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SOCIOLOGY | RESEARCH ARTICLE

Statistical demand-pull in 1930's U.S.A and Germany: Good will, welfare and warfare

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Abstract: In 1994 Jan van den Ende observed, “During the 1930s more and more statistics were being carried out on punched-card machines. An important reason was the increasing complexity of the statistics.” Works by acclaimed social scientists Evans, Tooze, Mason, E. Black, Aly, Bernstein, Whitman, D. Black, Schivelbusch and others are cross-checked to answer the question: “How did U.S. New Deal and Third Reich welfare/relief programs increase demand-pull for complex statistical data; setting the stage for epoch shift towards the digital age?” Third Reich Germany and New Deal America provides a unique historical-comparative viewpoint into how two governments, with similar social relief goals but different statistical establishments, increasingly demanded more complex statistics for implementing relief programs, with drastically different results. Donald Black’s theory of law theoretically frames the findings of this comparative study of U.S. New Deal and German “Aufartung durch Ausmerzungen” programs.

Subjects: Statistics for Social Sciences; Statistics; Public Administration Research Methods; Law & Society; Comparative Politics; Welfare; Citizenship - Social Policy; Unemployment; Historical Sociology; Ethics of Research

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PUBLIC INTEREST STATEMENT

The Third Reich used machine age statistical studies to implement a socially stratified welfare program for “legal Germans,” while New Deal, U.S.A. fostered statistical studies to identify and provide relief to unemployed Americans. Hitler and F.D. Roosevelt used welfare programs to promote good will with their publics. The programs entailed complex statistical studies, eugenical laws, government contracts with IBM and legislated social stratification. By the 1940s, advanced US armament production, IBM contracted US Social Security data banking and statistical processing, altogether, set the stage for digital R&D. Statistics, laws and warfare preparations, in 1930s Germany, helped divide targeted people from their wealth, property, labor and lives, to the advantage of the Nazis, while in the US they helped unite people with jobs, middleclass lifestyles and ultimately a new digital, global, mode of production and banking. Findings from this comparative interwar historical study validate Sociologist’s Donald Black’s theory of law.

Keywords: statistics; welfare; stratification; inequality; third Reich; new deal; eugenical law; pure sociology

1. Introduction

In “The number factory: Punched-Card Machines at the Dutch Central Bureau of Statistics” (1994) Dutch Jan Van Den Ende posited complex statistics created “demand-pull” for the introduction of the digital computer (p. 23). What increased demand-pull for statistical studies? The US New Deal and Third Reich’s “improvement through exclusion policy” or “Aufartung durch Ausmerzung” or “physical regeneration through eradication” (Friedlander, p. 20), programs created demand-pull for both statistics and ultimately the digital age. Both programs sought to remedy national unemployment. The US gave monetary relief to unemployed citizens, while the Nazis created full employment through an armaments program that constricted consumer goods, reduced workers’ benefits, imposed legal stratification on the German population and offered material compensation opportunities through plunder. To reduce survey paperwork overload, Germany’s Reich Statistical Office, by Tooze’s account, aspired to accomplish then, what today’s US government claims it does now, automated surveillance of people and companies nationwide.

Economic historians Tooze and Overy took issue with Aly’s German version of *Hitler’s Beneficiaries*, regarding how Aly calculated the statistics of Germany’s revenues and wartime debt. Aly responded by including “A Note on Calculations” at the end of the US version of *Hitler’s Beneficiaries* (2006). While Tooze calculates the percentage of Germany’s wartime revenues derived from larceny and forced labor, at about 25 percent of Nazi war expenditures, Aly calculates the revenues were about 70 percent (2006, p. 327). Tooze’s calculations include loans due after Germany’s defeat, whereas Aly’s calculations don’t. Aly’s disagreement is rooted in where the calculations begin and argues Tooze and others’ calculations may be mathematically correct, but are historically irrelevant because they fail to “reflect the political context in which those debts were incurred.” (2006, pp. 328–329)

This exemplifies discourse about the role and function of statistics, statisticians and the Reich Statistical Office in Third Reich programs. Where the calculations begin, what is included and excluded is an endless calculation or interpretation. As Mészáros wrote, “In other words the object of interpretation cannot be reached unless the approach is made on the basis of an objective affinity of values relevant to the given historical situation.” (1970, p. 23). The starting point for Aly’s investigations are the values relevant to how Hitler maintained domestic stability in Germany, while destabilizing neighboring countries. Aly maintains the Third Reich’s program of occupation and larceny, which materially benefited Aryan Germans, in hard times, created public goodwill between ordinary Nazis and their leadership. Germany’s war debts were counterbalanced by Nazi larceny that shipped train cars of coveted plunder (food, furniture, clothing, toys, etc.) to families in Germany. This along with stolen Jewish assets and forced labor helped shore up Nazi state revenues and domestic consumption. It also kept the German public complacent, well fed, silent about Nazi atrocities and loyal to the Führer, since Göring insisted Germans would not starve in the war (Aly, 2006, pp. 3, 173). Aly explains that:

While anti-Semitism was a necessary precondition for the Nazi attack on European Jews, it was not a sufficient one. The material interests of millions of individuals first had to be brought together with anti-Semitic ideology before the great crime we now know as the Holocaust could take on its genocidal momentum (2006, p. 6)

On the eve of WWII, after surviving the harsh inflation of the 1920s, the punishing effects of the Versailles Treaty and the self-sufficiency or autarky and full-employment program mandates of the Third Reich’s Labour Front and armaments program, ordinary Nazi’s were relatively unconcerned about the costs of any short-term welfare gains they made over and against their European

neighbors' losses (Aly, 2006; pp. 3–4, 32–5; Evans, 2004; Mason, 1964; Overy, 1996). Aly quotes from Julius Posener's book *Deutschland*. As a construction engineer, Posener surveyed the bombed out cities of Germany in 1945 and wrote:

The people did not fit the destruction. They looked good. They were rosy cheeked, happy, well groomed and very well dressed. An economic system that had been propped up by millions of foreign hands and the total plunder of an entire part of the world was here displaying what it had achieved (Aly, 2006, p. 325).

This dispute between Aly and Tooze capsules the larger picture of the Third Reich, with the Reich Statistical Office in the background turning out statistics that might or might not have been accurate or might have been “propaganda” or “double-counting” or exaggerating figures to get around Treaty of Versailles regulations or perhaps obscuring Germany's industrialized rearmament program, while providing data to enable the Final Solution and larceny of occupied countries (Aly & Roth, 2004; Black, 2001; Tooze, 2001). Tooze notes how the Germans were more advanced than the Americans in differentiating statistics that detailed government spending (Tooze, 2001, pp. 189–90). Regardless of the background statistical activity, that may never be fully known, Aly's thesis about how state generosity, particularly in hard times, created good will and unity between Nazi leadership and citizens, is applicable to the US leadership of New Deal America.

The Great Depression confronted the US government with an impoverished population, so Franklin D. Roosevelt (FDR) implemented The Federal Emergency Relief Administration (FERA). In its' first two years FERA distributed about \$500 million dollars of grants to states, which dispersed the funds to about 20 million unemployed, often homeless, Americans (Brown, 1940; pp. 145–90; 445–6, 464–5; Bernstein, 1985; pp. 17–25; Sherwood, 1948; p. 46). FERA began an administrative network to count unemployed Americans and established statistical data for the Social Security Administration (SSA). While some labor leaders were suspicious of these New Deal programs (Lubove 1968, pp. 15–6) most Americans welcomed them and re-elected F.D. Roosevelt so many times that Constitutional Amendment XXII was passed in 1947, limiting the number of terms a President could serve to two.

Both the *Aufartung durch Ausmerzung* and US FERA aid programs hinged on collected statistical data for the former and collecting statistical data for the later. The Germans targeted populations for abuse, arrest, deportation, occupation and larceny based on records collected and kept by the police, employers and the State (Aly & Roth, 2004). The US government wanted to create a national database of US citizens and it provided aid in return for personal information. Founded in 1935 FERA was merged into the Works Progress Administration (WPA), which funded 4,000 statistical research projects from 1938 to 1941, collecting data jointly with the Division of Statistics and Finance and the Bureau of Research and Statistics (founded in 1936). Collecting statistics for government funded relief programs progressed from being an accounting procedure to a complex administrative procedure with its' own experts, bureaucracy and educational programs (Brown, 1940; pp. 360–2; Bernstein, 1985; pp. 146–88).

At the start of the 1930s, the U.S.A. and Third Reich Germany were unequal in their statistical infrastructure establishments, but both created demand-pull for statistics by creating new laws and employment programs, almost simultaneously (Table 1). Unlike comparative studies by Garraty (1973) or Schivelbusch (2006) that examine similarities and differences in US and German leadership and corporatism in the 1930s, this study considers what increased demand pull for complex statistical processing in both countries. The demand for complex statistics fueled development of an electronic infrastructure. Today that infrastructure makes statistical studies an automated byproduct of a global and self-perpetuated, habitually interactive, electronic meta-data and surveillance processing and data banking, enterprise (Cortada, 2012; Halper, 2015; Packard, 2018; Phillips, 2018).

1.1. Third Reich literature

Tooze's (1999, 2001) political economic overview of Germany in the inter-war and Third Reich era provides in-depth analysis of the workings of the Reich Statistical Office (which oversaw statistics of Germany's companies, government spending, labor records, population, trade, import, export, agriculture and manufacturing production). E. Black's, *I.B.M and the Holocaust* (2001) examine IBM's business involvement with the Third Reich and with Dehomag, the German branch of IBM. Black hones in on evidence that Dehomag tabulating equipment and IBM punch cards were instrumental in running nearly all of Germany's infrastructure from statistical studies to banking operations, utility monitoring to payroll, train schedules to Holocaust operations. In the 1930s, IBM's tabulating equipment worked faster and more efficiently than human clerks, assuring a monopoly market for its superior data processing services (Austrian, 1982). Tooze's *The Wages of Destruction* (2006) examines Germany's economic mis-planning and eventual demise of the Third Reich's "state controlled" economy, hitched to a debt ridden, re-armament and war program.

Whitman's *Hitler's American Model: the United States and the Making of the Nazi Race Law* (2017) compares the Nazi Nuremberg race laws to American Jim Crow era segregation laws, which the Nazis studied when crafting the Nuremberg laws. Mason examines Germany's Labor Front operations and its' attempt to run a war and peace economy (Mason, 1966, 1993). Hansen (2015) provides an excellent overview of the history of the Prussian statistical establishment, prior to WWI. Aly & Roth's *The Nazi Census* opens with a discussion about German statisticians being elevated to "soldier scientists" and explains how they used the census, punch card and registry data to classify people into smaller and smaller categories that "... provided a bureaucratic foundation for a graded system of rewards and punishments for 'selection' and eradication.;" culminating in the Personal Identity Number (that might have been tattooed on a wrist or punched into an IBM card) (2004, pp. 2-5, 140-49). Aly's *Hitler's Beneficiaries* (2006) focuses on how ordinary Nazi's benefited materially from the Third Reich's persecution of Jews and others. E. Black's *War Against the Weak* (2003) chronicles how the American based 1920s eugenics movement and laws, backed by the Carnegie Institution and Rockefeller Foundation, inspired and supported Hitler's racist hygiene campaign. Friedlander (1995) outlines the historical progression of eugenical science into US and German law.

The United States Holocaust Museum opened in 1993 and featured a Hollerith machine. Speculation has long raged about whether Holocaust victims were identified by Nazi census data processed in Dehomag Hollerith tabulating machines. In 1994 two articles appeared in the *Institute of Electrical and Electronics Engineers (IEEE) Journal* that discussed Hollerith Tabulating machines. One article by Jan van Den Ende, describes how the Dutch Central Bureau of Statistics (DCBS) established a special data processing department that innovated changes in complex statistics and tabulating technology. Another article by Luebke and Milton argues Hollerith punch card tabulating was instrumental to Holocaust operations (Luebki and Milton 1994). The authors claim Third Reich census survey questions could not distinguish Aryans from Jews, until after 1935 when reporting of ethnic ancestry was mandated by the Nuremberg Race Laws. Both articles overlap regarding how innovative punch-card statistical programming capabilities invited "demand pull" (Van Den Ende, 1994 p. 23) for more complex statistics and in turn, faster more advanced tabulating machines. Jan van den Ende explains:

As has been mentioned, the punched-card technology was favored when many tables were required from one set of data. This was a two way process, for once the machines had been used it was simple to increase the number of tables derived from the data (1994, p. 18).

In 1997 Kistermann, a former German IBM employee published a counter article in *IEEE*. He claims targeted populations could not be identified by name and address without Centralized Personal Punched Card Files, which were unavailable to the Nazis. He thinks Aly, Roth, Luebke and Milton fail to report how German census Supplementary Card data was often incomplete (possibly due to the complex method of data collection?) (1997, pp. 39-40). Kistermann explains that

alphabetical printing with tabulators (that could print addresses) weren't used with German census data, but were used to punch card register, by name and account number, about 23 million Americans in 1937 (1997, p. 41).

In *Population Statistics, the Holocaust, and the Nuremberg Trials* (1998) Seltzer, a specialist in population statistics, explains German census methodology and how it was used in selective ways to identify Jews. For example, the Germans wanted to identify Dutch Jews after occupying Holland in 1940. The Nazi's didn't want to conduct a census because the Dutch were resistant. Instead of conducting a new census, the Nazi ordered a mandatory registration card (necessary for rations) for non-Jewish citizens and another card for Jews, using existing Dutch population data. Jewish Dutch citizens dutifully filled out registration card surveys with personal information—knowing that if they did not, the penalty was five years in prison and confiscation of property. In late 1940, a new IBM subsidiary, equipped with the latest Hollerith equipment, appeared in Holland. Dutch statistician, Lentz (who wanted to perfect a documentation system he called the “paper human”) in co-operation with the Nazis, helped pioneer alphabetizing projects, which generated cross-tabulated results by 14 June 1941 (Aly & Roth, 2004; pp. 66–70; Black, 2001; pp. 303–13; Seltzer, 1998; pp. 523–26). In 1942, the Dutch Jews were deported. Furniture taken by Nazis from the homes of deported Dutch Jews was shipped back to Nazi households in Germany (Aly, 2006, p.3). This example demonstrates how the Nazi welfare/relief worked in conjunction with complex statistical data and how source crosscheck methodology works in this study.

In 2001, Black's *IBM and the Holocaust* was a New York Times Best Seller. It is a compendium of the history and role of IBM's business operations, including Dehomag. Black's next book, *War Against the Weak*, (2003) examines relations between Hitler and the US eugenics movement. In contrast, other literature depicts IBM as the most benevolent, progressive, corporate example of welfare capitalism in world history, which it could afford to be, because as Stebenne notes: “the single most important development enabling IBM to begin to provide its distinctive brand of welfare capitalism was its winning of the contract to administer Social Security”—a contract encouraged by Frances Perkins (Stebenne, 2005, p. 57). While IBM N.Y. fostered welfare capitalism in the US, Dehomag administrators helped foster *Aufartung durch Ausmerzung* programs; after the war, IBM executives on both sides of the Atlantic reaped rewards. Black reports:

The men who headed up the IBM enterprise in Nazi Europe and America became revered giants within the corporation's global community. Chauncey became Chairman of the IBM World Trade Corporation, and the European subsidiary managers were rewarded for their loyalty with top jobs. Their exploits during the Nazi era were lionized with amazing specificity in a promotional book entitled *The History of Computing in Europe*, published in 1967 by IBM itself. However, an internal IBM review decided to immediately withdraw the book from the market. It is no longer available in any publicly accessible library in the world. (2001, p. 425)

Obviously WWI and WWII era eugenics and racist genocide are suppressed by governments for national security or by private companies because of trade secrets, liability and cover up. Kistermann writes that IBM's alphabetical printing tabulator 405 was first used for registering Americans for Social Security in 1937, but it is unclear if IBM's collator machine, which enabled the speedy development of the US Social Security data-base and skyrocketed IBM profits, was created in the US or used first in Germany, since wartime transactions with Dehomag don't appear in American records (Black, 2001; p. 119–20; Kistermann, 1997; p. 41; Social Security Oral History, Futterman, (1974); Van Den Ende, 1994, p. 16). Scholars lament other gaps in WWII history (Turda & Weindling, 2007, p. 1).

1.2. US New Deal literature

History sources regarding US New Deal era, include books by, A. Altmeyer, I. Bernstein, J. C. Brown, B. N. Armstrong, J. D. Brown, P. Douglas, J. Garraty and the Social Security Administration's Oral History website interview transcriptions. The Congressional report by National Resources Planning

Table 1. Legislation & events contributing to demand pull for complex statistics in 1930's Germany and US.

1929, 1930, 1931	
US	Germany
<p>New York Stock Market Crash: unknown numbers of unemployed. E. Durkheim's <i>Suicide</i> published in English. Famous book by Nazi doctors, Baur, Fischer Lenz, titled, <i>Foundations of Human Heredity and Race Hygiene</i> advocating for eugenics is translated into English (Black, 2003, p. 296)</p>	<p>Under 1919 Versailles Settlement and hated "War Guilt Clause" (Article 231); mandated to pay reparations for WWI. Under Young plan, reparations were reduced and US loaned Germany US\$300 million; 3 million registered unemployed; street fighting between socialists, communists and anti-fascists left hundreds dead; Centre-right parties collapsed.</p>
1932	
<p>Food looting and piecemeal self-help programs widespread; 22,000 ex-servicemen joined Bonus Army, camped in D.C. to demand deferred bonus payments (never paid); President Hoover ordered General MacArthur to burn camps; killing some and gassing over a 1,000 veterans (Bernstein, 1960, pp. 422, 437-56; 1985, p. 284). Third International Congress of Eugenics held in NYC American Museum of Natural History (Black, 2003, p. 298)</p>	<p>Eight million people unemployed; many civil service employees dismissed (Evans, 2004, p. 243) Communist party had about 300,000 members (Overy, 1996). Military replaced disarmament clauses in Treaty of Versailles for equal rights within Geneva Protocol and No Force Declaration (Evans, 2005, p. 341). Germany, US Italy, Britain and France agreed not to resolve future differences by force.</p>
1933	
<p>Federal Emergency Relief Act of 1933 provided emergency relief for needy with direct relief and work through state agencies and created Federal Emergency Relief Administration (FERA), which would become Social Security (National Resource Planning Board, 1942, p. 30). Wagner-Peyser Act passed, providing a system of federal-state employment offices; unemployment compensation is of a federal-state character because the offices are labor exchange units (Cohen, 1983, p. 401). Rules & Regulations are established for FERA as follows: 1) Rules governing expenditures for FERA funds (June 23); 2) Additional rules Re: FERA funding (July 1); 3) Supplement to Rules and Regulations No. 1 (July 11); 4) Conditions of employment on relief projects (July 21); 5) Employment of personnel on administrative pay roll under FERA (July 21); 6) Purchase of supplies in compliance with NRA and President's Reemployment Agreement (August 11); 7) Medical care provided in home to recipients of unemployment relief (September 10); 8) Organization and operation of transient service bureaus. (Brown, 1940, p. 198). "In 1933 relief on a large scale was almost as much of an innovation in state governments as in the Federal government since, most of state relief administration had only been in existence for less than 10 months." (Brown, 1940, p. 177) Durkheim's <i>Division of Labor</i> published in English</p>	<p>Hitler replaced President of Reichbank with Schacht (Evans, 2005, p. 343) promised to reintroduce conscription of non-Jewish men into armed forces (2005, p. 341). Decree for Countering Malicious Attacks on the Government created political courts for "disciplining of all inferior elements" (Evans, 1996 pp. 641-650). Enabling Act was made permanent (Evans, 1996, p. 619; 2004, pp.350-54). Jewish business boycott began. Civil Service Law dismissed Jews from civil service (Evans, 2005, pp.14-5). Extension of Law of April 7 replaced private company Jewish employees with Aryans (2005, pp. 393-4). Labor Front displaced labor unions (p. 457; Mason, 1993, pp. 88-109). First Law of the Reduction of Unemployment offered work and loans to Aryan couples (Evans, 2005, p. 330). 1933 Census Decree, centralized census data analysis and publication; 1933 census processed complex stats in record time (Luebke & Milton, 1994, pp. 27-28; Seltzer, 1998, pp. 515-19). Law for Prevention of Hereditarily Diseased Offspring decreed "compulsory sterilization for congenital feeble-mindedness, hereditary deafness . . . severe deformity, or severe alcoholism" (Evans, 2005, p. 507; Black, 2003, p. 299). Supplementary Decree to June 1 Decree entitled Aryans to apply for furniture vouchers (2005, p. 331). Second Law on Reduction of Unemployment provides 5,000 million RM for Aryan job creation programs (p. 330). Military withdrew from disarmament talks and League of Nations (Tooze, 2006, p. 56). Law Against Dangerous Habitual Criminals mandated indefinite internment of offenders with two or more criminal convictions (Evans, 1996, pp. 681-2). Dachau concentration camp opens (Black, 2003, p. 299)</p>
1934	

(Continued)

<p>“Thanks to the New Deal, the federal government was growing rapidly at a time when most private industries were unable to make new investments”; IBM practices welfare capitalism by giving its’ employees a pay raise and a new pension system (Haigh, 2010, p. 10).</p>	<p>Law on the Organization of Labor (Mason, 1993 pp. 103–8) and Work Book Laws (Evans, 2005, p. 478–9) made employers “Leaders” and workers “followers”; after the “Night of Long Knives” Hitler legalized the massacre of some of his supporters (2005, pp. 20–41, 45); Labor Front tasked with “bombarding” plants “with endless questionnaires” (Mason, 1966, p. 119); Death penalty decreed for hateful claims/ jokes about Nazi leadership. Unemployment fell (interpretations of figures varied) (Evans, 2005, p. 335); job programs suspended (2005, p. 341); massive government borrowing financed reemployment and rearmament, while Law for the Prevention of Misuse of Reopession hurt Jewish lenders (Aly, 2006, pp. 22).</p>
1935	
<p>Report of Committee on Economic Security transmitted to US Congress; recommends old-age insurance, federal and State public assistance, unemployment compensation, health care services, health services for crippled children, child welfare and vocational rehabilitation programs. Economic security bill introduced. Social Security Act becomes law; Members of Social Security Board named. (Altmeyer, 1966, p. 277). The market for IBM tabulating machines and punch cards became massive and IBM built a country club for all employees (Haigh, 2010, p. 10). Bremen Incident in NYC; Americans revolt against Hitler (Whitman, 2017, pp. 19–29)</p>	<p>Second Work Book Law and Card Index to register every Jew, (Jewish organizations supplied membership lists) began. Reich German Nationals Law or Citizenship Law differentiates Germans from Jews. 3 Nuremburg Laws Decreed: 1) Flag Law for the Reich; 2) Reich Citizenship Law defines Reich citizens and 3) Law on Protection of German Blood and German Honor forbids marriage between Jews and legal Germans; First Regulation Pursuant to the Reich Citizenship Law defined Jews. (Aly & Roth, 2004, p. 57; Whitman, 2017, pp. 29–32) Jewish stockbrokers banned (Evans, 2005, p. 388).</p>
1936	
<p>Federal unemployment tax of 1% of payrolls first applicable to employers of 8 or more; first public assistance payments to recipients with federal participation under Social Security Act in old age (17 states); aid to dependent children (10 states) and aid to the blind (9 states); first US Federal grant for administration of State unemployment insurance law (New Hampshire) certified; First state unemployment benefit paid in Wisconsin; all states participating in maternal and child health services (Altmeyer, 1966, p. 277–8). US Social Security Bulletin begins publication (C.J. Brown, 1940, p. 361). IBM’s owner, Watson, is America’s highest paid man (Haigh, 2010, p.10)</p>	<p>Four Year Plan announced; industry and military prepare for war. Workers left agriculture for urban and arms jobs, exacerbating labor and consumer goods shortages (Evans, 2005, pp.425–6; Mason, 1964; Mason, 1993, pp. 186–196). Economics Ministry created cartels, for state to, “direct and monitor increases in war-related production” while claiming to be a free market (Evans, 2005, p. 351); “a new system of national economic controls” emerged (Mason, 1993; Tooze, 2001, p. 212). Tax reform decreed, all tax laws to reflect National Socialist interests (Jews subject to back taxes) (Evans, 2005, p. 388). Laws made Jews liable for damage to the economy (transferring funds abroad) (Tooze 2006, p. 275). Other laws protected Aryans from rent hikes and wage reductions (Aly, 2006, pp. 23–30).</p>
1937	
<p>Workers acquire credits towards old age insurance benefits; employers and employees each subject to tax of 1 % of wages, up to \$3,000 a year; lump sum payments first payable to eligible workers, their survivors or their estates; constitutionality of old age and unemployment insurance provisions of the Social Security Act upheld by US Supreme Court (301 US 495, 548, 619); Federal unemployment tax payable by employers of 8 or more increased to 2% of payroll; unemployment insurance legislation approved in all states (Altmeyer, 1966, p. 278). Court upholds constitutionality of National Labor Relations Act</p>	<p>Unemployment dropped below a million partly by reducing the number of women in the paid workforce (Evans, 2005, p. 333); Hitler arbitrates conflicting demands by military and corporate leaders over shortages, bottlenecks, from “organizational jungle of the Four Year Plan” (Evans, 2005, p. 362) he decides autarky cannot be maintained and occupying eastern countries is necessary (2005, pp. 359–71). Dehomag seals contract with Office of Mechanized Tabulation of the German Military; Reich Office urges development of D11 tabulating machine that could process complex statistics in record speed —this machine was used in 1939 Census (Aly & Roth, 2004, p. 14)</p>
1938	

(Continued)

Table 1. (Continued)

<p>Federal unemployment tax, payable by employers of 8 or more, increased to 3% of payroll, all 51 jurisdictions making old age assistance payments under social Security Act. (Altmeyer, 1966, p. 278)</p>	<p>Old Debt Eradication Law: invalidated hundreds of thousands of titles to collectible debts of Jewish lenders (Aly, 2006, p. 22). Registration Decree: all citizens had to register with police. Decree of 23 July: third announcement demanding Jews (including infants) carry identification with large black 'J' on it (Kistermann, 1997, p. 42; Luebke & Milton, 1994 p. 28). Decree on the Duty of Service: allowed government to draft workers into particular jobs (Evans, 2005, p. 479). Decree for the registration of Jewish Assets. (Tooze, 2006, pp. 274–9) Decrees forbid Jews to work as auctioneers; in possessing or selling arms; or accepting commissions from public corporations (Evans, 2005, p. 391). Jews banned from public recreational facilities after Ernst vom Rath (a Nazi) is shot by a Jew and the SS and SD retaliated with Week of Broken Glass, which Jews pay atonement for (2005, pp. 580–95).</p>
<p>1939</p>	
<p>Federal Security Agency, set up by President's Reorganization Plan No. 1 of 1939, integrated into Social Security Board (to which was transferred the US Employment Service). U.S. Public Health Service, Civilian Conservation Corps, National Youth Administration and Unemployment formed. US Social Security Act amended to provide: under old age and survivor's insurance, benefits for dependents and survivors; to advance payment of monthly benefits to 1940; to revise the benefit formula; to modify coverage provisions, cap rates for employers and employees at 1% through 1942; under unemployment insurance, to modify definition of covered employment and make tax applicable only to the first \$3,000 in wages; to increase federal share of public assistance payments; to raise annual authorization for grants for material and child health, crippled children's and child welfare services and to extend these programs to Puerto Rico. For unemployment insurance and public assistance, state personnel merit system made requisite for Social Security Board approval of state plan; also made a condition for federal grants for material and child health and crippled children's services (Altmeyer, 1966, p. 278–9).</p>	<p>Schacht warns economy is in debt and is replaced by Funk, former State Secretary in Propaganda Ministry (Evans, 2005, p. 361). Laws restricted investments to rearmament only. "Businessmen spent increasing amounts of time dealing with the mass of regulations and requirements imposed on them by the state" (2005, p. 377). "Association of the Jews in Germany: 10th Decree to the 1935 Racial Law: All Jews are United in Association" (Kistermann, 1997, p. 42). 1939 Census staff increased 50% from 1933, to 750,000. Reich Statistical Office employed over 5,000 and processed 80-column cards from multiple state-level statistical bureaus; the 1939 Census was fully mechanized (Luebke & Milton, 1994, pp. 27–28). New law removed limits on money printing (Evans, 2005, p. 361). Security Police take over <i>Reichsvereinigung</i>, (the community organization that Jews were required to belong to) and all its municipal offices and deport Cora Berliner the statistician in charge of <i>Reichsvereinigung's</i> statistical work (Seltzer, 1998, p. 517) "... Questionnaires are distributed to Mental hospitals and completed by doctors of medicine who are paid 5 pfennigs per questionnaire ... when more than 3500 are processed the pay increases ... crosses signify death ... there are 283, 000 questionnaires ... at least 75,000 marked with a cross. (Müller-Hill, 1998, p. 13)</p>
<p>1939 Start of World War II.</p>	
<p>Excerpts From <i>The Formative Years of Social Security</i> by Arthur J. Altmeyer. Reprinted by permission of the University of Wisconsin Press. © 1966 by the Board of Regents of the University of Wisconsin System. All rights reserved.</p>	

Board tilted, *Security, Work and Relief Policies (1942)* is an encyclopedia of New Deal program development history. J. C. Brown and Sherwood also document FERA history. Bernstein describes US welfare legislative and labor history of the late 1930s and opens with a sentence about how it was scandalous there weren't any reliable statistics about the unemployed (1985, pp. 17–8). The Social Security Administration Oral History files are narratives by SSA executives. Little is known about ordinary temporary workers' experience in the SSA. Whether employees were hired into SSA away from IBM or Dehomag or the disintegrating Reich Statistical Office, through Project Paperclip,

remains a question, since “With Hitler’s defeat, the Nazi flight to America only accelerated. The true number of fugitives by never be known . . . more than sixteen hundred Nazi scientists, . . . were eagerly recruited to the United States by the Pentagon.” (Chiswick, 2006; Appendix 3, f.n.1, p. 5-819; f.n. 8, p. 5-20; Haigh, 2010; p. 18 fn. 2; Lichtblau, 2014; p. 10; Social Security Oral History, 1974; Futterman).

2. Methodology

2.1. Research approach and scope

This comparative-historical study crosschecks sources to validate and compare US New Deal and Third Reich Germany, statistical demand-pull activity. The study is premised on a contemporary definition of statistical studies from Seltzer’s article, regarding “Fundamental Principles of Official Statistics” used by the United Nations Statistical Commission (United National Economic and Social Council 1994) and the “Declaration of Professional Ethics” adopted by the International Statistical Institute (Seltzer, 1998, pp. 512–13). Donald Black’s theory of law, enabling stratification and social control is applied and validated (Black, 1976; pp. 11–36, 105–37; 1995). Black’s theory of law is applicable not only to Third Reich Germany, where the Enabling Act gave Hitler power to stratify society by decree, but also in the US, where New Deal programs were instrumental in stratifying a new middle class.

This is not a quantitative study of government statistical output, nor is it concerned with how statistics were generated or calculated. The focus is on how 1930’s U.S.A. and Third Reich Germany utilized different approaches to similar unemployment problems that created demand-pull for statistics, with different results. It is impossible to quantitatively answer the question, “How did 1930’s New Deal and Third Reich welfare/relief programs contribute to an increasing demand-pull for statistical data?” because all the decrees, laws, mandates, codes and scientific rationale the Nazi’s used to implement their programs necessitated revision of countless statistical studies. H. Friedlander reports that just summarizing the Nazi decrees (many of which initiated statistical revisions in population data) results in over 400 pages! (1995, p. 24). The scope of the research is confined to the 1930s, when both Germany and the US were on similar terms. Both countries were experiencing economic depression and mass unemployment, but while Germany had statistics to prove it (Tooze, 2001, p. 153; 2006, p. 48) the US did not. Both countries conducted population and other kinds of censuses, although unlike US data, Germany included worker benefit data. Both countries rented Hollerith tabulating machines from IBM and Dehomag, to process data. Neither country was a superpower, since Germany was subjected to punishments after WWI and neither country had entered into war, yet.

2.2. Research focus areas

The study focuses on three areas that generated demand for complex statistical studies. First, the *Aufartung durch Ausmerzung* program legally divided populations into loyal Nazis with entitlements and exploitable others. This meant population, marriage, employment and other statistics had to be generated and revised constantly, to reflect changes created by decrees that legally divided the population. K. C. Priemel explains how Germans stratified the Russian population to extract resources for Germans, while rationing them for Russians, thereby starving Russians. Priemel wrote, “The goals of economic exploitation and racial reordering were thus inherently linked, as Götz Aly and Susanne Heim have forcefully argued” (2016, p. 397). The first focus area, backlit with Blackian law theory, considers how that “racial reordering” in Third Reich Germany was enhanced by statistics and enforced by decrees.

Second, since the Reich Statistical Office ultimately could not keep up with demand-pull for statistics brought on by external government decrees, it sought to streamline data processing internally, but in doing so, actually increased the demand for complex statistics beyond processing power. Third, by the end of the 1930s, the US had far more demand for complex statistics than at the beginning of the 1930s, for at least three reasons: (1) FERA data gathering efforts and, (2)

IBM's revolutionary collator equipment to speed data processing of a national database of around 23 million Americans, (3) the Social Security Act of 1935 that legally initiated linked and expanding data banking of US payroll and Social Security data (Black, 2001; p. 119; J.D. Brown, 1969; p. 15; Kistermann, 1997; p. 41; Social Security Oral History, 1974; Futterman).

3. Analysis of three focus areas that increased demand for statistics

3.1. *Laws and stratification as a statistical demand pull factor in Germany*

When Hitler took power, he wanted to give loyal Nazis: jobs; tax breaks; loans; debt relief and legal formal privileged status over so-called inferior others. He also wanted to rearm Germany and occupy parts of Europe. What Hitler wanted give to loyal Nazis constituted the Third Reich's "improvement through exclusion policy" or *Aufartung durch Ausmerzung*, for Germans with the right "racial pedigree" (Aly, 2006; p. 13; Friedlander, 1995). The German *Aufartung durch Ausmerzung* program strove to maintain an impossible war-and-peace-time economy (Mason, 1993, p. 203) that ultimately had to appropriate forced labor and plunder resources from Nazi occupied European countries.

Aufartung durch Ausmerzung was operational before Hitler won the 1933 election. Militiamen intimidated, brutalized and committed larceny against Hitler's political opponents (Communists and Social Democrats) in the aftermath of the Reichstag arson on 27 February 1933 and before the election, which legitimated Hitler's power. The Reichstag arson presented an opportunity for the Nazis to claim Communists were on the verge of a "Bolshevik revolution" and obtain an emergency decree "for the protection of the People and the State." The decree suspended civil and individual liberties of the constitution and allowed the Reich government (and police auxiliary brownshirts) to take control of the federal states; including the searching and seizure of homes and property; violating privacy rights of all communications; and restricting rights of speech and assembly (Evans, 1996; pp. 618–19; 2004; pp. 331–33, 2005; pp. 11–12). The emergency decree became permanent, as the "Enabling Law," which allowed Hitler to rule by decree (Shirer, 1960, pp. 194–8) and author an avalanche of laws that stratified Germany.

As Head of State, Hitler had troops swear an oath of unconditional obedience to him (Evans, 2005, p. 43). Goring rescinded his order enlisting brownshirts as auxiliary police (2005, p. 21) and Hitler surrounded himself with his own bodyguard division, the SS, while the military (confined in size by the Treaty of Versailles 1919 mandate) was dwarfed by other military factions, competing for professional turf, mission and prestige in obeying the Führer. No matter what part of the Nazi military spectrum a soldier served in, ultimately what unified the troops with the Reich was race, legitimated by eugenical law decrees (Whitman, 2017) enhanced with material privileges including war booty for enforcing that legal standing and rationalized by statistical studies and eugenics. Laws used to divide the Nazis from others meant statistical population data had to be updated by police departments, the Reich Statistical Office and other offices, since it revealed what was available for plunder, once the targeted person was separated from it. There was economic incentive to force all people, by law, to give up their information for endless record keeping, often backed up by eugenical laws.

Sociologist Donald Black's idea of pure sociology without people might be applied to Nazi *Aufartung durch Ausmerzung* program, where data banking is an applied science of separating targeted people's wealth, labor power and lives, from them; rendering a society devoid of certain people. Black's theory of legal stratification of society posited in *The Behavior of Law* (1976, p.p. 13–31) makes claims that are hard to get around when applied to Third Reich lawmaking. Black's theory claims that law varies directly with stratification. In other words, the more stratification in society, the more laws there are, which was true in the Third Reich, since Hitler decreed a plethora of eugenical laws separating Jews from legal German "Aryans". For example, Reich laws decreed on: 7 April, 1933 (Civil Service Law); 9 May, 1933 (Extension of Law of 7 April 1933); 26 July, 1933 (Supplementary Decree to June 1 Decree) and 26 April, 1938, (Decree for the Registration of Jewish

Assets) worked against Jews and for the Aryanization or *Aufartung durch Ausmerzung* program (Table 1). Later laws were imposed on occupied countries to extract war booty for Nazi families and forced labor for the armament program.

Black's theory states law varies with rank. The higher the rank the more protection from law; the lower the rank the more subject to law. Hitler ruled by decree; he was not subject to the law. In contrast, Jews and others, according to the Nuremberg Laws Decree of 1935, were subject to laws that could: have them sterilized (14 July 1933, Law for Prevention of Hereditarily Diseased Offspring)(Friedlander, 1995, pp. 25–38); restrict their marriage choices (15 September, 1935; Law on the Protection German Blood and German Honor) and be collectively fined and punished with mass deportations for the crime of one Jew against a Nazi (7 November, 1938; 12 November, 1938) (Table 1).

According to Black's theory of law, downward law is greater than upward law, or laws are taken more seriously if those perceived to be hurt are higher up in the strata. For example, a teenage Jew, Herschel Grynszpan shot Ernst von Rath, a Nazi, in Paris on 7 November 1938 (after Herschel learned his parents had been deported from Germany to Poland). The Reich responded with the "Week of Broken Glass" (November 9–10, 1938) in which SS and SD men burned, destroyed and looted Jewish synagogues, homes and shops and deported 20,000 male Jews to concentration camps. Jews had to pay the insurance cost of the property damage that the SS and SD had caused. The Nazis demanded a collective "atonement fee" of 1 billion marks for the death of the Nazi. By 14 November 1938 Göring and the heads of five major banks planned a law to separate the remaining Jews from their remaining assets (Evans, 2005; p. 585–97; Tooze, 2006; pp. 274–84). Nazi law put Jews into double binds; cash strapped Nazis pressured Jews to emigrate (or disappear) but if Jews attempted to take money with them they were legally in the double bind position of being "prima facie suspects of wishing to smuggle capital out of the country" (Tooze 2006, p. 275).

Black's theory states "downward law" varies directly with vertical distance; upward law varies with vertical distance. In other words, whatever the crime, the rich are in a more advantaged position, than the poor. The Third Reich applied the Aryanization program to the Jews in an incremental, un-predictable fashion, increasing the likelihood Jews would suffer financial losses, arrests, foreclosure, fines, business losses, bodily harm and deportation, thereby degrading their position, while the Aryan German's position was legally elevated in social rank and protected. According to the theory, the punishment in these inverse relationships is predictable. Those with more wealth suffer less penal punishment and if convicted of anything, may suffer compensatory and therapeutic law. On the other hand, an individual deprived of his wealth is more likely to deviate and engage in deviant behavior, which predicts more social control. The more deviant behavior perceived by society, the more it predicts the quality and quantity of social control used to control the "out-of-control" social problem. For example, the November 1933 Law Against Dangerous Habitual Criminals allowed indefinite internment of offenders with two or more convictions. The law exemplified the quantity and quality of social control in relationship to the quantity of deviant behavior; increasing the penal punishment for already convicted and degraded people who were increasingly subject to more social control by a strata of society that had the power, organization and wealth to construct and enforce the laws.

3.2. External and internal statistical demand pull factors at the Reich statistical office

The Reich's Statistical Office was the central data processing bureau for the German government. It began in the eighteenth century when certain German states formed "statistical bureaus" as part of post-Napoleonic administrative reforms. Prussia (1805), Bavaria (1808) and Württemberg (1820) conducted censuses and maintained regional records. In 1872 the "Imperial Statistical Office" was established under the Reich Ministry of the Interior and assumed responsibility as a central statistical agency for collecting national data on, at the very least, population censuses, foreign trade, labor and corporate statistics, agricultural and manufacturing data and data

pertaining to government spending. In *Mapping the Germans* (2015) Hansen explains the historical co-development of statistics and cartography in Germany from 1848 to the First World War. He surmises that Germany's infatuation with statistics and cartography at the turn of the century, helped create what today might be called "fake news" or essentially an:

... illusory sense of certainty that made other abstract concepts seem increasingly real. Nowhere was this phenomenon more obvious than in the development of racial science, whose methodologies were largely anticipated by nineteenth-century movement to quantify national belonging using statistical and cartographic science. In the end then, the true legacy of these disciplines was to facilitate the elevation of ideology over actuality, to make the imaginary into the real. (Hansen, 2015, p.p. 160-1)

Tooze's article, "Weimar's statistical economics: Ernst Wagemann, the Reich's Statistical Office, and the Institute for Business-Cycle Research 1925–1933" details the history of the Reich Statistical Office during the Weimar, pre-Nazi era (1999, 2001; pp. 103–76). In the 1920s and 1930s, the Reich Statistical Office accommodated Ernst Wagemann's Institute for Business-Cycle Research or Institut für Konjunkturforschung, a liberal think tank of statisticians dedicated to observing the economy and money flows. Wagemann's Institut für Konjunkturforschung's stated goals were to help stabilize the economy to avoid economic depression and hyperinflation (Tooze, 1999) but the Weimar administration's printing of worthless money to pay for war debts in the 1920s did create hyperinflation, which the young, agitator, Hitler, used as a pretext for social revolution against the Treaty (Black, 2003, p. 269). Later Hitler also decreed printing of money without limits in 1939 (Evans, 2005, p. 361).

In the 1930s, the Reich Statistical Office mobilized to help the Führer improve profitability for the German business sector (Tooze 2006, p. 92) while also establishing an "unprecedented system of industrial statistics" due to compulsory reporting (2007, p. 107; 2001, pp. 177–214). Aly, E. Black and Tooze report major changes in the Reich Statistical Office after 1933. In 1934 a new million-dollar Hollerith machine factory and data coordinating facility opened in Berlin (Black, 2003, p. 309). Between 1933 and 1939 The Reich Office of Statistics doubled its employee base to roughly 5,000 employees and moved into a huge seven-story building in 1935 (Aly & Roth, 2004, p. 18–9). The Reich Statistical Office was stocked and re-stocked with the latest Hollerith tabulating machines. The Office and the German military were major customers of Dehomag (Aly & Roth, 2004; p. 14; Black, 2001; Tooze, 2001; pp. 188, 199). Black charts the course of NY IBM's takeover of Dehomag and Dehomag's insistence that NY IBM not be privy to the Nazi uses of Hollerith machines. Tooze charts the course of the turbulent changes in the Reich Statistical Office and Wagemann's Institute (Tooze, 2001, p. 189), which culminated in the Industrial Reporting System, perhaps the largest data collection system in the world at that time (Tooze, 2001, p. 240). The Reich's Statistical Office was to Third Reich Germany what Silicon Valley is to the US.

Under the Third Reich, the Statistical Office was flooded with demands for statistics to differentiate populations, identify populations for occupation and process statistics required from private companies, trade, tax, labor and agricultural sectors (Tooze, 2001, p. 204–5). Germany's across-the-board labor shortages, due to the success of the full employment program, afforded steady work (at capped pay rates) but left the Office shorthanded. Workers changed jobs seeking better pay in the new government contractor armament industries, which created demand-pull for labor statistics to be updated, in accordance with Work Book decrees (Aly & Roth, 2004; pp. 2, 44–5; Tooze, 2001; p. 236). German business managers had to file compulsory Industrial Reports they did not want to fill out, for fear of the loss of privacy, while government agencies feared losing control of their data (Tooze, 2001, p. 210). There were complaints about "endless questionnaires" hampering productivity (Mason, 1966; p. 119; Tooze, 2001; pp. 208–9). The press reported Industrial Reports were creating "statistical hysteria" (Tooze, 2001, p. 232). Policy makers demanded statistics to plan for all the new public spending projects Hitler authorized (2001, p. 203). Searching for suspected tax evasion, the Reich's Fiscal Administration demanded access to

the Office's statistical records, but the Reich Statistical Office and Reich Ministry of Defense (RWM) refused access because "confidentiality was the bedrock of statistics" (Tooze, 2001, pp. 209–10). This contradicted the reality that the statistical data-base already created provided the Third Reich with the information necessary to control the firms. A Statistical Law of 1935 was proposed as a way to obtain a sort of monopoly control over statistics for the Reich Office of Statistics, but other government agencies fought to protect their own data and the Law deadlocked (Tooze, 2001, pp. 210–11). There were also surveys required of workers, of doctors and of targeted populations in occupied countries (Friedlander, 1995; pp. 146–7; Müller-Hill, 1998, p. 13).

There were internal political developments in the Reich Statistical Office that increased demand-pull for statistics too. When the Statistical Law of 1935 deadlocked the Reich Statistical Office restructured itself into a network of agreements with data collectors, resulting in the Statistical Office having access to more information about German companies and departments than ever before and attempts were made to regulate and limit studies (Tooze, 2001, pp. 211–12). Still demands for statistical studies increased. Goering formed his own Raw Materials and Foreign Exchange Staff, which required its own statistical studies (Tooze, 2001, p. 220).

In 1936, Hitler announced The Four-Year Plan, or IG Farben Plan (Hayes, 1987) mandating Germany prepare to invade eastern countries by 1940. In 1936, the Reich Office reported Germany was alongside France and the US in economic recovery (Tooze, 2001, pp. 183, 189). Business leaders eager to cash in on government armament contracts fueled the German economy but pinched materials from civilians for the armament program. The corporatist deals Wagemann created during the Weimar Republic to protect Germany from market catastrophes were transformed into a network of *compulsory* Business Groups, under surveillance by the Third Reich, modeled on the *Auskunftspflicht* Decree of 1923 (Tooze, 2001, p. 187–8). This opportunity to oversee the flow of transactions throughout the national economy including over 7,400 firms, without much regard to corporate or civilian privacy, offered the Office leadership the opportunity to transcend a facilitative role in the economy, to a position where the economy was subordinated to "the priorities of the regime. What those priorities were was unclear" (Tooze, 2001, p. 213).

The Third Reich formed a Central Statistical Committee by Decree for Simplification of Economic Statistics in 1939 (Tooze, 2001, p. 233). The committee was under Walter Grävell's direction, with backing from Goering, the Business Groups and the Four Year Plan. It waged a tug-of-war with other statisticians in the Reich Statistical Office, namely Wagemann's successor as President to the Statistical office, Wolfgang Reichardt, to shift data collection away from comprehensive surveys, over to locally managed and continuously updated databases (Tooze 2001, pp. 216–91). This dramatic political, technical and scientific dispute between the Reich statistical office personal was partly in response to data processing overload and brought on a dramatic development in economic knowledge wherein the economy, first the subject of management by government to protect society from the ravages of boom-bust capitalism, became a network of cartels and social units (agriculture, Labor Front, etc.) in service to the state and under continuous monitoring. Walter Grävell's visionary system of economic social control entailed a system of surveillance of firms providing maximum information, without privacy rights, at minimum cost, to the government on an ongoing basis (Tooze, 2001, p. 239), bypassing repeated censuses and questionnaires and sharing data with other agencies (p. 241). Reichardt however, took issue with the loss of confidentiality (and trust) that reckless survey data collection and automated surveillance causes (Tooze, 2001, p. 216). He was dismayed at the prospect of statisticians becoming simply technicians monitoring a planned economy in service to a state that claimed it served the interests of society, when it was actually the other way around and thus threatened civilization (Tooze, 2001, p. 218). Walter Grävell however, saw Reichardt's concerns as liberalism and out-of-step with the needs of the new power structure where statisticians were expected to be "solider scientists" (Aly & Roth, 2004, pp. 8–33). Mandatory Work Book data monitoring increased the Reich's Office database to an awesome capacity and it no longer needed to be up-dated with questionnaires, since it was self-perpetuating (Tooze, 2001, p. 236).

In 1935, Hitler breached spending limits for military spending. In 1936, he launched an arms build-up without regard to economic stability. By 1937, Goering was firmly entrenched in the Reich Statistical establishment and in charge of the Four Year Plan. Hjalmar Schacht (a “liberal” of the Wagemann era) resigned as Minister for Economic Affairs and Goering was put in charge of the RWM. Goering staffed the RWM with party loyalists who subordinated all sectors of society to the interests of the armaments program. Grävell’s efforts to streamline and automate the information flow between companies, government and labor would have seen companies distributing, collecting and processing their own statistical data with free use of Hollerith Tabulating machines, while Reich Statistic Office officials coordinated a decentralized flow of data and compiling national statistics without having to gather the initial data (Tooze, 2001, pp. 239–44). The method entailed bypassing company confidentiality for the creation of a more decentralized, automated, information-surveillance system to monitor individual citizens and many sectors of society, through a distributed network of local data collection centers, with administrative oversight in the hands of the Reich. An ambitious plan, it was cut short by disputes between statisticians, loss of statistician manpower to the war, challenges of WWII and the fact that complex statistical information wasn’t helping to create a rational planning system and didn’t seem compatible with Nazism (Evans, 2005; p. 362; Tooze, 2001; p. 216); nevertheless, demand-pull for complex statistics in the Third Reich increased beyond processing power.

3.3. US New Deal legislation: Federal Emergency Relief Act (FERA) Social Security Administration (SSA) as statistical demand pull factors in the US

By the end of the 1930s, the US had far more demand-pull for statistics than at the beginning of the 1930s for at least two reasons. First, the US government simply lacked reliable statistics about how the Great Depression damaged Americans (Armstrong, 1932; pp. 475–81; Bernstein, 1985; pp. 17–8; Bradford, 1922; Converse, 1987; p. 47). Second, New Deal legislation created demand-pull for statistics for: (1) determining the number of unemployed and/or relief recipients during the Great Depression and, (2) launching the SSA in 1935 (Altmeyer, 1966; Douglas, 1936, 1939).

Since, “Little was known about the characteristics or composition of the relief population” (Brown, 1940, p. 194: US Congress, National Resources Planning Board, 1942, p. 121) FERA initiated state welfare agencies, for counting relief recipients (1942, pp. 29–55) and distributing grants according to guidelines that required statistical collection for the government. J. C. Brown reports, “Within the first two weeks of the FERA, a statistical and reporting service was developed, which later became the division of Research, Statistics and Finance” (1940, p. 194). Schivelbusch points out that both the Third Reich and FDR’s administration expanded governmental surveillance of citizens through popular opinion surveys, creating more demand-pull for statistical processing (2006, pp. 75–6). Converse (1987) chronicles the development of survey development in America, specifically leaving out the US census and Social Security (p. 4). Unemployed Americans were no longer “unknown” and the government and companies wanted to know them better through surveys and opinion research.

FERA created the first nationwide system of reporting relief statistics using data from the Children’s Bureau Statistics (U.S. Congress, 1942, p. 32). The data was expanded by commissions collecting statistics about millions of Americans (1942, p. 41). Operationalizing this new welfare system and managing the statistics seemed impossible, until Standard Oil, General Electric and Eastman Kodak offered administrative assistance and support for establishing government old age insurance programs in 1934 (Brown, 1969, p. 15). In 1935 IBM informed Congress it had a collator machine designed for high-speed matching sets of data (Black, 2001, p. 119). In 1935 FERA merged into the SSA and developed old age insurance, workman’s unemployment and disability insurance and child welfare programs (today’s US “Social Security” and “Medicare”). Legislation enacted in 1937 was based on statistical reports by the aforementioned commissions (US Congress 1942, p. 41). The President’s Reorganization Plan of 1 July 1939 and the Wagner-Peyser Act forged a federal-State partnership in public-employment service and “promoted uniformity of administrative and statistical procedure and

prescribing reports of the operations and expenditures of State employment services.” (1942, p. 37). Federal responsibility for welfare of insecure populations increased; government agencies could not deny relief to those in need. By 1941 the Social Security Board was processing 55,922,710 employee accounts (Bernstein, 1985, pp. 183–86). US payroll deductions enabled a Social Security fund. As W. Cohen explains, “Poor families not only received income and services through the legislation but for the first time they received conscious recognition by the federal government of their existence and plight.” (1983, p. 382).

By 1940, 48 departments of public welfare were working with the Federal government sending data to IBM contractors with tabulators, alphabetical printers and collators to process complex statistics. Not surprisingly IBM’s profits skyrocketed (Social Security Administration Oral History, Futtermann, 1974; Stebenne, 2005; pp. 57–8). Millions of American’s payroll data could be statistically monitored perhaps in ways the Reich’s Statistical Office would have liked to emulate. IBM’s contract to build a national Social Security database of the US population assured automated statistical data processing would be a growth industry. The same year Julius Posener’s book was published, the idea of a computer was being publicly promoted (Aly, 2006; p. 325; Bush, 1945; Cortada, 2012; pp. 45–6).

4. Conclusions

The 1930s began with massive unemployment in the US and Germany following the Crash of 1929 and the dismantling of the gold standard. The decade ended with both countries enlisting their unemployed into war efforts that helped the US become the world’s richest country and a leading arms merchant. By 1933 unknown numbers of unemployed Americans were being counted and provided with unemployment, disability and old-age insurance. These benefits were similar to what German workers had (Lubove, 1968, p. 27) and lost during the Third Reich because the benefits were “indiscriminate” in application (Evans, 2005, p. 484). However, Nazi’s who qualified as Aryans were compensated with war booty, Winter Aid, full time jobs, had their debts discharged, had rent control, had improved social status and perhaps, “never had it so good” (Aly, 2006; p. 30; Priemel, 2016; p. 420, fn. 110). In agreement with Aly, Tooze writes; “By far the biggest beneficiary of the economic persecution of German Jewry was not German business, but the German state and thus indirectly the German taxpayer in general” (Tooze, 2006, p. 277).

Many Americans and Aryans felt some allegiance to their governments for the welfare/relief programs—no matter if the form of the aid was larceny or an IBM punch card with a Social Security check inscribed into it. Regardless of German and US political and leadership differences and similarities, which is the subject of other social science (Black, 2001, 2003; Garrarty, 1973; Paxton, 2005; Schivelbusch, 2006; Whitman, 1991, 2017) both countries: (1) depended on populations giving up information about themselves (usually from a position of desperation and lack of choice and often legally enforced) and (2) depended on skilled statisticians and IBM punch card tabulators and collator machines; and (3) money to pay for the government contracts, statistical infrastructure and IBM rental equipment. Without meeting these conditions the Reich Statistical Office would not have implemented the IG Farben Plan, nor would the US have created a Social Security national database, in such a short time. With these conditions met, Germany could dismantle workers’ benefit programs and then compensate Aryans with “improvement through exclusion” legislation and the US government could begin providing workers’ benefits.

The many laws the Reich used to stratify German society validate Donald Black’s general theory of law (1976, pp. 13–31). Third Reich data banking and punch card technology separated Jews and others from: their jobs; their property, assets and wealth; each other; their labor power; and their lives. Aryanization entailed piecemeal confiscation of Jewish assets, exacerbated by ordinary Germans exploiting the disadvantage of a minority and legislation that maximized Reich appropriation and gave tax breaks to the Nazis. This program shifted war expenses onto conquered populations and maintained good will between the German working class and Nazi leadership (Aly, 2006). A Black (1995) inspired pure sociological application is beyond this study, but it might render

people reduced to unit worth or render people totally alienated. Eichmann was right when he said it would have been a loss if the Jews had “disappeared” before being concentrated and then disappeared by the Nazis, since so much material booty was at stake (Aly & Roth, 2004, pp. 92–3). It meant militiamen had to break and enter homes, arrest, jail and torture to get the keys to the Jew’s safe and force boycotts of Jewish businesses, fighting face-to-face with customers, and in the streets (Aly, 2006; Evans, 2005; Shirer, 1960). In today’s digital world the same effects might be achieved by turning off chips (easier, cheaper, faster, no paper trail, no face-to-face confrontation, no eye contact, no evidence and no militia to share booty with and no evidence—like a Hollerith machine or punch cards—left behind for social scientists to ponder in museums).

Statistics and laws enabled separation of the human from wealth, labor and life. Which is more important the data or the human? Seltzer argues more attention is paid to statistically counting numbers of Jews killed in the Holocaust, than to the potential abuse of statistics and the consequences that the Holocaust shows so clearly. Seltzer laments the silence of social scientists and statisticians regarding the dangers of enemies taking control of government data banks and suggests ways to take precautions. He asserts: “In many situations statistical outputs, systems, and methods are a necessary part of the effort to define, find, and kill an initially dispersed target population.” (1998, p. 543)

New Deal laws and IBM statistical processing in the US helped create the American middle-class, from the 1940s to the 1980s, because while separating people from their information, it also united people with jobs, drawing them out of poverty. Today the US is seeing a reverse of this stratification, with massive populations of uncounted homeless and the largest gap between global elites and the poor in world history; as wealth of the former middle class is hollowed out by electronic, short-term, speculative, price value, finance capitalism with real time surveillance (Elliot, 2017; Oxfam, 2018; Packard, 2015, 2017; Phillips, 2018). The findings validate and conflict with Marx’s class theory since Germans did not revolt against the capitalists or Hitler, after their unions were dissolved. Rather the class conflict was “moved” (with the help of Party planning and statistical studies, laws and propaganda) to a conflict between Aryan and so-called inferior races; with material rewards for those who helped enforce the divide. The German working class became closer in rank to the capitalists and the State, with the legal expulsion of racially inferior “others” whose jobs, homes and businesses were appropriated, while industrialists were taxed and regulated by the state (Aly, 2006, p. 30). Aryanization worked to the advantage of the Third Reich, evoking arguments by G. Lukács (2000) that the state manages social movements and consciousness (at the right time) and the proletariat cooperates, rather than revolts. Marx’s theory of primitive appropriation of wealth to provide capital for the advantaged class certainly appears validated, as does his theory of dialectical materialism wherein the mode of production is pregnant with the mode of production that will replace it (Marx, 1976; Packard, 2016). Germany’s Dehomag statistical and armament industries were undermined as investment capital moved to America, where armament and statistical processing industries were engineered into new a digital mode of production.

Hitler and FDR used complex statistics to achieve employment goals and maintain good will with their followers, as they prepared for war. While the Reich Statistical Office revolutionized mechanically tabulated statistical studies, the US funded and developed infrastructure for a digital age that can generate statistical data in real time (Cortada, 2012; Haigh, 2010; O’Regan, 2008; Packard, 2016). Marx’s theory of class conflict is conflicted by the Nazi manufacturing of a legal, formalized, stratification of society, rationalized with eugenic laws, scientific malpractice and propaganda, inspired partly by American Jim Crow segregation laws and encouraged by American eugenic movement leadership and money (Black, 2003; Whitman, 2017; p. 3). Contrary to Schivelbusch’s conclusion that the US didn’t have “class-consciousness,” Whitman’s book reports Nazis looked to America’s citizenship and anti-miscegenation laws as an example of how to legalize social engineering (Schivelbusch, 2006, p. 189; Whitman, 2017). Eugenic sterilizations were made legal by US Supreme Court ruling *Buck vs. Bell* in 1927 (Black, 2003, pp. 117–22, 408–9). The Nazis modeled their social stratification and genocide campaigns partly on American campaigns against Native Americans (Whitman, 2017, pp. 33–47). Those laws were banned long after WWII, in 1967 (Black, 2003, pp. 401–2). America was legally manufacturing “eugenic enemies” before WWII. Schivelbusch calls Garraty (1973) “the pioneer of

Historical comparisons between the National Socialism and the New Deal” (Schivelbusch, 2006, p. 76)—a discourse about corporatism that Whitman (1991) adjusts.

The conditions the US, New Deal and Third Reich German governments depended on to make their welfare/relief programs work: people giving up information by law and for relief; along with skilled statistical labor and equipment, were in full operation in Germany in the early 1930s and became fully operational in the US by the late 1930s. Statistical demand-pull helped shift the epicenter of advanced data processing technology from Berlin to the US along with the world’s superpower status, from cartel Germany to the burgeoning military industrialized US; which ever since, as Schivelbusch rightly argues, endlessly engages in and prepares for war—a quest similar to Hitler’s. Germany and the US achieved full employment by the 1940s, during which Germany dismantled workers’ benefit programs to allow discrimination against some and to appropriate labors’ money for arms building, while the US began providing unemployment and Social Security benefits to US employees. Using war contracts to boost payroll enabled attaching payroll data to other data. In contrast, today, full employment and payroll records are unnecessary for real time monitoring, indicating full time use of electronic media, rather than full employment, is perhaps more instrumental to a surveillance state. It might be argued (in another paper) the efforts of the 1930’s American labor movement and the goodwill of FDR, were not what lifted Americans out of the Great Depression so much as IBM’s and the war contractors’ quest for government contracts and the US government’s quest for more and more information about its’ citizens—a quest that has continued to grow.

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References

Altmeyer, A. J. (1966). *The formative years of social security*. Madison, WI: The University of Wisconsin Press.
Aly, G. (2006). *Hitler’s beneficiaries: Plunder, racial war, and the Nazi welfare state*. New York, NY: Metropolitan Books.

Aly, G., & Roth, K. H. (2004). *The Nazi census: Identification and control in the third reich*. Philadelphia, PA.: Temple University Press.
Armstrong, B. N. (1932). *Insuring the essentials: Minimum wage plus social insurance – a living wage program*. New York: The MacMillian Company.
Austrian, G. D. (1982). *Herman Hollerith: Forgotten giant of information processing*. New York: Columbia University Press.
Bernstein, I. (1960). *The lean years*. Cambridge: Mass; The Riverside Press.
Bernstein, I. (1985). *A caring society: The new deal, the worker, and the great depression*. Boston: Houghton Mifflin Company.
Black, D. (1976). *The behavior of law*. New York, NY: Academic Press.
Black, D. S. (1995). The epistemology of pure science. *Law & Social Inquiry*, 20(3), 829–870. Retrieved May 11, 2017. doi:10.1111/j.1747-4469.1995.tb00693.x
Black, E. (2001). *IBM and the Holocaust*. New York, NY: Crown Publishers.
Black, E. (2003). *War against the weak: Eugenics and America’s campaign to create a master race*. New York: Four Walls Eight Windows.
Bradford, E. S. August, (1922). 1877-1965. *Industrial Unemployment: A Statistical Study of Its Extent and Causes: Bulletin of the United States Bureau of Labor Statistics*, No. 310, Washington, D.C: G.P.O. Retrieved August 24, 2018, from https://fraser.stlouisfed.org/scribd/?title_id=3975&filepath=/files/docs/publications/bls/bls_0310_1922.pdf.
Brown, J. C. (1940). *Public relief: 1929-1939*. New York: Henry Holt and Company.
Brown, J. D. (1969). *The Genesis of Social Security in America*. Princeton, N.J.: Industrial Relations Section Princeton University.
Bush, V. (1945) As we may think. *The Atlantic*. July 1. Retrieved August 24, 2018, from <http://www.theatlantic.com/magazine/archive/1945/07/as-we-may-think/303881>
Chiswick, C. U. (2006). Appendix 3: Origin of historical statistics of the United States. In S. B. Carter, S. S. Gartner, M. R. Haines, A. L. Olmstead, R. Sutch, & G. Wright (Eds.), *Historical statistics of the United States*.

- Millennial Edition On Line Cambridge University Press, p.p 5-819-5-824. PDF copy retrieved August 24, 2018 from <https://hsus.cambridge.org/HSUSWeb/toc/showFrontEssay.do?id=Ap.ESS.03>
- Cohen, W. J. (1983). The development of the social security act of 1935: Reflections some fifty years later. *Minnesota Law Review*, 68, 379-408. Retrieved April 3, 2017 from, HeinOnline.
- Converse, J. M. (1987). *Survey research in the United States: Roots and emergence 1890-1960*. Berkeley: University of California Press.
- Cortada, J. W. (2012). *The digital flood: The diffusion of information technology*. New York, NY: Oxford University Press.
- Douglas, P. (1936, March). The United States social security act. *The Economics Journal*, 46(181), 1-20. Retrieved August 24, 2018. doi:10.2307/2225129
- Douglas, P. H. (1939). *Social security in the United States: An analysis and appraisal of the federal social security act* (2nd ed.). New York: McGraw-Hill Book Company, Inc.
- Elliot, L. (2017, January 16). World's eight richest people have the same wealth as poorest 50%: A new report by Oxfam warns of the growing and dangerous concentration of wealth. *The Guardian*. Retrieved August 24, 2018 from, <https://www.theguardian.com/global-development/2017/jan/16/worlds-eight-richest-people-have-same-wealth-as-poorest-50>
- Evans, R. J. (1996). *Rituals of retribution: Capital punishment in Germany 1600-1987*. New York, NY: Oxford University Press.
- Evans, R. J. (2004). *The coming of the third reich*. New York, NY: The Penguin Press.
- Evans, R. J. (2005). *The third reich in power: 1933-1939*. New York, NY: The Penguin Press.
- Friedlander, H. (1995). *The origins of Nazi genocide: From euthanasia to the final solution*. Chapel Hill, NC: The University of North Carolina Press.
- Garrarty, J. (1973, October). The new deal, national socialism and the great depression. *The American Historical Review*, 78(4), 907-944. Retrieved March 29, 2017 from <https://www.jstor.org/stable/1858346>. doi:10.2307/1858346
- Haigh, T. (2010). Computing the American way: Contextualizing the early U.S. computer industry. *IEEE Annals of the History of Computing*, 32(2), 8-20. doi:10.1109/MAHC.2010.33
- Halper, J. (2015). *War against the people: Israel, the palestinians and global pacification*. London, UK: Pluto Press.
- Hansen, J. D. (2015). *Mapping the German's: Statistical science, cartography, and the visualization of the German nation, 1848-1914*. New York: Oxford University Press.
- Hayes, P. (1987). *Industry and ideology: IG Farben in the Nazi era*. New York: Cambridge University Press.
- Kistermann, F. W. (1997). Locating the victims: The non-role of punched card technology and census work. *IEEE Annals of the History of Computing*, 19(2), 31-45. doi:10.1109/85.586070
- Lichtblau, E. (2014). *The Nazis next door: How America became a safe haven for Hitler's men*. New York: Houghton Mifflin Harcourt.
- Lubove, R. (1968). *The struggle for social security 1900-1935*. Cambridge, Mass: Harvard University Press.
- Luebke, D. M., & Milton, S. (1994). Locating the victim: An overview of census-taking, tabulation technology, and persecution in Nazi Germany. *IEEE Annals of the History of Computing*, 16(3), 25-38. doi:10.1109/MAHC.1994.298418
- Lukács, G. (2000). *A defence of history and class consciousness: Tailism and the dialectic*. (Trans. E. Leslie; Intro, J Rees; Postface, S. Žižek). New York: Verso.
- Marx, K. (1976). *Capital: Volume I* Ed. Mandel, E. Trans. B. Fowkes. London, U.K.: Penguin Classics.
- Mason, T. W. (1964). Some origins of the second world war. *Past & Present*, 29, 67-87. Retrieved through University of Victoria at Wellington NZ, library September 9, 2017. doi:10.1093/past/29.1.67
- Mason, T. W. (1966). Labour in the Third Reich, 1933-1939. *Past & Present*, 33, 112-141. Retrieved through University of Victoria at Wellington NZ, library September 9, 2017. doi:10.1093/past/33.1.112
- Mason, T. W. (1993). *Social policy in the Third Reich: The working class and the "national community"*. J. Broadwin (Trans.) J. Caplin (Ed.), U. Vogel (Intro.). Providence, RI: Berg Publishers.
- Mészáros, I. (1970). *Marx's theory of alienation*. London: Merlin Press.
- Müller-Hill, B. (1998). *Murderous science: Elimination by scientific selection of jews, gypsies, and others in Germany 1933-1945*. (G. R. Fraser, Trans.). Plainview, N.Y: Cold Spring Harbor Laboratory Press.
- O'Regan, G. (2008). *A brief history of computing*. New York: Springer.
- Overy, R. (1996). *The penguin historical atlas of the third reich*. Auckland, NZ: Penguin Books.
- Oxfam (2018, January 22). World's richest 1 percent get 82 percent of the wealth. Retrieved September 10, 2018 from <https://www.oxfam.org/en/pressroom/pressreleases/2018-01-22/richest-1-percent-bagged-82-percent-wealth-created-last-year>
- Packard, N. (2015). Profiling the machine age into the perpetuum mobile. *Innovative Journal of Business and Management*, 4 5, September - October (2015), 104-113 September 10, 2018 5, September - October (2015) <http://www.innovativejournal.in/index.php/ijbm/article/view/1192/899>
- Packard, N. (2016). Has the 'Perpetuum mobile' age arrived? *National Social Science Journal*, 47(1), 65-73 Retrieved August 24, 2018 www.nssa.us/journals/pdf/NSS_Journal_47_1.pdf.
- Packard, N. (2017). No place to hide, before and after data (Driven) journalism. *International Journal of Latest Research in Humanities and Social Science*, 1, 2, 24-36. Retrieved August 24, 2018 Retrieved <http://ijlrhss.com/paper/volume-1-issue-2/3-HSS-027.pdf>
- Packard, N. (2018). Habitual Interaction Estranged. *International Journal of Social Science*, VII(1), 68-93. doi:10.20472/SS2018.7.1.005
- Paxton, R. (2005). *The anatomy of fascism*. New York: Vintage Books.
- Phillips, P. (2018). *Giants: The global power elite*. New York, NY: Seven Stories.
- Priemel, K. C. (2016). 'Scorched earth, plunder, and massive mobilization: The German occupation of Ukraine and the Soviet war economy. In J. Scherner & E. N. White (Eds.), *Paying for Hitler's war: The consequences of Nazi hegemony for Europe*. New York, NY: Cambridge University Press, 389-426. Retrieved October 12, 2017. doi:10.1017/CBO9781107279131.016
- Schivelbusch, W. (2006). *Three new deals: Reflections on Roosevelt's America, Mussolini's Italy and Hitler's Germany 1933-1939*. New York: PICADOR.
- Seltzer, W. (1998). Population statistics, the holocaust, and the nuremberg trails. *Population And Development Review*, 24(3), 511-552. doi:10.2307/2808153
- Sherwood, R. E. (1948). *Roosevelt and Hopkins: An intimate history*. New York: Harper & Brothers.
- Shirer, W. S. (1960). *The rise and fall of the Third Reich: The history of Nazi Germany*. New York, N.Y: Simon and Schuster.

- Social Security Oral History. (1974, January 23). Jack S. Futterman. Retrieved March 29, 2017 from <https://www.ssa.gov/history/jackforal.html>
- Stebenne, D. L. (2005). IBM's "New deal" Employment policies of the international business machines corporation, 1933 – 1956. *The Journal of Historical Society*, 1, 47–77. Retrieved September 10, 2018. doi:10.1111/j.1529-921X.2005.00119.x
- Tooze, J. A. (1999). Weimar's statistical economics: Ernst Wagemann, the reich's statistical office, and the institute for business-cycle research 1925-1933. *Economic History Review*, 52(3), 523–543. Retrieved through University of Victoria at Wellington NZ, library March 29, 2017. doi:10.1111/1468-0289.00135
- Tooze, J. A. 2001. *Statistics and the German state, 1900-1945: The making of modern economic knowledge*. Cambridge, U.K: Cambridge University Press. Retrieved through University of Victoria at Wellington NZ, library June 7, 2017 from <https://ebookcentral.proquest.com>.
- Tooze, J. A. (2006). *The wages of destruction: The making and breaking of the Nazi economy*. New York, NY: Viking.
- Turda, M., & Weindling, P. J. (2007). Eugenics, race and the nation in central and Southeast Europe, 1900-1940: A historiographic overview. In M. Turda & P. J. Weindling (Eds.), *Blood and homeland* (pp. 1–20). New York: Central European University Press.
- U.S. Congress, National Resources Planning Board (1942). *Security, work and relief policies 78th congress 1st session*. Washington DC: US Govt. Printing Office. Document No. 128, Part 8: 29-41 March 29, 2017 https://openlibrary.org/books/OL6462846M/Security_work_and_relief_policies
- Van Den Ende, J. (1994). The number factory: Punched-card machines at the Dutch central bureau of statistics. *IEEE Annals of the History of Computing*, 16(3), 15–24. doi:10.1109/MAHC.1994.298417
- Whitman, J. Q. (1991). Of corporatism, fascism and the first New Deal. *American Journal of Comparative Law*, 39, 747–778. Retrieved September 10, 2018 Retrieved. doi:10.2307/840740
- Whitman, J. Q. (2017). *Hitler's American model: The United States and the making of the Nazi race law*. Princeton, N.J.: Princeton University Press.



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