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Funny Numbers

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Abstract

The struggle over cure rate measures in nineteenth-century asylums provides an exemplary instance of how, when used for official assessments of institutions, these numbers become sites of contestation. The evasion of goals and corruption of measures tends to make these numbers "funny" in the sense of becoming dishonest, while the mismatch between boring, technical appearances and cunning backstage manipulations supplies dark humor. The dangers are evident in recent efforts to decentralize the functions of governments and corporations using incentives based on quantified targets.

Keywords: Funny numbers, history of mental hospitals, history of statistics, standardization of statistics, statistics of mental illness, technicality, thin description

Introduction

The history of asylum statistics provides a field well befitting the topic of funny numbers, and not only because human sanity is thereby called into question. The normalization of the asylum as a place for housing the insane brought a huge expansion of these hospitals, and rapidly transformed them into the most quantitative of medical institutions. More even than prisons, they provided a model, not only for regulating and ordering these subject population, but also and perhaps mainly to indicate the level of need for such institutions and to monitor the effectiveness of their custodians. Statistics had, to be sure, a role in the internal ordering of the institutions, providing a balance sheet of patient admissions and outcomes that we might compare with the revenues and expenditures inscribed in financial books. Both forms of recordkeeping, medical as well as financial were regulated ever more tightly by governing boards, commissioners in lunacy, and ministers of health to whom the institutions reported. Patient outcomes provided the evidence by which these officials, and to a degree the general public, assessed the medical effectiveness of asylum care and made comparisons among institutions. Since they were being judged in part by their statistics, the asylum superintendents would have been irresponsible not to do all they could to improve these statistics, and through such efforts they gave discerning observers and resentful rivals grounds for suspicion that their facts might be factitious. Early asylum doctors were, in short, the pioneers of evidence-based medicine in its now-familiar statistical from. Their creativity was nurtured by the novel expectation that a responsible institution must faithfully keep account books, which should be made available for inspection by responsible authorities.

Keeping Proper Records

The story of funny numbers in relation to insanity might be said to begin in 1789. This would not be on July 14 but January 7, not the storming of the Bastille but a meeting of a committee of the House of Commons in Westminster to decide what to do about the King. His recent madness had provoked a furor among his physicians, spreading to the Parliament and the nation. Who, if anyone, was qualified to treat the royal patient, and who could say whether he would recover in time to forestall the need (for some, the earnest desire) to appoint a regent? What confidence could be placed in the irregular regime of Reverend Dr. Francis Willis, brought in from outside the elite circle of royal physicians? The committee interrogated Richard Warren, physician to the king:

> Whether if Nine Persons out of Ten, placed under the Care of a Person who had made this Branch of Medicine his particular Study, had recovered, if they were placed under his Care within Three Months after they had begun to be afflicted with

> the Disorder, Doctor Warren would not deem such Person, either very skilful or very successful?

He answered conditionally that he would, hypothetically. But did he accept the premise?

> Whether, in order to induce Doctor Warren to believe, that, for Twenty-seven years, Nine persons out of Ten had been cured, he would not require some other Evidence than the Assertions of the Man pretending to have performed such Cures?

"I certainly should," he now declared. Pretensions like these should be backed up by proper records. (Committee appointed 1789, 20, 25; Porter 2012a)

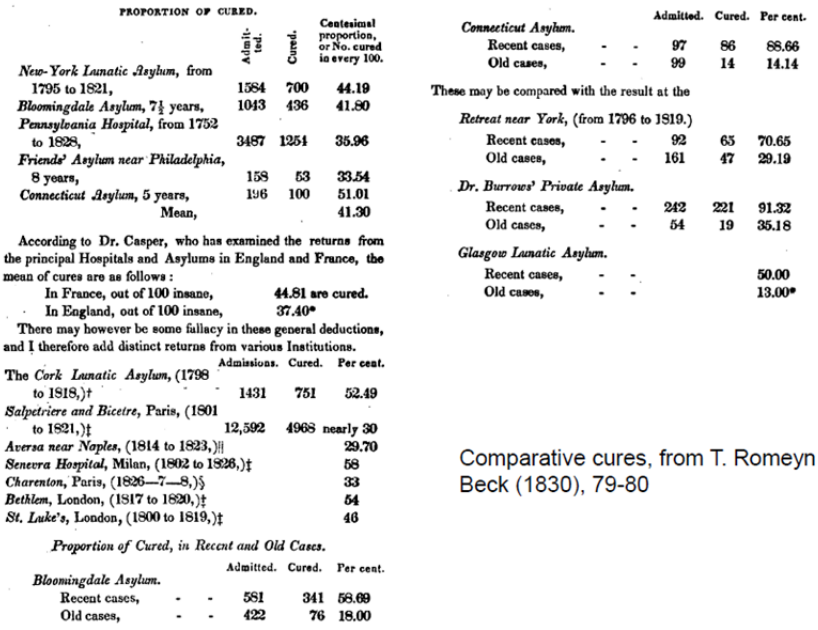
We can be impressed by the sweep of the quantifying bustle that accompanied the transformative political, economic, and scientific developments of the early nineteenth century without pretending to have located a clean historical rupture. While the reactions to George III's mental breakdown in 1789 mark a convenient beginning for a historical study of asylum statistics, the story remains halting and episodic until the 1830s. By then, the cascades of numbers that engulfed so many aspects of social, governmental, and scientific life were clearly recognizable as a historic movement. Statistics had become and would remain a key template for knowledge and an irrepressible force in administration. The quantitative sensibility did not quite sweep all before it, but for centuries there has never been a down market in numbers. The Anglo-Scandinavian King Canute could not still the seas by mere force of his command, but he might have secured a reputation in social science by forecasting a millennium in which the statistical tide would never ebb. (Porter 1986; Hacking 1990)

Yet, we must ask, what boats did this tide lift? Physicians, traditionally, had been suspicious of statistics. Treatment by numbers, applied indiscriminately, would undermine the professional standing of medicine, which always was identified with an expert matching of principles to a distinctive individual patient. Public health was an exception, and asylum medicine, the treatment of the insane, even more so (Matthews 1995; Marks 1997; Rusnock 2001; Jorland, Opinel & Weisz 2005; Greene 2007). Insanity, of course, presented challenges to cool statistics. What the French called *folie raisonnante*, reasoning with a display of logic from twisted or outlandish assumptions, is not unknown in quantitative procedures. In medical studies, especially of mental illness, it lurks ominously wherever relevant background knowledge has been suppressed for the sake of a seemingly straightforward numerical comparison. Yet the advance of numbers in asylum medicine was hard to turn back. This is not only because most nineteenth-century asylums, as public institutions, were subject to rising standards of accountability. It owes also to the delirious growth of insanity in the asylum era, so that institutions established to solve the problem in a province or county by providing beds for 100 or 250 inmates grew to include a thousand, two thousand, even five or ten thousand, and still there were more clamoring to be admitted. A multitudinous

congregation of disorderly, unreasonable persons makes a situation calling out for statistics.

Problems with Cure Rates

The issue of cure rates, which rose to the surface in regard to George III, became critically important in the nineteenth century. Especially in northern Europe and North America, tables proliferated in public and bureaucratic reports. None were so universal as the patient table or table of population movement, which supplied in columns the number of patients at the beginning of the year, new admissions, patients released cured, improved, unimproved, and dead, and number of residents at the end of the year. Every patient entered here as cured or improved gave donors and legislators another reason to invest money in specialized institutions for the mentally ill, rather than leaving them to rot in prisons and poorhouses. Americans proved themselves particularly adept at this form of demonstration. Theodric Romeyn Beck, for example, used statistical reports to compare American institutions with each other, and with foreign ones. His tables from 1830, still in a very early phase of the asylum movement, showed cure rates in America comparable to the most famous European asylums. American asylum directors often evinced conspicuous satisfaction in the superiority of their calculated results to those of celebrated Old World alienists such as Esquirol at Bicêtre or Samuel Tuke at the Retreat in York (Beck 1830).



PROPORTION OF CURED.

	Admitted.	Cured.	Centesimal proportion, or No. cured in every 100.
New-York Lunatic Asylum, from 1795 to 1821,	1584	700	44.19
Bloomingdale Asylum, 7¼ years,	1043	436	41.80
Pennsylvania Hospital, from 1752 to 1828,	3487	1254	35.96
Friends' Asylum near Philadelphia, 8 years,	158	53	33.54
Connecticut Asylum, 5 years,	196	100	51.01
Mean,			41.30

According to Dr. Casper, who has examined the returns from the principal Hospitals and Asylums in England and France, the mean of cures are as follows:

In France, out of 100 insane, **44.81 are cured.**
In England, out of 100 insane, **37.40***

There may however be some fallacy in these general deductions, and I therefore add distinct returns from various Institutions.

	Admissions.	Cured.	Per cent.
The *Cork Lunatic Asylum*, (1798 to 1818,)†	1431	751	52.49
Salpetriere and Bicetre, Paris, (1801 to 1821,)‡	12,592	4968	nearly 30
Aversa near Naples, (1814 to 1823,)‖			29.70
Senevra Hospital, Milan, (1802 to 1826,)‡			58
Charenton, Paris, (1826—7—8,)§			33
Bethlem, London, (1817 to 1820,)‡			54
St. Luke's, London, (1800 to 1819,)‡			46

Proportion of Cured, in Recent and Old Cases.

	Admitted.	Cured.	Per cent.
Bloomingdale Asylum.			
Recent cases,	581	341	58.69
Old cases,	422	76	18.00
Connecticut Asylum.			
Recent cases,	97	86	88.66
Old cases,	99	14	14.14

These may be compared with the result at the

Retreat near York, (from 1796 to 1819.)			
Recent cases,	92	65	70.65
Old cases,	161	47	29.19
Dr. Burrows' Private Asylum.			
Recent cases,	242	221	91.32
Old cases,	54	19	35.18
Glasgow Lunatic Asylum.			
Recent cases,			50.00
Old cases,			13.00*

Comparative cures, from T. Romeyn Beck (1830), 79-80

Theodric Romeyn Beck printed tabular figures for cures and cure rates to demonstrate that asylums in the United States compared favorably with the most famous institutions from the Old World.

Yet an absolute cure rate, the alienists insisted, could not capture the achievement, still less the potential, of lunatic asylums dispensing the new moral treatment. These figures, it was understood, included many cases that had become hopeless through neglect or ill treatment. The purpose of the numbers was not merely to summarize past experience, but to encourage families to seek help for their relatives before it was too late, and in this way to clear the path for improving the numbers. The proper measure of what asylums could contribute to the welfare and prosperity of a people was no indiscriminate total of past results, but the cure rate for new cases, before the effects of a disorder had time to penetrate deeply into brain tissues.

The pressure of competition, as in any free market, inspired vigorous emulation and improvement, pushing these numbers still higher. In the United States, where this form of evidence was widely publicized, cure rates for fresh patients rose to the wondrous level of 90% that had seemed merely boastful when claimed by Dr. Willis. Indeed, there were some who thought them boastful still. After all, the fundamental principle of comparative statistics in action stands above frequency distributions or curve fitting. The first law of funny numbers is that every favorable comparison implies an equal and opposite unacceptable comparison, which will therefore be challenged. At Siegburg Asylum near Cologne, in Germany, Maximilian Jacobi insisted that the implausibly high cure rates of English institutions were achieved by discharging patients as cured before they had fully recovered (Prichard 1837). Even temporal comparisons began soon to create trouble. In Massachusetts, where cure rates rose momentarily above 90% (for "fresh" patients), they soon turned down, and asylum officials began to complain of being forced to take whatever patients were sent by some judge, whether or not there was any prospect that the institution could help them. These might be people who had spent years moldering in a prison or barn, and now were on the verge of death.

> When it is considered, as is the fact, that many persons of abused lives and exhausted constitutions, of bodily as of mental imbecility, and of *mania* brought on by vicious indulgence or by remorse for crime, are committed to this Hospital, but to be cared for during a brief season of languishment without hope of relief, and then to be buried at the public charge, the wonder is, that so *few*, rather than so many, yearly die. It is not a rare occurrence, that subjects, *not for cure*, but for care and nursing only, reach the Hospital in the last stages of existence, and a few short days, or weeks it may be, add their names to the lists of mortality. (State Lunatic Hospital 1851, 7-8).

The directors of these institutions understood that a well-timed transfer, say from a poorhouse to a mental hospital, was statistical alchemy, transforming a death into a discharge. But to the asylum, it exemplified the principle of equal and opposite forces, a death that would now weigh on their statistics. What tide could lift it? The only hope, if they could not reject such patients, was reclassification: in-

mates arriving in extreme ill health and dying within weeks should no longer be counted as patients of the receiving institution.

Sadly, cure rates continued to decline, sinking below 20% in some of the largest and most prominent institutions by the end of the nineteenth century. Asylum officials were perplexed as to how those old institutions, to whom were unknown the wonderful modern improvements in science and architecture, had managed to cure such a high proportion of their patients. Statistical opportunism, it appeared to Pliny Earle, who addressed the question in his 1877 annual report for the Northampton Asylum in Massachusetts. In the early years of Worcester, Earle explained, superintendent Samuel Woodward had achieved his unmatched success by calculating the cure rate as a percentage of patients *discharged*, without even counting inmates who died in the institution, so that only patients who left the institution unrecovered weighed against him in the statistics. Earle found also that very few institutions had ever corrected their reports for relapsed patients. In fact, he confessed, neither had he when, three decades earlier, he had served as superintendent of the Bloomingdale Asylum in New York. Reanalyzing the data, he found many patients who had been discharged as cured, readmitted to the same institution, and discharged again, perhaps multiple times. One of his own, he now acknowledged, had been admitted a total of 59 times over a period of 29 years, and discharged as recovered 46 of those times! (Earle 1887: 10, 22-24).

Standardized Figures of Insanity

Faced with a record of ostensibly declining effectiveness, asylum directors became more and more conscious of loose definitions. Cure rates could not be reliably compared unless they meant the same thing in different times and different institutions. This meant standardized disease categories, standardized criteria of cures, and agreement on what population measure exactly should be placed in the denominator of the fraction whose numerator was the number of cures. The great initiative for uniform asylum statistics came from France in the late 1860s. A valid use of cure rates as a basis for comparing the effectiveness of institutions required that the admitted patients could be made comparable along a whole array of variables that were likely to affect the likelihood of recovery. This demanded uniform disease categories as well as agreement on all the patient characteristics that should be registered along with the disease, including age, education, rural or urban, and occupation. By 1870, the statistical categories had begun to reflect a heightened obsession with heredity and all the factors that might be hereditarily linked to insanity, including drunkenness, illegitimacy, epilepsy, feebleminded-ness, tuberculosis, crime, and suicide. Yet the task of comparison could scarcely be solved at the level of the asylum, since decisions as to what categories of patients were to be admitted and discharged were outside the power of directors and

statisticians. It was the same problem that undermined the efforts of the International Statistical Congresses from about 1850 to 1880.

Even the effort to count the insane and compare these numbers internationally depended on multiple dimensions of standardization that proved unattainable in practice. These numbers were administratively as well as scientifically important, since the prevalence of insanity in a population determined the scale of institutions required to house and care for them. Given the difficulty of locating and tallying the non-institutionalized insane, many statisticians preferred to rely on an excellent census in some foreign land over a flawed one at home. On the assumption that lunacy rates were relatively uniform among European populations, it followed that the highest measures of proportion insane in a population were generally the most accurate. Hence the alienists attended closely and respectfully to census results from Belgium, Scotland, Switzerland, and in particular from Norway, which in 1828 was vaulted into first place in the ratio of insane to population by Frederik Holst's thorough and detailed census.

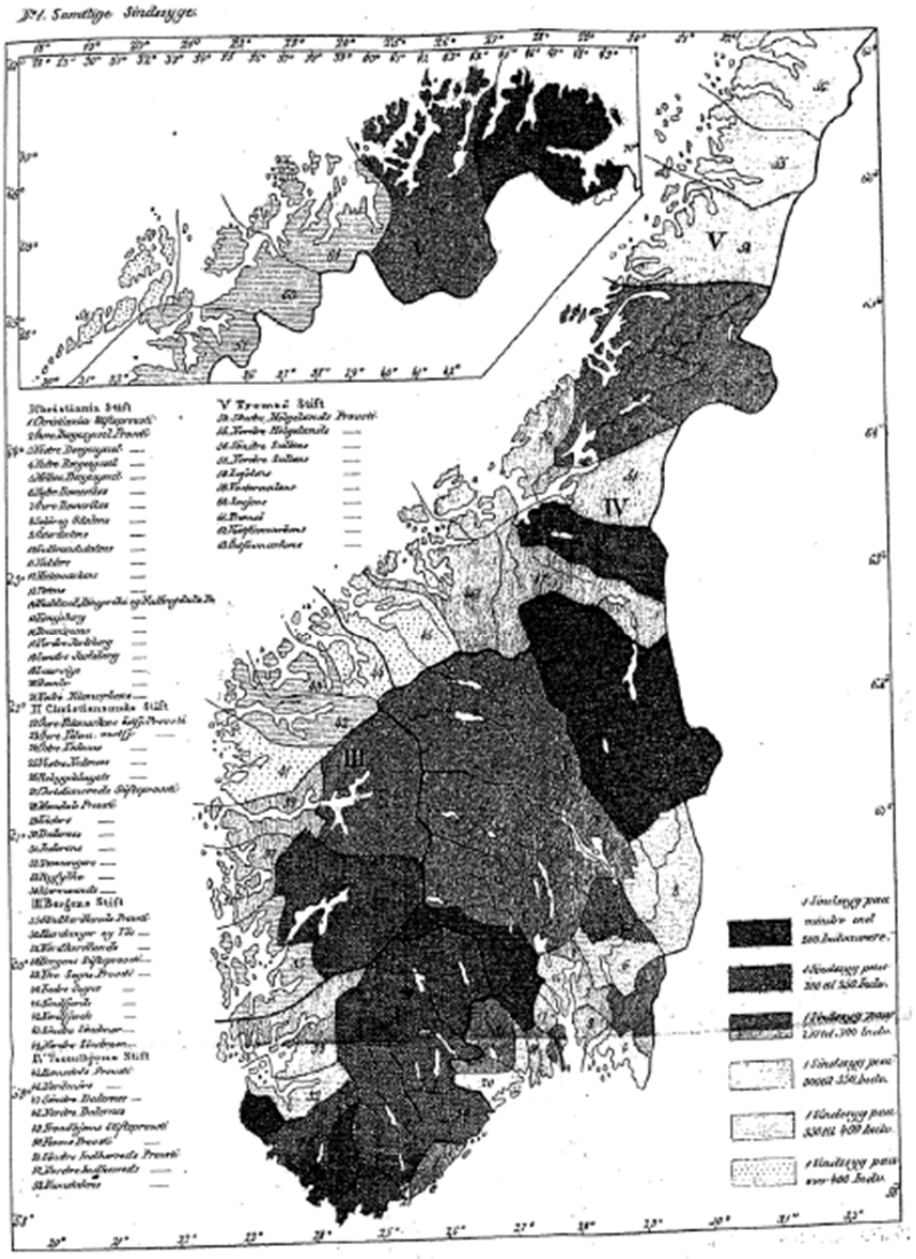
K. Sygdommens Aarsager, sammenlignede.

Aarsager.	Maniaci.				Melancholici.				Dementes.				Sindssvage af alle tre Arter.			
	Mandkjøn.	Qvindekjøn.	Afbegge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Afbegge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Afbegge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Afbegge Kjøn.	Forhold.
1. Physiske:																
Arveligt Anlæg	12	10	22	1: 8	8	6	14	1: 16	6	5	11	1: 15	26	21	47	1: 12
Barselseng	ſ	6	6	1: 31	ſ	3	3	1: 74	ſ	7	7	1: 23	ſ	16	16	1: 36
Epilepsie	ſ	1	1	1:185	ſ	ſ	ſ		ſ	ſ	ſ		ſ	1	1	1:569
Apoplexie	1	ſ	1	1:185	1	ſ	1	1:222	4	3	7	1: 23	6	3	9	1: 63
Feber	1	ſ	1	1:185	5	2	7	1: 32	12	5	17	1: 10	18	7	25	1: 23
Slag paa H[illegible]et	2	1	3	1: 62	2	2	4	1: 55	7	2	9	1: 18	11	5	16	1: 36
Vand i Hjernen	ſ	ſ	ſ		ſ	ſ	ſ		1	ſ	1	1:162	1	ſ	1	1:569
Blod i Hjernen	ſ	ſ	ſ		ſ	ſ	ſ		1	ſ	1	1:162	1	ſ	1	1:569
Forkjølelse	2	ſ	2	1: 92	3	ſ	3	1: 74	1	2	3	1: 54	6	2	8	1: 71
Engelsk Syge	ſ	1	1	1:185	ſ	ſ	ſ		ſ	ſ	ſ		ſ	1	1	1:569
Nervesvækkelse	1	1	2	1: 92	3	5	8	1: 28	2	ſ	2	1: 81	6	6	12	1: 47
Hysterie	ſ	ſ	ſ		ſ	5	5	1: 44	ſ	1	1	1:162	ſ	6	6	1: 95
Udsvævelser	2	1	3	1: 62	1	ſ	1	1:222	2	1	3	1: 54	5	2	7	1: 81
Drik	10	1	11	1: 17	10	ſ	10	1: 22	4	ſ	4	1: 40	24	1	25	1: 23
Onanie	2	ſ	2	1: 92	1	ſ	1	1:222	7	ſ	7	1: 23	10	ſ	10	1: 57
	33	22	55		34	23	57		47	26	73		114	71	185	
2. [illegible]iske:																
Forsømt Opdragelse	ſ	ſ	ſ		ſ	ſ	ſ		ſ	1	1	1:162	ſ	1	1	1:569
Streng Beh[illegible]ling	2	1	3	1: 62	2	2	4	1: 55	3	1	4	1: 40	7	4	11	1: 52
Feilslaget Haab	4	2	6	1: 31	1	ſ	1	1:222	ſ	1	1	1:162	5	3	8	1: 71
Haabløs Kjærlighed	13	34	47	1: 4	11	29	40	1: 6	5	21	26	1: 6	29	84	113	1: 5
Ulykkeligt Ægteskab	1	5	6	1: 31	1	2	3	1: 74	ſ	1	1	1:162	2	8	10	1: 57
Jalousie	2	2	4	1: 46	1	3	4	1: 55	1	2	3	1: 54	4	7	11	1: 52
Sorg	6	7	13	1: 14	33	18	51	1: 4	7	15	22	1: 7	46	40	86	1: 7
Skræk	18	13	31	1: 6	8	5	13	1: 17	10	10	20	1: 8	36	28	64	1: 9
Religionssværmerie	6	3	9	1: 21	6	12	18	1: 12	1	ſ	1	1:162	13	15	28	1: 20
Samvittighedsskrupler	2	2	4	1: 46	9	3	12	1: 18	1	1	2	1: 81	12	6	18	1: 32
Krænket Ærefølelse	2	ſ	2	1: 92	3	2	5	1: 44	2	ſ	2	1: 81	7	2	9	1: 63
Overdreven [illegible]dering	ſ	ſ	ſ		4	2	6	1: 37	1	ſ	1	1:162	5	2	7	1: 81
Ærgjerrighed	1	4	5	1: 37	2	6	8	1: 28	2	3	5	1: 32	5	13	18	1: 32
Psychiske	57	73	130		81	84	165		33	56	89		171	213	384	
Physiske	33	22	55		34	23	57		47	26	73		114	71	185	
Tilsammen	90	95	185		115	107	222		80	82	162		285	284	569	

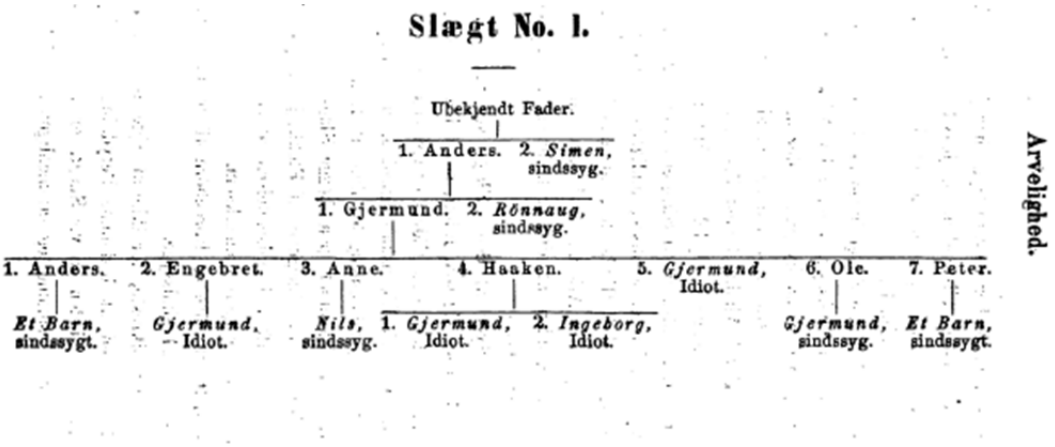
This table of causes of insanity by disease form and by sex of patient was one of the more striking products of the pioneering Norwegian census of insanity, directed by Frederik Holst and published in 1828.

Étienne Esquirol of France, who called insanity a "disease of civilization," had been skeptical of Holst's numbers. How could poor, rural Norway, with its fjords, forests, and rural poverty, be so far ahead of France or England as these numbers seemed to indicate? By 1859, new numbers from Norway drew admiring commentaries in France, Britain, and Germany. Working from the registers compiled by Holst and his successors, Ludvig Dahl outstripped everyone with an exhaustive

tally of the insane and their hereditary relations in a few Norwegian provinces, including a pioneering set of family pedigrees of mental illness (Holst 1827; Dahl 1859).



This shaded map from Ludvig Dahl (1859) indicated ratio of insane, including mentally weak, for the parishes of Norway.



Ludvig Dahl (1859) supplied the prototype of the eugenic pedigree chart of family defects. Half a century later it had become ubiquitous.

Yet the praiseworthy efficiency of the Swiss and Norwegians was no substitute for thorough, reliable counts at home, if international comparisons were to be based on statistical facts rather than uncodified experience and reasonable assumptions The standardizing efforts of the supremely civilized 1860s were designed to eliminate spurious differences and provide bureaucratic solutions to the problem of insanity rankings, advancing science while mitigating envy and resentment. And yet standardization proved impossible, for the reasons we have already seen, and others too. In 1870-71, the military defeat of France severed alienist connections with Prussia, forcing the Germans to pursue standardization in one country. Or, to sum up this first part of my story, beneath the veneer of rationalized bureaucratic efforts to standardize statistics, insanity held its place, uncontrolled and unharmonized. An expert on mental illness with extensive international experience might argue plausibly for the greater prevalence of specific conditions in one or another land, or defend the superiority of a certain treatment regimen as practiced by a particularly well-run institution. But the golden ideal of settling such issues with systematic, uniform, boring compilations remained well beyond reach.

Numbers of Neoliberalism

Too much was at stake to maintain a strict, humorless quantification. Funny numbers are misleading, deceitful numbers, but they can also be humorous, if darkly so. Trust in numbers always brings such temptations with it. The numbers of neoliberalism, for example, are tools of decentralization, based often on indirect forms of power. Such numbers as indicators and benchmarks provide means to judge dispersed actors engaged in a common project under a central authority such as a government or corporation. Good numbers bring wealth and prosperity, and justify promotions (in the public economy) or bonuses (in joint stock compa-

nies and especially banks and investment firms). The appearance of new forms of public management that emphasized assessment by the numbers was met promptly with critiques that such measures led to gaming and "goal displacement" (Hood 1991; Bevan & Hood 2006). Onstage, a plodding bureaucracy sitting around a table proceeds with laborious deliberations on such questions as how much debt a hedge fund can take on for arbitrage in circular exchanges that may be completed in nanoseconds. The press and citizens have the opportunity, if we look hard, of seeing also what is happening off stage. It's a bit like Michael Frayn's play *Noises Off* or the Cole Porter musical, *Kiss Me Kate*. On stage, the action proceeds at first as if according to plan. Off stage, the madness gradually extends its empire until the onstage action also is infected by the chaos.

Whoever can exploit the ambiguity of measures to fulfill numerical targets without having to expend resources on the thing measured enters into the domain of funny numbers. Such opportunities will be found wherever approval, payment, or some other desired end is made contingent on achieving a quantitative standard. Similar forms of deceit are possible in other contractual arrangements, yet the modern reverence for quantitative evidence has enabled funny numbers to achieve primacy. The ascendancy of cost-benefit analysis, risk analysis, and statistical tests of significance stands in tribute to this ideal. We must never suppose that corruption was ushered into the world by numbers, which, on the contrary, have achieved prominence partly in the hope of controlling it. We would be rash to suppose that such efforts are fruitless, yet Proteus always finds new forms suited to new constraints, and funny numbers have given a definite advantage to financial markets. These furnish a new theater of insanity, one that is uniquely funny because the deception and manipulation that we see offstage have *made possible* the fine displays of order and tranquility on view. "Pay no attention to the little man behind the curtain," says the little man in the American theater of bimetallism, *The Wizard of Oz.* But after awhile, as bankers and investors from Iceland and Ireland, Britain and the United States, brought on waves of corporate bankruptcies and depleted pension funds, as millions all over the world are driven from their homes and forced into unemployment, as whole nations face financial collapse, threatening the European monetary system, the man behind the screen must be recognized.

These are *Funny Numbers*, painfully funny, worked out according to a logic of standardized decorum that is undermined in reality at every junction. The pretense of their validity provides space within for bankers and CEOs to profit from their ambiguities and manipulability. The irony is that the bankers were right in a performative sense for long enough to meet their own needs. So much wealth implies very powerful interests. These men did not allow their enterprises to fail until they failed catastrophically. Right up to the financial collapse of 2008, investment companies were showing wonderful profits on paper. Even afterwards, they held onto sufficient resources to fend off investigation. They had the power to keep the

numbers *boring*, maintaining a screen in front of this theater of the absurd. It is time to recognize the raw power that sustains the impression of orderly boringness in financial accounts.

Every effort at data reduction has the potential to produce funny numbers, which seem to be inevitable in a world of statistics. We should recall that statistics as a mathematical field grew up in the early twentieth century, an era that worshiped simplification, mass production, and standardization. Funny numbers enjoy a symbiotic relationship with the modern social sciences, which have typically been impatient with historical and cultural depth, preferring what I call *thin description*. They flourish in that world of subtle differences occluded by thin description, permitting a kind of arbitrage that highlights once more the links to finance (Porter 1986, 2003, 2012b; Desrosières 1993).

Thin description, however, provides merely the *opportunity* to invent funny numbers. We need also to consider motive, which rarely follows simply from description. Funny numbers made their breakthrough in alliance with an ethic of thin *prescription*. Thin prescription means judging a person or institution by a few numbers or, ideally, one number. Now here, I am sorry to say, we are compelled to confront the unpleasant fact of irony. This ethic of *thin prescription* was invented to make the facts transparent by erecting obstacles to special pleading. It arose as a strategy of impersonal regulation. There is a price, which we are often willing to pay, to deploy statistics as insurance against casuistry—so deep is the discredit into which reasoning about cases has fallen on the scales of evidence. If the statistical analysis of a psychological or therapeutic experiment finds no demonstrable effect, we don't want the experimenter making causal efficacy appear after the fact by saying we should have excluded the subjects who lost their jobs or had unhappy love affairs during the course of the trial. Once the constraint of statistical routine is lifted, experimenters with disappointing numbers will make excuses: Look at its good effect on this patient and that patient, the statistical refuseniks will say, while the heart attack that struck some other patient will be attributed to extraneous factors, such as high blood pressure or an infection during travel abroad. Thin prescription should subject these advocates to the discipline of hard facts.

Thin prescription provides ideal conditions for trust in numbers. But this phrase can easily be misunderstood. Trust in numbers in its most important and interesting form is not about some cultural disposition to put implicit faith in measures and calculations, but about the containment of subjectivity. Yet the replacement of opinion by calculation in thin prescription raises the stakes of statistical calculation. It makes the numbers into something worth fighting over, putting intense pressure on the ideal of honest calculation. The wielders of numbers under such circumstances would like them to seem as boring and technical as possible. Boringness means there are no shady manipulations, no basis for controversy, or at least that nobody recognizes it. Technical routines shut down dissent. Boring is

what the budget office, the engineering corps, or the international bank puts on the stage. And just behind the stage we can see, if we look closely, intense struggle about how the quantification should be performed, struggle that undermines the unwilling suspension of disbelief in the theater of objectivity that is acted out for the audience. We can scarcely imagine that negotiation and corruption are driven from the field by the weak tools of calculation. Thin prescription sometimes works as a screen that protects them from the eyes of the curious. At other time the battles over numbers that serve as proxy for naked struggles based on interests cannot be contained, moving the action into full public view. In any case, it is the proper task of social science to pursue historical and cultural understanding of these ostensibly technical disputes. These situations are profoundly ironical, and an accurate narration of number wars should be funny, or at least sardonic (Porter 1995, 2009; Rottenburg 2009).

We scholars of quantification are privileged to live in the golden age of funny numbers. Neoliberalism is not simply about the superiority of private enterprise, about shrinking the state. It is about making private enterprise a model for public agencies, and licensing it to carry out state programs. This means decentralized action and decisions directed by well-designed incentives. A brilliant epistemology stands behind it. Friedrich Hayek, in alliance with Michael Polanyi, argued persuasively for the inherent superiority of local knowledge: people close to the scene of the action will always know much that is inaccessible to some far-removed bureaucratic center. Let the plodding state officials, then, be replaced by a private firm, and let it be earn profits when it effectively discharges its assigned task. It would of course defeat the purpose of this excellent system if high functionaries in the capital had to look over every shoulder and intervene in every detail. Let them, then, act as a center of calculation, deploying the tools of thin prescription, and rewarding these firms in proportion to their success in generating good numbers (Latour 1997; Desrosières 2003).

This way of working is admirably objective, even while leaving a generous space for the application of detailed expertise. But there is a little problem. The advantage of those with the best local knowledge extends also to the accounts and the statistics. If the central office were to specify everything in infinite detail, the benefits of reliance on local knowledge would evaporate. If instead, distant administrators define broad quantitative goals and give local people the incentive of increased profit for finding more efficient ways to attain these goal, self-interested contractors may be tempted to optimize the numbers in ways that evade the real purposes of the work. The most efficient way to increase profits may not be to provide valuable services, but to corrupt the calculation, and if a local firm has a sufficient monopoly on expertise, it will be very hard to demonstrate corruption. Accounting rules may be heavy as lead, permitting the entrepreneurs of public thievery dance circles around them.

A similar dynamic affects and often oppresses public institutions, which also are increasingly caught up in a system of incentives and punishments. Such are the principles behind Research Assessment Exercises in Britain, with imitators in other countries. At least the British seem to realize that the incentives can easily become perverse, and have done what they can to make gaming difficult. Much worse I think are the tests of elementary and high school effectiveness in the United States, which pretend to preserve local control of schools by subjecting all to a common measure. They do not know how to address the unstandardizable aspects that make these measures so difficult, and some of the designers of these measures intend by them to destroy public education so as to create space for profits in the private sector. The standards are archetypes of thin prescription, and their greatest impact has been to encourage the reconstruction of school curricula to match the content of the tests, and sometimes to make the temptation to cheat almost irresistible.

Of course there always are sincere souls trying to close these loopholes, a Sisyphean task, like the efforts of tax authorities in Greece or Italy or the United States. Closing down such manipulations would be difficult enough if the wealthy did not, by funding political candidates, invest shrewdly in tax avoidance in the form of what amounts to bribery of their elected officials. The contradictory forces of making rules and exploiting ambiguities have played a key role in the shaping of modern accounting systems. The little Dutch boy of legend who saved a town by putting his finger in the dike had it easy. This is like Hercules and the Hydra: every hole plugged opens up two new ones. It is a Vaudeville scene, a preserve for the production and reproduction of funny numbers.

Thin prescription, in its highest forms, has two outstanding characteristics: it is typically presented as hard objective fact, the counter to special pleading; and yet these thin measures are readily and invisibly manipulated by interested actors. These are intrinsically comic situations, though typically unrecognized by the participants, because they so often are bound up with sober bureaucratic and professional rituals. Even more do outsiders dismiss them as dull and technical. It is a task for historians and ethnographers to reveal the comic dimension of numbers by displaying, beside the controlled action on stage, the offstage turmoil and disguises. Yet these stories go beyond comedy. Marx, correcting Hegel, argued that world-historic events happen twice, but, overgeneralizing, failed to notice that they may commence as farce, then turn to tragedy. We of the third millennium have been often reminded.

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