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## DATA, DIPLOMACY, AND LIBERALISM: AUGUST FERDINAND LUEDER'S CRITIQUE OF GERMAN DESCRIPTIVE STATISTICS

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My goal was the destruction of statistics and of those politics that were most closely linked with statistics, consequently of two sciences, held in highest esteem by almost all civilized countries, by rulers on the thrones as well as by the powerful on the steps of the thrones . . . , by the erudite class and by the millions in the general public.<sup>1</sup>

Friedrich August Lueder's stance on statistics around 1810 is rather severe. It is less clear why the professor for history and statistics should have turned against a system of knowledge production that he himself taught at Göttingen for quite some time.<sup>2</sup> Why did he reject statistics as a method of investigating the "strength" and the "happiness" of countries? German descriptive statistics is an auspicious case for any history of knowledge in transition. A short-lived discipline, it was practiced from 1750 to 1810.<sup>3</sup> It presents the odd case of statistics before data. In these early days, solid numbers were not easy to come by. Words were favored over mathematics, although units and lists, sizes and scopes were increasingly integrated into the text. The statistical descriptions of different countries, which appeared in great number, were much closer to a collection of historical facts, which could include numbers. As this article will show, descriptive statistics is a type of knowledge that could not be produced at universities alone. Scholars depended on voluntary associations, politicians, travelers, planters, the church, insurance and harbor records or on the emerging statistical bureaus of state governments.<sup>4</sup>

1 August Ferdinand Lueder, *Kritische Geschichte der Statistik* (Göttingen, 1817), v; as well as his earlier volume, August Ferdinand Lueder, *Kritik der Statistik und Politik, nebst einer Begründung*

*der politischen Philosophie* (Göttingen, 1812). Unless noted otherwise, all translations are my own.

2 August Ferdinand Lueder (1760–1819), from 1786 professor for history and

statistics at the Carolinum in Braunschweig, from 1810 professor at the University of Göttingen. In 1814 he had to resign from this position. There are hints to a scandal or plot against him, »

»but none of the countless short biographies gives any evidence that his 1812 *Kritik der Statistik und Politik* had anything to do with it. From 1817–1819 he was honorary professor at the University of Jena. See Emanuel Leser, "August Ferdinand Lueder," in *Allgemeine Deutsche Biographie* 19 (1884), 377–378 [online edition]; Friedrich Saalfeld, *Johann Stephan Pütters Versuch einer Geschichte der Universität Göttingen von 1788–1820*, vol. 3, (Hannover, 1820) 122–124; Wilhelm Roscher, *Geschichte der National-Oekonomie in Deutschland* (Munich, 1874), 619–624.

3 In most accounts Achenwall's publication of 1749 marks the beginning. Lueder prefers the date of Büsching's journal. Arguably this "end" can be described as yet another transformation. Descriptive statistics helped to establish disciplines like economics or ethnology.

4 For details on the manual craft of data collection and processing, see Christine von Oertzen, "Machineries of Data Power: Manual versus Mechanical Census Compilation in Nineteenth-Century Europe," forthcoming in *Osiris* 2017; Emmanuel Didier, "Cunning Observation: U.S. Agricultural Statistics in the Time of Laissez-Faire," *History of Political Economy* 44 (2012): 27–45; Kerstin Brückweh, *Menschen zählen. Eine Geschichte der Wissensproduktion durch britische Volkszählungen und Umfragen im 19. und 20. Jahrhundert* (Munich, 2014); Johannes Fallati, *Die Statistischen Vereine der Engländer* (Tübingen, 1840).

The history of statistics distinguishes German descriptive statistics from two more successful and better known strands: mathematized social statistics and political arithmetic.<sup>5</sup> Today's notion of mathematized social statistics did not emerge until around 1830 as a result of the work of Belgian astronomer Adolphe Quetelet.<sup>6</sup> He is usually credited with transferring the method of least squares developed in the field of astronomy by Carl Friedrich Gauß to the analysis of human populations. Probability became a tool of *physique sociale* and facilitated the normative description of mass behavior. But in Lueder's time the method of calculating errors (by applying the law of error) was not available. Another strand of statistics, pre-dating both social statistics and descriptive statistics, was political arithmetic. In the second half of the seventeenth century the English economist William Petty and others set out to describe everything they encountered in a country exclusively in quantified terms.<sup>7</sup> Compared to the statistics Lueder advocated, the political arithmeticians included less information of diplomatic or political relevance in their work. They were less concerned with popular habits and instead focused on measures and units. By contrast, Lueder and his cohort distanced themselves from what they perceived of as reductionist tendencies.

Descriptive statistics was different in that it clearly belonged to the historical disciplines. Before the emergence of historicism these were more diverse in their methodical approaches. In addition to political histories like Voltaire's, for example, there were more empirical forms of history: "Considered a collection of facts rather than a *Wissenschaft* in its own right, *historia universalis* survived in the philosophical faculty, independently or combined with other subjects."<sup>8</sup> To contemporaries, descriptive statistics belonged to the ensemble of auxiliary sciences (*Hilfswissenschaften*). In Göttingen, Johann Christoph Gatterer had laid the groundwork for sub-disciplines such as genealogy, chronology, numismatics, paleography, and heraldry. All manner of historical objects were systematized and their provenance rigorously verified to establish their historical value as sources. Around 1800, geography and statistics were understood to be part of this group of sub-disciplines, adding to the global scope of history. Investigating this particular variety of German statistics in the context of the auxiliary sciences brings an important new angle to the rich literature on the history of statistics in general, which has focused on the emergence of probabilistic mathematics, economics,

5 Alain Desrosières, *The Politics of Large Numbers. A History of Statistical Reasoning*, trans. Camille Naish (Cambridge, Mass., 1998 [1993]), 18; Vincenz John uses three German terms for the movement: "beschreibende Statistik," "ethnologische Statistik" or "deutsche Universitätsstatistik"; see Vincenz John, *Geschichte der Statistik*, vol. 1. (Stuttgart, 1884). (Reprint Wiesbaden, 1968), 91.

6 Adolphe Quetelet, *Sur l'homme et le développement de ses facultés, ou essai de physique sociale*, 2 vols., (Paris, 1835).

7 William Petty, *Political Arithmetick* (London, 1690), 7: "I have long aimed to express myself in Terms of *Number, Weight, or Measure*; to use only Arguments of Sense, and to consider only such Causes, as have visible Foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites, and Passions of particular Men, to the Consideration of others." (original emphasis) John Graunt, *Natural and Political Observations Mentioned in a Following Index, and made upon the Bills of Mortality* (London, 1662). There are German authors working in this tradition, for example pastor Johann Peter Süßmilch, *Die göttliche Ordnung in der Veränderungen des menschlichen Geschlechts, aus der Geburt, dem Tode und der Fortpflanzung desselben* (Berlin, 1741).

8 Konrad Jarausch, "The Institutionalization of History in 18th Century Germany," in *Aufklärung und Geschichte*, ed. Hans Erich Bödeker, Georg G. Iggers, Jonathan B. Knudsen, Peter H. Reill (Göttingen, 1992), 25–49, 32.

and the social and political sciences in great detail.<sup>9</sup> In the research literature Lueder himself is mentioned only in passing.<sup>10</sup> The present article will outline the movement of German descriptive statistics as an experiment in quantified history, comparing it to other types of collections of material emerging at the same time.

My perspective on the topic is informed by a history of knowledge focusing on the social and political dynamics of different ways of knowing. For this purpose I will outline the research agenda of descriptive statistics as Lueder practiced it in his early years in three sections. First, I will trace the transitions from hidden to transparent knowledge (section I), from words to quantified relations (section II), and from recourse to text to recourse to new types of sources (section III). In the article's second part, I will develop a tripartite answer to the question why Lueder eventually rejected descriptive statistics. The key issues are his complex notion of diplomatic experience (section IV), his fear of numbers as a governmental technology (section V), and his support for economic liberalism (section VI). Throughout the article the reframing of knowledge will be key to my analysis; in the concluding remarks I will reflect on the method of a history of knowledge in transition (VII).

### I. From *Arcana* to Transparency: The Reframing of Diplomatic Experience

Statistical knowledge can be seen as a reaction to ignorance about foreign countries. Diplomatic missions could be motivated by a perilous lack of familiarity.<sup>11</sup> German statisticians point quite unanimously to the diplomatic corps of sixteenth-century Venice as the beginning of their craft. Lueder especially gives the impression that statistical knowledge was a necessary consequence of Venice's extended web of trade relations in the early modern period. Each returned envoy was questioned in front of the senate.<sup>12</sup> Cosmopolitan diplomats and tradesmen thus shared the experience they had gathered abroad. One key element of this knowledge was its strict management. The accounts of these travellers were kept in a well-guarded archive. Some were not even confided to paper and channeled only to a handful of people.

The content of this intelligence concerned the powers of the foreign states in question. It contained information about the political system, the character of the ruler and those of immediate influence, the foreign relations of the country, its administration, and

9 Hans Erich Bödeker, "On the Origins of the 'Statistical Gaze': Modes of Perception, Forms of Knowledge, and Ways of Writing in the Early Social Sciences," in *Little Tools of Knowledge: Historical Essays on Academic and Bureaucratic Practices*, ed. Peter Becker and William Clark (Ann Arbor, 2001), 169–196; Lorenz Krüger et al., *The Probabilistic Revolution*, 2 vols. (Cambridge, 1987); Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, 1988); Rüdiger Campe, *Spiel der Wahrscheinlichkeit: Literatur und Berechnung zwischen Pascal und Kleist* (Göttingen, 2002).

10 Johan van der Zande, "Statistik and History in the German Enlightenment," *Journal of the History of Ideas* 71 (2010): 411–432, 423; Daniel Schmidt, *Statistik und Staatlichkeit* (Wiesbaden, 2005), 26; Keith Tribe, *Governing Economy: the Reformation of German Economic Discourse, 1750–1840* (Cambridge, 1988), 27f. Hermann Lehmann, "Zum Einfluss des 'Wealth Of Nations' auf die Ökonomen des deutschen Bürgertums," *Jahrbuch für Wirtschaftsgeschichte* 17 (1976): 109–132.

11 Markus Twellmann, ed., *Nichtwissen als Ressource*, (Baden-Baden, 2014).

12 Lueder, *Kritische Geschichte der Statistik*, 27; for the diplomatic culture of secret knowledge in the "collegio," the 22 councils of the Doge of Venice cf. Filippo de Vivo, *Information and Communication in Venice: Rethinking Early Modern Politics* (Oxford, 2007).

13 Lueder, *Kritische Geschichte der Statistik*, 31. The first publication from this archive is: Francesco Sansovino, *Del governo et amministrazione di dersi regni et republiche, coi antiche come moderne* (Venice, 1585); Jo. [Giovanni] Botero, *Relationes de praecipuis rebus publicis* (Helmstädt, 1670). First published in Italian in 1589.

14 Ital. *statista* = statesman. The term statistics is used synonymously with “science of the state” (*Staatswissenschaft*). Gottfried Achenwall, *Abriß der neuesten Staatswissenschaft der vornehmsten Europäischen Reiche und Republiken* (Göttingen, 1749), 1.

15 Paul Lazarsfeld, “Notes on the History of Quantification in Sociology — Trends, Sources and Problems,” *Isis* no. 52:2 (1961): 277–333, 292.

16 “Was die ersten Statistiker verbreiteten, war ein Stoff, gesammelt von Männern, die gebildet waern in der grosen Welt; auf einem der ersten Theater der Welt; die genau wußten, was sie wollten und nicht wollten, und die Beruf, Amt und Liebe ihrem Vaterlande leitete, spornte und bestellte.” On the other hand, he saw lesser capacities or even wrong epistemological motivations at work: “neben Sammlergeist [herrschte] der raisonnirende oder pragmatische Geist eingesperrt in Studirstuben in kleinen Städten.” Lueder, *Kritik der Statistik*, 7.

17 “das gemeinschaftliche Produkt der Kabinette und der Schule war.” Lueder, *Kritische Geschichte der Statistik*, VI.

18 Johann Stephan Pütter, *Selbstbiographie. Zur dankbaren Jubelfeier seiner 50jährigen Professorsstelle zu Göttingen*. (Göttingen, 1798), 177.

19 Niedersächsische Staats- und Universitätsbibliothek, Cod. Ms. Achenwall 203: Reichs- und Landes-Münzwesen.

everything that was noteworthy about its realm. It was only around 1580 that part of this *arcane* knowledge was published in books. While the scholar Francesco Sansovino described customs, constitution, and administration, political thinker and diplomat Giovanni Botero set the tone for the inquiry into the strengths of states: their possible time of decay and probable powers in war, which includes industry.<sup>13</sup>

This idealized picture of the diplomatic knowledge of the rich and mighty republic of Venice is established by Lueder in part to decry the descriptive statistics practiced in small university towns by political outsiders. In Lueder’s view, none of the protagonists of descriptive statistics — such as Johann Christoph Gatterer, Gottfried Achenwall, Johann Stephan Pütter, Arnold Heeren, and August Ludwig Schlözer — had the necessary political experience. Nevertheless Achenwall introduced the term “statistics” with a nod to Italian statesmen.<sup>14</sup> His teaching and research seem to have relied on the basis of good relations with those in power. This sustains Lueder’s point that statistics could not be produced at universities alone. Traveling diplomats were frequent guests in Achenwall’s university seminars. The task remaining for the students after the visit was to order the provided information according to existing taxonomies.<sup>15</sup> Yet for Lueder, the spirit of the cosmopolitan merchants of Venice was lost in this process. In his view, Göttingen’s professors and other German academics never left the narrow world of their studies and had no immediate political experience.<sup>16</sup>

Achenwall’s and Pütter’s approach substantiates Lueder’s suspicion that statistics were the joint endeavor of the political cabinet and the universities, producing only surrogates of diplomatic knowledge.<sup>17</sup> In his autobiography of 1798, Pütter prided himself that Gerlof Adolf von Münchhausen (prime minister in Hannover and curator of the University of Göttingen) had confided his private files to him. He thus had access to material from recent diplomatic missions including classified information.<sup>18</sup> While Pütter concerned himself with the inner workings of his home state, Achenwall focused on foreign relations. Some of the questionnaires, sent out by the chancellery in Hannover to give Achenwall’s request more authority, are still preserved in Göttingen. There are around a hundred reports from state officials of foreign nations on the question of currency and coinage — an important chapter in Achenwall’s “Abriss.”<sup>19</sup> They

sometimes bear comments by von Münchhausen, who seems to have read them first.<sup>20</sup>

The material practices show how political *arcana* — when translated into a published version — are not entirely independent from the workings of the government. Quite on the contrary, the whole research agenda seems to have depended on political authority. And what is more, the teaching of statistics met the acute demand for qualified administrative personnel.<sup>21</sup> Subsequently it began to be reframed as public knowledge, with enlightened protagonists who rendered the workings of states transparent. Although it came to the university through political channels, statistics was reframed as an innovative and progressive science.<sup>22</sup>

In the bureaucratic episteme developing in Göttingen, transparency came to replace the *arcana* of the Venetian envoys. The first notable transition in statistics can thus be described as a democratization of diplomatic experience. It is likely that at least one element was possibly lost in this process. While the rich observations of eyewitnesses had previously been conveyed in the form of reports, they were now relegated to a quantitative mode of representation, which resorted to numbers, fact driven paragraphs, and tables, but aimed at more than that.

## II. From Words to Quantified History

As mentioned above, the German descriptive statisticians sought to steer a middle course between words and numbers. This poses the question of how exactly quantification shaped their approach. The most notable aspect for a history of knowledge in transition is the question to what extent the dynamics of quantified history included or excluded topics. In my case, quantification led to the inclusion of colonies and remote areas under indigenous rule.

On the basis of numerous details, statistics always aimed at a comprehensive view.<sup>23</sup> Publications did not simply serialize historical events in lists but tried to get a more efficient grip on them. Best results were achieved “when the statistician arranges all his data, the particular features of a state, for the purpose of a more convenient overview, for *comparing* and *measuring* the conditions of different times and different states.”<sup>24</sup>

Descriptive statistics definitely tended towards quantitative representation. However, two examples from Lueder’s early statistical

<sup>20</sup> Wilhelm Meyer, ed., *Die Handschriften in Göttingen*. Bd. 1: *Universitätsbibliothek. Philologie, Literärgeschichte, Philosophie, Jurisprudenz* (Berlin, 1893). Staats- und Universitätsbibliothek Göttingen, Handschriften: Achenwall 67a: Notata No 29.

<sup>21</sup> William Clark, *Academic Charisma and the Origins of the Research University* (Chicago, 2006).

<sup>22</sup> Schlözer’s periodical “Staatsanzeiger” is the symbol for this new visibility, Martin Peters, *Altes Reich und Europa: der Historiker, Statistiker und Publizist August Ludwig (v.) Schlözer (1735–1809)* (Münster, 2003).

<sup>23</sup> For variants of comprehensiveness, see Michael Hagner, *Der Hochsitz des Wissens: das Allgemeine als wissenschaftlicher Wert* (Zurich, 2006).

<sup>24</sup> Lueder, *Kritik der Statistik*, 196, quoting Schlözer, emphasis added.

- 25 His main contribution to statistics is his textbook, *Einleitung in die Staatskunde nebst einer Statistik der vornehmsten europäischen Reiche. Ein Handbuch*. vol. 1 (Leipzig, 1792). He also published source editions: August Ferdinand Lueder and Johann Christian Dieterich, eds. *Materialien zur Statistik*, vol. 1 (Göttingen, 1794). Journals help to keep abreast of the latest available information: Adam Friedrich Ernst Jacobi and August Ferdinand Lueder, trans., *Holländische Staats-Anzeigen*, 6 vols. (Göttingen 1784-1786). Other translations provide insight into the constitutions and trade in the Dutch colonies, Sweden, Prussia, and Sicily: Jacques Accarias de Sérionne and August Ferdinand Lueder (trans.), *Geschichte des holländischen Handels: nach Luzacs 'Hollands Rykdom' bearbeitet* (Leipzig, 1788); Adolf Fredrick Ristel and August Ferdinand Lueder, trans., *Charactere und Anekdoten vom schwedischen Hofe* (Braunschweig, 1790); Meerman, Johan, and August Ferdinand Lueder, trans., *J. Meermanns Freyherrn von Dalem Reise durch Preussen, Oesterreich, Sicilien und einige an jene Monarchien grenzende Länder*, vol. 1. (Braunschweig, 1794); Johan Splinter Stavorinus and August Ferdinand Lueder. *J. S. Stavorinus Schiffskapitains in Diensten der holländisch-ostindischen Kompagnie Reise nach dem Vorgebürge der guten Hoffnung, Java und Bengalen in den Jahren 1768 bis 1771* (Berlin, 1796); August Ferdinand Lueder, *Über die Industrie und Kultur der Portugiesen* (Berlin, 1808).
- 26 Lueder, *Besitzungen der Holländer*, 3.
- 27 Lueder, *Besitzungen der Holländer*, 12.
- 28 François Bernard and August Ferdinand Lueder, trans., *Ueber den gegenwärtigen Zustand der Kolonie am Vorgebürge der guten Hoffnung verglichen mit ihrem ursprünglichen* (Göttingen, 1786 [1783]), 4.

works<sup>25</sup> illustrate why he considered mere measurements of physical extensions, mere numbers, insufficient. What is more, this estimation of scales and scopes focused on power relations, and therefore Lueder was necessarily driven to include remote areas to give true approximations of the forces at play.

In his statistical publications Lueder typically progressed from geography to climate, from plants to humans, from agriculture to manufacturing, from politics to the judicial system. Lueder emphasized that it was impossible to write a statistical account of the Netherlands without including its colonies, because it was impossible to assess the state's "power" and "wealth" without them.<sup>26</sup> It is in the West and East Indies that the foundations of the marvelous wealth on display in Europe were laid. Thus these regions were indispensable for a correct analysis of the Netherlands. The logic of this inclusion is a functional one, it is interested in power dynamics and has to be distinguished from the encyclopedic diligence of universal history (*Universalhistorie*).

In Lueder's account of the Netherlands, not all types of numbers were equally valued. He was incapable of giving the size of the colonies due to indeterminate borders and a general lack of available measurements. But he deemed the size of a country alone a hopelessly irrelevant factor when it came to assessing its strength.<sup>27</sup> The first example for this attempt to grasp scales, scopes, and their dynamics concerns the plantations. Lueder was never moderate when it came to condemning slavery, and he was especially unrelenting in the case of the Free Republic of the Netherlands, which made use of slaves in its colonies.<sup>28</sup> Yet when he evaluated the prospects of the Dutch colony of Suriname, the number of slaves became a neutral factor just like the size of its arable land, the technological standard of its machines, the relation of machine capacity to possible harvest, and the available capital. To assess their success, each factor had to be judged by its possible force or volume. Financial capital or debt was the one factor where Lueder showed the Netherlands to be most closely intertwined with its colonies. And although the numbers given don't instill stalwart trust in their accuracy, the sheer magnitude of the money loaned, gained, embezzled, transferred or stored leaves a vivid impression. Planters, slaves and creditors in Amsterdam were indeed interdependent. Lueder openly questioned older published numbers, but did not reveal his own source, a handwritten account of an undisclosed contemporary who had travelled in Suriname.

In the second example Lueder went beyond the Dutch colony of Suriname. He estimated the forces that could possibly overthrow colonial rule. In this case giving numbers replaced a discourse on revolution. Lueder gave the ratio of slaves to free citizens as 10:1. In older accounts this relation had even been reported to be 30:1 in Suriname — a high imbalance in power even compared to adjacent British colonies like Jamaica (5:1), Montserrat (8:1), or St. Christoph (16:1).<sup>29</sup> The threat of political instability was palpable, and Lueder came close to a statistical description of a rebel nation when he concluded:

Eloped Slaves and displaced natives are the ancestry of these enemies, and new runaways from the Dutch plantations increase their number incessantly. While no societal bond connects them all there is no visible trace of that separation which characterizes the savage. The so-called Saramaccan Negroes formed a kind of republic of their own several years ago . . . No bond encompasses them, but all are united, all become brothers, as soon as an opportunity presents itself to remind the Dutch with fire and sword of human rights and to commit to the bloody vengeance of their decaying fathers.<sup>30</sup>

In this quote the numbers are less important. Instead, the nature of social bonds and organizational cohesion was paramount. So Lueder may have resorted to numerical ratios, but he did not lose sight of the main goal: to describe something that cannot properly be derived from its outer dimensions. Power and strength were sometimes only accessible when there was information about intangible scales and scopes. The crucial point was the current state of political power. Where the political arithmeticians might have just counted or even overlooked the slaves, Lueder as a descriptive statistician tried to assess all the dynamics that could affect the Netherlands. This is one reason he even described the ungovernable areas of the Dutch colonies. It is noteworthy, though, that his quantified history appeared to be somewhat utilitarian. Although Lueder was a supporter of the French Revolution and human rights, he did not promote these values in themselves. When Lueder operated on a global scope this was for reasons connected to quantification and no longer to natural or universal history (*Naturgeschichte*, *Universalgeschichte*).

<sup>29</sup> Lueder, *Besitzungen der Holländer*, 61f., quoting Raynal.

<sup>30</sup> Lueder, *Besitzungen der Holländer*, 11. In addition to Dutch, Saramaccan was spoken in the region.

Lueder's numerous statistical publications departed from the paradigm of anthropological statistics (*ethnologische Statistik*) set by Achenwall. This could be motivated by a mode of collection common to the natural sciences and their taxonomies, a rather encyclopedic version of comprehensiveness. But there already is a decisive difference. When Lueder explained the global scope of his statistics and the inclusion of ethnology (*Erd- und Völkerkunde*),<sup>31</sup> he justified this mainly by his focus on economic potential. The people living in remote areas were not his key concern or object of study. What makes him remarkable as a statistician, compared to mere collectors of single facts, is his insistence on dynamic procedures which encompass previously unknown factors. The exact relation of slaves to masters, for example, is graspable only through its representation as quantified history.

Although Lueder was sympathetic to the plight of women, slaves, and first nations, this inclusion was not motivated by natural law. Compared to Gatterer or Achenwall, for Lueder it was no longer the frame of universal history or the taxonomy of natural sciences that demanded global comprehensiveness. Rather, it was the object of research — the powers of a country and its political and economic dynamic — that elicited this quantified representation of seemingly remote areas. The rebel slaves were assessed as a risk to the riches of the colony. And it was not words, but numbers that showed these social relations — provided that they were not used in

31 Lueder, *Kritik der Statistik*, 28.

32 This has been shown to be true for the history of more mathematical variants of statistics: "Quantification is thus a process of mutual accommodation between mathematics and subject matter to create and sustain the analogies that make applications possible." "There was still a distinction between 'legal equality' and 'mathematical equality,' while the first mode prevailed." Lorraine Daston, *Classical Probability in the Enlightenment* (Princeton, 1988), xvi, 23.

33 Simon Schaffer, "Les cérémonies de la mesure. Repenser l'histoire mondiale des sciences," in *Annales. Histoire, Sciences Sociales* 2:70 (2015): 409-435.

What is remarkable is that the quantitative focus on sizes, amounts, and forces did not simplify and reduce the object of research to a misleading clarity that could only be achieved by idealization. Lueder's approach investigated economic dynamics and global entanglement. Social historian of science Simon Schaffer goes even further. When discussing the emergence of political arithmetic and metrology he, too, is among those who see a strong connection between the "quantifying spirit" and foreign trade interests.<sup>33</sup> This is exemplified by England's foremost authority on bookkeeping, Patrick Kelly, who had accounts of the quantifying units in all British colonies sent to him for evaluation. Establishing an order of weights and measures reduced the incalculable element of foreign trade and led to new possibilities of bookkeeping. Quantified knowledge — one that captures sizes, scopes, and forces — seems to be linked to accessing populations, to making them accessible, to address and to govern them.

### III. From Written Documents to Raw Material: Auxiliary Sciences and the Production of Sources

As mentioned above, the place of statistics within mid-eighteenth century academia was in the field of history and, more specifically, among the auxiliary sciences (*Hilfswissenschaften*).<sup>34</sup> Lueder began his career as professor for history *and* statistics. As a branch of history, statistics was considered a discipline that focused on the present state of affairs. It is thus reasonable to consider statistics as the eighteenth-century equivalent of contemporary history (*Zeitgeschichte*). Dutch historian Johan van der Zande has described German descriptive statistics as a form of statistics belonging to and emerging from historical disciplines, and it is possible to go even further since the fact that it belonged to a group of subsidiary disciplines of history has not been fully recognized.<sup>35</sup> Geography and chronology mapped time and space; genealogy, heraldry and phaleristics (honors, medals, titles) organized the social fabric of hierarchies and families; numismatics and metrology laid out the infrastructures of trade, while paleography (writing), sigillography (seals), and diplomatics (documents) were concerned with the sphere of written law. Statistics is no longer remembered as belonging to this group because it was removed from the canon of the auxiliary sciences in the mid-nineteenth century. The reason was most likely the overwhelming success of statistics, which became a science in its own right, as did the former auxiliary science of geography. This understudied context can explain two innovative achievements inherent to statistics.

The first achievement is the visual strategy of representation by means of graphs.<sup>36</sup> Chronological tables, genealogical trees, heraldic compendia, numerical equations in numismatics and metrology: it is remarkable to what extent these sciences replaced narrative with innovative visual forms of representation that captured society from a new angle and dispensed with narration.<sup>37</sup> The proximity to material culture itself may have triggered the striking inclusion of graphic elements within texts. Statistics chose to include data into a dynamic

» geography, numismatics and the like. Later the term of auxiliary, subsidiary, or aiding sciences refers more closely to history. This group of disciplines shifted from a supporting status to being considered expert knowledge about editorial matters that prepared the sources for the use by others.

34 Other noted influences are the tradition of universal history or *Universalgeschichte* and *Staatskunde* or *Reichsgeschichte*, which constitute a juridical setting.

35 Johan van der Zande, "Statistik and History in the German Enlightenment," *Journal of the History of Ideas* 71 (2010): 411-432. Originally the auxiliary sciences were

a remnant of the philosophical faculty, which "helped" to prepare the students for later studies by teaching the frames of reference in chronology, »

36 Georg Iggers, "L'Université de Göttingen, 1760-1800. La transformation des études historiques," *Francia* 9 (1981): 602-620, 611.

37 Frank Rexroth, "Woher kommen die Historischen Hilfswissenschaften? Zwei Lesarten," in: *Vielfalt und Aktualität des Mittelalters. Festschrift für Wolfgang Petke*, ed. Sabine Arend, Daniel Berger, Carola Brückner (Bielefeld, 2006), 541-557; Anthony Grafton, *What Was History? The Art of History in Early Modern Europe* (Cambridge, 2007); Arnaldo Momigliano, "Ancient History and the Antiquarian," *Journal of the Warburg and Courtauld Institutes* 13 (1950): 285-315.

form of quantified history, while history previously consisted in collecting unrelated empirical facts.

The second achievement was that the new method of source identification and source criticism applied not only to written documents, but to artefacts as well. Systematically introduced by Johann Christian Gatterer,<sup>38</sup> the auxiliary sciences provided precise scientific standards for the whole discipline of history. They almost took on the form of a natural history of events and states. Statistics can thus be framed as one of the archival sciences,<sup>39</sup> which do not only preserve, but reach out to new materials in the tradition of empiricism. Their strength does not lie in the interpretation or contextualization of facts, but in establishing, finding, and evaluating facts. Most importantly, the archival sciences developed new areas of evidence: epigraphy, for example, verified all Greek and Latin inscriptions on monuments, gravestones, and tools. It is widely held that the auxiliary sciences laid the foundations for the narrative masterpieces of early-nineteenth-century, national historicist historiography and their unparalleled proficiency in source criticism.<sup>40</sup>

Lueder was part of this scientific paradigm of new modes of documentation and verification. Like an antiquarian collector, he wrote in lists of quotations or he translated in ways that seem almost parasitic.<sup>41</sup> His polyphonic documentation betrayed his dedication to material, objects, sources, and their precise scrutiny. While statistics can be seen as the most successful and experimental of the auxiliary sciences in capturing new empirical evidence through its methods of data collection, it may also be seen as a knowledge practice that builds important frames. This is Martin Gierl's observation, who wrote the most concise monograph on the development of the auxiliary sciences at Göttingen. The subdisciplines, while never forming narratives, nevertheless were very important in setting the frame for history.<sup>42</sup>

#### IV. Against Academic Statistics: The Absence of Diplomatic Experience

Taking into account this context of formal innovation, it is time to turn to Lueder's critiques, which he laid out in two monographs (1812 and 1817). The first part of the answer why Lueder rejected descriptive statistics, his former field of expertise, lies with his disappointment that statistics never lived up to its promise. Lueder believed in the potential of this auxiliary science, but he shunned its practical results. These were impeded by a problematic constellation of static empiricism and the dynamic and complex phenomenon they tried to

38 Johann Christoph Gatterer, *Ideal einer allgemeinen Weltstatistik: in der öffentlichen Versammlung des Königl. histor. Instituts den 2. Oct. 1773 vorgelesen* (Göttingen, 1773).

39 Lorraine Daston and Glen Most, "History of Science and History of Philologies," *Isis* 106 (2015): 378-390.

40 Hanns-Peter Reill, *The German Enlightenment and the Rise of Historicism*, (Berkeley, 1975); Franz X. Wegele, *Geschichte der Deutschen Historiographie seit dem Auftreten des Humanismus*, (Munich, 1885).

41 "Meine Uebersetzung ist theils Auszug, theils wörtliche Uebersetzung, Auszug da, wo ich auf zu weitläufige und lange Raisonnements stieß; wörtliche Uebersetzung da wo der Hr. Verfasser Fakta erzählte." Bernard François and August Ferdinand Lueder, trans., *Ueber den gegenwärtigen Zustand der Kolonie am Vorgebürge der guten Hoffnung verglichen mit ihrem ursprünglichen* (Göttingen, 1786 [1783]), preface, unpaginated.

42 "Das Theater der Universalhistorie realisiert sich nicht zuletzt als hilfswissenschaftliches Kabinett, dem Chronologie und Geographie äußere Umrisse, Heraldik, Numismatik und Diplomatik innere Festigkeit verleihen. Gatterer hat dem Bauplan des großen Kubus der Geschichte mit einer Handvoll Grundprämissen Regeln gegeben." Martin Gierl, *Geschichte als präzisierte Wissenschaft. Johann Christoph Gatterer und die Historiographie des 18. Jahrhunderts im ganzen Umfang* (Stuttgart-Bad Cannstatt, 2012), 82.

capture. Because the declared aim of the numerous monographs on statistics published at the time was to assess the powers and forces of a state (*Grundkräfte* or *Staatskräfte*),<sup>43</sup> the majority of authors gave an overview of a country's riches, political power, and judicial structure.<sup>44</sup> Others emphasized fertility of the land, or the amount of skilled labor or money in circulation.<sup>45</sup> In its focus descriptive statistics differed markedly from the later development of the sociological outlook on society, which centered on a normative, crime-related, and mathematized view.<sup>46</sup>

It should be mentioned that criticism of statistical methods was at an all-time high in the first decades of the nineteenth century. A dispute among statisticians (*Statistikerstreit*) about the appropriate mode of representation of one's findings saw several groups falling out in the years after 1806.<sup>47</sup> Lueder distinguished those who presented their results in words (the non-pragmatic continental strand of descriptive statistics) from those who used numbers (mainly Anglophone political arithmetic) and those who used a combination of both.<sup>48</sup> The latter group produced elaborate and widely sold graphic diagrams. William Playfair, Florence Nightingale, and John Snow in London as well as August Friedrich Wilhelm Crome in Gießen were among the protagonists of this thematic cartography, which was common to many forms of conducting statistics, but shunned by descriptive statisticians.

It remains to be investigated why Lueder eventually turned against all kinds of statistics. Of course, the "philosophical" or "real" statisticians, as the descriptive statisticians liked to call themselves, were under pressure to defend their approach. Their synthesis of all the noteworthy aspects of a state (*Staatsgemälde* or *Staatsmerkwürdigkeiten*)<sup>49</sup> was conveyed mainly in words, but with a firm command of the numerical data. In this method, the synoptic view or "statistical gaze"<sup>50</sup> assumed that intangible forces could only be understood by going through a process of quantification, which, however, would go beyond mere lists of numbers. The continental adherents of descriptive statistics acted as if the opposing tradition of political arithmetic was already defeated. Lueder's colleague Arnold Heeren saw this mutilated kind of history as nothing more than a carcass or a skeleton. The descriptive statistician Ernst Brandes famously coined the term "chart servants" (*Tabellenknechte*) to denigrate political arithmetic and thematic cartography alike.<sup>51</sup> For Lueder it was not only the wrong kind of statistics, he considered all these endeavors to be futile, heartless, and based on fictitious evidence.

43 Lueder, *Kritische Geschichte der Statistik*, 99f.

44 "Sie giebt die Kräfte der Staaten und das Glück der Völker an: sie schildert den gegenwärtigen, den neuesten Zustand derselben". Lueder, *Kritische Geschichte der Statistik*, 22, quoting Achenwall.

45 Lueder, *Kritische Geschichte der Statistik*, 102f., 142f.

46 Bernhard Kleeberg, "Bad Habits and the Origins of Sociology," in *Rethinking Order: Idioms of Stability and De-Stabilization*, ed. Nicole Falkenhayner, et al. (Bielefeld, 2015), 47–62.

47 Vincenz John, *Geschichte der Statistik*, vol. 1 (Stuttgart, 1884).

48 "Gemälde in Form der Tabellen . . . aber zugleich gleichsam durchcolorient mit einigem Raisonnement; ein Mittelding zwischen dem Gemälde in Worten und dem Gemälde in Zahlen." Lueder, *Kritische Geschichte der Statistik*, 201.

49 Lueder, *Kritik der Statistik*, 196; quoting Schlözer.

50 Hans Erich Bödeker, "On the Origins of the 'Statistical Gaze': Modes of Perception, Forms of Knowledge, and Ways of Writing in the Early Social Sciences," in *Little Tools of Knowledge*, 169–196.

51 Lueder, *Kritische Geschichte der Statistik*, 222f.

What Lueder described as a heyday for statistical knowledge actually fell into a period of very scant availability of data. To be sure, national statistical bureaus began to be established, statistical societies were founded, insurance data gathered, cadastral maps rounded out, and colonial surveys conducted at great expense. Nevertheless, political arithmetic and descriptive statistics alike flourished well before any exactitude of prognosis was at hand. Despite this problem, new publications on statistics found readers and publishers. Statistical calendars became items of mass circulation that had a very practical function of orientation within the available public institutions and gave an index of everything existing in the country.<sup>52</sup> Statistics evolved into a subject taught in schools, and Schlözer sent out model requests to lay people to involve them in data collection.<sup>53</sup> The ideal of an empirical anchoring of political topics through quantification proved rhetorically convincing and capable of attracting all the credits of a rational practice before it was even feasible and had a scientific core.

But it was not just fictitious empiricism that Lueder took issue with. Not only did he find fault with the lack of data, but he rejected statistical approaches as such, regardless of whether they relied on numbers or graphs or even words. In his view, the number of inhabitants in a given country did not convey the strength of that country. This could only be achieved through in-depth knowledge and acquired skill. While quantification gravitates towards the visible, tangible, and measurable, Lueder judged the information to be gained from physical things to be futile.<sup>54</sup> His answer was not yet to suggest inference of intangible relations from material indicators, as sociologist Paul Lazarsfeld observes.<sup>55</sup> He maintained that true understanding depends on local, first-hand experience. Every fact had to be investigated in its natural environment (*Heimat*), as Alexander von Humboldt put it.<sup>56</sup> Something in the tangled web of political and economic power relations constituting the potential of each nation does not yield to the formats statisticians favored:

To become acquainted with events, customs, passions, and actions one has not experienced for oneself merely from the accounts of others: this is only possible to a certain extent. There are too many media between the observer and the object so that the nature of the latter is often distorted by it.<sup>57</sup>

52 Volker Bauer, *Repertorium territorialer Amtskalender und Amtshandbücher im Alten Reich. Adreß-, Hof-, Staatskalender und Staatshandbücher des 18. Jahrhunderts*, 3 vols. (Frankfurt a.M., 1997–2002). (= Ius Commune Sonderhefte 103, 123, and 147).

53 Lueder, *Kritische Geschichte der Statistik*, 367.

54 The German term *Größe* denotes large size as well as high esteem (greatness).

55 Lazarsfeld, *Notes on the History of Quantification*, 305.

56 “Denn darauf gerade kömmt es an, jede Sache in ihrer Heimath zu erblicken; jeden Gegenstand in Verbindung mit andern, die ihm zugleich halten und beschränken.” Lueder, *Kritische Geschichte der Statistik*, 559, quoting Alexander von Humboldt.

57 Lueder, *Kritische Geschichte der Statistik*, 558, quoting Garve, my emphasis.

Lueder's history of statistics thus ends where it set out: in Venice with reports from experienced practitioners. The ideal of statistics is thus portrayed as a type of knowledge that belongs to the political sphere, so that scholars without access to it are left high and dry. This kind of knowledge emanated from the political cabinets of those in power and those who had traveled the world. Schlözer famously emphasized experience, the reading of traces, and complex judgments. He wanted to carefully meet each piece of quantitative evidence with the expertise of an experienced physician. He virtually wanted to feel the "pulse" of data.<sup>58</sup> But Lueder remained unconvinced. To him the necessary kind of knowledge remained the privilege of politicians and experienced travelers. The idea of political counseling is thus reverse-engineered: academic advice appears lackluster against the proficiency of those in power. Lueder propagated a statistics of the cabinet, not of the university.<sup>59</sup> Yet what he observed at the time was precisely the opposite: the reign of a wrong kind of academic knowledge presumed to be applicable as political counsel.

### V. Against the Charade of Numbers: Statistics as a Powerful Tool of Government

The second part of the answer why Lueder turned against descriptive statistics lies in its deep effects on society and government — despite being based on thin air. This critique resonates with later findings on the rhetoric of statistics. Anthropologist Arjun Appadurai has pointed to the function of numbers in an imaginary rule of India, for example.<sup>60</sup> While governing the unknown, the presumptively mirrored conditions on the ground could be decided upon regardless of whether they were rooted in empirical reality or not.

Lueder foresaw these powers of statistics, but perceived no advantage in them. In his view, the inexperienced politician became easy prey for aspiring academic statisticians. He considered the modern utopia of political measurements, the transparent numbers, an erroneous charade and inherently wrong. The very format the complex information took seemed to be tailored for a particular situation of political counsel: "Statistical tables will show the minister the scope of that which he has to know before he dare decide upon some matter or before he ventures to give his counsel."<sup>61</sup>

Statistics became a tool for influencing decisions. Combining word, image, and number with pragmatic rulings and decision making, statistics strongly resembled the format of scenarios that was employed

58 Schlözer famously compared statistics to the experience of a physician when he spoke of feeling the "pulse" of his sources: "Der Statistiker hebt alle die Data aus, welche einen augenscheinlichen oder versteckten, größern oder mindern Einfluß auf das Wohl des Staats haben. Man fühlt den vorgefundnen Angaben so zu sagen auf den Puls. Hat eine derselben einen Einfluß auf das Wohl des Staats, so sondert man sie für die Statistik aus. Dies aber zu fühlen, setzt einen eigenen Takt, einen geübten Blick voraus, den nur eine Menge anderer gelehrten Kenntnisse erzeugen können." Lueder, *Kritik der Statistik*, 32.

59 Lueder, *Kritische Geschichte der Statistik*, 564, Kabinetts- und Kathederstatistik.

60 "[I]llusion of bureaucratic control and a key to a colonial *imaginaire*." Arjun Appadurai, "Number in the Colonial Imagination," in *Orientalism and the Postcolonial Predicament: Perspectives on South Asia*, ed. Carol A. Breckenridge and Peter van der Veer (Philadelphia, 1993), 320-321, 317.

61 Lueder, *Kritische Geschichte der Statistik*, 305, quoting Heining.

in the twentieth century.<sup>62</sup> It became mandatory to look at numbers before a political decision could be made, regardless of possible deflections by measured “evidence.” But as historian of quantification Theodore Porter has pointed out, one may be weary of the tradeoff between numerical measurement and personal decisions.<sup>63</sup> Automated rule-making was enhanced by this information regime.

Lueder saw multiple disadvantages emerging from this type of knowledge. The new information made available inspired Prussia and Russia to colonize new territory, and the example of Kamchatka is given. The planned settlement experiment ended in disaster, because statistics did not foresee the majority of the obstacles encountered.<sup>64</sup> Lueder maintained, just as political scientist James Scott does today, that the attempt of a state to *see* is doomed to failure.<sup>65</sup> In his view, statistics serves “ministers of injustice,” those fraudulent political scientists who use corrupt data to satiate their greed.<sup>66</sup> Statistics lured the rulers to seize opportunities that seem to pose no risk on paper. The numbers encouraged large-scale projects.<sup>67</sup> Statistical works were particularly important when war was likely to be waged. They served to spot the enemies’ weaknesses, to spur competition, and compare economic power. And worst of all: they enhanced governance. In political practice, Gatterer’s synoptic universalism may thus turn into a panoptic mechanism of control.<sup>68</sup>

Historian Regina Danuser argues that the public began to expect the use of statistics from their rulers. A good regent had to appear knowledgeable, and this was best achieved by acquiring proficiency in using data.<sup>69</sup> Rather than being depictions of the realm, statistics became images constructed for the realm. The ruler could give the impression of someone striving for just distribution of resources and fixing weaknesses where fixing was due. It has to be stressed that the public view was much more benevolent than Lueder’s. Schlözer heralded statistics as a praise for every ruler. Numbers measured successful government — an opinion that was negatively confirmed by an instance in which a city chose not to publish the latest statistics and thus hide its lack of progress.

Yet Lueder’s sensibility was directed against autocratic measures and state intervention. Statistical information became a power in itself since it augmented the possibility of governance and control. Quantification itself has to be understood as a trace of presumed political activity and access. The counting of every dog in the realm suddenly makes sense when one plans a tax on dogs.<sup>70</sup> But Lueder

62 Andreas Wolfsteiner, *Sichtbarkeitsmaschinen. Zum Umgang mit Szenarien* (Berlin, forthcoming 2017).

63 Theodore Porter, *Trust in Numbers. The Pursuit of Objectivity in Science and Public Life* (Princeton, 1995) xi.

64 Lueder, *Kritische Geschichte der Statistik*, 387.

65 James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven, 1998).

66 “Diese unächten Staatswirthschafter, diese Minister der Ungerechtigkeit, diese Geißel der Menschheit, grausamer als Krieg, Pest und Hunger gebären die abscheulichsten Entwürfe, welche nur abzwecken, ihre Habsucht zu befriedigen, die Lasten der Unterthanen zu vermehren, und ihnen das wenige Vermögen zu rauben, welches eine anhaltende Arbeit, unterstützt von der Stärke ihrer Gesundheit und von ihrem Fleiße, ihnen verschafft hat.” Lueder, *Kritische Geschichte der Statistik*, 306, quoting Heinig.

67 Lueder, *Kritische Geschichte der Statistik*, 20.

68 Many authors evoke Foucault, but it seems worth investigating whether Bentham’s unrealized plan for the perfect observatory and prison was in fact a monumentalization of statistics as much as a disciplinary institution.

69 Regina Dauser, “Das Wissen der Herrschaft,” in *Geschichte(n) des Wissens. Festschrift für Wolfgang E. J. Weber zum 65. Geburtstag*, ed. Mark Häberlein, Stefan Paulus, and Gregor Weber (Augsburg, 2015) 621–633, 631.

70 Lueder, *Kritik der Statistik*, 32.

saw a risk in the assemblage of public trust, rationalistic charter for interference, precariously thin data, cultures of collecting, and statistically self-evident operation plans. Citizens became addressable. Although quantified knowledge of society was perceived as neutral abstraction, it paved the way for new types of contact. The risk existed because statistics provided access for the authorities to resources and people.

Moreover, Markus Twellmann points out that much of the criticism voiced by the descriptive statisticians against the numerical statisticians can be traced to a strong anti-French sentiment. German romanticism formulated its pronounced stand against quantification in the wake of the Napoleonic conquest. Lueder's frequent mentions of Napoleon fully sustain this theory. The critique of statistics in the early nineteenth century was an implicit criticism of French rule and the model state of Westphalia in particular.<sup>71</sup> Especially Lueder's first critique often names Napoleon and his surveys as the true face of the lingering threat which Lueder considered data collection to be. While Lueder's critique of quantification as a powerful tool of governance originated in reaction to an existing political enemy, there is no denying that it anticipated today's analysis of the global GDP numbers or big-data algorithms.<sup>72</sup>

## VI. Liberalism as Limited Responsibility

Statisticians generally consider the sudden vanishing of political entities from the map as an argument against statistics.<sup>73</sup> The total collapse of the European political system in 1806 proved previous statistical predictions wrong, especially those on the military strengths of Prussia, which had lost the war. Johan van der Zande has noted that the system of descriptive statistics virtually disappeared at the beginning of the nineteenth century and has attributed its demise to its "uneasy relationship to historiography."<sup>74</sup> While this is undeniable, it is also worth investigating the impact of Adam Smith's economic liberalism, which was certainly the decisive force behind Lueder's turn against statistics. Lueder is considered one of the protagonists who introduced Smith's theory to the German-speaking countries, having published three volumes of a revised translation of Smith's works after his statistical descriptions and prior to his critiques. Among those early economists, Lueder is considered a maverick for his conflation of the emancipation brought about by the French Revolution with market liberalism. Lueder simplified the subject and illustrated Smith's ideas with examples from

71 Markus Twellmann, "Ja die Tabellen! Zur Herkunft der politischen Romantik im Gefolge numerisch informierter Bürokratie," in *Berechnen, Beschreiben: Praktiken statistischen (Nicht-)Wissens 1750-1850*, ed. Gunhild Berg, Borbála Zsuzsanna Török, and Marcus Twellmann (Berlin, 2014), 141-170.

72 Burkardt Wolf, "Big Data, Small Freedom? Informational Surveillance and the Political," *Radical Philosophy* 191 (2015): 13-20; Daniel Speich Chassé, "The Use of Global Abstractions. National Income Accounting in the Period of Imperial Decline," *Journal of Global History* 6 (2011): 7-28.

73 New territorial and political structures could at the same time be said to trigger a need for statistics: Johann Nepomuk Zizius, *Theoretische Vorbereitung und Einleitung zur Statistik* (Vienna, 1810), iv.

74 Zande, *Statistik and History*, 412.

colonial contexts.<sup>75</sup> He must, some very pointed theses notwithstanding, be considered as one of the proponents of the economic liberalism that introduced the beneficial effects of markets as driving forces of society as well as a pronounced idea of a *laissez-faire* state.

In keeping with this interest, Lueder narrowed statistics down to an early form of economics. In Germany economics emerged with a strong historical outlook, a focus on providing food for the people and the transformation from cameralism into the German Historical School of Economics.<sup>76</sup> It was Gustav Schmoller who heralded the Göttingen School — almost tantamount to proponents of descriptive statistics — as a forerunner of economics (*Volkswirtschaftslehre*).<sup>77</sup> Lueder's posthumous volume clearly paved the way for political economy: "National-Oekonomie, oder, Volkswirtschaftslehre."<sup>78</sup>

In light of this economic background Lueder's sudden reluctance against statistical measures reveals a new edge: "Had the statistical tables not had the imperfections that they did; had they contained only truths; they still would have had to advise measures and directives which impede and disintegrate."<sup>79</sup> Lueder's attacks against statistics were invectives against bureaucracy. He was resolved to abolish interference by the state. His arguments used economic liberalism as a decisive new frame of reference. According to him, academics and politicians were immersed in their duty to regulate each and every detail of life, while in fact achieving nothing. Meanwhile the real dynamics had developed elsewhere for centuries:

The new politicians do not pay attention to the fact or they do not appreciate that throughout past times, for millennia, and in all parts of the earth it was never the sphere of the politicians and the powerful, but the sphere of the people in which wealth, culture, and humanity emerged, grew, and matured.<sup>80</sup>

The top-down view of governance, facilitated by quantification, conceived of the people as "dead mass."<sup>81</sup> Yet Lueder remained adamant that improvements of society were never built like architecture:

79 Lueder, *Kritische Geschichte der Statistik*, 402.

80 Lueder, *Kritische Geschichte der Statistik*, 53.

81 "Das Volk erschien in der neuern Politik als eine tote Masse, die selbst sich nicht bilden kann; die von andern

gebildet werden muß, soll sie nicht ewig ungebildet bleiben". Lueder, *Kritische Geschichte der Statistik*, 52.

75 August Ferdinand Lueder, *Über Nationalindustrie und Staatswirthschaft. Nach Adam Smith bearbeitet*, vol. I-III, (Berlin, 1800, 1802, 1804); Hiroshi Mizuta, ed., *Adam Smith: Early German Responses*, 4 vols. (Bristol, 1998) [Reprint of works by Georg Sartorius and August Ferdinand Lueder, *Ueber Nationalindustrie und Staatswirthschaft. Nach Adam Smith bearbeitet*, 3 vols. (Berlin, 1800, 1802, 1804). With an introduction by Hiroshi Mizuta]; See Volker Hentschel, "Die Staatswissenschaften an den deutschen Universitäten im 18. und frühen 19. Jahrhundert," *Berichte zur Wissenschaftsgeschichte* 1, nos. 3/4 (1978): 181-200; Michael Behnen, "Statistik, Politik und Staatengeschichte von Spittler bis Heeren," in *Geschichtswissenschaft in Göttingen. Eine Vorlesungsreihe*, ed. Hartmut Boockmann and Hermann Wellenreuther (Göttingen, 1987), 67-101.

76 Tribe, *Governing Economy*; Lehmann, "Zum Einfluss des 'Wealth Of Nations' auf die Ökonomen des deutschen Bürgertums"; J. Adam Tooze, *Statistics and the German State, 1900-1945: The Making of Modern Economic Knowledge* (Cambridge, 2001); Mohammed Rasseem and Justin Stagl, eds., *Statistik und Staatsbeschreibung in der Neuzeit vornehmlich im 16.-18. Jahrhundert* (Paderborn, 1980); Mary Poovey, "Figures of Arithmetic, Figures of Speech. The Discourse of Statistics in the 1830s," *Critical Inquiry* 19, no. 2 (1993): 256-276.

77 Gustav Schmoller, *Grundriß der allgemeinen Volkswirtschaftslehre*, vol. 1 (Leipzig, 1900), 129.

78 August Ferdinand Lueder, *National-Oekonomie, oder, Volkswirtschaftslehre: ein Handbuch zur Beförderung des Selbststudiums dieser Wissenschaft* (Jena, 1820).

according to a plan.<sup>82</sup> Change occurred throughout generations and was never predictable. He went as far as to deny the feasibility of emancipation and negated all chance of a better society by the massive role he assigned to the chaotic force of chance. In his view, humankind had reached goals that no one had ever formulated. Designs for a better life turned against their authors and ended in catastrophe, whereas dire and unpopular events proved in hindsight to be beneficial.

It is obvious that the comprehensive view of statistics was lost and Lueder drops out of the universal frame provided by the scientifically minded Gatterer. As Gierl describes correctly, the auxiliary sciences established the chronological and geographical order and structure in which history took place. They defined the backbone of history and cast it as a global project. While Lueder did include remote facts in his statistical description of the Netherlands, it is evident in his variant of quantified history that the scope of universal history was not his. In his later writings it becomes even more apparent that he sided with “the people,” and upon closer examination, with a very select group of powerful individuals. In a shift in values so typical for the discourse of economics, sacrifice turned into necessary loss. Hardships for the people were the unavoidable condition of development. *Laissez-faire* was preferable to planning. Lueder even invoked the “invisible hand” to describe how society was moved by ungovernable yet strong cross-currents that could never be tamed by mere data tables.<sup>83</sup>

Liberalism was a double-edged sword. On the one hand, Lueder cut the ties to paternalistic and repressive rulers. He questioned control and asked why the police was usually forgotten in the discussion of statistics, implying that both enhanced law and order. He demanded some leeway for Prussian bureaucrats to decide about individual cases as well as protection against their chicanery for Prussian citizens.<sup>84</sup> On the other hand, Lueder ridiculed agrarian statistics (*Nahrungslisten*), an important part of nineteenth-century economic order that took nutrition and provision into account.<sup>85</sup> Welfare for him figured as one of the overreaches of government and should instead confine itself to security issues.

Descriptive statistics, which had only recently undergone the difficult transition from political *arcana* to transparent portraits of the state, experienced yet another reframing. It no longer included all people, but defended the territory and possession of the wealthy. In Lueder’s

82 Lueder, *Kritische Geschichte der Statistik*, 53.

83 “Man sah nicht, wie die am kräftigsten Würkenden, mit und ohne Diadem, die Edelsten wie die Verworfensten nur Werkzeuge waren in der unsichtbaren Hand, die sie gebauchte, . . .” Lueder, *Kritische Geschichte der Statistik*, 55.

84 Lueder, *Kritische Geschichte der Statistik*, 276; 282; 283.

85 Lueder, *Kritische Geschichte der Statistik*, 382.

harsh rejection, statistics posed a risk in itself because it was tantamount to constricting lives by politics. One may deplore his inability to see the effects of social association. But from his liberal point of view he nevertheless portrayed the potential of quantified knowledge correctly. It augments the opportunities to regulate and is a powerful tool. This is why he condemned statistics as:

an abhorrent venture, because it led to the ruling of everyone and everything, to an incessant governing at all ends and in all places and in all nooks and crannies: to the kind of reign in which all free development ceases, in which the freedom of all and all freedom are thoroughly eliminated; which would have to transform, if at all feasible, man into beasts, into machines: an insane and abhorrent venture . . .<sup>86</sup>

## VII. Concluding Remarks: A History of Knowledge in Transition

From today's perspective, it looks as if neoliberalism heavily relies on data collection, and it is even diagnosed as becoming increasingly bureaucratic.<sup>87</sup> Back in Lueder's time, there was a constitutive rift between market liberalism and the use of quantified data as tools of governance. Indeed, his account of statistics marks one extreme when he describes statistics entirely as a creature and tool of the state. This cooperation amounts to an epistemology of bureaucracy rather than of science. At the same time political counsel is reverse-engineered, since it is not the politicians, but the academics who receive information from the outside. The history of statistics has also substantiated the opposite extreme, namely, that statistics, bureaucratization, and augmented regulation can be read as successful adaptations of economic practices and not of politics: good business conduct, double bookkeeping, accounting, and logistical planning.<sup>88</sup> Yet while a more balanced genealogy of statistics from political as well as economic influences might be advisable, Lueder's description is revealing for a history of knowledge in transition.<sup>89</sup>

Lueder provocatively portrayed it as a type of knowledge that originated in political practice and could never be satisfactorily produced in a secluded academic study. Furthermore, he shed light on the practical side of how to retrieve new information or how to establish new sources for history. Those who collect and those who process knowledge, Lueder argued, are different groups of people, thus including lay people or politicians within the fabric of science. It was this constellation of local and erudite knowledge that Foucault

86 Lueder, *Kritik der Statistik*, x.

87 David Graeber, *The Utopia of Rules: On Technology, Stupidity, and the Secret Joys of Bureaucracy* (Brooklyn, 2015).

88 Porter, *Trust in Numbers*, 50.

89 James A. Secord, "Knowledge in Transit," *Isis* 95 (2004): 654-672; Henning Schmidgen, "Fehlformen des Wissens," in Georges Canguilhem, *Die Herausbildung des Reflexbegriffs im 17. und 18. Jahrhundert*, trans. Henning Schmidgen (Munich, 2008), vii-iviii.

pointed to in his description of the unsettling variant of history he called genealogy.<sup>90</sup> Lueder can be credited with a keen observance of the relation of statistical knowledge to all kinds of power. To better analyze the ways in which knowledge may exert its subversive or oppressive force, Foucault introduced the concept of *savoirs assujettis* (subjugated forms of knowledge), which can be recovered by assiduously deciphering expertise that is present but masked inside historical constellations. The concept of subjugated forms of knowledge refers to aggregates that are not sufficiently formalized, that are disqualified, subconscious or local. The reason why Foucault pursued the heterodox *savoir des gens* is that it took shape in rejection of more hegemonic ways of knowing. And while Lueder's abandonment of statistics does not make him a proponent of a minority view, he recognized the unattainable proficiency of diplomatic experience, and its untranslatability into mere scientific prose. The tactics employed by those who were counted and governed by this new technique of quantified history do not come into view, although the power of statistics to govern people's behavior is seen as a constant threat in Lueder's writing. This appears to be close to what might be obtained by a genealogical analysis of statistics, when the forms of subjugated knowledge are analyzed as traces of a conflict in the past that produced two sides. Foucault wanted to start with the disciplined body itself as an archive of struggles. He read it as an ensemble of self-relations, desires, and fears that bear the stigmata of historical developments.<sup>91</sup>

The short-lived configuration of descriptive statistics provides insight into an analysis of knowledge as it crosses symbolic boundaries and thresholds. Central to its analysis is the problem of representation and transcription into signs. Cultural techniques are a methodological concept designed to wean scholars off their preference of the knowledge of sciences and the elites. Instead, this mode of investigation deals with the symbolic labor necessary to transcribe any practice into image, word or number.<sup>92</sup> Parallel to this, the transformation from one social setting to the next should become paramount to retrieve the effects and struggles of minor and hegemonic perspectives. For the history of knowledge in transition, the formations and revocations of knowledge provide a useful starting point for analysis. This second type of translation could be addressed not as symbolic labor, but as labor of affiliation. Not only the everyday procedure of transcribing the world into signs is key, as in cultural techniques of writing, measuring or counting. We need to investigate the question

90 Michel Foucault, "Vorlesung vom 7. Januar 1976," in idem, *In Verteidigung der Gesellschaft: Vorlesungen am Collège de France (1975-1976)*, trans. Michaela Ott (Frankfurt a.M., 1999), 7-30, 15f. First published in French as *Il faut défendre la société* (Paris, 1996); Martin Saar, "Genealogische Kritik?" in *Was ist Kritik?*, ed. Rahel Jaeggi and Tilo Wesche (Frankfurt a. M., 2009), 247-266.

91 Michel Foucault, "Nietzsche, die Genealogie, die Historie," in *Schriften in vier Bänden. Dits et Ecrits*, ed. Daniel Defert and François Ewald, vol. 2, (Frankfurt a. M., 2005 [1971]), 166-191, 174, 180.

92 Christian Kassung and Thomas Macho, "Einleitung," in *Kulturtechniken der Synchronisation*, (Munich, 2013), 9-21; Erhard Schüttpelz, "Die medienanthropologische Kehre der Kulturtechnik," *Archiv für Mediengeschichte* 6 (2006): 87-110.

93 Ludwik Fleck, *Die Entstehung und Entwicklung einer wissenschaftlichen Tatsache* (Frankfurt a. M., 1980); Yehuda Elkana, *Anthropologie der Erkenntnis. Die Entwicklung des Wissens als episches Theater einer listigen Vernunft*, trans. Ruth Achlam (Frankfurt a. M., 1986 [1981]), 11–21; Ian Hacking, “‘Style’ for Historians and Philosophers,” in idem, *Historical Ontology* (Cambridge, Mass., 2002), 178–199; Arnold Davidson, “Styles of Reasoning. From the History of Art to the Epistemology of Science,” in *The Emergence of Sexuality. Historical Epistemology and the Formation of Concepts*, ed. id. (Cambridge, Mass., 2001), 125–142.

94 Daniel Speich Chassé and David Gugerli, “Wissensgeschichte. Eine Standortbestimmung,” *Traverse* [Themenheft ‘Kulturgeschichte’] 1 (2012): 85–100.

where and how new forms of knowledge were approved of by collaborating collectives since knowledge, be it scientific or superstitious, hegemonic or the belief of a minority, cannot be restricted to individuals.<sup>93</sup> The vantage point of the history of knowledge should always be one that takes these affiliations into account. In this way, the conceptual changes and the societal forces transforming each other can be observed. This research perspective builds upon the social history of science, but combines its efforts with a special emphasis on the knowledge of minorities, the Global South,<sup>94</sup> of translations into alternate social, religious or geographic settings. This requires a high attentiveness to the framing and reframing of knowledge, and a particular observation of the moving forces causing these shifts. What makes knowledge resilient? When do people resort to new moral economies (of science)? Why is there such fierce rejection of certain ways of knowing?

As I have argued in this article, Lueder’s transformation from an adherent of descriptive statistics into a harsh critic of all forms of statistics resulted from the more exclusive reference frame of liberalism. The crucial motive that made Lueder turn to another kind of knowledge reverberates with the background noise of defended territory and protected possessions. Thus Lueder’s work bears the mark of past struggles that articulate themselves in particular kinds of knowing.

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