

**A New Global Tide of Rising Social Protest?
The Early Twenty-first Century in World Historical Perspective**

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I. The Problem and Its Significance

A (Puzzling) Resurgence of Labor and Social Unrest:

During the past three decades, there had been an almost complete consensus in the social science literature that labor movements worldwide were in a severe (many argued 'terminal') crisis (see for example, Sewell 1993; Zolberg 1995; Castells 1997; Gorz 2001). In a similar vein, the dominant position in the social movement literature was that "class" had become largely irrelevant as an organizing principle for collective action and social movement organization (see, e.g., Larana et al 1994; Pakulski and Waters 1996; for a critique see Rosenhek and Shalev 2014).

In the past several years, however, there has been a growing chorus among sociologists pointing to the resurgence of labor protest in various parts of the world (see for example, Milkman 2006, Chun 2009, Silver and Zhang 2009, Agarwala 2013, Zhang 2015, Ness 2015). Likewise, beginning around 2010, major newspapers were suddenly filled with reports of labor unrest around the world, after a two decade lull in such reports (Silver 2003, 126; Silver 2014). Taking the front page of the *Financial Times* (*FT*, London) as an illustration, in the first six months of 2010, we find reports of widespread labor unrest in Chinese factories following strikes at major automakers such as Honda and Toyota; intense protests by Bangladeshi garment workers including violent clashes with police that forced the shutdown of the country's busiest export processing zone; escalating labor unrest in India including worker occupations at Hyundai and go-slows at the German car parts supplier Bosch; and mass demonstrations against austerity in Greece, Portugal, Italy, Spain, France and the UK.¹ Then, in August and September, there were reports of widespread labor unrest in Egypt, riots against rising food prices in Mozambique, and a general strike of public sector and mineworkers in South Africa. In December 2010, we get news of protests against unemployment and rising food prices in Tunisia—the start of what would be called the “Arab Spring”².

By 2011 this uptick in labor protest gave way to a broader wave of social unrest—from the Arab Spring to the Occupy Movements—leading *Time* magazine to declare "The Protester" as their *Person of the Year* (Andersen 2011). Revolutions, uprisings and mass movements once again became a hot topic in academic debates (Beinin 2011, Goldstone 2011, Sassen 2011, Wallerstein 2011, Badiou 2012, Hardt and Negri 2012, Žižek 2012, Calhoun 2013, Harvey 2013, Milkman et al 2013, 2014, Goodwin and Romanos 2014, Therborn 2014). Journalists and social scientists speculated that 2011 would come to be seen as a turning-point year of "global revolt" alongside 1789, 1917, 1848, 1968 and 1989 (Rachman 2011, Gitlin 2012, Mason 2012, Chase-Dunn 2013). In the following two-and-a-half years (Jan 2012-June 2014), rebellions and uprisings erupted in countries as diverse as the Ukraine, Turkey, Brazil, Bosnia and Thailand, while some of the uprisings (Libya, Syria and the Ukraine) devolved into wars. A widely shared sense that the 2011 events signaled a historical turning point emerged, but there was little agreement on its exact nature.

This brief sketch of the upsurge of labor and social unrest over the past decade raises two sets of questions that animate this research project. The first relates to the relevance of class in general and the working class in particular for understanding current protest dynamics. The second relates to the historical

¹ 'Chinese workers' protests spread' (*FT*, June 10), 'Fears grow over China labour unrest' (*FT*, June 11); 'Bangladesh doubles wages in clothes industry to stem unrest' (*FT*, July 30); 'Bosch locks out staff amid India unrest' (*FT*, March 12), 'Police break up Hyundai strike in Chennai' (*FT*, June 9); 'Austerity plans spark protests in Eurozone' (*FT*, February 24); 'Workers' rage' (*FT*, June 9).

² 'Egyptians Seize Rare Opportunity to Stir Things Up', (*FT*, September 28); 'Seven die in Mozambique food rioting' (*FT*, September 3); 'Strike hobbles South Africa public services' (*FT*, August 19); 'Tunisian unemployment sparks unrest' (*FT*, December 28)

significance of the current upsurge. Is it, as some have posited, a turning point in world history? We will next elaborate on each of these questions in turn.

Questions of Class:

Rosenhek and Shalev (2014) have argued that the recent wave of protest poses "a serious challenge" to the general idea that "class" is no longer a significant organizing principle for collective action as well as to the "dichotomous distinction [prevalent in the social movement literature] between old materialistic social movements and new post-materialistic ones". While movements like the Indignados in Spain and Occupy Wall Street in the US share some characteristics with the "post-materialist" social movements (e.g., fluid and participatory internal practices, a preponderance of youth among the activists and supporters), they have "taken shape around opposition to existing modes of resource distribution and demands for alternative socio-economic policies" and have attempted to construct new collective identities based on quasi-class distinctions", rearticulating "the relationship between identities and distributive conflicts as the basis for political action" (Rosenhek and Shalev 2014: 36-38).

Yet, there has been very little use of the concept of class in the existing literature on the recent wave of protest, and even less analysis of the role of workers and workers' movements in the protest wave³. These lacuna are problematic. There has been a clear/quantifiable resurgence of labor unrest in recent years. Moreover, both workers and working class demands played a significant (and almost entirely ignored) role in the broader wave of social unrest⁴. In part, the lack of attention to the role of labor may be due to a lack of data, and to the extent that this is the case, our new database will make a major contribution.

But, in part, the lack of attention to labor is due to the fact that we are standing in the midst of a conceptual and terminological *tower of babel* when it comes to class in general and the working class in particular. Many of the most influential writers define the working class (or proletariat) in such a narrow way as to exclude *by definition* most actors and actions. For Guy Standing (2011: 6) the *precariat* is a major force behind much of the unrest, but he distinguishes the precariat from the proletariat. The latter term he restricts to "workers in long-term, stable fixed-hour jobs with established routes of advancement, subject to unionization and collective agreements, with job titles their fathers and mothers would have understood, facing local employers whose names and features they were familiar with". *By this definition, the vast majority of the world's wage workers throughout the history of capitalism would be excluded from the working class and/or the proletariat.* On the flip side, Slavoj Žižek (2012: 11) sees the mid-twentieth century unionized wage worker in factories, shops and offices (that is, Standing's proletariat), not as workers, but as a "salaried bourgeoisie" who are "resisting being reduced to proletarians".

As we move from conceptualization to measurement in this project, we are particularly mindful of the need to contribute to an exit route out of the *tower of babel* rather than adding our own floors to the top; however, due to space constraints we can only make a few suggestive remarks here. First, we start from Silver's (2003: Appendix A) conceptualization of the terms *labor and unrest*, which leads us in the direction of a much broader definition of the working class (or proletariat) than is used by Standing or

³ Among the few who have written about the role of workers in the 2011 wave, see Milkman et al (2013) and Shepard (2012) for Occupy Wall Street; see Beinin (2011) and Worrall (2012) for the Arab Spring, and Karatasli et al (2014) for a wide range of cases from across the globe.

⁴ To take one of the more widely discussed 2011 uprisings as an illustration: although students and youth were the public face of the April 6th movement that spearheaded the mass mobilization leading to the ouster of Mubarak, the movement itself was originally formed to support a major strike by Egyptian textile workers. Moreover, during the week leading up to the fall of Mubarak "strikes erupted in a breadth of sectors — among railway and bus workers, state electricity staff and service technicians at the Suez Canal, in factories manufacturing textiles, steel and beverages and at least one hospital" (MSNBC 2011). In sum, labor unrest played a major (but little recognized) role in the Egyptian case.

Žižek (cf. van der Linden 2014) as well as a more encompassing definition of proletarian struggles (cf. Fraser 2014)⁵. Second, we work from the premise that working-class formation is a historical process that unfolds unevenly in (geographical and industrial) space, and that this uneven spatial-temporal pattern is partly intelligible as an outcome of recurrent major transformations in historical capitalism--analogous to what Schumpeter (1947) refers to as the process of "creative-destructive". As such, from time to time we witness the death of *a historically specific working class* -- most recently, the Fordist mass production working class in the global North; however, the same mechanisms that bring about the "unmaking" of the "old" working class (e.g., capital mobility, labor migration, the rise/decline of industries), also lead to new working class formation. The result is the recurrent *making, unmaking and remaking of working classes* on a world-scale, as well as the emergence of struggles both by workers experiencing the "creative" and the "destructive" sides of the process of capital accumulation, respectively (Silver 2003).

Indeed, our list of reported labor unrest in 2010 above includes both types of workers' struggles: strikes by factory workers in China, India and Bangladesh are examples of "*struggles by new working classes in formation*," while a significant part of the force behind the anti-austerity protests in Europe has come from "*struggles by "old working classes being unmade"*--that is, the working class that had formed in the twentieth century with the rise of Fordism and the welfare state⁶. We have found these two types to be very useful for describing/explaining the labor component of the recent protest wave (Silver 2014, Karatasli et al 2014); however, we are also convinced of the need to introduce a "*third type*". This *third type* is composed of the struggles by those who have been proletarianized--in the sense that they are dependent on wage labor for their survival--but who have never had stable wage employment. Put differently, the "third type" is composed of *struggles by that part of the working class who were never made or unmade but who have simply been bypassed by capital* (Karatasli et al 2014). The mass protests against unemployment in Tunisia and the part of the European anti-austerity protests fueled by a generation of precariously employed/unemployed youth are examples of our third type from our 2010 list.

The discussion in this sub-section brings us to a set of research questions related to the class composition of the current wave of social unrest: (1) what has been the weight of *labor unrest* within the broader worldwide wave of *social unrest* over the past five years? (2) what has been the relative weight of the above-mentioned *three types* of working class struggles within this protest wave? (3) how does the class composition of the recent protest wave (weight and types of labor unrest) compare to previous major worldwide waves of social unrest in the 19th and 20th centuries? This comparative-historical question brings us to the second question animating our project--the historical significance of the current upsurge.

Questions of Historical Turning-Points:

One of the main reasons the recent protest wave has caught the imagination of social scientists and the general public is because of its *global* spread. Within the space of a couple of years, mass social protest erupted in a variety of countries with diverse political structures (Tejerina et al 2013; Tisdall 2014) on every major continent. Such a world-scale *clustering in time* of mass social unrest is relatively rare. This has, in turn, led both scholars and journalists to ask whether this wave of unrest signals some kind of historical turning point. The sense of a historical turning point has been strengthened by the fact that the protest wave has been unfolding in the aftermath of a major and still unresolved *global economic crisis* as well as in the context of growing *global geopolitical tensions* and a crisis of US world power.

⁵ Indeed, our definition of the working class (or proletariat) leads us to include both Standing's *precarariat* and the lower-ranks of Žižek's *salaried bourgeoisie*.

⁶ Silver (2003) uses the terms "Marx-type" and "Polanyi-type" labor unrest to classify these two types. Lee (2007) makes a parallel distinction between "rustbelt" and "sunbelt" workers' struggles in China. Burawoy (2010) ties waves of Polanyian counter-movements to phases of capitalist development.

Historically, the rare periods when mass global social unrest has lasted for more than a few years, have been associated with periods of major *economic and political crisis* for global capitalism, most notably, periods of *world hegemonic breakdown/transition* (Silver and Slater 1999; Boswell & Chase-Dunn 2000; Martin 2007; Smith 2011; Smith & Wiest 2012, Silver 2015). One such 'global' wave of social unrest took place from approximately 1776-1815--with interlinked wars, revolutions and rebellions roiling the Atlantic World (Blackburn 1988, Hobsbawm 1962, Wallerstein 1989, Silver and Slater 1999). A second global wave took place in the first half of the 20th century -- its symbolic start date can be the 1917 Soviet Revolution in the midst of the First World War, and as its symbolic end date the 1949 Chinese Revolution in the aftermath of the Second World War (Hobsbawm 1994; Silver 2003, ch4). The first period of *intertwined 'global' social conflict and war* marked the transition from Dutch to British world hegemony; the second marked the transition from UK to US world hegemony (Arrighi 1994, Silver & Slater 1999)⁷.

Might the current upsurge of global social unrest come to be seen *in retrospect* as marking the transition from US hegemony to some (as yet unknown) world social and political order? *This is one of the main questions animating this project.* We obviously cannot conduct empirical research on the future, but we can shed light on future dynamics through comparisons with analogous historical periods. This research strategy--comparing the present with past periods of world hegemonic crisis--was used by Arrighi and Silver (1999) in *Chaos and Governance in the Modern World System*⁸. For this project we will follow an analogous comparative research strategy, however, we will go beyond their analysis by (a) constructing a database on worldwide social unrest from 1851-2016 (that is, from the high point of British hegemony to the current crisis of US hegemony) that will provide a strong empirical foundation for the comparative analysis; and (b) the fact that we can observe the hegemonic transition process almost 20 years later. The conceptual-theoretical framework establishing the causal links between social conflict and hegemonic transitions diagramed by Silver and Slater (1999: 180) --including the making, unmaking (and bypassing) of working classes discussed in the previous section -- provide a starting point from which to build⁹.

II. Working Hypotheses

Many worthwhile hypotheses could be derived from the above discussion, however, for the present purposes we will limit ourselves to two sets of falsifiable hypotheses, the first corresponding to questions of class composition and the second corresponding to the issue of the historical turning point.

Hypotheses 1a-e

On the geographical spread of social unrest and its relationship to phases of world hegemony:

- (a) years in which mass social or labor unrest is taking place simultaneously in many countries are rare;
- (b) periods of hegemonic crisis/breakdown are disproportionately represented among the years in which mass social or labor unrest is taking place simultaneously in many countries
- (c) the geographical spread of labor and social unrest is significantly greater in the 2010-2016 period

⁷ Notwithstanding a long and venerable tradition in the social sciences linking wars to revolutions and labor/social conflict (see, e.g., Tilly 1978, Skocpol 1979 & Mann 1993; also Levy 1989, 1998 and Stohl 1980), geopolitical dynamics have received little attention in the literature on the current protest upsurge.

⁸ See Silver and Arrighi (2011) for additional discussion of the strategy of comparing hegemonic transitions (and more generally, comparing analogous past periods with the present) as an analytical tool for shedding light on contemporary dynamics.

⁹ We will assess and when appropriate integrate into that model the causal mechanisms proposed in the existing literature to explain the global nature of the current protest upsurge. These have largely focused on the impact of world-economic processes on the livelihoods of various groups and classes such as rising global food prices (Bar-Yam et al 2013), the worldwide rise of (youth) unemployment (Mason 2013; Chase-Dunn 2013), middle class decline (Žižek 2012; Mason 2013; Calhoun 2013) and economic crisis and financialization (Hanich 2013; Smith 2011; Murphy and Ackroyd 2013).

than the average for the 1851-2016 period as a whole;

(d) the geographical spread of labor and social unrest in 2010-2016 is equal or greater than in period of hegemonic crisis/breakdown of British hegemony;

(e) for the 1851-2016 period, in phases of hegemonic crisis/breakdown, labor/social unrest is characterized by a rising trend and explosive pattern (as measured by the slope and standard deviation from the mean, respectively); in phases of hegemonic stability labor/social unrest is characterized by a stable and/or declining trend (cf. Silver 2003, Table 4.1).

Hypotheses 2a-d:

On the composition of the recent global wave of social unrest

(a) labor unrest was present as a component of overall social unrest in the majority of the countries that experienced mass social unrest from 2010 to the present;

(b) all three types of labor unrest (see page 3) were present in the countries that experienced labor unrest. However, the weight of each type differed by region and industry:

(i) the first type -- struggles by new working classes in formation -- was the dominant form of labor unrest in countries, sub-national regions, and industries that experienced rapid economic growth in the past twenty years. ["where capital goes, conflict follows"--Silver 2003]

(ii) the second type -- struggles by old working classes being unmade and who were seeking to retain previously won rights -- was the dominant form of labor unrest in countries, sub-national regions and industries that experienced industrial decline, especially employment decline, in the past twenty years

(iii) the third type -- struggles by that part of the working class that has been bypassed by capital -- was prevalent in both the global North and the global South, but had a far greater weight in overall labor unrest in the global South--that is, regions that tend to be characterized by high levels of proletarianization but low levels of labor absorption by capital relative to the total population available for wage labor.

On comparisons to earlier historical global protest waves:

(c) the weight of labor unrest as a percentage of overall social unrest has not declined over time; its weight in the current protest wave is the same or equal to that of past waves;

(d) the relative weight of type 3 labor unrest as a percentage of overall labor unrest has increased over time in tandem with capital intensity; type 3 weight in the current wave is greater than in past waves.

III. Research Design

A. The Need for a New Dataset on World Labor and Social Unrest

In order to assess the plausibility of the hypotheses set out above, we need a picture of the *long-run world-scale* patterning of labor and social unrest. The picture must be of sufficient *historical and geographical scope* to allow for an examination of potential feedback among local level actions as they unfold over time--e.g., to assess the plausibility of the hypothesis, 'where capital goes, conflict follows'-- and for comparisons across analogous historical phases--e.g., to be able to assess the plausibility of the hypothesis on the secular rise in "third type" labor unrest or hypotheses about analogies between periods of hegemony/hegemonic crisis/transition. The picture must include *details on the actors, actions and demands* of protesters so as to allow us to distinguish between *labor and other forms of social unrest* as well as to distinguish among the *different types of labor unrest*. Finally, the picture must be derived from datasets constructed in a way that minimizes potential biases and increases our confidence in the database as a *reliable and valid indicator* of the actual spatial-temporal distribution of labor/social unrest.

The digitization of newspaper archives--not to mention the recent upsurge in global social unrest--has sparked attempts by social scientists to construct large databases of protest events. Unfortunately, as discussed below, these datasets are of limited use for the proposed research, either because of their limited temporal and/or geographical scope, the limited details provided about the protests, or because the data collection methods raise concerns about potential biases detracting from the reliability/validity of the database. Table 1 summarizes the strengths and weaknesses of some of the existing datasets.

Table 1. Comparison of Existing Datasets and the GSP Dataset

Databases	Sufficient Temporal Scope?	Sufficient Geographical Scope?	Are Diverse Forms of Social Movements Included?	Can Diverse Forms of Labor Unrest be Identified?	Can True/False Negatives be Verified?
GDEL gdeltproject.org	✗	✓	✓	✗	✗
ICEWS	✗	✓	✓	✗	✓
Ortiz <i>et al</i> (2013)	✗	Partial	✓	Partial	✓
Bertho (2009; 2014)	✗	Partial	✗	✗	✓
The Guardian / LSE Studies	✗	✗	✗	✗	✓
WLG	Partial	✓	✗	Partial	✓
Proposed Dataset	✓	✓	✓	✓	✓

As can be seen from Table 1, these databases fall short of meeting the needs of this project or other research taking a macro-historical approach to understanding the dynamics of labor and social unrest:

- The GDEL database (Database of Events, Language, and Tone) contains over 250 million protest reports from 1979 to the present, drawn from news sources in 100 languages, using fully automated natural language processing (see <http://gdeltproject.org>). Although it is impressive in size and scope, it is of limited use for the current project due to its short temporal span (starting only in 1979), its total reliance on computer-automated data collection, which produces a large number of false positive events (see Hammond and Weidmann 2014 on the "mediocre correlation of GDEL with hand coded data"), and the difficulties that arise in determining whether or not trends over time are an artifact of the shifting number of news sources (a form of "data collection bias"; cf. Earl et al 2004, 68).
- ICEWS (Worldwide Integrated Crisis Early Warning System) contains 30 million worldwide news stories collected from 6000 international, regional, national and local news publishers from 2001 to today (<http://www.lockheedmartin.com/us/products/W-ICEWS.html>; also see O'Brien 2010). One advantage of ICEWS over GDEL is that, although ICEWS also relies on automated natural language processing for data collection, it relies on human coders to confirm the events as true positives. Nevertheless, ICEWS' utility is limited for our project given that its temporal scope is even shorter than GDEL, it collects limited information on event characteristics, and is subject to the same problem

of how to interpret trends over time given the constantly shifting news source base.

- Ortiz *et al* (2013) analyze 843 protest events in 84 countries retrieved from online news reports between 2006 and 2013. Their database contains more detailed information on the protest events (e.g., demands) than does GDELT or ICEWS. Moreover, the researchers are more conscious about choosing their newspaper sources so as to minimize "selection bias" (cf. Earl et al, 2004, 68-72). Unfortunately, the very short time period time covered limits its usefulness our project.
- Alain Bertho (2009; 2014) has been compiling instances of riots from news reports around the world. But the temporal scope of his project is limited, it focuses only on riots, and he does not address methodological concerns about potential systematic biases in the database.
- The London School of Economics cooperated with *The Guardian* newspaper to create some interesting interactive timelines for the Arab Spring and the 2011 UK riots. We have drawn some inspiration from these timelines for thinking about how to present/disseminate our data to the wider public including for classroom use, but the LSE/Guardian databases are too narrow in geographical and temporal scope to serve as a significant data source for our project (*The Guardian* 2011; 2012).

The last already-existing database listed in Table 1--the World Labor Group (WLG) Database--comes closest to providing the type of data needed for this project, especially with regard to its temporal and spatial scope. The World Labor Group (WLG) database was constructed using information from the Indexes of The New York Times and The Times (London) on newspaper reports of labor unrest (strikes, demonstrations, factory occupations, food riots, etc.) throughout the world beginning in 1870. Reports on labor unrest in the United States were excluded from The New York Times dataset and reports on labor unrest in the UK were excluded from The Times (London) dataset. The result is a database with over 91,947 "mentions" of labor unrest for 168 "countries" covering the 1870 to 1996 period, including information on the article source and date as well as the reported action type (e.g., strike, demonstration) and location (i.e., country, and when available, city and/or industry). The WLG database formed the empirical foundation of *Forces of Labor: Workers' Movements and Globalization since 1870* (Silver 2003; see also Silver 1995, 2013).

Although we will make use of the WLG database in this project both directly and as a comparison source for assessing the reliability/validity of the new database to be constructed, the WLG database falls short of meeting the needs of this research project. Table 1 categorizes the WLG's 126-year temporal scope as "partial" because it ends in 1996, whereas we need a database that comes to the present. Moreover, the WLG database was designed to include only reports of labor unrest whereas one important goal of the proposed project is to better understand the relationship between labor unrest and other forms of social unrest. Finally, the creation of the WLG database (which predates the era of digitized full text historical newspaper archives) was based on the limited information provided in the newspapers' annual Index (rather than the full text of the articles). As such, it is missing the detail on actors and demands often needed to distinguish among our three types of labor unrest.

IV. Database Creation Strategy

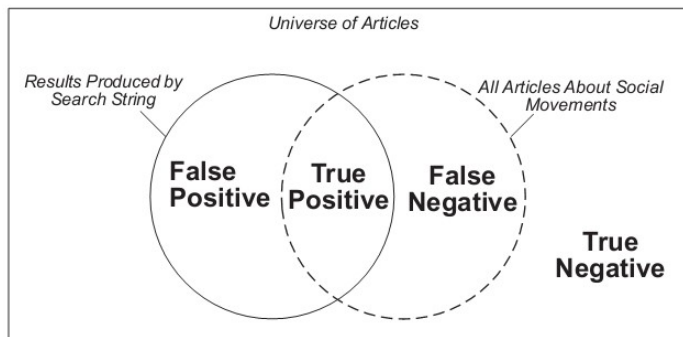
In sum, in order to pursue this research project we were obliged to construct a new long-term world-scale database on labor and social unrest designed to meet the needs of macro-historical sociological research, including satisfying all five criteria specified in Table 1 above. For this database creation project we chose to follow what is by now a widespread and developed practice in the social sciences of using newspaper reports to create datasets on social protest.¹⁰

¹⁰ For the tip of the iceberg of (and about) newspaper-based social movement studies see Earl et al 2004; Silver 2003; Tarrow 1996; Kriesi et al 1995; Koopmans 1993; Olzak 1989; Tarrow 1989; Korzeniewicz 1989; Burstein 1985; McAdam 1982; Danzger 1975; Franzosi 1987, 1995; Jenkins and Perrow 1977; Paige 1975; Snyder and Kelly 1977; Snyder and Tilly 1972; Sugimoto 1978; Tilly 1978; Tilly 1981; Tilly et al 1975. See also newer studies, including those referred to in Table 1 above.

The literature on using newspapers as a source for constructing indicators of social unrest point to several types of potential bias including: (1) "selection bias" due to newspapers not reporting all events, and more importantly for reporting them selectively (with systematic bias) across time and space (Earl et al, 2004, 68-72; Barranco & Wisler 1999; McCarty et al 1999; Oliver & Maney 2000); (2) "description bias" due to missing or incorrect information in news reports (Earl et al, 2004, 2-73; McCarty et al 1999); (3) "data collection bias" due to faulty data collection schemes employed including sampling methods used, the use of fully-automated data-collection techniques and/or reliance on indexes or subject categories used by news agents (Earl et al 2004, 68); and (4) "researcher bias" due to human coding or data-entry errors (Franzosi 1987). The proposed database creation strategy seeks to minimize all four bias types.

1. The Search String: Our data collection strategy involves using ProQuest and LexisNexis' advanced search options in order to identify all articles reporting on labor and/or social protest in the digital archives of the selected newspapers (on the selection of newspapers, see next section). Through a series of pilot study tests spread over two years, our research team sought to identify an optimal "search string" (a combination of keywords, operators and wildcards) and other search conditions for (1) maximizing the number of true positives (articles about labor and social unrest), (2) minimizing the number of false positives (articles that are not about labor or social unrest), and (3) minimizing the number of false negatives (articles about labor and social unrest that are not captured by our search string). This is not an easy task. After all, when we expand the keywords in our search string to minimize false negatives, we also increase the number of false positives. If we use a very narrow search string to minimize false positives, we also increase the number of false negatives. So, there is always a trade off in the choices made (see Figure 2).

Figure 2: Optimal Search String Maximizes True Positives, Minimizes True and False Negatives



Our pilot studies involved testing different search strings as well as different options on what to search (full text, abstract, title, subject headings). We drew three basic conclusions from these tests:

1) We chose to search the title, abstract and/or full text of the articles rather than search the "subject" or "index" categories provided by the newspaper databases (e.g. ProQuest, LexisNexis). We found that the subject categories created by the database companies were based on difficult to understand and/or defend categories (for a similar critique see Earl *et al* 2004: 68). Our reliability tests found that searches using the databases' subject headings produced an unacceptably high number of false negatives (that is, articles on labor and social unrest that should be in our database but that were not caught in the search).

2) We chose to search on protest action keywords but not to include actor keywords in the search string as modifiers (such as "and worker", "and teacher", "and student"), since including the latter inflated greatly the number of false negatives. Given the long historical and broad geographical scope of the data collection, the list of all potential actor terms would have to be impossibly long. Indeed, one of this project's key theoretical premises is that the classes/groups that make up the actors of labor and social unrest are recurrently made/unmade/remade over time and space, and hence the words used to refer to

them in newspaper reports will also change over time and space (see Chun 2009, Agarwala 2013, Fraser 2014 and van der Linden 2014 for parallel arguments on how narrow formulations of who is the working class blinds social scientists to important manifestations of labor and class-based grievances and protest). After testing a wide range of search strings, we¹¹ settled on the following:

(Protest* OR Demonstrat* OR Upris* OR Unrest* OR Revolut* OR Riot* OR Revolt* OR Rebel* OR Upheav* OR Insurrect* OR Strik* OR Clash* OR Rall* OR Dissent* OR Turmoil* OR Boycott*)

This keyword string produced 379,527 articles from *The New York Times* for the period 1851-2013; and 155,759 articles from *The Guardian* (London) for the same period when searching on the article titles [note: add figures for 2014-2016]¹². It is important to point out that this data collection project is *not* designed to produce a count of *all or even most incidents* of labor and social unrest that have taken place in the world from 1851-present. Newspapers report on only a small fraction of the labor and social unrest that occurs. Instead, as was the case for the World Labor Group database (Silver 2003, 37), the data collection procedure is intended to produce a measure that reliably indicates the changing levels of labor and social unrest relative to other points in time and locations in space. Given the underlying theoretical perspective emphasizing the role of major waves of labor and social unrest in provoking transformation/restructuring, we are particularly interested in being able to identify (in time and space) major waves of unrest. Pilot reliability studies conducted for this project as well as the extensive reliability studies conducted on the WLG database support the conclusion that indicators constructed from our new database will be an effective and reliable tool for identifying periods and places of exceptionally high or intense levels of labor and/or social unrest.

2. *The Newspaper Sources:* In order to decide which newspaper sources would be optimal for this study, we conducted a series of pilot studies comparing search results for seven major newspapers: (1) the Financial Times, (2) the Guardian (London), (3) the Times (London), (4) the New York Times, (5) the Washington Post, (6) the Christian Science Monitor, and (7) the Daily/Sunday Telegraph. We compared the reports produced by these digitized newspapers, using different (i) search string combinations, (ii) search engines (e.g., LexisNexis vs. ProQuest vs. newspaper's own search engine); (iii) search parameters including full text, abstract, title, and subject headings; and (iv) time frames. Based on these pilot studies we settled on *The New York Times* (NYT) and *The Guardian* (London) as main sources for this project.

The pilot study list of seven newspapers were all UK- or US-based because, following the lead of the WLG, we decided to rely on one major newspaper from each of the world's hegemonic powers of the

¹¹ By doing keyword searches rather than subject searches, we retain a high level of control over the data collection process. We can always include or exclude search terms at any time without restarting the data collection from the beginning. For instance, based on results from our pilot studies, we decided not to use the term "occupy" in the search string. However, if we were to change our minds and decide to add this term - or any other term - we can easily create a search string that only produces the added results produced by the added search term.

(Occupy*) **AND NOT** (Protest* OR Demonstrat* OR Upris* OR Unrest* OR Revolut* OR Riot* OR Revolt* OR Rebel* OR Upheav* OR Insurrect* OR Strik* OR Clash* OR Rall* OR Dissent* OR Turmoil* OR Boycott*)

Furthermore, since we can see the results produced by *each* keyword, this strategy helps us conduct a sensitivity analysis through which we can observe the effects of including/excluding each keyword in the emerging patterning of social/labor unrest.

¹² The trade-off between maximizing true positives and minimizing false positives is also arising when deciding whether to search the title only or the full text of the article. Based on our Phase 2 tests, we determined that full article text searches produce a prohibitive number of false positives that need to be painstakingly culled at the data coding stage. For the *New York Times* searching the abstract is a (happy medium) option; however, unfortunately for all the UK papers we tested (see next section) the search engine did not give abstract search as an option; the only options were title or full text search.

19th and 20th centuries (Silver 2003: 190-91), rather than aggregating information from one national newspaper from *each* country in the world (e.g., as done by Ortiz et al 2013) or making use of all existing digital newspaper sources found in online databases such as ProQuest or NexisLexis (e.g., as done by GDELT, ICEWS, and Bertho 2009, 2014). While at first sight, it would seem that using the widest range of sources would reduce "description bias" and "selection bias", these alternative approaches are not feasible for this study, and *introduce their own "selection", "description", "data collection" and "researcher" biases*. Most countries do not have digitized newspapers dating back to the 19th century, and even if they did, we would face insurmountable problems related to the range of language skills required and to assessing the comparability of data across such a wide range of sources. Moreover, taking the route of just searching "everything online" is a problem for a study such as ours, which is concerned with identifying long-term global trends, since there are geographical biases in the "online weight" of different countries as well as temporal biases rooted in the exponential growth in the number of online newspaper sources covering any given year as we get closer to the present.

We settled on using *The New York Times* and *The Guardian (London)* as the optimal solution for this project for several reasons. First, both have world-level information collecting abilities dating back to the mid-19th century. As a result, geographical selectivity bias rooted in the technological limits of newspaper reporting is not a major problem (Dangler 1995). Geographical selectivity bias rooted in editorial policies (as opposed to technological constraints) is more of a problem, but based on WLG reliability studies, supplemented by our own more recent pilot studies, we find that the reporting of both is global in reach throughout our time period. It appears that as major newspapers of the world's hegemonic powers, they take the world as their sphere of influence, and thus, their reporting is "global"¹³.

Based on the pilot studies, we determined that, among the three US-based sources, on an annual basis over the entire historical period, our "search string" (see above) for the 1851-2013 period, consistently returned the most articles for *The New York Times*. The number of articles returned from *The NYT* (379,527 articles in total or an annual average of 2328) was almost twice as much as that for the next best source, *The Washington Post* (195,405 articles in total or an annual average of 1198). Among the four UK-based sources, *The Times* and *The Guardian* produced the highest number of results--155,759 total (942 annually) for *The Guardian* and 128,144 (786 annually) for *The Times*. In making the final decision we also took into account a pilot study we conducted to see which combination produced the widest possible geographical coverage. We found that the *Guardian-New York Times* combination produced the widest and most balanced geographical distribution of reports of labor and social unrest events (see Karatasli et al 2014).

Two final considerations sealed the decision to use the combination of the *New York Times* and *The Guardian*. First, these two newspapers are available from the same databases (both are searchable through ProQuest Historical Newspapers and LexisNexis), whereas access to the historical archives of *The Times* (London) is only available through the Gale Group database. Using *the Guardian* with *The New York Times* rather than *The Times* (London) allows us to minimize issues that might arise from relying on two different search engines. Finally, because the WLG database relied on a combination of *The New York Times* and *The Times* (London), by using *the Guardian* instead, the new data collection effort is adding an additional source for the years that overlap with the WLG database (1870-1996). The result is a "happy medium" combination--replication of the WLG with *The New York Times* and extension of the WLG with *The Guardian*--that allows for reliability checks and deepening of the empirical base for our analysis.

We downloaded key information on all articles produced by our search string from *The New York Times* and *The Guardian* from 1851-2016 as csv files from the ProQuest and LexisNexis databases, and uploaded in SQL form to our customized secure database. The uploaded dataset includes (for each article) the date,

¹³ Following the lead of the WLG, we will exclude reports on the UK from *the Guardian* database and reports on the US from *the NYT* database in order to compensate for disproportionate national coverage.

title, page and column, abstract, keywords and hyperlink to full text of article. The basic information for the 535,286 articles from the two newspaper sources produced by our search string were uploaded as a searchable dataset on our secure server.

The second step was to code basic information for each article. Trained student data coders were presented on the screen with the basic information (title, abstract, date, page, column, source, and a hyperlink to the full text of the article) on a randomly selected article from the entire universe of approximately 535,286 newspaper articles; at the same time they were presented in another window with an online customized data entry form to use for coding information about the unrest event(s) from the newspaper articles. The data entry form prompts the coders to indicate whether the article is a true positive (report on labor and/or social unrest). If it is a true positive, then the form prompts the coder to also complete the fields for (v) reported actors, (vi) reported action type, (vii) reported demands, (viii) reported location, (ix) if workplace labor unrest, the reported industry.

We decided to rely on trained human research assistants for data coding (rather than a fully automated scheme) because our tests for this project show that fully automated data collection schemes are incapable of reliably distinguishing true/false positives (see also Hammond and Weidmann 2014). We developed detailed coding instructions, through several successive iterations, starting from, but moving well beyond, the basic coding scheme used for the WLG database (Silver 2003, Appendix B). The coding instructions are linked to the project's database and are easily accessible to coders while they are coding. As part of our efforts to minimize "researcher bias", approximately 5% of the articles (28,103 articles) were double-coded to check inter-coder reliability.

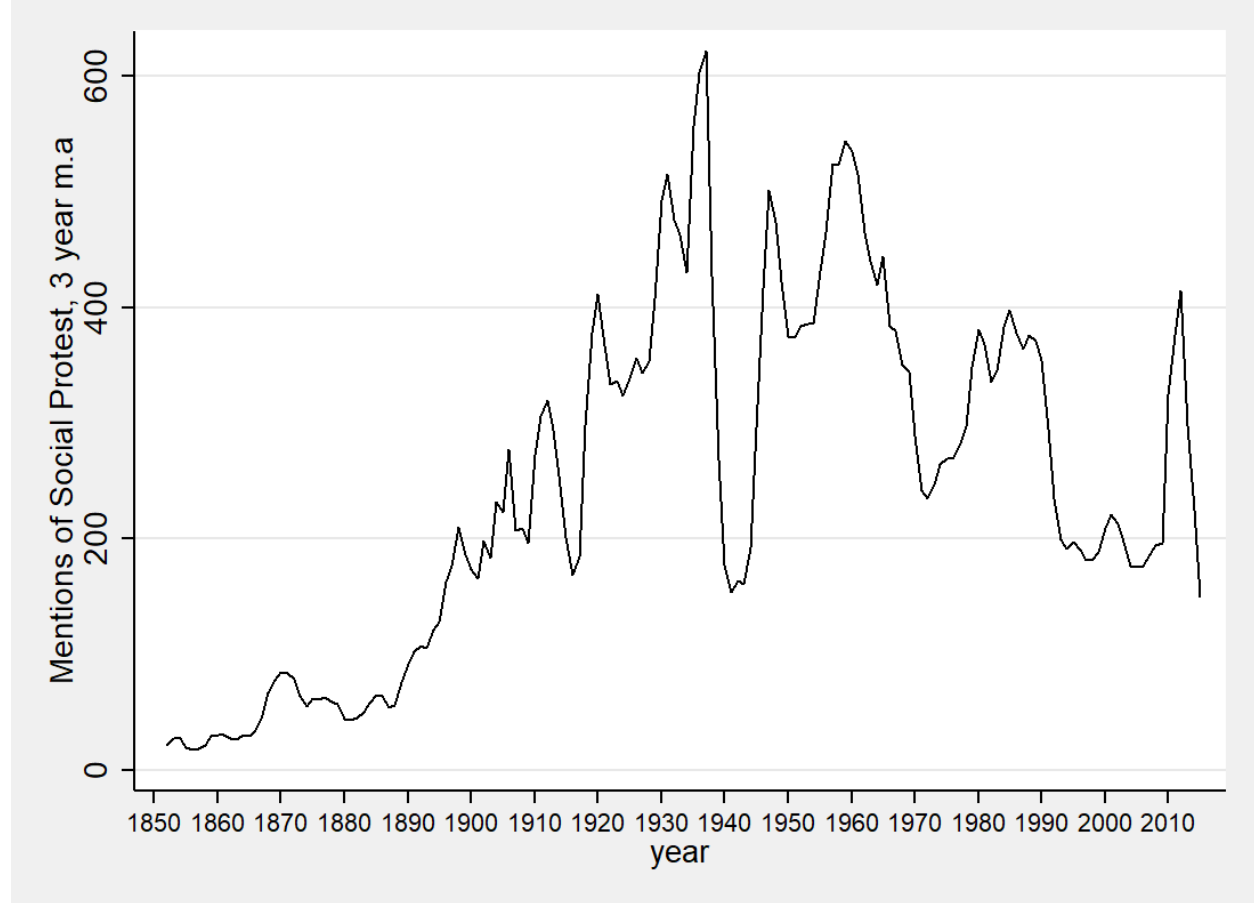
Finally, all articles for which first-round coders found one or more events of labor unrest are in the process of being read a second time by coders who will classify the labor unrest events according to our three types outlined in Section I: struggles by (1) new working classes in formation (2) working classes being unmade through the "destructive" side of the process of creative-destruction; and (3) those who have been proletarianized but were never incorporated into stable wage employment. This includes the unemployed youth in various countries who are a major foci in the literature on the recent protest wave.

V. Findings

Figure 3 (below) is a time series of the total number of reports of social protest from 1851 to 2011 in our newly created Global Social Protest Database. The basic temporal pattern offers initial prima facie support for some of our hypotheses on the relationship of the rise/decline of social unrest to phases of world hegemony.

First: we note a rising trend of social protest from the late nineteenth century to the eve of the Second World War, which is consistent with our hypothesis that periods of hegemonic crisis/breakdown are periods of rising and/or intense social unrest (see Figure 3). Moreover, following Silver (1995), we identified years of global waves of social protest using a combination of two criteria. The first criterion is derived from Shorter and Tilly (1974), who defined "wave years" as ones in which the number of protests are at least 50% greater than the average of the preceding five years. As Table 2 (below) shows, according to this criterion, the following years qualify as waves in our Global Social Protest time series: 1860, 1868-71, 1885, 1890, 1897-1899, 1905, 1911, 1919-1920, 1936, 1946-48 and 2011.

Figure 3. Reports of Social Protest in the World, New York Times and Guardian, 1851-2016



Source: Global Social Protest Database v1.

Table 2. Identification of Years of Global Social Protest Waves

Wave-Years (Shorter and Tilly Method)	Wave-Years (Silver Method)
[1] 1860	
[2] 1868-1871	
[3] 1885	
[4] 1890	
[5] 1897-1899	
[6] 1905	
[7] 1911	[1] 1911
[8] 1919-1920	[2] 1919-1920
[9] 1936	[3] 1936
[10] 1946-1948	[4] 1946-1948
[11] 2011	[5] 2011

Years with relatively few reports of social unrest can be identified as “wave years” by the Shorter and Tilly method *if* the preceding five years were relatively uneventful. As such, a relatively small increase in the frequency of reported social protests will produce a “wave” (as long as the number of reports of social unrest is 50% greater than the average of the previous five years). We therefore complement the Shorter

and Tilly method by adding a second criterion: that the number of reports of social protest in a given year must also be greater than the annual mean of reported social protests worldwide for the entire period (Silver 1995: 28). The combination of these two criteria gives us five global waves of social protest from 1851 to 2016 as shown in Table 2 (column labeled Silver method). These are 1911, 1919-1920, 1936, 1946-48 and 2011.

Our finding that there is a world-historical wave in reported global social protest in 2011 (using *both* wave determination criteria) is consistent with our hypothesis that the intensity of social protest in the 2010-2014 period is, at least equal if not greater than the period of hegemonic crisis/breakdown of British hegemony. This is consistent with our theoretical understanding that (a) the contemporary period is one of world hegemonic crisis/breakdown; and (b) periods of hegemonic crisis/breakdown are characterized by rising and intensifying global social unrest. [or: as formulated above: in phases of hegemonic crisis/breakdown, social unrest is characterized by a rising trend and explosive pattern (as measured by the slope and standard deviation from the mean, respectively); in phases of hegemonic stability labor/social unrest is characterized by a stable and/or declining trend (cf. Silver 2003, Table 4.1)].

Although Figure 3 is a time series of the total number of reports of social protest worldwide, our preliminary analysis of the data (disaggregated by country) also provides support for our hypothesis that periods of crisis/breakdown of hegemony are ones in which the *geographical spread* or *geographical clustering* of social protest (i.e., the number of countries experiencing significant waves of social unrest in any given year) is disproportionately high.

Our preliminary analysis of the composition of the current wave of social unrest requires a more nuanced analysis. On the one hand, we can easily identify examples of all three types of labor unrest post-2010 in our new database. For instance, the first type -- struggles by new working classes in formation -- was the dominant form of labor unrest in countries, sub-national regions, and industries that experienced rapid economic growth in the past twenty years. The best way to observe this dynamic is to examine the geographical shifts in labor unrest in key industries. For instance, Table 3 illustrates this pattern by showing the changing geography of labor unrest in the automobile industry. While in the early 20th century, core countries such as United States, France, United Kingdom and Canada were the epicenters of autoworker labor unrest, from 1970s to 1990s, main zones of labor unrest in the world auto industry became countries such as Japan, Germany, USSR/Russia, Spain, Argentina, Brazil, South Africa, South Korea and Mexico. In the early 21st century, India and China became the epicenters of labor unrest in the auto industry. This pattern illustrates Silver's (2003) main argument: where capital goes, conflict follows. Our new dataset supports the claim by Karatasli et al (2013), that rising labor militancy in East and South Asian countries has been a key component of the 2011 wave of "social protest" (see also Silver and Zhang 2009, Zhang 2015, Ness 2015).

Table 3. Geographies of Labor Unrest in Auto Industry

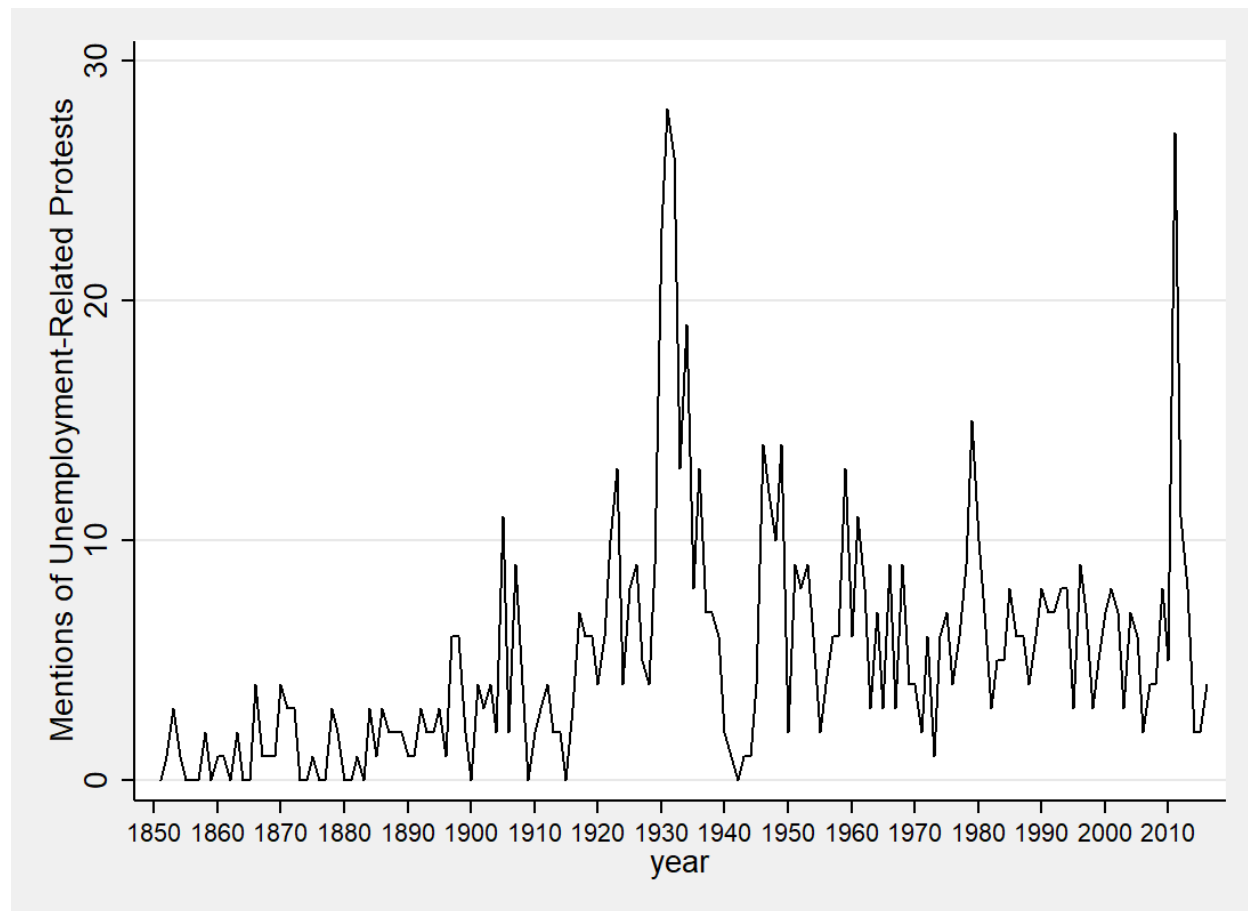
	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s	1990s	2000s	2010s
USA	x	x	x	x	x	x						
France	x	x	x	x	x	x	x	x				
Italy		x	x				x		x		x	
UK				x		x	x	x	x			
Canada				x	x	x	x		x			
Japan							x					
Spain								x				
Argentina								x				
Germany									x			
Brazil									x	x	x	
South Africa									x	x	x	
South Korea									x	x	x	
USSR/Russia									x	x	x	
Mexico											x	
India											x	x
China												x

Source: Global Social Protest Database v1. [add note about criteria used for “x”]

Figure 4 below shows the historical patterning of unemployment related protests in our database from 1851 to 2016. This indicator includes both reports of protests by the unemployed and other social protest events in which unemployment has been a major reported concern. Interestingly, Figure 4 shows two major peaks in this period. The first one is around 1930-1933 and the second one around 2011. In other words, the first of these major waves is right after the 1929 crisis and the second one is right after the 2007/8 financial crisis. Seen from our theoretical framework, these two periods correspond to the terminal crisis of the respective hegemonic periods (i.e. the terminal crisis of the British hegemony in the early 20th century and the terminal crisis of the US hegemony in the early 21st century).

Equally interesting is the geographical epicenters of these two global waves of unemployment related protest. The hotbeds of the unemployment related protests of the 1930s are the United States, United Kingdom, France and Germany. Although the bottom of the list also includes some Eastern European and Latin American countries/regions, it appears that the majority of the reported unemployment related protests took place in capitalist core countries. In contrast, the hotbeds of the unemployment related protests of the early 21st century are much more widely spread—Greece, USA, Egypt, Tunisia, Israel, Spain, Jordan, Libya and United Kingdom, respectively. This latter list contains (a) core regions where capital is leaving and producing a “second-type” labor unrest by working classes that are being unmade (such as the United States and United Kingdom), (b) semiperipheral regions that have been hit heavily by the 2007/8 financial crisis and the Eurozone crisis such as Greece and Spain, and (c) peripheral countries in the Middle East that became the hotbeds of revolutions such as Egypt, Tunisia and Jordan (as well as the oil rich Libya). While elements of our “third type” labor unrest can also be found in (a) and (b), the “third type” is a significant form of labor unrest in (c).

Figure 4. Reports of Unemployment Related Protests in the World, New York Times and Guardian, 1851-2016



Source: Global Social Protest Database v1.

In sum, by using unemployment-related protests as a crude indicator for our “second” and “third” types of labor unrest, we find preliminary support for two findings that support our initial hypotheses. *One*, the “second type” of labor unrest -- struggles by old working classes in the process of being “unmade” and who are seeking to retain previously won rights -- is important today in countries and regions that experienced industrial decline, especially employment decline, in the past twenty years. *Two*, that the third type of labor unrest -- struggles by that part of the working class that has been bypassed by capital -- can be found today in both the global North and the global South, but is a far more significant component of overall labor unrest in the global South--that is, in regions that are characterized by high levels of proletarianization but low levels of labor absorption by capital relative to the total population available for wage labor.

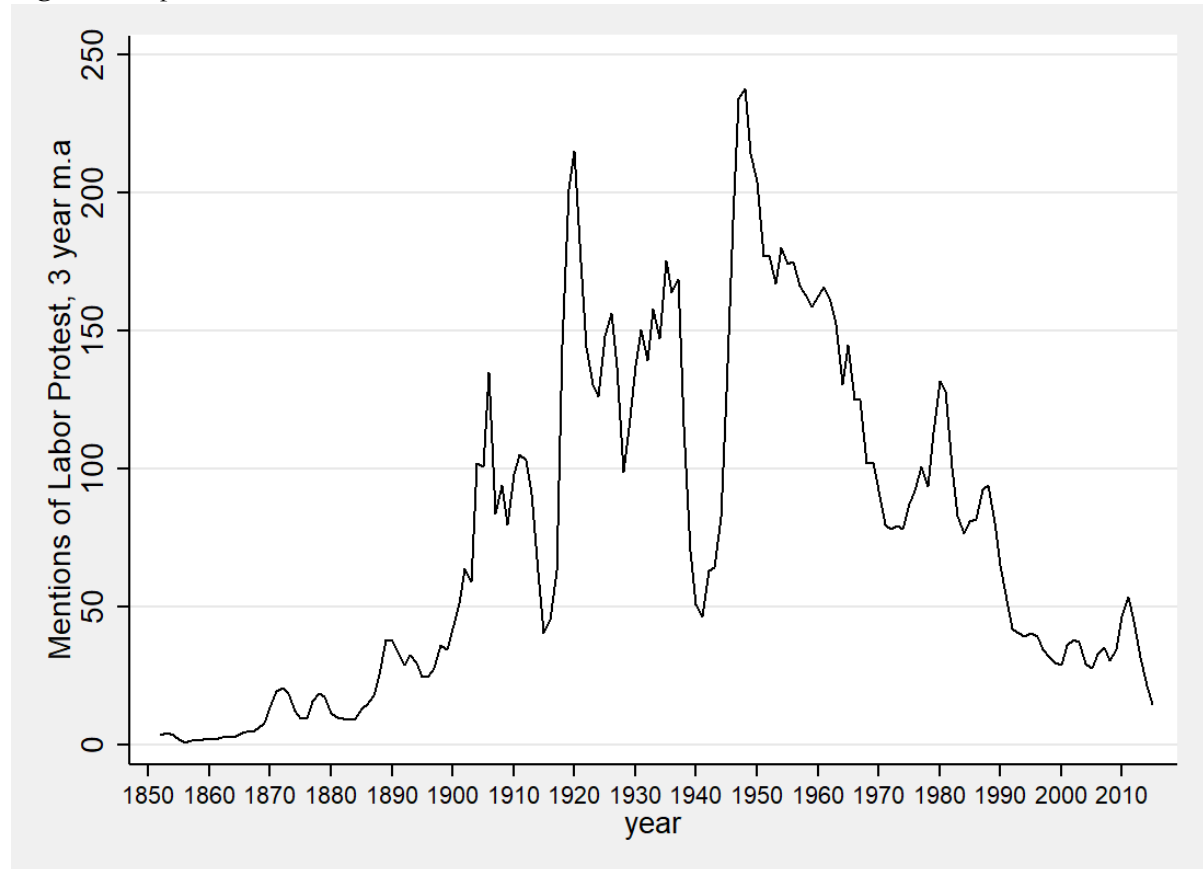
While we are still in the early phases of the data analysis, we can report that it is less clear that we will find support for our hypothesis that “the weight of labor unrest as a percentage of overall social unrest has not declined over time.” **Table 4** (below) shows wave-years for reported labor unrest in the Global Social Protest Database as identified by the criteria used above to identify waves of social unrest. According to the Shorter and Tilly method, 2010-2011 qualifies as a major wave of labor unrest on a global scale. It is one of the thirteen major waves of labor unrest from 1851 to 2016. Yet, when we include the second criterion (that the frequency of reported labor unrest should be higher than the overall average for the

entire period), 2010-2011 no longer qualifies as a global wave year. The most recent wave (2010-2011) disappears from the list, along with the six sets of wave years prior to 1905.

Table 4. Identification of Years of Global Labor Unrest Waves

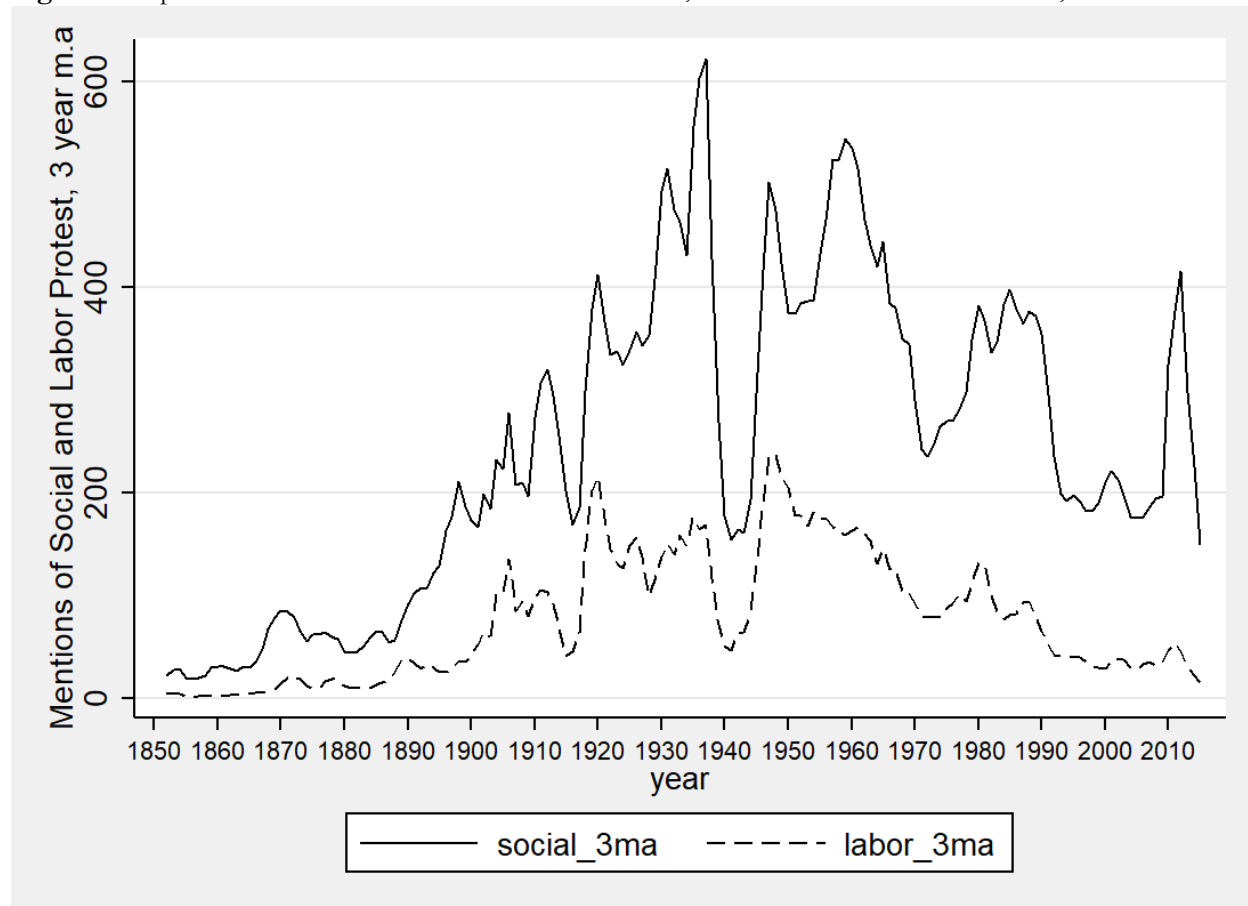
Wave-Years (Shorter and Tilly Method)	Wave-Years (Silver Method)
[1] 1861	
[2] 1864	
[3] 1866-1872	
[4] 1878	
[5] 1886-1890	
[6] 1899-1902	
[7] 1905-1907	[1] 1905-1907
[8] 1919-1920	[2] 1919-1920
[9] 1926	[3] 1926
[10] 1934	[4] 1934
[11] 1945-1948	[5] 1945-1948
[12] 1976	[6] 1976
[13] 1980	[7] 1980
[14] 2010-2011	

Figure 5. Reports of Labor Unrest in the World, New York Times and Guardian, 1851-2016



Source: Global Social Protest Database v1. [3 year moving average, do last points have zeros in MA?]

Figure 6. Reports of Social and Labor Unrest in the World, New York Times and Guardian, 1851-201



Source: Global Social Protest Database v1. [3 year moving average, do last points have zeros in MA?]

Figure 5 (above) shows the historical trajectory of labor unrest from 1851 to 2016 and Figure 6 (above) compares frequencies of social and labor unrest reports together. While there is a clear increase in labor unrest in the early twenty-first century (Figure 5), the contribution of labor unrest to the 2011 wave is relatively small (as can be seen from Figure 6). This raises doubts about the validity of our hypothesis 2c, which predicts that the weight of the labor unrest component in overall social unrest has not declined. There are two possible reasons for this finding. The first explanation is that many of the reported protests that contribute to our 2011 social protest peak are “actually” labor unrest, but they are not being reported as such by the newspapers. As we argued in the earlier conceptual section of this paper, type 3 labor unrest is likely to be misrecognized (i.e., not recognized as labor unrest) by both newspapers and researchers; and moreover, the weight of type 3 labor unrest has grown over time. Of course, the second possible explanation for our failure to find support is that our research has falsified hypothesis 2c.

It is also difficult to come to a conclusion before further analysis for several reasons. First, many of the “social unrest” events in news reports (e.g. news reports about the 2011 Egyptian revolution) do not give details about the class/status characteristics of the participants. Second, articles on mass protests often refer to the “people” as actors; but without further evidence, we do not code the report as labor unrest, even though there is a high probability that labor is present among the actors and in the demands. Consequently, in Figure 6, the reported events making up the gap between the social unrest line and the labor unrest line do not necessarily indicate non-labor social unrest. Some proportion of these events are

labor unrest, but how many (and how consistent a proportion over time) is for now unknown. Based on what we know now, we can say that, *if the rate of underreporting of labor unrest is more or less constant over the 150 years*, Figure 6 shows that proportion of labor unrest has declined over time (falsifying hypothesis 2c). However, *if, as we suspect, the rate of underreporting has increased over time* (in part due to the increased weight of type 3 labor unrest), then it suggests a major reinterpretation of the relationship between the contemporary dynamics of social and labor unrest, on the one hand, and the contemporary dynamics of hegemonic crises and capitalist development, on the other hand.

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