer precedents for current discussions. The chapter first surveys research on labor in economic history, which has followed traditional views in economics by seeing work as a disutility, and intrinsic motivations for work have been entirely neglected. The chapter then describes the self-determination theory of human behavior developed in psychology and constructs a Historical Work Meaningfulness Framework. The chapter uses this framework to examine literature in labor and social history on work and meaning. Research into deskilling, conflicts over workers' control, the development of working-class identity, and enslaved workers' social relations illuminate levels and shifts in work meaningfulness. The main causal factors suggested by historians are changes in technology, management practices, and worker representation. The chapter concludes by discussing how qualitative and quantitative historical research can contribute to understanding long-run changes and determinants of work meaningfulness.

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Section 1: Introduction

Popular narratives about the changing content and experience of work suggest that 21st century jobs are unusually meaningless or unsatisfying to their incumbents, but such views rarely incorporate history.[1] This chapter takes a longer-term perspective on meaningfulness in work, examining the research of historians and placing current concerns in a broader temporal context. It discusses approaches to work analysis and shows that economic historians have viewed human behavior as the result of habitual responses to stimuli, or mechanistic (Deci 1975), with no attention to meaning or intrinsic motivation. Nevertheless, psychological theories of intrinsic motivation can be used to examine past work with historical sources. Research by labor and social historians has discussed topics related to meaningful work, and the long-run perspective of historical research contributes to a more general analysis of the development and determinants of work meaningfulness.

Readers may query whether the history of work has any useful data or conclusions for the exploration of work and meaning in the present and future. William Blake's "dark satanic mills" of the British Industrial Revolution can feel distant to the point of irrelevance for 21st century office workers. Moreover, is meaningful work not just a present-day concern of workers who have ascended to a higher tier in a Maslowian (1943) hierarchy of labor conditions?

To the contrary, finding meaning in work is not uniquely modern. Psychological research into intrinsic motivation since the 1970s has produced self-determination theory

[1] The most influential of these perspectives is that of Graeber (2019), who claimed that "bullshit jobs" were widespread and their share of employment was growing in the early 21st century. Graeber's assertions have been disproved by Dur and van Lent (2019), Nikolova and Cnossen (2020), and Soffia, Wood et al. (2021), who all find that few workers in Europe report that they feel their work is meaningless. Soffia, Wood et al. (2021) also show that the share of workers who consider their jobs meaningless fell from 2005 to 2015.

(SDT), which shows that humans have psychological needs for competence, relatedness, and autonomy. People who fulfill these needs report experiencing feelings of meaning in life and have higher eudaimonic wellbeing (Ryan and Deci 2017). Workers' efforts to satisfy these three psychological needs can be found throughout the history of work. Strikes against increasing employer control in the early 20th century show workers' concern with autonomy (Braverman 1974, Montgomery 1979, Graves 1981). Defensive industrial action to protect skilled crafts in the 19th century demonstrates interest in retaining a feeling of competence (Cohen 1990). Pride in developing work abilities was not limited to artisans, and textile workers in the Industrial Revolution reported feelings of competence (Dublin 1979). Past workers complained about repetitive work (Wyatt, Fraser et al. 1929, Walker and Guest 1952, Zonderman 1992) and turnover studies found that some workers left jobs because of their monotony (Frankel 1919). The social connections of trade unions and workers' efforts to communicate in loud and frantic factory settings show an enduring desire for relatedness (see Section 4.1.1).

While employers sometimes offered higher wages to offset low autonomy, competence, or relatedness, extrinsic inducements were not sufficient for all workers, as shown by turnover and strike action. Historical workers had an interest in what we now define as meaningful work, and their perspectives on the content and context of their jobs can contribute to our understanding of how and why meaningfulness has changed.

More broadly, the history of work has much potential to inform discussions about labor in the present and future. As shown in Schneider and Vipond (2023) and discussed further in Section 5, historical examples can contribute to debates about how developments such as automation and digital technologies may change work and labor markets by providing a long-run perspective, allowing for the analysis of completed processes of change,

and by offering a variety of examples for analysis. Short-term and long-term effects may differ, and researchers can use history to examine long-run developments and the final outcomes of technological adoption processes. History contains many instances of technological change, which allows researchers to examine the different variables that impact the effects of innovation on labor demand, the content of work, and work meaningfulness. Since the long-term future of innovation paths is uncertain, only by investigating many technological and organizational shifts can we understand the range of possible outcomes. The variety of results from historical innovation episodes shows that outcomes are not predetermined but are affected by the decisions of workers, managers, policymakers, and innovators.

The chapter is organized as follows: Section 2 describes two ways to categorize work analysis and presents economic history's focus on extrinsic aspects of work. Section 3 outlines the psychological literature on self-determination and meaning in life and constructs a framework to examine historical work meaningfulness. Section 4 turns attention to labor and social history, which have used qualitative methods to understand work in the past. In the synthesis of historical research, several hypotheses are suggested regarding work meaningfulness in history and its development. Potential determinants of meaningful work are also suggested based on the historical literature. Section 5 elaborates on the value of historical experiences for research on future developments and the general social science of meaningful work, and it suggests approaches for historians and social scientists interested in studying meaningful work in the past. Section 6 concludes by calling for historians to directly investigate work meaningfulness, and for social scientists to consider historical parallels and evidence in their explorations of trends and determinants of meaningful work.

Section 2: Work in Economic History

As a discipline that has been concerned with shifts in human living conditions since its origins in the 19th century, economic historians might be expected to take interest in work meaningfulness. Debates about the standard of living, sometimes recently reconceptualized as "quality of life", are second only to explanations of the development of national income in their salience through the history of the field. The indicators that scholars have chosen for these investigations of living standards reveal their view of what constitutes a good life. If some indicators are used frequently, this implies that the discipline sees a good society as one characterized by high levels and positive trends in such metrics.[2] Using this intuition, one way to summarize approaches is to examine whether researchers have focused on extrinsic or intrinsic rewards from work. For example, when scholars analyze wages to capture living standards they assume that workers were interested in extrinsic rewards, they impose such an individual welfare function on historical workers, or, less commonly, they present evidence for the importance of this indicator.[3]

A second approach, focusing on labor, is to apply the scholarship on work orientations to a discipline's research topics. This literature categorizes workers' views of work and their main motivation. Work orientations research suggests that people mainly see work as a job for generating income, a career that increases one's social status, or a calling to fulfilling and socially valuable work (Wrzesniewski, McCauley et al. 1997). The topics of scholarly investigation imply researchers' views of what workers valued.

[2] The evidence examined by social and labor historians that is discussed in Section 4 shows that the availability of sources does not prevent scholars from examining intrinsic rewards.

[3] Most indicators of quality of life are used repeatedly and fresh research into established indicators does not always include a justification for analysis. However, adding a new indicator requires an argument for its inclusion in economic historians' conceptualization of life quality. Examples are found in the early studies of historical anthropometrics, e.g. Floud, Wachter et al. (1990).

Economic historians have almost uniformly taken an extrinsic-rewards perspective or a job-oriented perspective, treating work as a source of material benefits (wages, social status), or a risk of pain (occupational risk). They have mainly analyzed real wages, frequently to the exclusion of other subjective and objective job attributes (Schneider in press).[4] There has been some research on skills, skill premia, and social status, but these have been presented as extrinsic motivations for employment; they could also be seen as imposing a career orientation on historical workers. As in mainstream economics (Spencer 2015), work has been considered a disutility and there has been hardly any discussion of intrinsic motivation to undertake work or to prefer certain working conditions for intrinsic reasons. Economic historians assume or impose an individual welfare function on historical workers in which only income or status motivates employment. [5]

2.1: Job-Oriented Perspectives: Real Wages, Hours, and Safety

One extrinsic reward has dominated economic history analyses of work: income. Since the 19th century, scholars have used long-run series of real wages as the main indicator of changes and international differences in the standard of living (Thorold Rogers 1884, Phelps Brown and Hopkins 1955, Allen 2001, de Zwart 2025). Scholarship on incomes began with Thorold Rogers (1866), and it has been the foremost object of dispute in scholars' debates about whether forces such as industrialization raised or lowered living standards. More recent research using the pathbreaking methodology of Allen (2001) to compute material living

[4] The first studies of subjective wellbeing in history are very recent (Lack 2021, Álvarez-Nogal and Prados de la Escosura 2024) and examine general wellbeing rather than labor.
[5] Almost all discussions of motivation or incentives by economic historians exclusively consider extrinsic motivation: political leaders seek aggrandizement of wealth and power, firms and their managers seek profits, unions aim for wage increases, and congregants of religion seek salvation.

standards using consistent consumption baskets has provided new international comparisons to track global relative income. Renewed interest in wage series since the widespread adoption of Allen's welfare ratio approach has encouraged fresh consideration of the important limitations of this indicator (Stephenson 2018, Stephenson 2020, Burnette 2023). Even so, the relative ease of finding wage data in comparison with in-kind payments for work and production for use has meant that real wages for day labor remain by far the most common area of research on labor incomes.

One limitation of wage series may have implications for work meaningfulness in the past: there were many places and times in which people did not mainly make their living from waged labor.[6] A striking implication is found in the discussion of living standards following the Black Death in England. Day wages increased by up to 160% after the plague, and as a result the early 15th century is sometimes referred to as the "Golden Age of Labour". However, Hatcher (2011) showed that the increase in daily wages did not produce a commensurate rise in material living standards because there was not enough demand for day laborers to enable workers to increase their yearly incomes by the same amount. Instead, most workers toiled on their own land or on rented parcels. Instead of specialization in waged labor most people before the industrial age had a wide range of work tasks, and few of them, especially women, had a single identifiable occupation.[7] Carrying out many work activities may have produced feelings of autonomy by comparison with a narrow work portfolio, but spreading one's time over different tasks may have limited opportunities to develop abilities and thereby feel competence. In addition to the problems of using money wages to capture living standards in

[6] At the same time, wage labor did not simply rise monotonically across time. Lucassen (2021) describes a pattern in which wage labor has risen and declined repeatedly over the past 2500 years.
[7] See e.g. Ågren (2016), Lindström and Ågren (2023), Burnette (2024), Whittle, Hailwood et al. (2025).

contexts when few people worked regularly for wages (Burnette 2025), the transition to specialized wage work may have had psychological consequences that have been ignored by economic historians.

Only a few topics have found space around the dominance of real wage series in the economic history of labor. As a complement to income, there have been some studies of working days and hours (Huberman and Minns 2007, De Vries 2008, Maneuvrier-Hervieu and Chambru 2024), although time spent at work is difficult to capture before the 18th or 19th century because documentation of days worked is rare. As noted above, most economic historians consider time spent at work as a disutility rather than an occasion to experience relatedness or an opportunity to develop and feel competence. One other objective dimension of job quality that has received attention is occupational safety, either on its own or as part of studies of compensating differentials (Aldrich 1997, Aldrich 2006, Boal 2018). Workplace risks are, of course, an extrinsic disbenefit of employment.

2.2: Career-Oriented Perspectives: Skills, Skill Premia, and Social Status

A more popular area of research than non-wage objective dimensions of work is found at the meeting point of economic history and historical sociology: the development of skills and rewards for skill acquisition. Economic historians have primarily investigated the supply of skilled labor and skill premia, while historical sociologists have been more interested in social mobility.[8] In both cases, the assumed motivation of workers is extrinsic, either to earn higher wages or to ascend to a higher status.

[8] Historical sociologists' views of work motivations are generally similar to those of economic historians, as shown in the work incentives proposed by Tilly and Tilly (1998). They posit that employment is organized around incentives of compensation (wages and other forms of benefits), commitment (association with a family or other social group), and coercion (extrinsic penalties). The

There are two main approaches to capturing the skills of historical workers. The first uses a simple bipartite (skilled or unskilled) or tripartite (skilled, semiskilled, or unskilled) division of workers or occupations, and the incomes of these groups are used to calculate skill premia. This approach is used to assess the contribution of skill levels or human capital development to economic development (Frankema and van Waijenburg 2023). A more sophisticated hierarchical approach was provided by the developers of the HISCLASS system (van Leeuwen and Maas 2011). This scheme combines a historical occupational classification system based on the International Labour Organization's ISCO-68 occupational classification scheme, called HISCO (van Leeuwen, Maas et al. 2002), with a coding of social class, derived from the skill indicators in the 1965 US Dictionary of Occupational Titles. HISCLASS was constructed to examine North Atlantic economies in the modern period (18th to 20th centuries), but it is now used to analyze many contexts. One limitation of HISCLASS is that its class ranking of occupations is fixed across time and space.

Economic historians use the class ranking as a proxy for skill. In this research, occupational titles are assumed to have a consistent relationship with skill: if a worker is listed in a wage account with some occupation, scholars assume that the worker possessed the typical skill level for that occupation. However, such an approach provides no information about competence as conceived in the self-determination literature. A worker in a high-skilled occupation may be completing tasks that she finds trivial and unchallenging, therefore meaningless; or a worker in a job with low nominal skill requirements may be facing a task

first and third of these are clearly extrinsic motivations. The second may be viewed as intrinsic because workers could experience feelings of relatedness, or extrinsic, as social bonds and obligations provide a motivation external to the individual.

that he feels is unachievable and therefore causes him anxiety, stress, and a lack of intrinsic motivation and meaning.

2.3: Summary of Economic History Perspectives on Work

While economic historians have conducted many studies of real wages in the past and have related their findings to productivity, living standards, and incentives for technological change, most research has downplayed or even ignored non-wage dimensions of work. The study of intrinsic motivation for labor has been entirely neglected. Skill development has not been examined to see if workers have achieved mastery over tasks or sought challenges, but to determine how the provision of skills contributed to production and whether skills can explain the division of rewards from technological change. Individuals acquired skill to secure material rewards such as higher wages or a higher social status. Autonomy and relatedness have not received any substantial attention from economic historians. Next, we turn to evidence for the importance of these aspects of human experience and behavior, which puts their neglect by economic historians into sharper relief.

Section 3: Self-Determination Theory, Meaning, and a Historical Framework

An important area of research in psychology is the motivation of human behavior, by which psychologists aim to determine "energy", the source of behavior, and "direction", or the types of behaviors individuals choose. In the first half of the 20th century, psychological views of motivation were dominated by mechanical "drive" theories, which posit that there are learned and consistent relationships between stimuli and behaviors (Deci 1975). In these theories human behavior is extrinsically motivated by "tissue deficits" such as deficits of food or sex. However, drive theories were unable to explain a variety of empirical findings in

studies of humans and animals in which research subjects engaged in exploratory or curious behaviors without extrinsic rewards. The limits of drive theories can be illustrated with examples from some of the many experimental studies in this area. In animal studies, rats explored previously unseen areas of a cage, even when they were hungry or were suffering pain from an electrical grid, and they did so without any extrinsic inducement. Experiments with humans and monkeys found that subjects completed puzzles even when no reward was offered (Deci and Ryan 1985, ch. 2).

The inability of drive theories to convincingly explain these and similar findings led to a search for alternative explanations for motivation. The resulting literature on self-determination theory (SDT) and meaning in life has identified three basic psychological needs that are associated with intrinsic motivation: feelings of autonomy, competence, and relatedness (Deci 1975, Deci and Ryan 1985, Ryan and Deci 2017).[9] These basic psychological needs "must be satisfied for psychological interest, development, and wellness to be sustained" (Ryan and Deci 2017). The concept of "meaning" was introduced through arguments such as those of Maddi (1970) that meaning was fundamental to explaining human motivation, but that it had been neglected by the earlier mechanistic approaches. Satisfying these three basic psychological needs contributes to eudaimonic wellbeing and is associated with feeling meaning in life (see the survey of literature in Ryan and Deci 2017), making self-determination an important but unappreciated aspect of historical quality of life. As historical

[9] Engaging in beneficent work may also produce feelings of meaning. It is discussed *inter alia* in Martela, Ryan et al. (2018), and it is part of the Work and Meaning Inventory constructed by Steger et al (2012), but plays a lesser role in the work meaningfulness framework of Nikolova and Cnossen (2020). Views of what kinds of work are beneficent are socially conditioned, making beneficence an extrinsic motivation. For conceptual cohesion the framework and analysis that follows are based on the elements of meaning that have their origins in intrinsic motivation, so beneficence is not considered here.

workers spent an even larger share of their lives working than people in the present (Crafts 2022), work was probably more important as an occasion to experience feelings of meaning in the past because workers had less time in which to feel autonomous, competent, and related outside of work.

As shown throughout this volume, several social science fields take an interest in meaningful work. Some use data-collection scales that capture feelings of meaningfulness such as the Work as Meaning Inventory (WAMI) (Steger, Dik et al. 2012). Nikolova and Cnossen (2020) demonstrate that data from the European Working Conditions Survey captures many aspects of meaningful work. The first representative surveys of wellbeing and working conditions were only conducted in the second half of the 20th century, and few of these included questions about autonomy, competence, or relatedness at work. How can work meaningfulness be captured for earlier times?

In place of survey data, we can construct a general framework for work meaningfulness from intrinsically motivated behavior in the past and use it to analyze qualitative historical sources. The first step is conceptualization of each of the three basic psychological needs, drawn from the literature on SDT. *Autonomy* captures whether workers feel an "internal locus of causality" (Ryan and Deci 2017), which is related to but distinct from the concept of "control" discussed further in Section 4. While control can be seen as negative freedom—the absence of a supervisor directing one's actions—autonomy is positive freedom to pursue "self-endorsed" behaviors. *Competence* is presented in SDT as carrying out activities that offer "optimal challenge" (Deci and Ryan 1985) or experiencing "effectance" and a feeling of "flow" (Ryan and Deci 2017). Work or other activities that are too easy or too difficult lead to loss of motivation. *Relatedness* has received somewhat less attention than the other two basic psychological needs, and is sometimes considered a pre-condition for achieving meaning

through autonomy and competence. It has been conceptualized as "relational satisfaction" (Ryan and Deci 2002) or "feeling socially connected" through reciprocity. It can be experienced when one feels cared for by other people and when one contributes or gives to others as well (Ryan and Deci 2017).

A framework for analyzing work meaningfulness in the past next requires a unit and bounds of analysis. Present work meaningfulness research commonly uses surveys of job incumbents, and the questions capture respondent characteristics, whether they experience intrinsic motivation, and if they achieve feelings of meaning within employment; intrinsic motivation in non-work activities is not captured. For example, questions examining autonomy may inquire about whether workers can organize their tasks, but employment contracts are not considered. In historical settings forced labor relationships were more common, which likely reduced feelings of autonomy *in life*. To enable comparison with present research, the historical framework follows current conceptualizations by only considering autonomy, competence, and relatedness within work or employment. However, as situations of forced labor (such as enslavement, discussed in Section 4.1.2) surely reduced overall intrinsic motivation, such contextual features should also be discussed. The framework can be used to examine autonomy, competence, and relatedness in all types of historical work, including waged work, production for own use or consumption, and forced labor.[10] Analysis may be carried out for industries, single occupations, or for common work portfolios that ranged across different occupations.

The framework aims to capture whether historical work fulfilled the three basic psychological needs of SDT and produced meaningfulness. In current research, this is

[10] Historians use various definitions for work; for example, Lucassen (2021) adopts the definition from Tilly and Tilly (1998) of "any human effort adding use value to goods or services".

achieved by asking study participants to assess their *feelings* of autonomy, competence, relatedness, and meaning. In historical settings, little self-reported subjective information is available, although objective information about work situations is more common. An ideal study should aim to ascertain whether workers *felt* autonomous, competent, and related, and the Subjective Conceptualizations (Level 1) of the framework can be used. Occasionally, it may be possible to find evidence that directly states whether workers felt their work was meaningful, and that such meaning produced feelings of having a meaningful life. However, sufficiently rich evidence is rare, and the Objective Conceptualizations (Level 2) can be applied instead. These versions allow assessment based on factual information about work rather than directly-reported sentiments.

Level 3 provides historically-adapted versions of questions and items used in current measurement of work meaningfulness and self-determination. For Framework Pillars I–III, we present amended versions of questions from the European Working Conditions Survey used by Nikolova and Cnossen (2020). The EWCS questions are adapted to account for the lack of direct survey responses in historical studies, and the variability of historical working arrangements in which many people were not employed consistently in one type of work or one occupation. These specific questions can help to structure analysis when evidence is rich and informative. For Pillar IV, which can be used to assess direct evidence of workers reporting meaningfulness in work, there is no objective conceptualization, and we adapt items from the WAMI (Steger, Dik et al. 2012).[11]

[11] Following the discussion in note 9 above, the WAMI items that capture beneficence are not included.

Historical Work Meaningfulness Framework

I. Autonomy

1. Subjective Conceptualization (A-SC): Workers felt that they were able to determine causality in their work environment.

2. Objective Conceptualization (A-OC): Workers exercised choice over the organization and conduct of their work.

3. Adapted EWCS Questions:
   AQ1: Did workers evaluate the quality of their work outputs or conduct?
   AQ2: Could workers choose or change the order of their tasks?
   AQ3: Could workers choose or change the methods they used in work?
   AQ4: Could workers choose or change their work speed?
   AQ5: Could workers take breaks at their own discretion?
   AQ6: Were workers permitted to apply their own ideas in work?

II. Competence

1. Subjective Conceptualization (C-SC): Workers felt that they were able to seek and achieve optimal challenges, and/or experienced effectance.

2. Objective Conceptualization (C-OC): Workers were prepared to accomplish their tasks given the training and tools provided. Workers could find new challenges within existing activities or in new activities.

3. Adapted EWCS Questions:
   CQ1: Did workers solve unforeseen problems on their own?
   CQ2: Did workers learn new things during work?
   CQ3: Did workers have sufficient skills to cope with their duties or more demanding duties?

III. Relatedness

1. Subjective Conceptualization (R-SC): Workers felt socially connected at work.

2. Objective Conceptualization (R-OC): Workers could engage in socially-connecting activities at work.

3. Adapted EWCS Questions:
   RQ1: Did peers help and support each other?
   RQ2: Did supervisors help and support their subordinates?

IV. Meaning in Work and Life

1. Subjective Conceptualization (MIL-SC): Workers felt and reported experiencing meaning in their work, and that their work contributed to feelings of meaning in life.

2. (No Objective Conceptualization, see the text)

3. Adapted WAMI Items:
   MI1: Workers reported having or finding meaningful work or a meaningful career.
   MI2: Workers stated how their work contributed to their life's meaning.
   MI3: Workers described what made their job meaningful.
   MI4: Workers reported that they had found work with a satisfying purpose.
   MI5: Workers stated that work contributed to their personal growth.

Human activities can be motivated by both extrinsic and intrinsic rewards, so the former (e.g. a wage or food grown for subsistence) does not preclude intrinsic motivation, though increases or decreases in extrinsic rewards may temporarily shift relative shares of intrinsic and extrinsic motivation (Deci 1975). When workers have very low levels of extrinsic rewards (pay) or very high extrinsic demands (work effort), intrinsic motivation may fall as workers are unable to provide for their material needs or find their effectance limited by exhaustion (Vohs, Mead et al. 2006, Rosso, Dekas et al. 2010). Therefore, work meaning from intrinsic motivation should be considered alongside objective job quality.[12]

The absence of survey data before the late 20th century requires creativity when seeking sources to analyze with this framework. Nonetheless, labor historians have shown that there is a wealth of qualitative material available about work in many places and at many times in the past. Typical sources for objective work facets include the reports of labor regulators, the discussions of social commentators, and trade handbooks that recount the use of different technologies. The content of work has received renewed recent attention by historians using materials such as court records (Fiebranz, Lindberg et al. 2011, Ågren 2016, Whittle and

[12] A system of indicators to analyze historical job quality is constructed in Schneider (in press).

Hailwood 2020, Whittle 2024) and the objective quality of work can be analyzed using material produced by workers, employers, and observers (Schneider in press). These sources provide an entry point to examining work using the Objective Conceptualizations and some of the Adapted EWCS Questions. Workers' views have a long tradition of analysis in historical scholarship, using diaries, letters, and workers' magazines, among many sources (Dublin 1979, Blewett 1990, Zonderman 1992, Halpern 1997). For more recent periods (the late 19th and 20th centuries), there are oral histories for some occupations and locations. This material includes objective qualitative data about work conditions (Levels 2 and 3) and might allow use of the Subjective Conceptualizations. The framework and sources can be used to explore variation in meaning between and within jobs across time. The following section surveys labor and social history research using the framework.

Section 4: Work and Meaningfulness in Labor and Social History

Labor and social history and economic history have diverged since at least the 1970s. This divide is the product of various intellectual and institutional developments including the "cultural turn" of historians[13], the increasing subsumption of economic history as a subfield of empirical economics (Margo 2018) and, in some regions, bitter debates about questions of the economic past in which economic historians and social and labor historians found themselves on opposing sides.[14] Although social and labor history have been less interested

[13] The cultural turn was a shift in many humanities and social science disciplines beginning in the 1970s that prioritized research into culture and identity, and away from material topics and the use of positivist epistemology. In history, an earlier view that the discipline is a social science (most associated with Leopold von Ranke) was replaced by a stance that historical research should be pursued as a branch of the humanities, with more use of subjectivist epistemology.

[14] Perhaps the most important of these debates followed the publication of Robert Fogel and Stanley Engerman's controversial *Time on the Cross* (1974), which analyzed the economics of enslavement in the United States.

than economic history in the development of living standards, these fields have investigated topics related to meaningful work, unlike economic historians. There is now limited communication between labor and social history and economic history, and their topics of interest and methods are far apart. Nonetheless, the qualitative approaches of labor and social historians have addressed all three of the psychological needs that form the basis of self-determination theory. Business historians have also contributed to some of these strands of literature.

This section presents scholarship that has discussed relatedness, competence, and autonomy, and instances when the fulfillment of these basic needs at work may have changed. It then uses this research to suggest possible determinants of meaningfulness proposed or implied in the historical literature. In addition to the discussion of large-scale shifts, the section also puts forward hypotheses about meaningfulness tradeoffs in the past and potential questions that could merit further study. As this literature does not explicitly discuss meaningfulness, identifying the intrinsic or extrinsic motivations of historical workers is at least partly inferential. Given the scope of the chapter, it necessarily elides differences between industries and locations to provide a general picture.

4.1: Relatedness in Labor and Social History

Particularly since the cultural turn, historians have been very interested in community and the development of group cultures. This literature occasionally borrows concepts from qualitative sociology or anthropology, occasionally from psychology, but not from the literature on intrinsic motivation. Therefore, scholars have tended to discuss concepts similar to relatedness such as community, group identity or consciousness, and the development or expression of shared cultural practices. One concomitant limitation is that while present

research on work meaningfulness examines experiences during working hours, labor and social historians rarely draw such distinctions in their analysis of community and identity, and instead express more interest in experiences outside of, but related to, employment. Much literature mentions work as context for emerging class consciousness, the formation of representative institutions, and worker sociability. The following discussion presents research on within-work and work-adjacent experiences to provide a general view of the literature.

4.1.1: The Development of Class and Working-Class Communities

A large part of labor historiography and social historiography has recounted the development of class consciousness and working-class communities. A cornerstone of this research is the work of E. P. Thompson (1963) on class consciousness in England during the 18th and 19th centuries, although Thompson was not the first historian to investigate these topics. This literature generally draws inspiration from a Marxist expectation that the economic position of a proletariat would lead to the creation of a corresponding class identity. While a rich area of study, its use for the analysis of relatedness is limited because most scholarship focuses on the development of class identity for other ends—principally political representation of the working class, or in campaigns for better pay and conditions—rather than worker association as an end in itself (Ware 1924, Sullivan 1955, Foster 1974). The Marxist inspiration for research on class consciousness in the industrial age has meant scholars have paid less attention to institutions that formed worker communities and likely enabled relatedness in earlier periods, such as guilds.

Research on working-class communities that offers more hints for the experience of relatedness examines connections between socialization at work and informal association in work-related spaces, of which the most stereotypical would be the pub or tavern (LeMasters

1973, DeLottinville 1981, Kirkby 2007). Workers also made connections through formal institutions such as friendly societies and trade unions (Cordery 2003). Relatedness in these organizations could be experienced on multiple levels: there were personal activities such as shopfloor organizing and local meetings, and large unions had national meetings and some published their own magazines. These different levels of engagement and communication embedded workers in communities with reciprocal commitments. Connections may have been strengthened during periods of industrial conflict, when workers were more reliant upon one another.[15] If this were the case, there may have been a short-run wellbeing paradox in which heightened feelings of relatedness may have been achieved at the same time as lower material living standards when workers forwent wages during strikes. Unionism and similar formal and informal groupings enabled workers to socialize within work and in adjacent spaces (R-OC, RQ1). Community gatherings also occurred in institutions not immediately associated with employment. Houses of worship and sports clubs were common organizations where workers built and maintained social connections.

Labor communities had limits, including the gender, race, ethnicity, and religious membership rules of trade unions. Even when women labored in the same establishment as unionized men, they could be excluded from the social interactions that would have provided greater feelings of relatedness as well as bargaining power (Yeo 2001). On some occasions, workers broke down racial barriers to participation in collective bargaining institutions (Horowitz 1997, Martinez 2001). One reason for such solidarity was a change in employment conditions such as increased work pace, which affected all workers, though solidarity-building could still be contested by prior racial or gender prejudices, and could be reversed.

[15] Nye (2013) suggested that this process occurred during the United Auto Workers' sit-down strike against General Motors in 1936–37.

Ostensible sources of division or exclusion could also give rise to a distinct set of connections around different identities: for example, occupational segregation by gender could facilitate gendered community relations and associations. While historians have traditionally focused on how gender segregation and discrimination shaped identity and the boundaries of solidarity, circumscribed connections also provided satisfaction and meaning to women at work (RQ1) (Tentler 1982). Similarly, while cultural, racial, or social differences could be used to exclude workers and limit relatedness, such identities could also underpin feelings of community and relatedness among coreligionists, workers sharing a language, or members of the same caste (Chakrabarty 1989). Identities could shift and communities could be reorganized, meaning that the connections which provided relatedness varied over time (Gooptu 2001).

The construction and boundaries of labor communities and associated relatedness varied between historical work cultures. Class has been the dominant mode for viewing these networks in Europe and North America, and much scholarship has followed in this Marxist tradition. More recent research that globalizes labor history has shown that other identities and social groupings provided opportunities for historical workers to experience relatedness. Since the cultural turn most labor history has been an offshoot of social history and scholars have embedded the conduct and experience of work within experiences of society. Therefore, historians have elided feelings of community experienced by workers during their working time with the formal meetings and informal gatherings of workers after the end of their working day.

4.1.2: Enslavement and Community

One of the most vibrant areas of social history over the last half-century has been the study of enslavement and other forms of forced labor, especially the slave economies and societies of the Americas. As discussed in Section 3, the Historical Work Meaningfulness Framework focuses on experiences *during* labor to enable comparison with present-day analysis of work meaningfulness. Nonetheless, enslavement imposed severe limitations on enslaved peoples' opportunities to satisfy basic psychological needs, particularly autonomy. Enslavement usually combined forced labor with physical punishment and social control to limit freedom and agency, and entry into enslavement was of course not volitional. Physical harm rarely appears in present discussions of work meaningfulness, but was much more common in historical employment and especially in forced labor. Suffering physical harm from enslaver violence would likely lead to reduced feelings of meaning through lower autonomy (A-SC) and relatedness (RQ2).

Historians' views of work motivation among enslaved people have varied: Fogel and Engerman's (1974) argument that enslaved workers took note of their place in an occupational hierarchy could be interpreted as a typically economistic imposition of extrinsic motivation for work, or as a search for competence, as discussed briefly by Johnson (1986). Another framing of enslaved work as a source of competence is provided by Stevenson (1996), who asserted that "slave men and women strove to complete work quotas and took pride in their labor" (p. 195). Historians have also examined enslaved peoples' efforts to develop skills such as reading despite enslaver prohibitions (e.g. Webber 1978). As this skill may not have offered an immediate extrinsic benefit, it could be seen as a way to satisfy a desire for competence.

Within the coercive system, enslaved people established and sustained connections during their hours of work and in other facets of life associated with the forced labor system

such as co-located housing.[16] Scholars sometimes present these activities as a form of resistance, which could be seen as a way to feel autonomy as well as relatedness.[17] Striving to experience meaning through community-building can be viewed as an attempt to actively craft meaningful work, an *in extremis* example of a phenomenon discussed elsewhere in this volume. Indeed, some scholars have claimed that developing a unique culture under shared oppression fostered a strong sense of community (Blassingame 1979). Enslaved people found opportunities within gang labor to experience connections and relatedness (Dusinberre 2009).[18] While the gang system sharply limited autonomy, enslaved people communicated during work, for example by singing (R-OC, RQ1).

Feelings of relatedness may have varied with the size of the enslaved labor force. Enslaved people on small farms had fewer opportunities for reciprocal caring outside of the few others in bondage to the same enslaver. The enslaver may also have interposed himself or herself in such relationships, perhaps reducing relatedness for the enslaved. Whether this system produced different levels of relatedness from other forced labor regimes such as

[16] Perhaps unsurprisingly given the scholarly traditions of social and labor history that focus on identity, culture, and community, work itself has been discussed much less than other aspects of enslaved experience (e.g. socialization, enslaver violence, family relations).

[17] There is a much larger literature on resistance that fits primarily with discussions of autonomy. Classic works discussing resistance include Bauer and Bauer (1942), Stampp (1956), and Ellison (1983); more recently (among many) Camp (2004), although monographs of recent decades usually include at least some discussion of resistance modes.

[18] There were two main systems for organizing enslaved labor in the Americas: a "task" system, in which enslaved people were assigned a specific, sometimes measurable, work task until it was complete or for some time interval; and a "gang" system, in which enslaved people were grouped by age and sex to carry out a set of activities for days or weeks under an overseer. The more restrictive gang system was more common on tobacco, cotton, and sugar plantations; the task system was used more frequently in the Lowcountry and Sea Islands of South Carolina and Georgia, where longer-staple cotton and rice were cultivated. The task system likely provided slightly higher autonomy through reduced supervision, but as task workers also had to tend to their own small garden plots or do domestic work, it perhaps allowed less leisure time (Berlin and Morgan 1993, Lussana 2016). Kay and Cary (1995) presented the task system as a method that enslavers used to secure or improve enslaved people's work motivation.

Russian serfdom, in which thousands of individuals were enserfed by a single lord, may merit further analysis (Kolchin 1983).[19]

Much like the gender-segregated factory work mentioned above, many aspects of enslaved life, including work, were divided by gender. This led to opportunities for gendered homosociability: for men, this could include drinking, gambling, and fighting (Lussana 2016), which were also common social activities for white factory workers. Women were commonly grouped together by enslavers to care for children and to work in separate gangs, which gave rise to ideas about Black femininity and, plausibly, relatedness (White 1985). Women sometimes oversaw the work of children and teenagers, which might have enabled a closer-knit group than monitoring by white overseers. However, such arrangements may have produced conflicted feelings for the "driveresses" who were placed into a position of coercive authority, so any effect on relatedness requires further consideration (Dusinberre 2009, Paton 2020). More broadly, differences in work activities could strain communities: enslaved people who developed work skills had greater mobility and opportunities for resistance, which enslavers tried to exploit to inhibit community feelings (Andrews 2019). Therefore, there may have been a tradeoff between relatedness and competence for enslaved people.

Historians have also discussed the attempts of enslavers to impose paternalistic communities. Enslavers claimed their system of bondage was a "positive good" and purported to provide for both the bodily (e.g. food, medicine) and spiritual (religious) needs

[19] Kolchin critiqued the literature on enslaved communities in the Americas from the 1960s and 1970s for providing an overly optimistic view of community development. He argued that communal relations and autonomy were much lower among enslaved people in the US South than Russian serfs, primarily because enslavers were usually present, slaveholdings were much smaller, and Black Americans were a minority of the population in the South. His argument suggests that opportunities to find intrinsic motivation in work and life were lower for enslaved people in the US than the other settings he discusses.

of the people whom they enslaved. While these efforts aimed to burnish the public image of enslavement, they were also intended to make enslaved people more complaisant with their situation (Camp 2004). This imposed community placed the enslaver as the agent of enslaved social relations and perhaps disrupted voluntary social interactions between enslaved people, which may have produced a perceived external locus of causality (see Deci and Ryan 1985), reducing feelings of meaning (A-SC). Whether such efforts were an intentional strategy to deprive enslaved people of basic psychological needs is a further aspect of meaningfulness that could be investigated by historical research.

Satisfaction of basic psychological needs within and outside of work was likely lower for enslaved people in the Americas than any of the other historical worker groups discussed in this chapter: enslavers limited their feelings of autonomy, relatedness, and competence through controlling violence. Historians have discussed attempts by enslaved people to resist these strictures and find opportunities to experience relatedness by forming bottom-up communities. Such efforts occurred within and outside of work, although the emphasis in the historiography of slavery on non-work elements of life means there remains much scope for research on the experience of forced *labor* itself.

4.2: Competence

The most prosaic but perhaps the most fundamental part of research on labor concerns the content of work, and labor historians have considered its development, albeit to a much lesser extent than class and community. An important strand of research into work content is the historical labor process literature that followed Braverman (1974). The focal point in these debates has been the discussion of "deskilling", or the substitution of skilled artisans by

semiskilled or unskilled workers operating specialized machinery.[20] While much of the deskilling literature has focused on the loss of extrinsic rewards such as wage premia and the social status of artisans, the loss of a feeling of achievement from facing new challenges as work was broken up into routine tasks could have reduced motivation and meaningfulness. Two principal settings in which deskilling has been discussed are the experience of factory work in the First Industrial Revolution, and the worker-as-automaton world of the Fordist assembly line in the 20th century.

4.2.1: Factory Work in the First Industrial Revolution

In general, most factories in the First Industrial Revolution employed a few skilled workers to maintain and adjust machinery and many low-skilled operatives to monitor the machines and make minor interventions to their running.[21] As there was no formal training for most operatives, typical stories of the learning process tell of workers who were run off their feet by the pace of work and dazzled by the speed of machinery (CQ3) (Zonderman 1992, Gross 1993). They could also be shocked by the noise of the factory and feel stifled by the indoor environment of dust, fumes, heat, and humidity. Such an experience was not conducive to the state of "flow" aimed for in facing optimal challenges (Deci and Ryan 1985). After some weeks or months, operatives usually adjusted to factory work demands. This could lead to satisfaction when one finally achieved a feeling of effectance, but the lack of a subsequent challenge or variety was generally amotivating. Standardized machinery prevented workers from finding new challenges (C-OC, CQ1, CQ2). Studies of textile work

[20] Braverman and related research has also substantially discussed "workers' control", aspects of which are addressed in Section 4.3 below.
[21] The dates assigned for the First Industrial Revolution vary by country; in Britain it is commonly dated c. 1760–1830, with some flexibility in either direction.

have paid particular attention to these experiences (Dublin 1979, Zonderman 1992). The greatest continuing challenge was maintaining focus with the high, and at times rising, pace of the automatic or semi-automatic machinery (Dublin 1979, Tentler 1982).

The First Industrial Revolution also featured notable changes in the gender division of labor. While later episodes of deskilling, such as the displacement of skilled butchers (Halpern 1997) or gunsmiths (Hounshell 1984) in the 19th century, replaced male artisans with semiskilled or unskilled men, the first phase of industrialization included replacement of both predominantly male (e.g. weaving) and female (e.g. spinning, knitting) trades. In factories, the skilled workers were invariably men, while women and children were commonly employed as operatives. Several scholars have suggested that, for women, the disemployment effects of industrial technology outstripped the creation of new work. The result was a reduction in women's formal employment (Richards 1974, Humphries and Schneider 2021). In Britain, women's labor force participation only returned to preindustrial levels in the 1980s (Shaw-Taylor, Sugden et al. 2019).

Women who found work in factories were limited to jobs that probably did not allow them to feel competence. This lack of new challenges may have led them to focus on the extrinsic (income) rewards of employment, or they may only have found intrinsic motivation in social relations with colleagues. The first possibility is supported by sociological research, discussed in Chapter 2 of this volume, which found that women in the UK primarily had a job orientation towards work up to the 1980s. Women's exclusion from the paid labor force and shifts into low-competence factory work probably reduced feelings of meaning, but these changes have received little attention outside of gender history. The long-run development of gendered divisions in work motivation and feelings of competence merits further investigation.

One caveat for the discussion of deskilling during the First Industrial Revolution is in order: some pre-industrial manufacturing employments that commonly employed women such as hand spinning and straw plaiting were also repetitive, and it is possible to overstate the loss of motivation in factory work. At the same time, these earlier employments could allow workers to challenge themselves by improving their output quality (C-OC), which was not possible using factory machinery that was commonly set up to produce a specific quality of output.

4.2.2: Fordism and the Assembly Line

Many 20th century labor historians have discussed the effects on perceived competence following a later development of the factory system: the rise of assembly line production in the 20th century. This development is most associated with Henry Ford, although Ford himself was not the genius behind the assembly line, mass production, or flow production. In all likelihood there was no single brain, but a group of Ford managers and executives who built on a longer tradition in American manufacturing that favored producing long runs of standardized goods (Hounshell 1984, Broadberry 1997, Nye 2013).

Much as pre-industrial textile production relied on individual craft workers, some of whom were high-skilled, the early auto manufacturing industry featured extensive employment of skilled workers such as machinists and molders. In the late 19th and early 20th centuries, these workers trained for years to build up knowledge of their trade in an apprenticeship before ascending to the position of a craftsman (Meyer 1981). Before mass production, work relied on higher-skilled employees using relatively generic tools to carry out a variety of tasks. Automobiles were assembled in place (a system known as "static assembly"), and parts were not always compatible, requiring workers to adjust them, for

example by filing, for a suitable fit (Gartman 1986). These tasks required the skilled workers to address different challenges regularly (C-OC, CQ1, CQ2) To increase production volumes, lower costs, and respond to continuing demand, firms steadily moved towards increasing specialization and introduced more specific tools in the late 19th century (Meyer 1989).

The assembly line, introduced by the Ford Motor Company by 1913, followed partially in a Taylorist tradition.[22] A key aim was to decompose work into discrete elements that could be completed by unskilled or semiskilled workers using specialized tools, and by assigning one or few extremely specific tasks to a worker for every vehicle or part that passed on the assembly line (Meyer 1981). Examples could include *starting* to thread one or two bolts, before the next worker tightened the *same* two bolts. Once a task was assigned, the worker was expected to complete it, over and over, for the whole day, and possibly for weeks on end. Operative discretion was reduced or eliminated in the design of machine tools (Meyer 1989). A necessary concomitant was the introduction of interchangeable parts, which also changed the work of men employed in parts production, making it more standard, repetitive, and lowering skill requirements (Gartman 1986, Biggs 1995).

Most of the resulting work was mind-numbingly tedious, with incessant repetition. One Ford worker described his situation: "If I keep putting on Nut No. 86 for about 86 more days, I will be Nut No. 86 in the Pontiac bughouse" (Meyer 1981, p. 40).[23] Standardization

[22] In some discussions Taylorism (discussed below in 4.3.2) and Fordism are elided, or the former is seen as step towards the latter. While both aimed to increase productivity, Taylor increased the efficiency of individual workers by incentivizing work to a specific method, while Ford mechanized the entire flow of production, simplified tasks, and implemented early forms of automation. Common elements included measurement, particularly time studies, and analysis of how materials moved through an establishment. The scientific inspiration of Taylor was also widely influential, including for Ford (see the discussion of the scholarly debates in Watson, 2019), who made use of Taylorist concepts and methods.

[23] Workers who adjusted to one highly repetitive job frequently refused to be transferred because the transfers were invariably to similarly tedious work that was unfamiliar (Peterson 1987).

reduced or eliminated unexpected problems or challenges, and the tasks were so simple that most did not require a learning process (C-OC, CQ1, CQ2).

In part because of the tedium, but also the high pace of work, absenteeism and turnover at Ford's Highland Park plant were outrageously high: in 1913, daily absenteeism was 10% and annual turnover was 370% (Raff and Summers 1987). To address these problems, Ford increased labor's extrinsic rewards by raising wages, doubling those for the lowest-paid workers to $5 per day—a sum so generous that it became a media sensation.[24] The only exceptions to assembly-line monotony were in the remaining preserves of higher-skilled workers, in the tool shops and maintenance of specialized machines (Meyer 1989).

Skilled workers' knowledge of how to manipulate tools and material inputs was their economic value, and labor historians have discussed how this capacity was important for their self-perception, including their view of their own "manliness" (Meyer 2016). Older workers felt that their status and competence were particularly threatened, as their long service developing skills and knowledge of auto manufacture was made obsolete at the same time as their age became a hindrance to keeping up with fast-moving assembly line work. Ford specifically wanted *unskilled* men without experience of setting up and operating machine tools because they would be more malleable. His ideal operative merely took and executed instructions. The shift in labor requirements was dramatic: in 1910, 75% of jobs at Ford were skilled, but by 1923, 79% of them required one week or less to learn (Peterson 1987). The assembly line offered a clear tradeoff: workers' experience of competence fell in return for increased extrinsic rewards. The more general application of these approaches eventually led

[24] The five-dollar day was contingent on workers accepting surveillance outside of the factory. The Ford Sociological Department monitored workers' family lives, including by visiting their homes, and the full $5 daily wage was conditional on satisfying a series of personal and, for immigrant workers, social integration requirements.

to scholarly and public concern about worker motivation in the second half of the 20th century (Warhurst and Knox 2020).[25]

4.3: Autonomy and Control

Labor history has taken great interest in the topic of control, a concept similar to what meaningfulness researchers might refer to as "autonomy", but with some difference. For historians, "control" can refer to determination of the organization of a work process and methods for task completion, or to workers' management of an enterprise. The Marxist influence returns here, as many historical narratives present conflict between worker control and entrepreneurial prerogatives to organize the methods and conduct of production. Some business historians have also investigated this topic when recounting the origins of modern management techniques.

4.3.1: Factory Discipline

The emergence of factory work during the First Industrial Revolution changed the task content of work, as discussed above, and is commonly depicted as a dramatic change in labor relations and work conditions. There were supervised work settings in the pre-industrial world, including large construction sites, forced labor in agriculture, indoor workshops, and

[25] Later in the 20th century, competition from Japanese manufacturers led to the widespread adoption of a system called "lean production". In lean production skilled workers were expected carry out processes on a variety of specialized tools. Some scholars have claimed that this system provided greater worker discretion and competence, while others have argued that it remained subject to a low-control Fordist logic. On the one hand, lean methods might have undermined their autonomy (the cause of initial resistance at Toyota in 1950) but it could also have provided new challenges (Ohno 1982). This process of broadening workers' tasks from specialization to more generalist work partly reversed the long transition discussed in Section 2 from pre-industrial work to the 20th century in which varied work portfolios were replaced by full-time employment in one occupation. Findings about changes in meaning for workers during the introduction of lean production could inform historians' views of how the earlier, specializing transition shaped meaning.

domestic service. However, it is likely that more workers toiled under direct supervision in the secondary sector from the late 18th century and into the 19th century than before.

Factory work included new labor discipline that has received attention from business and social historians (McKendrick 1961, Pollard 1965, Thompson 1967).[26] Managers sought to use their large fixed capital investment in plant and equipment extensively as possible to spread its costs, and they needed workers to be present consistently. Factory schedules removed choice over working time, reducing autonomy (A-OC, AQ5). The factory bell or clock imposed a scientific, seemingly objective measure of working time on operatives who may have been used to self-disciplined employment at home.[27] As absenteeism or slow working prevented full exploitation of these capital investments, managers and overseers imposed financial and physical punishments on workers who missed work, arrived tardily, stepped away from their machines, or spoke to each other (Pollard 1965, Chapman 1967, Huberman 1996). Fines could range from a few hours' to more than a day's wages for lateness, absenteeism, or other misdemeanors such as swearing at work. Women and children were also subject to corporal punishment for such infringements. As discussed in the context of enslavement, violence likely reduced workers' feelings of autonomy and deterred subsequent autonomous behavior.[28] Shaming punishments, such as forcing workers to carry notices of poor conduct, were used in some establishments (Pollard 1963).

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[26] A provocative contribution by Clark (1994) claimed that workers "hired" factory owners to impose discipline that would enable the workers to increase their productivity, which workers were unable to maintain themselves.

[27] Timekeeping may appear objective to 21st century readers, but some factories used a starting bell that rang early and a closing bell that rang late to lengthen the working day (Myles 1850, Tucker 1984).

[28] Pollard (1963) argued factory owners' demand that workers "had to be made obedient to the cash stimulus, and obedient in such a way as to react precisely to the stimuli provided" (p. 254) was in opposition to workers' previously self-directed behavior.

Discipline also included managerial determination of work pace and procedures, which reduced autonomy (A-OC, AQ2, AQ3, AQ4, AQ6). Many textile machines had their speeds set and adjusted by the factory manager or overseer, and operative workers had to maintain this pace. In some industries, artisan production jobs were systematized to ensure that workers produced more standard outputs using established methods, limiting autonomy. An early example of the systemization of skilled work was imposed by the English ceramics entrepreneur Josiah Wedgwood. He implemented much greater division of labor in his growing 18th century pottery works and demanded strict adherence to quality control practices and use of set designs. As the few overseers could only monitor the workers they observed, checks of the quality and quantity of workers' output were the main supervision mechanisms (AQ1). Like Ford, Wedgwood preferred to mold workers from youth to avoid the difficulty of retraining artisans with years or decades of ingrained practice (McKendrick 1961). Other factory owners also expressed a preference for hiring younger workers, or set up in areas where they believed the population had more disciplined labor habits (Pollard 1963).

There was little effective labor organization in the sectors that were mechanized in Britain during the late 18th century, although this did not stop attempts to resist the adoption of machines. Nuvolari (2002) argued that machine-breaking in the early Industrial Revolution aimed to direct technological change away from centralized, low-autonomy work in factories, but workers did not oppose the adoption of similar, smaller machinery that could be used in homes. These efforts were unsuccessful, but they are illustrative of workers' values.

By the mid-19th century some industries did have labor combinations strong enough to contest the adoption of technologies or management systems that could reduce autonomy or competence. These organizations were generally craft unions that organized narrow occupational groups, so workers in the same establishments likely had different experiences

of meaningfulness. Skilled men in British cotton-spinning factories were organized in a strong union that could resist technological changes that reduced their autonomy, while the children they supervised had no parallel organization, little autonomy, and suffered corporal punishment (Bullen, Wyke et al. 1987). Cotton spinning featured a "subcontracting" system of labor organization in which the men who were employed to operate machines known as "spinning mules" hired, trained, disciplined, and paid their young assistants. Subcontracting has been used at many times and in many industries in the past (Kessler and Lucassen 2013, Lucassen 2021). In such a system, workers who toiled alongside each other had quite different experiences of autonomy and intrinsic motivation, and autonomy-reducing discipline was not only imposed by firms.[29]

Factory discipline reduced worker autonomy and enforced its limitations through extrinsic punishments (corporal punishment, fines) and enticed workers to accept its strictures using extrinsic rewards (wages). Adding eudaimonic wellbeing to our picture of quality of life strengthens the argument of researchers who have a pessimistic view of the effects of early industrialization.

4.3.2: Scientific Management

The First Industrial Revolution led to the introduction of factory discipline. During the Second Industrial Revolution, scientific management or Taylorism increased the scope of managerial prerogatives. The biography of its originator and namesake, Frederick Winslow Taylor (1856–1915), was unusual: after traveling in Europe as a teenager and receiving a

[29] The implications of subcontracting for satisfaction of basic psychological needs are ambiguous and worthy of further investigation. Work in a known group could satisfy feelings of relatedness, but subcontracted work might include extrinsic group pressures for work pacing.

private secondary education at the elite Philips Exeter Academy, he declined an offer to attend Harvard. Instead, he went to work as a patternmaker, then a machinist, and later a machine shop foreman, before studying for a degree in mechanical engineering. In the 1880s and 1890s, while working in the steel industry, he developed a system of management techniques that he believed would address important "labor problems" (Wood and Wood 2002). His methods became famous by the 1910s, in part through extensive self-promotion, and their adoption was the subject of public debates, including in the US Congress (Aitken 1960).

For Taylor, a fundamental cause of "labor problems" was the information asymmetry between workers and managers. Experienced workers knew better than their superior how to complete a task, how long it would take, and how much effort to apply. Their peers also discouraged them from working too quickly, as this would lead to a reduction in piece rates or would show each other's inefficiency. Therefore, workers engaged in "soldiering", collectively limiting their effort and output to deny the capitalist maximum returns while retaining their own energy and maintaining the piece rate. For Taylor, autonomy was at the core of "labor problems", and it prevented the achievement of "maximum prosperity" through decreased production costs, which required workers to labor with "maximum efficiency" (Taylor 1911). Extrinsic improvement and the satisfaction of basic psychological needs were directly opposed.

The Taylor system included several elements to optimize production, eliminate the information asymmetry, and prevent collective slow-working, although few firms that claimed to use scientific management adopted Taylor's program in full (Nelson 1974). The most commonly-used elements were time studies, in which managers would ascertain the most efficient way to carry out a process and the time taken to do so, and the "incentive wage", a two-track piece rate system in which workers were paid a higher piece rate if they completed

tasks according to the most efficient method determined by the time study. If workers followed the recommended course, they could earn higher wages, assuming they reached the expected higher output level.[30] Workers who used their own methods or did not raise their output would receive lower wages, and might be dismissed or moved to other jobs (Nelson 1977). Scientific management penalized workers who deviated from the method and work pace established by the time study and incentive wage, clearly reducing autonomy (A-OC, AQ2, AQ3, AQ4, AQ6) (Montgomery 1979). As the time study established a single best practice, competence was also reduced as workers could not seek new challenges (C-OC, CQ1, CQ2).

Unions objected to the incentive wage system and time studies because they would reduce autonomy and were likely to increase the pace of work (Nelson 1974, Nelson 1977, Graves 1981). A higher pace likely reduced relatedness by eliminating opportunities for conversation (R-OC). Extensive resistance stymied the adoption of the Taylor system in many firms, or limited its application to only the adoption of piece rates without a time study and an established method. Scientific management was also resisted by some managers who saw it as an intrusion on *their* authority and autonomy, or who were skeptical that the system would achieve its stated aims (Nelson 1974). The multiple levels of resistance to Taylorism show that reduced autonomy was a widely-shared concern: foremen and middle managers did not want to simply instruct workers on how to carry out a set of tasks and then measure their output (Smith and Boyns 2005).

[30] Deci (1975) claimed that the Taylor System assumed the primacy of extrinsic motivation and thereby reinforced those motivations, although he only considered one element of the system, the incentive wage. Piece rates long predated Taylor and scientific management was not limited to payment-by-output.

If anyone gained autonomy and experienced optimal challenges from the Taylor System, it was the time study man who could move from process to process across an establishment, analyzing work and optimizing production methods (A-OC, AQ6, C-OC, CQ1, CQ2). This perhaps added to the zeal of Taylor's many apostles in the 1910s and 1920s: they may have experienced greater meaning in work in addition to extrinsic rewards in salaries, consulting fees, and attention in academic circles and the business and popular press.

4.4: Summary

Scholarship in social and labor history has provided general outlines of the state of work meaningfulness and some likely change-points in the last three centuries. The main limitations of this literature are that it has tended to combine discussions of the satisfaction of basic psychological needs within and outside of work, and that it lacks a direct analysis of work meaningfulness. Nonetheless, we can draw some broad conclusions about work meaningfulness in the past and the factors that have shaped whether workers experienced autonomy, competence, and relatedness.

The rise of factory discipline and Taylorism are much-discussed historical developments that reduced worker autonomy. In both cases, managers or overseers aimed to secure higher and more regular effort from workers, although both developments saw resistance. Both developments also reduced workers' pacing discretion, but Taylorism went much further than factory discipline in limiting workers' choice over methods of work. Labor organizations in the 20th century had more success in resisting the autonomy-reducing changes of scientific management than the machine breakers of the First Industrial Revolution. In addition to reduced autonomy, factory work provided few opportunities for most operatives to experience feelings of competence, and the effects of industrialization on

effectance may have been more important for women. In a later episode of deskilling, US auto manufacturing craftsmen were supplanted by the assembly line, which included the decomposition of work into a series of routine tasks. However, the same results did not occur in other countries where strong labor combinations resisted this competence-reducing system (Lewchuk 1987). Labor historians have long examined social connections through the lens of class consciousness and solidarity, particularly in labor unions, and scholarship has gradually incorporated labor communities based on other identities such as gender and ethnicity. Enslaved workers had no representation, but individuals and groups created opportunities for meaningful and intrinsically-motivated experience within regimes of forced labor.

Historians' discussions suggest that technology, management choices, and representation are potential determinants of work meaningfulness. These forces interact: some technological changes may alter workers' feelings of competence, but only if management decides to adopt such techniques and if workers cannot prevent or limit their adoption. Strong labor organizations that enable workers to experience relatedness can be broken by labor-replacing technology, particularly if the legal system does not support worker representation. Organizational technologies that aim to increase effort levels and include monitoring may reduce autonomy, but they can be challenged by workers. Legal regimes that block worker representation may prevent workers from satisfying their psychological needs and achieving feelings of meaning, although workers have determinedly sought to experience relatedness, competence, and autonomy under such systems.

Section 5: Connecting History to the Present and the Future

Historians frequently caution against seeing the past as clearly predictive of the future. As noted in Section 1, social scientists can nonetheless analyze history to evaluate mechanisms

that may shape work meaningfulness or other outcomes of interest, and to see if mechanisms have consistent relationships across time. Current discussions about changes in work commonly focus on the role of technology. Some of the most-discussed technologies of the 21st century appear to be entirely new, but others discussed in Section 4, like the assembly line, are still in use. Purportedly novel technologies like algorithmic management are new applications of old ideas (Brown, Lauder et al. 2010, Kellogg, Valentine et al. 2019), and robots are a descendant of post-World War II automation technologies (Hounshell 2000). Some scholars have argued that robots grow from the same branch of the technological tree as machinery first introduced in the Industrial Revolution (Fernández-Macías, Klenert et al. 2021). Most importantly, technologies from different periods may have similar effects on skill demands or the organization of work.

On this basis, past experiences can be used to draw conclusions about the general relationship between innovation and work, and history provides a rich variety of settings in which to investigate the development and determinants of work meaningfulness. The traditional approaches of labor and social historians can be augmented with a direct interest in work meaning using the framework constructed in Section 3, and new approaches in digital humanities and quantitative social science can be used to investigate levels and broad trends.

5.1: Uses of History and the Future of Work

The most straightforward use of history when evaluating how work may change is analogical reasoning: identifying a past instance that appears familiar and using it to project the future. Analogies are powerful in public and policy discourse, and analogical reasoning based on a single case or few instances of past job-changing innovations is common in popular and academic writing on the future of work (Schneider and Vipond 2023). However, analogies

frequently mislead when the wrong analog is chosen (May 1973, Eichengreen 2012). Analogies also encourage the view that there are fixed paths into the future and may imply technological determinism. Single analogies also offer no variation across the potential determinants of the final outcome and therefore provide only a partial view of mechanisms. If analogies are used, understanding their context, and how they resemble and differ from other possible analogies and the present is essential to appreciate the strengths and limitations of parallels. The importance of contextual variables such as the organization of labor markets makes a deep knowledge of history essential if one wishes to use past examples to suggest possible routes into the future.

Public or policy communication may require analogies, although they should be chosen carefully. For social science, historical studies provide rich inductive evidence, and we should not expect that processes will repeat with the same results. Three aspects of historical study are particularly useful for inductive reasoning about technological change. First, the multiplicity of technological changes in the past allows researchers to investigate reasons why historical innovations have had varying effects. Scholars can use variation in potential determinants and outcomes such as meaningful work to isolate the role of individual determinants, and to examine interactions between determinants. Second, history offers the opportunity to explore developments in a long time horizon. While the past usually provides little assistance in predicting short-run developments, the *range of long-run outcomes* can be ascertained more accurately by looking to long-term shifts in the past than to recent developments in the present. Third, history allows us to explore completed processes of change, and to disentangle short-run effects from final consequences, which may not be distinguishable to observers living through such shifts.

Historical research can remind us of the wide *variation* in possible outcomes and the role of human agency in shaping those outcomes. While some present research acknowledges that humans will shape the future of work, technological deterministic perspectives remain strong, particularly in public discourse.

5.2: Future Research Directions

Two broad categories of future research can begin to directly explore meaningful work and its long-run determinants in history, for which this chapter may serve as a starting point. Bottom-up and top-down approaches can contribute to a better understanding of changes across time. They can also consider the causes of shifts in detail and thereby enrich the study of historical quality of life.

A bottom-up approach would build on the labor and social history literature discussed in Section 4 using the Framework constructed in Section 3. The sources are well-known to historians, but, as shown here, merit a fresh, careful investigation from the perspective of work meaning. To carry out a bottom-up inquiry one may wish to begin by investigating some conjunctures proposed above individually, and, unlike the broad discussion in Section 4, disaggregating by experiences in different occupations. Some of the hypotheses suggested throughout this chapter, synthesized or inferred from secondary literature, can be studied closely with primary sources.

A top-down perspective may begin from the collection of text corpuses such as oral histories or autobiographies. Natural language processing methods could then be used to trace changes in workers' descriptions of labor across time. The use of these methods has only just begun by economic historians interested in subjective wellbeing (Lack 2021). Researchers will need to account for changes in the meanings of words across time, place, and language,

and measures such as term frequency may be confounded by the varying salience of topics, regardless of any substantive change in working conditions and meaning. As text corpuses can only capture the *discussion* of topics and not necessarily the underlying work and experience of meaning, they should be used with caution.

These approaches should be complementary: the top-down perspective can track broad trends over long periods, while the bottom-up view enables occupational disaggregation that is crucial to capture the effects of specific shifts such as the adoption of identifiable technology or worker organization. Both may be vulnerable to the limitations of historical qualitative and quantitative data: occupational data apart from censuses and population registers may not be representative. Historical studies of work meaning trends and determinants will produce more reliable conclusions when many places and periods are analyzed and compared, to mitigate problems of representativeness and increase external validity.

In addition to broad studies of determinants and trends, several topics raised in this chapter would benefit from dedicated study. The effects of paternalism on enslaved workers' feelings of relatedness were mentioned in Section 4.1.2, and a more general consideration of how paternalism and other managerial practices impact meaningful work would add to historical and current research. Divisions such as racial and gender segregation likely also had implications for workers' experience of meaning. The potential wellbeing paradox of strikes, in which workers may have experienced high relatedness and low objective wellbeing, could be of interest to many fields that investigate labor and industrial disputes. This chapter has noted instances when work became less meaningful while some extrinsic rewards rose, but whether there is a consistent relationship between meaningful work and multidimensional objective job quality is not clear. Finally, the long-term shift from the 17th to the 20th century

towards less diverse work portfolios—the transition from a worker as a jack-of-many-trades (Burnette 2023) to the Standard Employment Relationship—may have had conflicting consequences for meaningfulness. On one hand, workers may have felt more competent in their narrower range of work activities, but competence may give way to amotivation if a new challenge is not acquired. A narrower portfolio of tasks may also have had implications for feelings of autonomy.

Section 6: Conclusion

This chapter has introduced historians and historical social scientists to the literature on meaningful work and has surveyed scholarship on labor in the past that may interest current researchers studying meaningfulness. Workers in the past tried to satisfy their basic psychological needs for autonomy, competence, and relatedness, and their work experiences have implications for historical scholarship and present efforts to ensure that workers can experience intrinsic motivation.

Economic history has entirely neglected intrinsic motivation for human behavior, including for work. Extensive psychological research shows that experiencing self-determined behaviors is an important motivation, and the satisfaction of basic psychological needs should be part of historical quality of life studies. Social and labor historians have shown more interest in topics related to meaning, as discussed in Section 4, but have focused their investigations primarily on concepts such as community, culture, control, and identity. The Historical Work Meaningfulness Framework constructed in Section 3 enables direct analysis of meaningfulness in the past.

There are many opportunities to use classic and new historical and social scientific methods to better understand meaningful work in the past. Labor and social historians may

be primarily interested in capturing a greater breadth of historical work experience, while social scientists may wish to analyze long-run determinants of work meaning. The research described in Section 4 suggests three potential interacting determinants that can be investigated with detailed study. The chapter has also put forward several hypotheses and questions about work meaning in the past. While an extrinsic motivation and therefore not analyzed here, experiencing beneficence in work should also be a topic of historical research.

Incorporating intrinsic motivation provides a more complete view of historical quality of life, and analysis of work meaningfulness in the past can contribute a long-term perspective and fresh evidence for meaningful work scholarship. In these ways, investigating historical work meaning enriches both historical and current research.

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