## 1

#### TEXT

THE UNITED STATES FEDERAL GOVERNMENT SHOULD ENTER INTO BINDING CONSULTATIONS WITH THE GOVERNMENT OF THE PEOPLE’S REPUBLIC OF CHINA OVER AN OFFER THAT, through DARPA, should substantially increase nanotechnology assistance and cooperation with Mexico CHINA WILL SAY YES TO LIFTING SANCTIONS

#### CHINA WILL SAY YES TO EFFORTS TO MERGE NEW MARKETS – VESTED ECONOMIC INTEREST

May 13

[Robert R. Editor, Business Mexico Online Commentary: China sees Mexican trade deals as stepping stones to other markets; Mexico beware! Business Mexico Online JUNE 7, 2013 [http://business-mexico-online.com/commentary-china-sees-mexican-trade-deals-as-stepping-stones-to-other-markets-mexico-beware/]

The price China is likely to exact will be twofold: 1) Using Mexico´s numerous free trade agreements with other countries as a platform to export Mexican-made-or-assembled Chinese goods around the world, and 2) reducing obstacles and tariffs on Chinese exports.

Peña´s great mistake is in thinking that Mexico and China are “equals”

It is a mistake for Mexico to buy into the Chinese propoganda that both countries are in similar situations as developing nations, and so should work together in a fraternal alliance.

China has the second-largest economy in the world, and is a world power, militarily, economically, politically and commercially. Although China may have many problems similar to those of a developing country, such as pollution and rural poverty, those are due to decades of obtrusive communist policies and unrestrained government development at all costs. That is very different from the progressive maturity of true developing countries.

Mexico is a true “developing” nation, struggling to pull itself up by its bootstraps, with all the advances and stumbles along the way that a poor country trying to democratize tends to suffer. Peña´s great mistake is in thinking (at least in public rhetoric, if not in private) that Mexico and China are “equals” that can work together to leverage each other into the First World.

Undoubtedly China will cold-heartedly pursue its own national interests, and it is Chinese economic growth rather than Mexican growth that will be China´s priority. This does not mean that Mexico will inevitably be harmed by China´s aggressive international trade policies, but any carelessness or lack of long-term planning by the Mexican government could cause the Sino-Mexican relationship to tip dangerously in China´s favor. Current Mexico-China balance of trade figures indicate that China exports nearly 10 times more products to Mexico than Mexico exports to China, so it has to be understood from the outset that any new trade agreements are not starting from a level playing field.

The agreements reached during Chinese President Xi´s visit to Mexico this week reveal some of China´s underlying interests:

1) Access to Mexican oil to fuel China´s expanding economy.

2) Access to the United States market through Mexico´s NAFTA agreement with the United States and Canada.

3) Access to the European Union and other regions and countries through Mexico´s other free trade agreements

4) Reducing the risk of Chinese products being subject to higher tariffs or anti-dumping measures.

#### GENUINE CONSULTATION ON REGIONAL HOTSPOTS NECESSARY TO BUILD A FRAMEWORK OF TRUST NECESSARY TO SAVE US-SINO RELATIONS, IMPACT IS WORLD PEACE

Vice Foreign Minister Zhang 12

[Vice Foreign Minister Zhang Zhijun at the Eighth Lanting Forum of the Ministry of Foreign Affairs Stay committed to peaceful development and win-win cooperation the Ministry of Foreign Affairs of the People's Republic of China: 28 December 2012 Westlaw]

China and the United States, one the world's largest developing country and the other the biggest developed one, are also the two largest economies in the world. That makes their relationship one of the most important yet complex in the world. Whether the two countries will live amicably with each other is an issue whose significance goes far beyond the bilateral scope and which concerns peace, stability and prosperity of the whole world. Some regard it a law of history that there have always been fierce clashes, at times, conflicts and wars, between an established power and an emerging power. But we reject such fatalism. In our view, in this globalized era when countries are inter-dependent with their interests closely linked, there has been a major shift in international relations. In the face of frequent global challenges, all countries would want to stick together to meet challenges together and pursue common development. This is an unstoppable historic trend. Those who go along with it will prosper and those against it perish. We are sober-minded on this and it is from this perspective that we view and approach China-US relations. We are committed to seeking new answers to old problems and are determined to foster a new major-country relationship based on mutual respect and win-win cooperation.

What has happened in China-US relations shows that both sides stand to gain from cooperation and lose from confrontation. This year marks the 40th anniversary of the issuance of the Shanghai Communique and the resumption of contact between the two countries. China-US relations have entered a stage where they should no longer have doubts about further growth of this relationship. Over the past 40 years, great progress has been made in China-US relations. In particular, the two presidents have reached important agreement to build a new type of major-country relationship based on mutual respect and win-win cooperation, heralding a new, historic starting point for China-US relations. Two-way trade has surged from nearly zero at the time of resumption of contact to 446.6 billion US dollars last year and is expected to exceed 500 billion US dollars this year. The two sides, once in estrangement and confrontation, now engage in dialogue and cooperation. We have had the Strategic and Economic Dialogues (SandED), the High-Level Consultation on People-to-People Exchange and a total of more than 90 consultation mechanisms covering political, economic, trade, security, defense, scientific, technological, people-to-people, cultural, energy, the environment and many other fields. This is not commonly seen in major-country relations and speaks volumes about the dynamism and potential of China-US relations. More than 3.5 million visits are taking place between the two countries every year, nearly 10,000 every day on average. The two countries have maintained close communication and coordination on counter-terrorism, nuclear proliferation, climate change and regional hotspot issues.

That being said, China and the United States still differ significantly in social system, development stage, history, culture and tradition and still face major and sensitive issues including Taiwan and Tibet-related issues. These issues, if not handled properly, will upset or even seriously damage the bilateral relationship.

To dispel strategic mistrust and build a new type of major-country relationship is a demanding task which calls for unflinching efforts from both sides. At the current stage, I believe it is important for the two countries to do the following:

First, they need to have candid and in-depth communication so as to avoid strategic misjudgment. China and the United States have maintained close high-level contacts and exchanges through quite a number of mechanisms of dialogue and communication including the SandED, the Strategic Security Dialogue and the Consultation on Asia-Pacific Affairs. Given the profoundly changing and complex international and regional landscape and the growing destabilizing factors and uncertainties, to have in-depth, candid discussions to find solutions and to strengthen coordination and cooperation will help reduce mutual suspicion and boost strategic mutual trust. Apart from increasing dialogue, coordination and cooperation on global issues and international and regional hotspot issues, it is also important that the two sides truly follow the principle of mutual respect, understand each other's national condition and public opinion, respect each other's choice of social system and development path, and refrain from imposing one's own will on the other side.

#### THESE REGIONAL HOTSPOTS INCLUDE LATIN AMERICA

Beijing Xinhua 09

[Xinhua: 1st Round Sino-US Strategic, Economic Dialogue Concludes in Washington World News Connection July 29, 2009 Westlaw]

IV. On Sino-US Cooperation on International and Regional Issues The two sides discussed the common international challenges facing the two countries. They were resolved to maintain close communication and coordination and work together with the rest of the international community for the settlement of conflicts and reduction of tension that trigger regional and global instability. The two sides noted that traditional and nontraditional security threats are intertwined, and situations in Northeast Asia, South Asia, the Middle East and African require combined efforts. The two sides reaffirmed the importance of the Six-Party Talks, the continuing efforts to achieve denuclearization of the Korean Peninsula, and the maintaining of peace and stability of the Peninsula and Northeast Asia. They emphasized the importance of implementing UN Security Council Resolution 1874 and resolving the nuclear issue on the Peninsula through peaceful means. The two sides agreed to exert greater efforts for the early realization of the aforementioned goals. The two countries also pledged to increase coordination to jointly promote stability and development in Afghanistan and Pakistan. They agreed that senior officials from both countries with responsibilities for Iran and the Middle East should continue to consult closely on these issues. The two sides expressed their willingness to increase coordination and consultation on the issue of Sudan to jointly seek an early and enduring political settlement of the Darfur issue and promote the peace process between the north and the south of Sudan.

BOTh sides pointed out their shared opposition to terrorism and pledged to work collaboratively to strengthen global non-proliferation and arms control regimes. They reiterated their respective nuclear policies and discussed the upcoming 2010 Nuclear Nonproliferation Treaty [NPT] Review Conference and the Conference on Disarmament. The two sides also exchanged views on the Global Nuclear Security Summit proposed by the US side and reiterated the importance of existing dialogues on security, arms control, non-proliferation, and counter-terrorism issues. The two sides intend to further enhance dialogue and cooperation to combat transnational challenges, such as cross-border crimes, terrorism, the illegal drug trade and piracy.

The two sides agreed to enhance consultation on policy planning, Asia, the Middle East, Africa, Central Asia, and Latin America within the Strategic Dialogue framework, with a view to broadening and deepening cooperation on issues of mutual concern.

V. On Mechanism for China-US Strategic and Economic Dialogue

The two sides expressed their shared view that the SED will continue to advance China-US relations in tandem with other existing bilateral mechanisms. The Dialogue represents a major initiative to further develop China-US relations in the new era, and offers an important platform for the two countries to deepen understanding, enhance mutual trust, and promote cooperation. In order to more fully explore shared solutions on a wide range of common challenges, the Chinese and US delegations look forward to further discussions on specific matters raised at the dialogues through special representatives of the two presidents, working groups, and existing bilateral dialogues.

#### OUR IMPACT IS THE BIGGEST – EVERY IMPACT SCENARIO CAN BE SOLVED BY SINO-US RELATIONS

Beijing Xinhua 09

[Beijing Xinhua in English China's official news service for English-language audiences (New China News Agency)] Xinhua 'Commentary': World Has Every Reason To Closely Watch Obama's China Visit 11/17/09 Westlaw]

As American geostrategist Zbigniew Brzezinski said at a January seminar marking the 30th anniversary of the two countries' diplomatic ties, China and the United States have become important forces in global political and economic stability.

Since the ice-breaking visit by late U.S. President Richard Nixon to China in 1972 against the backdrop of the Cold War, bilateral cooperation has expanded to the areas of politics, economy, military and culture.

BOTh countries are aware of the importance of their relations.

Though Obama won the presidential election under the banner of "Change," he decided to keep the U.S.' China policy of communications and cooperation unchanged, according to Harry Harding, a leading China specialist in the United States who has advised several presidents.

President Hu Jintao also stressed more than once that healthy development of Sino-U.S. relations is not only in the fundamental interests of both countries, but is also conducive to peace, stability and prosperity in the Asia-Pacific region and the world at large.

Given the interwoven relations that China and the United States share in a global village, both nations see huge potential in seeking their common interests through expanded cooperation.

And major challenges, such as the global economic downturn, terrorism, nuclear proliferation, and climate change, cannot be tackled by a single country on its own. Instead, they need the joint efforts of the international community, where the United States and China, as two influential countries, should play exemplary roles.

Obama's visit to China offered an opportunity for China and the United States to reach understandings and agreements and seek solutions to a variety of global issues.

China served as an important engine to drive forward global economic recovery while the United States saw its economy reverse the trend of recession in the third quarter of this year.

To reinforce the positive economic momentum and promote global development in a steady, orderly manner, the United States and China need to join hands in the spirit of mutual support.

Among all of the issues, global warming is a problem of immediate consequence. Earlier this month in Barcelona, representatives from more than 40 small-island countries warned during a five-day convention on climate change that any delay in a solution to the problem would increase the possibility of their homes being flooded.

As the world's two major greenhouse gas emitters, how the United States and China will cooperate and assume responsibility is a concern with global ramifications.

Undoubtedly, China and the United States still, and will always, have disagreements, especially in the fields of trade, currencies, greenhouse gas emissions, and political and military trust.

But disagreements provide room for talks, improved communications and enhanced cooperation.

## 2

#### A. 1AC USES WEAK DATA AS THE METHOD FROM WHICH TO MAKE PREDICTIONS

Rosekind 09

[Mark R. Rosekind, Ph.D Kevin B. Gregory Alertness Solutions The Moebus Aviation Report on "Scientific and Medical Evaluationof Flight Time Limitations": Invalid, Insufficient, and Risky Alertness SolutionsJanuary 2009]

While the extensive scientific literature on fatigue has definitively established its role in reducing alertness, performance, and safety, there remains a significant and critical gap in the scientific data available to address policy issues and provide specific solutions. There are few studies that have specifically tested an alertness strategy/fatigue countermeasure or compared an established regulatory policy to an alternative or quantified the benefits of implementing an Alertness Management Program (AMP)/Fatigue Risk Management System (FRMS). Regulatory authorities continually confront this gap between the science establishing fatigue as a significant safety issue and having data to address policy issues or provide specific solutions in their efforts to address fatigue risks through policymaking. EASA's request for scientific and medical evaluation of 18 specific flight time limitation questions is one more example of such an effort. However, the resulting MAR addressing the 18 posed questions is invalid, insufficient, and risky. The following highlights some of the most significant and relevant issues in each of these areas.

I. Invalid

a. No data. In 13 of the 18 questions posed there is direct acknowledgement that no data is available to address the question or the data that are cited do not specifically address the question posed. Therefore, 73% of the questions do not have any data or relevant,appropriate data to provide an evaluation of the issue identified (e.g., #1, 6, 10, 13).

b. Recommendations without data . Though acknowledging no data or no relevant data are available, specific recommendations are still made to address the questions posed. The primary task identified was to provide a scientific and medical evaluation of the questions posed, however, the MAR goes beyond this tasking to provide specific recommendations intended for policy making .These recommendations were not data-driven and relied on generalizing from other information to fill the "data gap" . However, the recommendations are presented in a manner to suggest that they could be used for data based policies.

c. Subjective data sources . A significant number of the scientific citations used to substantiate specific points were studies that utilized only subjective , self-reporting measures. Subjective, self-report measures can be discrepant from objective measures of alertness and performance, biased, and influenced by varied sources. It is critical that scientific data used as a basis for policy making be based on objective , measurable outcomes related to performance, relevant operational variables, behavioral actions,errors, incidents, accidents and appropriate safety measures. Subjective measures can complement these other varied objective outcomes but are highly questionable as the exclusive source for an evaluation or recommendation. For example, the MAR cites previous NASA research related to a subjective survey on sleep quantity and quality in onboard crew rest/bunk facilities (1). Yet the MAR does not include a complementary NASA study that included objective physiological measures of sleep quantity and quality in onboard rest facilities during actual operations involving two different flight patterns and three different aircraft (2).

d. Ignores operational experience and safety history. While a scientific and medical evaluation of the 18 questions posed is relevant, equally relevant is the operational experience and safety history of the activities being addressed. Policy making to address established safety issues could consider safety data, operational experience, relevant scientific findings, and where appropriate, economic factors. When the MAR goes beyond scientific and medical evaluation to make "practical" recommendations, it enters a realm where these other relevant factors (safety data, operational experience, 'economics, etc.) become significant considerations.

e. No quantification of risk/benefit . In policy-making efforts, it is critical to go beyond documentation of an effect to quantifying specifics of the risk . Regarding fatigue, this translates into both quantifying the risk and identifying the specific areas where these risks are expressed. First, this allows decisions about what specific fatigue-related risks to address and their priorities . Second, it provides a basis for determining expected,quantifiable benefits and outcomes that could be measured by implementing policies and activities . The MAR expert panel made an effort to use this approach in a couple of its responses (e.g., #2, 12). However, the quantification of risks and subsequent, quantifiable benefits of implementing policies and recommendations should be the lead issue in addressing all of the questions posed .

#### THE IMPACT IS TWO FOLD

#### (1) EPISTEMOLOGY – ASSUME THE 1AC SOLVENCY, UNIQUENESS AND IMPACTS HAVE ZERO PERCENT PROBABILITY BECAUSE THEY USE WEAK DATA

Zellner 07

[Arnold Graduate School of Business, University of Chicago Philosophy and objectives of econometrics Journal of Econometrics Volume 136, Issue 2, February 2007, Pages 331-339]

On the relation of science and econometrics, I have for long emphasized the unity of science principle, which Karl Pearson put forward as follows: the unity of science is a unity of methods employed in analyzing and learning from experience and data. The subject matter discipline may be economics, history, physics, or the like, but the methods employed in analyzing and learning from data are basically the same. As (Jeffreys, 1957) and (Jeffreys, 1967) expresses the idea, “There must be a uniform standard of validity for all hypotheses, irrespective of the subject . Different laws may hold in different subjects, but they must be tested by the same criteria ; otherwise we have no guarantee that our decisions will be those warranted by the data and not merely of inadequate analysis or of believing what we want to believe . ” Thus the unity of science principle sets the same standards for work in the natural and social sciences. For example, this range of considerations is particularly relevant for those in economics who cross-correlate variables and assert causation on the basis of such correlations alone (See Zellner (1979a) for consideration of such tests and of alternative definitions of causality) or those who carelessly test all hypotheses in the “5% accept–reject syndrome.” Also, we must emphasize the importance of a general unified set of methods for use in science and the undesirability of unnecessary jargon and ad hoc methods.

Given that we take the unity of science principle seriously, we may next ask what are the main objectives of science. As Karl Pearson, Harold Jeffreys, and others state, one of the main objectives of science , and I add of econometrics, is that of learning from our experience and data. Knowledge so obtained may be sought for its own sake, for example, to satisfy our curiosity about economic phenomena and/or for practical policy and other decision purposes. One part of our knowledge is merely description of what we have observed; the more important part is generalization or induction, that is that part which “... consists of making inferences from past experience to predict future [or as yet unobserved] experience,” as Jeffreys puts it.

Thus there are at least two components to our knowledge, description and generalization or induction. While generalization or induction is usually considered to be more important, description plays a significant role in science, including economics. For example, Burns and Mitchell's monumental NBER study Measuring Business Cycles is mainly descriptive but valuable in providing general features of business cycles about which others can generalize . While some have damned this work as “measurement without theory ,” the opposite sin of “ theory without measurement” seems much more serious. In fact there are too many mathematical economic theories which explain no past data and which are incapable of making predictions about future or as yet unobserved experience. Such economic theories are mathematical denk-spielen and not inductive generalizations to which I referred above. Further, I shall later mention another important role for description in connection with reductive inference.

In learning from our experience and data, it is critical that we understand the roles and nature of three kinds of inference, namely, deductive inference, inductive inference, and reductive inference.

As regards deductive inference, Reichenbach (1958) explains, “Logical proof is called deduction; the conclusion is obtained by deducing it from other statements, called the premises of the argument. The argument is so constructed that if the premises are true the conclusions must also be true. ... It unwraps, so to speak, the conclusion that was wrapped up in the premises.” Clearly, much economic theory is an exercise in deductive inference. However, the inadequacies of deductive inference for scientific work must be noted. First, traditional deductive inference leads just to the extreme attitudes of proof, disproof, or ignorance with respect to propositions. There is no provision for a statement like “A proposition is probably true” in deductive inference or logic. This is a deficiency of deduction for scientific work wherein such statements are very widely employed and found to be useful. Second, deduction or deductive inference alone provides no guide for choice among logically correct alternative explanations or theories. As is well known, for any given set of data, there is an infinity of models which fit the data exactly. Deduction provides no guide for selection among this infinity of models.

Thus, there is a need for a type of inference which is broader than deductive inference and which yields statements less extreme than deductive inference . This type of inference is called inductive inference by Jeffreys. It enables us to associate probabilities with propositions and to manipulate them in a consistent, logical way to take account of new information. Deductive statements of proof and disproof are then viewed as limiting cases of inductive logic wherein probabilities approach one or zero, respectively.

Jeffreys (1967), who has made major contributions to the development of inductive logic in his book Theory of Probability states that inductive inference involves “ making inferences from past experience to predict future experience ” by use of inductive generalizations or laws . And given actual outcomes, the procedures of inductive inference allow us to revise probabilities associated with inductive generalizations or laws to reflect the information contained in new data .

Note that for Jeffreys induction is not an economical description of past data, as Mach suggested since Mach omitted the all-important predictive aspect of induction. Further, predictive inductive inferences have an unavoidable uncertainty associated with them, as Hume pointed out many years ago. For example, it is impossible to prove, deductively or inductively that generalizations or laws, even the Chicago quantity theory of money , are absolutely true . Even Newton's laws, which were considered “ absolutely true ” by many physicists in the nineteenth century, have been replaced by Einstein's laws. Thus there is an unavoidable uncertainty associated with laws in all areas of science, including economics. Inductive logic provides a quantification of this uncertainty by associating probabilities with laws and providing logically consistent procedures for changing these probabilities as new evidence arises . In this regard, probability is viewed as representing a degree of reasonable belief with the limiting values of zero being complete disbelief or disproof and of one being complete belief of proof.

For Jeffreys, Bayesian statistics is implied by his theory of scientific method. Thus, Bayesian statistics is the technology of inductive inference. The operations of Bayesian statistics enable us to make probability statements about parameters ’ values and future values of variables . Also, optimal point estimates and point predictions can be readily obtained by Bayesian methods. Probabilities and/or odds ratios relating to competing hypotheses or models can be evaluated which reflect initial information and sample information. Thus, many inference problems encountered in induction can be solved by Bayesian methods and these solutions are compatible with Jeffreys's theory of scientific method. See, e.g., Berry et al. (1996), Box and Tiao (1973), DeGroot (1970), Fienberg and Zellner (1975) and (Zellner, 1971) and (Zellner, 1979b) for presentations, discussions and applications of Bayesian methods.

To illustrate inductive inference in econometrics, consider Milton Friedman's Theory of the Consumption Function . In his book Friedman set forth a bold inductive generalization which, he showed, explained variation in much past data, a fact that increased most individuals ’ degree of reasonable belief in his theory. Further, Friedman proposed a number of additional tests of his model and predicted their outcomes, an example of what we referred to above as inductive inference . Many of these tests have been performed with results compatible with Friedman's predictions. Such results enhance the degree of reasonable belief that we have in Friedman's theory. This is the kind of research in economics and econometrics , which illustrates well the nature of inductive inference and is, in my opinion, most productive .

As regards inductive generalizations, there are a few points, which deserve to be emphasized. First, a useful starting point for inductive generalization in many instances is the proposition that all variation is considered random or nonsystematic unless shown otherwise . A good example of the fruitfulness of such a starting point is given by the random walk hypothesis for stock prices in stock market research. Many researchers have put forward models to forecast stock prices by use of variables such as auto sales, changes in money, and the like only to find that their forecasts are no better than those yielded by a random walk model. In other areas, when a researcher proposes a new effect, the burden is on him to show that data support the new effect . The initial hypothesis is thus, “ No effect unless shown otherwise . ”

#### ASSIGNING WEAK DATA A NON-ZERO PERCENT CROWS OUT STRONG DATA BECAUSE OF TIME SKEW

Reuter 86

[Peter Reuter Senior Economist in the Washington Office of the Rand Corporation.THE SOCIAL COSTS OF THE DEMAND FOR QUANTIFICATION Journal of Policy Analysis and Management Volume 5 Issue 4, Pages 807 - 812] [ct]

But in other areas of social policy , the expert community is small , not quantitative or ill-informed. The advocates often make initial estimates of the scale of a problem. Such numbers frequently have obscure origins in data drawn from confidential or proprietary sources with vague descriptions of how the data were used. The report of the 1970 Commission on Product Safety, which announced 20 million product-caused injuries, is a good example; it is difficult to determine how these numbers were produced or what they really measure.10 Another instance was the estimate of huge revenues generated by illegal drug transactions, some $80-100 billion in 1980 according to the National Narcotics Intelligence Consumers Committee." These numbers helped fuel the demand for enormous increases in federal resources for combatting drug traffic. Precisely because these numbers are the first estimates of what-ever they purport to measure, they often achieve great prominence. Congressional hearings will cite them, newspapers will re-port them; their propounders and advocates will obtain at least fleeting fame, if not lasting fortune. If the numbers come from agencies, they will help those agencies increase their share of the budget. The bad estimates are produced at least partly because good estimates are so difficult to make in these areas . It is easy to point to the failings of the first "measurement" but often hard to pro-duce a convincing alternative . Later, more serious researchers dis close the weaknesses of their data sources and the assumptions required to generate the estimates and consequently are criticized by the advocates of the earlier figure. In this case we have a minor variation on the standard Gresham's law: the bad but obscure will drive out (or prevent the creation of) the serious but explicit . In the case of drug revenues there is a now a small critical literature'' but the difficulty of producing better estimates has limited the efficacy of that criticism.

#### (2) DISCLOSURE ETHICS –EXPLICIT OR IMPLICIT REFUSAL TO SHARE DATA IS UNETHICAL BECAUSE IT DISCOURAGES DEBATES OVER THE DATA

Gelman 11

[Andrew Gelman, professor of statistics and political science and director of the Applied Statistics Center at Columbia University. received the Outstanding Statistical Application award from the American Statistical Association, the award for best article published in the American Political Science Review, Massachusetts Institute of Technology. S.B., mathematics, 1985. S.B., physics, 1986 Harvard University, M.A., statistics, 1987. Ph.D., statistics, 1990 “Open Data and Open Methods” Chance Vol 24. No 4. 2011] [Google]

The ethics violation, as I see it, by Blackman and his statistician colleague came not in their design, data collection, or even their flawed analysis, but when they had the opportunity to subject their data to an outside analysis.

Having been supplied free travel and housing to that conference and having spent several days more reading a key source article and analyzing its summary statistics, I felt both an obligation and an inclination to help. So I looked up Black¬man’s address in North Carolina and sent him a polite letter saying I was a statistician who had attended a confer¬ence in which his work was mentioned, that I had two ideas of how he could ana¬lyze his data better (I gave some details here and maybe a graph or two), and that I would like to see his raw data so I could do more. I used Harvard letterhead, but was careful not to identify myself as a PhD student—I think I called myself a “researcher”—and I ran the letter by some of my fellow students to make sure I was being sufficiently polite.

A few days later, I followed up the letter with a phone call—older readers of CHANCE might recall these primitive technologies—at which point Blackman told me he had discussed the matter with his statistician and they decided their analysis was just fine and it would be too much trouble for them to copy the data from their logbooks and send it to me.

That was the unethical step. Refusing to share your data is improper, and the lead researcher and his statistician should have realized that, given their lack of expertise in statistics, it was at least plausible that an outsider could improve on their analysis.

You might consider my ethical judg-ment too harsh—maybe these guys were busy that week, or just in a bad mood— but sharing data is central to scientific ethics. If you really believe your results, you should want your data out in the open. If, on the other hand, you have a sneaking suspicion that maybe there’s something there you don’t want to see, and then you keep your raw data hidden, it’s a problem. I don’t think the dead chickens had any confidentiality issues. And what sort of researcher is so sure of the analy¬sis of his MS-level statistician that he won’t even consider the possibility that an outside analysis might reveal something new? (Again, I’m not trying to be a PhD snob here. There’s a lot statisticians at all education levels can do, but one should also recognize one’s limitations. I have a PhD, myself, but try always to be open to the possibility that I might be making a mistake—which is a good thing, because I make mistakes a lot!)

I regret not following up with a more formal request—I assume the Environmental Protection Agency is ultimately subject to the Freedom of Information Act—but at this point, the lab notebooks are probably lost forever.

The ethics of a decision depend on one’s state of knowledge. In this case, I would not blame a team of insuffi¬ciently trained researchers for a weak but conventional statistical analysis—but I do blame the principal investigator for violating the principle of openness in scientific research. This is hardly an ethical lapse on the scale of tobacco executives who commissioned research studies and then buried their findings, but it is something statisticians must always be aware of: Do not be so tied to your analyses that you are afraid that others might, with the same data, find something different.

Complications

Data sharing is an obligation, but the practicalities are a bit tricky. Twenty years ago, it was a lot harder to extract your data in a nice format for sharing. You could photocopy your lab note¬books, but the raw numbers might have needed some explanation. And it also took a lot more effort to ask someone for their data. Today, people don’t need to write a letter and make a follow-up phone call, but can simply fire off an email to any researcher in the world asking for data.

Especially for high-stakes policy questions (such as the risks of electric power lines), transparency is important, and we support initiatives for automatically making data public upon publication of results so researchers can share data without it being a burden. When requested to supply information from our own past research, I have sometimes been unable to find some data files or replicate analyses written in archaic computer languages. This is embarrassing—I can still share much of my data, but cannot always share the steps of the analysis— and motivates me to be more systematic with our computations in the future.

As a statistician, I think the key point is to recognize that different analyses can give different perspectives on a data set. I am not suggesting that researchers be regularly subjected to forensic analyses of all their decisions in data collection and analysis, explaining every email exchange or every new version of a data set that had a transformation or data exclusion. But openness should be the norm.

#### THE ALTERNATIVE IS EXPLICIT DISCLOSURE OF STRONG DATA

#### STRONG DATA REQUIRES (1) THE DATA USED AND (2) A REGRESSION TABLE

#### **A REGRESSION TABLE MUST INCLUDE** THE SAMPLE SIZE, THE MODEL AND VARIABLES USED, T STATISTICS, BETA COEFFICIENTS, AND R-SQUARED

Wooldridge 02

[Jeffrey Professor of Economics, Michigan State University, previously Associate Professor of Economics, Massachusetts Institute of Technology, Ph.D. Economics, UCSD; Introductory Econometrics: A Modern Approach 2nd Edition. Pages 150-1]

We end this chapter by providing a few guidelines on how to report multiple regression results for relatively complicated empirical projects. This should teach you to read published works in the applied social sciences, while also preparing you to write your own empirical papers. We will expand on this topic in the remainder of the text by reporting results from various examples, but many of the key points can be made now. Naturally, the estimated OLS coefficients should always be reported. For the key variables in an analysis, you should interpret the estimated coefficients (which often requires knowing the units of measurement of the variables). For example, is an esti- mate an elasticity, or does it have some other interpretation that needs explanation? The economic or practical importance of the estimates of the key variables should be discussed.

The standard errors should always be included along with the estimated coefficients. Some authors prefer to report the t statistics rather than the standard errors (and often just the absolute value of the t statistics). While nothing is really wrong with this, there is some preference for reporting standard errors. First, it forces us to think carefully about the null hypothesis being tested; the null is not always that the population parameter is zero. Second, having standard errors makes it easier to compute confidence intervals.

The R-squared from the regression should always be included. We have seen that, in addition to providing a goodness-of-fit measure, it makes calculation of F statistics for exclusion restrictions simple. Reporting the sum of squared residuals and the standard error of the regression is sometimes a good idea, but it is not crucial. The number of observations used in estimating any equation should appear near the estimated equation. If only a couple of models are being estimated, the results can be summarized in equation form, as we have done up to this point. However, in many papers, several equations are estimated with many different sets of independent variables. We may estimate the same equation for different groups of people, or even have equations explaining different dependent variables. In such cases, it is better to summarize the results in one or more tables. The dependent variable should be indicated clearly in the table, and the independent variables should be listed in the first column. Standard errors (or t statistics) can be put in parentheses below the estimates.

#### STRONG DATA MUST COME PRIOR TO POLICY DECISIONS – ALTERNATIVE CAN DO THE PLAN ONLY AFTER OUR METHOD IS ESTABLISHED

Kahan 13

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based—All the Way Down”; *Culture, Politics and Climate Change* (eds. M. Boykoff & D. Crow, Routledge Press, 2014 Forthcoming; February 13, 2013)

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Dispelling controversy over climate change, then, requires overcoming this “tragedy of the science communication commons.” We need science communication strategies that make crediting the best available evidence compatible with membership in the diverse cultural groups that comprise our pluralistic liberal society. If we can rid the science communication environment of the toxic partisan resonances that transform positions on climate change into badges of loyalty to contending factions, then we can be confident that ordinary members of the public, using the normal and normally reliable faculties that they use to discern who knows what about what, will converge on the best available scientific evidence on climate change as they do on the vast run of other questions for which science supplies the best answer.

What are those strategies? I refuse to answer.

The reason is not that I have no ideas about how to counteract the influences that generate motivated reasoning of the sort that figures in cultural cognition. Decision scientists, including ones using the methods of the science of science communication to address climate change risk perceptions have done lots of work that I think helps to identify plausible lines of attack (Myers, Nisbet, Maibach & Leiserowitz 2012; Hart & Nisbett 2011; Kahan, Jenkins-Smith, Tarantola, Silva & Braman 2012).

But here too the number of strategies that it is plausible to believe will work exceeds the number it’s reasonable to believe will actually work. If I were to say, “Here’s the answer: do this!,” I’d be engaging in the very form of story-telling that it is the central aim of this essay to discredit.

I can’t tell those engaged in the mission to improve public engagement with climate science what to do but I can tell them how to do it: by engaging in a genuinely evidence-based approach to science communication. To make this prescription responsibly more concrete, I’ll say one thing about the methods that should be employed for this purpose, and another about where to use them.

a. Methods. In my view, both making use of and enlarging our knowledge of climate science communication requires making a transition from lab models to field experiments. The research that I adverted to on strategies for counteracting motivated reasoning consist of simplified and stylized experiments administered face-to-face or on-line to general population samples. The best studies build explicitly on previous research—much of it also consisting in stylized experiments—that have generated information about the nature of the motivating group dispositions and the specific cognitive mechanisms through which they operate. They then formulate and test conjectures about how devices already familiar to decision science—including message framing, in-group information sources, identity-affirmation, and narrative—might be adapted to avoid triggering these mechan¬isms with communicating with these groups.1

But such studies do not in themselves generate useable communication mate¬rials. They are only models of how materials that reflect their essential characteris¬tics might work. Experimental models of this type play a critical role in the ad¬vancement of science communication knowledge: by silencing the cacophony of real-world influences that operate independently of anyone’s control, they make it possible for researchers to isolate and manipulate mechanisms of interest, and thus draw confident inferences about their significance, or lack thereof. They are thus ideally suited to reducing the class of the merely plausible strategies to ones that there communicators can have an empirically justified conviction are likely to have an impact. But one can’t then take the stimulus materials used in such experiments and send them to people in the mail or show them on television and imagine that they will have an effect.

Communicators are relying on a bad model if they expect lab researchers to supply them with a bounty of ready-to use strategies. The researchers have fur¬nished them something else: a reliable map of where to look. Such a map (it is hoped) will spare the communicators from wasting their time searching for non¬existent buried treasure But the communicators will still have to dig, making and acting on informed judgments about what sorts of real materials they believe might reproduce in the real-world contexts the effects that researchers elicited in their models.

The communicators, moreover, are the only ones who can competently direct this reproduction effort. The science communication researchers who constructed the models can’t just tell them what to do because they don’t know enough about the critical details of the communication environment: who the relevant players are, what their stakes and interests might be, how they talk to each other, and whom they listen to. If researchers nevertheless accept the invitation to give “how to” advice, the best they will be able to manage are banalities—“Know your au¬dience!”; “Grab the audience’s attention!”—along with Goldilocks admonitions such as, “Use vivid images, because people engage information with their emo¬tions. . . but beware of appealing too much to emotion, because people become numb and shut down when they are overwhelmed with alarming images!”

Communicators possess knowledge of all the messy particulars that research¬ers not only didn’t need to understand but were obliged to abstract away from in constructing their models. Indeed, like all smart and practical people, the commu-nicators are filled with many plausible ideas about how to proceed—more than they have the time and resources to implement, and many of which are not com¬patible with one another anyway. What experimental models—if constructed ap-propriately—can tell them is which of their surmises rest on empirically sound presuppositions and which do not. Exposure to the information that such model¬ing yields will (if the models are elegant) activate experienced-informed imagina¬tion on the communicators’ part, and enable them to make evidence-informed judgments about which strategies they believe are most likely to work for their particular problem.

At that point, it is time for the scientist of science communication to step back in—or to join alongside the communicator. The communicator’s informed conjecture is now a hypothesis to be tested. In advising field communicators, science of science communication researchers should treat what the communicators do as experiments. Science communication researchers should work with the communi¬cator to structure their communication strategies in a manner that yields valid ob¬servations that can be measured and analyzed.

Indeed, communicators, with or without the advice of science of science communication researchers, should not just go on blind instinct. They shouldn’t just read a few studies, translate them into a plausible-sounding plans of action, and then wing it. Their plausible surmises about what will work are likely to be more plausible, more likely to work, than the ones dreamed up by less worldly la-boratory researchers. But the researchers’ plausible surmises are still just that. They are still only hypotheses. Without evidence, we will not learn whether policies based on such surmises did or didn’t work. If we don’t learn that, we won’t really have learned anything, including how we can do even better next time.

Genuinely evidence-based science communication must be based on evidence all the way down. Communicators should make themselves aware of the existing empirical information that science communication researchers have generated (and steer clear of the myriad stories that retail consumers of decision-science work like to tell) about why the public is divided on climate science. They should formulate strategies that seek to reproduce in the world effects that that have been shown to help counter the dynamics of motivated reasoning responsible for such division. Then, working with empirical researchers, they should observe and measure. They should collect appropriate forms of pretest or preliminary data to try corroborate that the basis for expecting a strategy to work is sound and to calibrate and refine its elements to maximize is expected effect. They should also collect and analyze data on the actual impact of their strategies once they’ve been deployed.

Finally, they should make the information that they have generated at every step of this process available to others so that they can learn from it too. Every exercise in evidence-based science communication itself generates knowledge. Every such exercise it¬self furnishes an instructive model of how that knowledge can be intelligently used. The failure to extract and share the intelligence latent in doing science communica¬tion perpetuates the dissipation of collective knowledge that it is the primary mis-sion of the science of science communication to staunch.

CARD CONTINUES AFTER DISCUSSING LOCAL ADAPTION ON CLIMATE CHANGE STRATEGY

5 A central aim of the science of science communication is to protect the value of what is arguably our society’s greatest asset. Modern science has conferred on us the knowledge necessary to live healthier, safer, and more prosperous lives than our forbears could even have imagined, much less lived. But the same conditions of political liberty and cultural pluralism that have nourished the advancement of science have multiplied the competing number of certifiers of what is collectively known (Kahan 2013). Our prospects for actually making effective use of what science has taught us about the workings of nature demands that we use science to improve our understanding of how to enable culturally diverse citizens to con¬verge on the best scientific evidence as they deliberate over how to pursue their common ends.

The imperfect state of the science of science communication is part of the ex-planation for cultural polarization over climate science. But it is no more than a part of it. Another, perhaps even larger one is the failure for decades to have made effective use of what had already been learned as a result of the scientific study of risk perception and communication.

Now, many public-spirited citizens and institutions are turning to the know¬ledge associated with the science of science communication to try dispel the fog of cultural conflict that obscures the best available scientific evidence on climate change. But unless we use evidence-based methods, this decisive opportunity to inte¬grate the science of science communication with the practice of science will end up wasted, too.

#### STRONG DATA CAN SOLVE EPISTOMOLOGY –

#### REGRESSION MODELS MAKE ACCURATE PREDICTIONS

Braumoeller & Sartori 02

[Bear F. Braumoeller, Associate Professor of Political Science at Ohio State University and Anne E. Sartori , Associate Professor of Political Science at Northwestern University 6 Empirical-Quantitative Approaches to the Study of International Relations in Cases, Numbers, Models: International Relations Research Methods edited by Detlef F. Sprinz and Yael Wolinsky REVISED, November 2002]

Advantages of the Statistical Method

One advantage of the statistical method is that it permits political scientists to aggregate information from a tremendous number of cases. This advantage is perhaps so obvious that its importance is often overlooked. To comprehend its magnitude we need only imagine trying to make sense of a thousand surveys of individual attitudes, beliefs, voting behavior, etc., without the aid of statistics. The ability to extract even basic summary statistics from such a mass of data is immensely valuable: even something as unsophisticated as a sample mean—say, per capita GNP—conveys a wealth of information in compact and understandable form.

The ability to aggregate information is a potent stimulus for theorizing. Theory development often begins when a researcher uncovers an empirical puzzle that remains unexplained by prior theory (Lave and March 1993). Such a puzzle leads to a search for an explanation, and eventually to new or better-developed theory. A puzzle can emerge from a single case, but the researcher often would like to know whether or not it indicates a prevalent pattern of behavior. Only statistics can provide the answer to this question.2

For example, statistical analyses indicate that a number of pairs of states (e.g., India and Pakistan) engage in a disproportionate number of wars (Goertz and Diehl 1992). The empirical discovery of this phenomenon, which the literature terms “enduring rivalry,” has led to a number of attempts to explain the behavior of this set of dyads (e.g. Vasquez 1995; Bennett 1998; Diehl and Goertz 2000): what is it that makes states become rivals; why do rivals fight so often; and how do rivalries end?

The use of statistics also makes the terms of a given debate more explicit. Inference requires assumptions, whether implicit or explicit; statistics force scholars to be quite explicit about the nature of at least some assumptions. Transparency is valuable both because assumptions should be as clear as possible and because one can compensate for violated assumptions if they are understood.3

In addition to standards of inference, the use of statistics necessarily entails standards of evidence. Even the most scrupulous researcher can be hard-pressed to avoid selectively evidence that would contradict his or her theory. Here, too, standardization is an asset; the need for coding procedures forces the researcher to be explicit about criteria for measurement and mitigates the human tendency to notice only trends that are consistent with the theory under investigation. Quantification can be a considerable boon both to reliability and validity: in the former case, explicit tests of reliability can flag unacceptably “noisy” measures, while in the latter details of the coding process make it clear what is, and is not, being measured.4For example, the Polity democracy index is an aid to scholars because the coding rules are quite specific and reliability can be calculated.

Statistical techniques also permit us to assess the claim that observed associations among variables are due to chance. Such assessments are critical to the testing of theory, and they are often very difficult to make. The statistical method can make the task almost trivially easy. For example, the extent to which any given Third World country votes with the United States in the U.N. will naturally vary from year to year; as a result, it can be difficult to determine whether an increase or decrease following a change in domestic political regime is an indicator of realignment or simply the product of random fluctuation. Absent the ability to assess the odds that such fluctuations are due to chance, analysts could argue endlessly over their substantive significance.5 Hagan (1989) addresses this question by testing to determine whether mean voting scores under a given regime differ significantly from mean voting scores under its successor; in about half of the 87 cases he examines, he finds that random fluctuation is a highly improbable (p<0.05) explanation for the difference in voting patterns across regimes. Although statistical testing does not answer the question with perfect certainty, it gives far more precise answers than could otherwise be obtained. In so doing it dramatically narrows potential areas of disagreement.

By answering the question of whether observed associations are the plausible result of chance, the statistical method also permits us to draw causal inferences. Using statistics, one can investigate ancillary associations implied by a posited causal process and assess the probability that these associations are due to chance.6 Because international relations scholars constantly seek to understand why actors behave as they do, this ability is perhaps the method’s greatest contribution to the discipline. To continue the above example, one might wonder not just whether a given country’s U.N. votes coincide to a greater or lesser degree with those of the United States but why. One obvious possibility would be that American foreign aid, to put it crudely, buys votes: American leaders use foreign assistance to induce cooperation. If this is the case, increases in American aid should be followed by an increased coincidence of votes in the U.N. on issues considered to be important by the U.S. Wang (1999) tests this hypothesis by examining the voting records of sixty-five developing countries from 1984 to 1993 and finds that an increase in American foreign aid generally precedes an increase in voting alignment; moreover, the positive relationship between the two is very unlikely (again, p<0.05) to be the result of chance. Absent statistical techniques, the effects of American aid could be debated one anecdote at a time without any conclusion in sight. Even the most meticulous case selection and comparison could never produce such precise results.

A final strength of the statistical method is the fact that it conveys the ability to test two explanations against one another with remarkable precision. For example, while tests of realist and of domestic-political explanations of conflict typically limit themselves to ruling out chance associations, Clarke (2001) tests realism against two domestic-political explanations. He finds that realism “either does as well as the rival or better than the rival” theory (28).7

#### (2) EXPLICIT DISCLOSURE OF DATA PROMOTES ACCURACY – WE USE A REGRESSION MODEL OF SHARED DATA FROM 49 PAPERS CONTAINING OVER 1148 TEST STATISTICS

Wicherts et al 2011

[Jelte M. Wicherts\*, Marjan Bakker, Dylan Molenaar Psychology Department, Faculty of Social and Behavioral Sciences, University of Amsterdam, Amsterdam, The Netherlands "Willingness to Share Research Data Is Related to the Strength of the Evidence and the Quality of Reporting of Statistical Results" PLoS ONE 6(11)] [http://www.plosone.org/article/info%3Adoi %2F10. 1371%2Fjournal.pone.0026828]

In the current study, we related the willingness to share data from 49 papers published in Journal of Personality and Social Psychology or Journal of Experimental Psychology: Learning,Memory, and Cognition to two relevant characteristics of the statistical outcomes reported in the papers, namely the internal consistency of the statistical results and the distribution of significantly reported (p,.05) p-values. We restricted the attention to JPSP and JEP:LMC, because (1) authors in these journals were more willing to share data than authors in the other journals from which Wicherts et al. requested data, (2) no corresponding authors in these two journals declined to share data, because they were part of an ongoing project or because of propriety rightsor ethical considerations, and (3) studies in these two journals were fairly homogeneous in terms of analysis and design (mostly lab experiments).

CARD CONTINUES

Errors in the Reporting of Statistical Results The 49 papers contained a total of 1148 test statistics that were presented as significant at p,.05 . Table 1 presents for each paper the number of significantly reported test results, the number of misreporting errors, and the median and average of all genuinely significant p-values (as based on the recalculated values). Forty-nine of these statistics (4.3%) were inconsistent with the reported (range of) pvalues. In forty-seven of the inconsistent results (95.9%), the reported p-value (range) was smaller than the recalculated p-value. Figure 1 gives the origin of three types reporting errors. Although 51.1% (587) of the tests statistics from papers from which no data were shared, most incorrectly reported p-values (36 out of 49; 73.5%) originated from these papers. These errors include quite small ones (e.g., p=.0002 reported as p,.0001). Twenty-eight of the 32 p-values (87.5%) were incorrectly reported at the level of the 2nd decimal (e.g., =.02 reported as p,.01) were from papers from which no data shared. Negative binomial regressions (Table 2) that accounted for the number of test statistics and the average p- values in each paper (see below) showed that reluctance to share data was predictive of the prevalence of both types of reporting errors

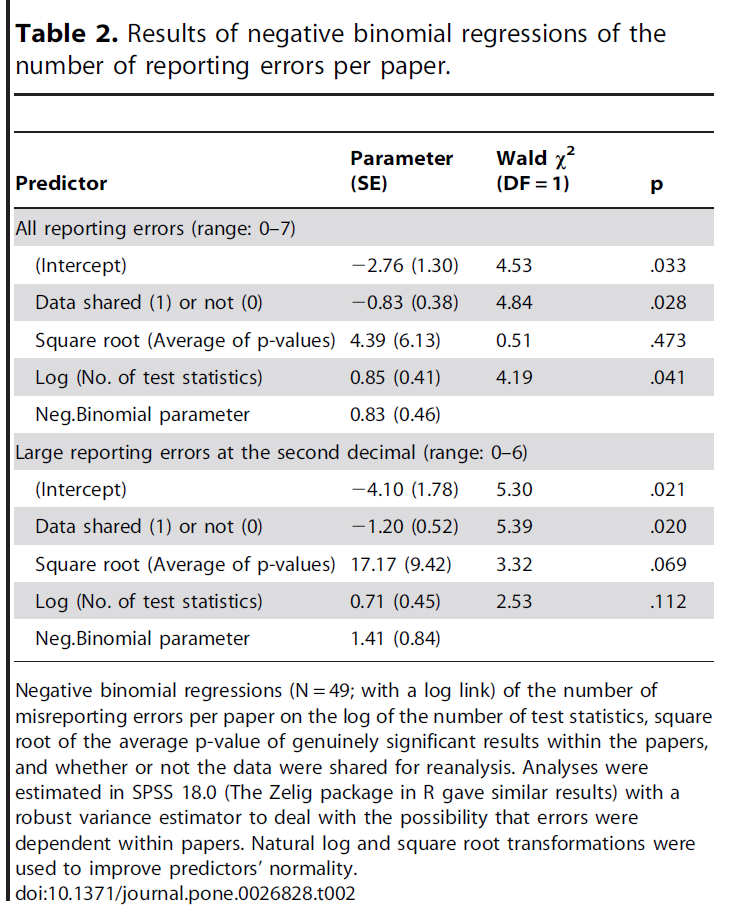
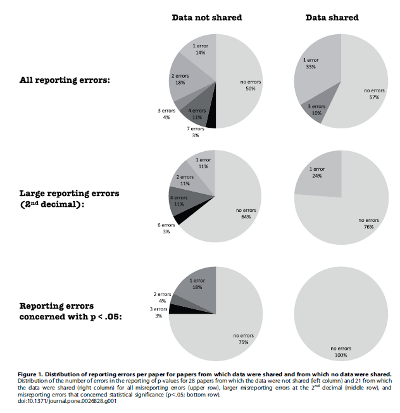
CARD CONTINUES

In this sample of psychology papers, the authors ’ reluctance to share data was associated with more errors in reporting of statistical results and with relatively weaker evidence (against the null hypothesis) . The documented errors are arguably the tip of the iceberg of potential errors and biases in statistical analyses and the reporting of statistical results. It is rather disconcerting that roughly 50% of published papers in psychology contain reporting errors [33] and that the unwillingness to share data was most pronounced when the errors concerned statistical significance .

Although our results are consistent with the notion that the reluctance to share data is generated by the author’s fear that reanalysis will expose errors and lead to opposing views on the results, our results are correlational in nature and so they are open to alternative interpretations. Although the two groups of papers are similar in terms of research fields and designs, it is possible that they differ in other regards. Notably, statistically rigorous researchers may archive their data better and may be more attentive towards statistical power than less statistically rigorous researchers. If so, more statistically rigorous researchers will more promptly share their data, conduct more powerful tests, and so report lower p-values. However, a check of the cell sizes in both categories of papers (see Text S2) did not suggest that statistical power was systematically higher in studies from which data were shared.

The association between reporting errors and sharing of data after results are published may also reflect differences in the rigor with which researchers manage their data. Rigorously working researchers may simply commit fewer reporting errors because they manage and archive their data more diligently. A recent survey among 192 Dutch psychological researchers highlighted a rather poor practice of data archiving in psychology [36]. When asked whether they archived their research data, only a third of the psychologists responded positively. This is remarkable in light of guidelines of the APA [11] that stipulate that data should be retained a minimum of five years after publication of the study. Even among those psychologists who indicated that they “archive” their data, most did not follow proper archiving standards (e.g., by keeping code books and writing meta-data [37]), but simply stored data on their own (current) computer (32%), on CDs/DVDs (18%), or on the shelf (20%). Haphazard data management is documented in a number of scientific fields [37,38,39], may result in errors in analyzing and reporting of results, and obviously impedes the sharing of data after results are published. Regardless of the underlying processes, the results on the basis of the current papers imply that it is most difficult to verify published statistical results when these are contentious. We focused here on NHST within two psychology journals and so it isdesirable to replicate our results in other fields and in the context of alternative statistical approaches. However, it is likely that similar problems play a role in the widespread reluctance to share data in other scientific fields [13,14,15,16,17,18,19,20]. Because existing guidelines on data sharing offer little promise for improvement [40], progress in psychological science and related fields would benefit from having research data itself be part of the process of replication [15,16], notably by the establishment by journals, professional organizations, and granting bodies of mandatory data archiving policies. More stringent policies concerning data archiving will not only facilitate verification of analyses and corrections of the scientific record, but also improve the quality of reporting of statistical results. Changing policies require better educational training in data management and data archiving, which is currently suboptimal in many fields [36,37,38,39]. On the other hand,technical capabilities for storage are already available. For instance, several trial registers in the medical sciences (like clinicaltrials.gov) enable storage of research data. Rigorous archiving of data involves documentation of variables, meta-data, saving data files in formats that are robust (e.g., ASCII files), and submitting files to repositories that already require these standards. Best practices in conducting analyses and reporting statistical results involve, for instance, that all co-authors hold copies of the data, and that at least two of the authors independently run all the analyses (as we did in this study). Such double-checks and the possibility for others to independently verify results later should go a long way in dealing with human factors in the conduct of statistical analyses and the reporting of results.

Table 2 –Negative Binomial Regressions



## 3

#### The narrative of progress structures us foreign policy; it reduces complex social issues to simple technical linear problem/solutions – aff harms aren't true, they can't solve, and it turns case

Escobar 1995 [Arturo, Kenan Distinguished Professor of Anthropology, UNC-Chapel Hill Director, Institute of Latin American Studies, UNC-Chapel Hill Adjunct Professor, Department of Geography, UNC-Chapel Hill Adjunct Professor, Department of Communications, UNC-Chapel Hill Fellow, Institute of Arts and Humanities, UNC Fellow, Center for Urban and Regional Research, UNC Facilitator, World Anthropologies Network / Red de Antropologías Mundiales Research Associate, Instituto Colombiano de Antropología e Historia, Bogotá, “Encountering Development THE MAKING AND UNMAKING OF THE THIRD WORLD” 1995, page 52-53]

CONCLUSION The crucial threshold and transformation that took place in the early post– World War II period discussed in this chapter were the result not of a radical epistemological or political breakthrough but of the reorganization of a number of factors that allowed the Third World to display a new visibility and to irrupt into a new realm of language. This new space was carved out of the vast and dense surface of the Third World, placing it in a ﬁeld of power. Underdevelopment became the subject of political technologies that sought to erase it from the face of the Earth but that ended up, instead, multiplying it to inﬁnity. Development fostered a way of conceiving of social life as a technical problem, as a matter of rational decision and management to be entrusted to that group of people—the development professionals—whose specialized knowledge allegedly qualiﬁed them for the task. Instead of seeing change as a process rooted in the interpretation of each society’s history and cultural tradition—as a number of intellectuals in various parts of the Third World had attempted to do in the 1920s and 1930s (Gandhi being the best known of them)—these professionals sought to devise mechanisms and procedures to make societies ﬁt a preexisting model that embodied the structures and functions of modernity. Like sorcerers’ apprentices, the development professionals awakened once again the dream of reason that, in their hands, as in earlier instances, produced a troubling reality. At times, development grew to be so important for Third World countries that it became acceptable for their rulers to subject their populations to an inﬁnite variety of interventions, to more encompassing forms of power and systems of control; so important that First and Third World elites accepted the price of massive impoverishment, of selling Third World resources to the most convenient bidder, of degrading their physical and human ecologies, of killing and torturing, of condemning their indigenous populations to near extinction; so important that many in the Third World began to think of themselves as inferior, underdeveloped, and ignorant and to doubt the value of their own culture, deciding instead to pledge allegiance to the banners of reason and progress; so important, ﬁnally, that the achievement of development clouded the awareness of the impossibility of fulﬁlling the promises that development seemed to be making. After four decades of this discourse, most forms of understanding and representing the Third World are still dictated by the same basic tenets. The forms of power that have appeared act not so much by repression but by normalization; not by ignorance but by controlled knowledge; not by humanitarian concern but by the bureaucratization of social action. As the conditions that gave rise to development became more pressing, it could only increase its hold, reﬁne its methods, and extend its reach even further. That the materiality of these conditions is not conjured up by an “objective” body of knowledge but is charted out by the rational discourses of economists, politicians, and development experts of all types should already be clear. What has been achieved is a speciﬁc conﬁguration of factors and forces in which the new language of development ﬁnds support. As a discourse, development is thus a very real historical formation, albeit articulated around an artiﬁcial construct (underdevelopment) and upon a certain materiality (the conditions baptized as underdevelopment), which must be conceptualized in different ways if the power of the development discourse is to be challenged or displaced. To be sure, there is a situation of economic exploitation that must be recognized and dealt with. Power is too cynical at the level of exploitation and should be resisted on its own terms. There is also a certain materiality of life conditions that is extremely preoccupying and that requires great effort and attention. But those seeking to understand the Third World through development have long lost sight of this materiality by building upon it a reality that like a castle in the air has haunted us for decades. Understanding the history of the investment of the Third World by Western forms of knowledge and power is a way to shift the ground somewhat so that we can start to look at that materiality with different eyes and in different categories. The coherence of effects that the development discourse achieved is the key to its success as a hegemonic form of representation: the construction of the poor and underdeveloped as universal, preconstituted subjects, based on the privilege of the representers; the exercise of power over the Third World made possible by this discursive homogenization (which entails the erasure of the complexity and diversity of Third World peoples, so that a squatter in Mexico City, a Nepalese peasant, and a Tuareg nomad become equivalent to each other as poor and underdeveloped); and the colonization and domination of the natural and human ecologies and economies of the Third World.26 Development assumes a teleology to the extent that it proposes that the “natives” will sooner or later be reformed; at the same time, however, it reproduces endlessly the separation between reformers and those to be reformed by keeping alive the premise of the Third World as different and inferior, as having a limited humanity in relation to the accomplished European. Development relies on this perpetual recognition and disavowal of difference, a feature identiﬁed by Bhabha (1990) as inherent to discrimination. The signiﬁers of “poverty”, “illiteracy,” “hunger,” and so forth have already achieved a ﬁxity as signiﬁeds of “underdevelopment” which seems impossible to sunder. Perhaps no other factor has contributed to cementing the association of “poverty” with “underdevelopment” as the discourse of economists. To them I dedicate the coming chapter.

#### Specifically, the aff invokes the narrative of progress:

#### Our impact is the biggest – the narrative of progress locks us into ignoring pressing economic, environmental, nuclear, and social issues that risk extinction because we believe our exceptionalism

Loewen 07(James W. "Jim" Loewen, American sociologist, historian, and author, University of Vermont, “Lies My Teacher Told Me”, page 285 – 286, 2007, RLA)

This is the America in which most textbook authors grew up and the America they still try to sell to students today. Perhaps textbooks do not question the notion that bigger is better because the idea of progress conforms with the way Americans like to think about education: arneliorative, leading step by step to opportunity for individuals and progress for the whole society. The ideology of progress also provides hope for the future. Certainly most Americans want to believe that their society has been, on balance, a boon and not a curse to mankind and to the planet. History textbooks go even further to imply that simply participating in society. Americans contribute to a notion that is constantly progressing and remains the hope of the world. As Boorstein and Kelley put it, near the end of A History of the United States, “ Americans – makers of something out of nothing – have delivered a new way of life to the far corners of the world.” Thus, the idea of American exceptionalism – the United States as the best country in the world – which starts in our textbooks with the Pilgrims, gets projected into the future. Faith in progress has played various functions in society and in American history textbooks. The faith has promoted the status quo in the most literal sense, for it proclaims that to progress we must simply do more of the same. This belief has been particularly useful to the upper class, because Americans would be persuaded to ignore the injustice of the social class if they thought the economic pie kept getting better for all. The idea of progress also fits in with social Darwinism, which implies that lower class lower owing to its own fault. Progress as an ideology has been intrinsically antirevolutionary: because things are getting better all the time, everyone should believe in the system. Portraying America so optimistically also helps textbooks with stand attacks by unpatriotic critics in Texas and other textbook adaptation states. Internationally, referring to have not countries as “developing nations” has helped the “developed nations” avoid facing the injustice of worldwide stratification. In reality “development” has been making Third World Nations poorer, compared to the First World. Per capita income in the First World was five times that in the Third Word in 1850, ten times in 1960, and fourteen times by 1970. It’s tricky to measure these ratios, partly because a dollar buys more in the Third World than in the First, but per capita income in the First world is now twenty to sixty times that in the Third World, The vocabulary of progress remains relentlessly hopeful, however, with regard to the “undeveloped.” As economist E.J. Mishan put it, “Complacency is suffused over the globe, by referring to these destitute and sometimes desperate countries by the fatuous no – menclature of ‘develiping nations.’ In the nineteenth century, progress provided an equally splendid rational for imperialism. Europeans and Americans saw themselves as performing government services for utilizing natural resources of natives in distant lands who were to backward to do it themselves. ¶ Almost every day brings new reasons for ecological concerns, from deforestation to the equator to ozone holes at the poles. Cancer rates climb and we don’t know why. We have no way to measure the full extend of human impact on earth . The average sperm count in healthy human males around the world has dropped nearly 50 percent over the past fifty years. If environmentally caused, this is no laughing matter, for sperm have only to decline in a straight line for another fifty years and we will have wiped out human kind without knowing how we did it. We Were similarly unaware for years that killing mosquitoes with DDT was wiping out birds of prey around the globe. Our increasing power makes it increasingly possible that humankind will make the earth uninhabitable by accident. Indeed, we almost have on several occasions. In the early 1990s, for example nations around the planet agreed to stop production of CFGs that damaged the ozone in the upper atmosphere. In 2006 Washington Post writer Joel Achenbach noted, “Scientists are haunted by realization that if CFCs had been made with a slightly different type of chemistry they’d have destroyed much of the ozone layer over the entire planet. We were simply lucky. All these considerations imply that more of the same economic development and nation state governance that brought us this far may not guide us to a livable planet in the long run. We do not simply face an energy crisis that might be solved if we only develop low – cost energy that does not pollute or cause global warming. On the contrary, if we had cheaper energy, imagine the havoc we might cause! Scientists have already envisioned how we could happily use it to decrease salinity of the seas, increase our arable Land, and in other ways make our planet nicer for us – in the short run. Instead, we must start treating the earth as if we plan to stay here. At some point in the future, perhaps before readers of today’s high school textbooks pass their fifteenth birthdays. Industrialized nations, including the United States may move towards steady state economies in their consumption of energy and raw materials. Thus, our oil crisis can best be viewed as a wake up call to change our ways. Second our use of oil (and all other fossil fuels) has a serious worldwide impact: global warming, As everyone knows, except some high school history textbook authors, this warming melts the polar ice caps, causing sea levels to rise. Oceans rose one foot in the last century. The most conservative estimates, embraced by the George W Bush Administration, predicts they will rise another three feet in this century. Around the world --- from Mexico to Venace to much of Bangladesh – hundreds of millions of people live close enough to sea level that this rise will endager their lives and occupations. The resulting dislocation will constitute the biggest crisis mankind has faced since the beginning a recorded history. And this is the most pleasant estimate. If the Greenland Ice Sheet Ricses the ocean may rise twenty three feet. Scientists James Lovelock in 1970 famously invented the “Gaia Hypothesus,” the idea that the earth acts as a homeostatic system. Recently Lovelock has pointed out that as Earth’s equilibrium gets disturbed, some disequilibrium processes may cause even faster warming. As the polar ice cap melts, for example , they no longer reflect the son’s rays, so the earth absorbs more heat. Lovelock predicts the death of billions of people before the equilibrium is established once more. Global warming also increases other weather problems: the average windspeeds of hurricanes have doubled in the past thirty years, and they are also more frequent. That’s not all. Evidence shows that carbon dioxide, a normal result of burning oil or coal, also makes oceans more acidic. Scientists warn that, by the end of the century, this acididty could decimate coral reefs and kill of creates that undergurd the sea’s food chain. “It’s the single most profound environmental change I’ve ever learned about in my entire career,” said Thomas Lovejoy, author of Climate Change and Biodivdersity. What we’re doing in the next decade will affect our oceans for millions of years,” said Ken Caldeira, oceanographer at Stanford University. In addition to our energy and global warming crises we face other severe problems. Thousands of species face imminent extinction. One list of likely canidadates includes a third of all amphibians, a fourth of the world’s mammals, and an eight of its birds. Wilson thinks the foregoing is optimistic and believes two thirds of all species will perish before the end of the century. Nuclear proliferation poses another threat. In 1945 only one country – the United States had the know how and economic means to build nuclear weapons. Since then, Great Britian, the USSR, France, China, India, Pakistan, Israel, South Africa, and apparently North Korea have joined the nuclear club. If Pakistan and North Korea can do it, clearly almost every nation on earth – and some private organizations, including terrorist groups has the capacity. The United States cam uncomfortably close to using nuclear weapons in Vietnam in 1969, and India and Pakistan came uncomfortably close to using them against each other in 2002. In the long run just keeping to the old paths regarding all these new problems is unlikely to work. “From the mere fact that humanity has survived to the present, no hope for the future can be salvaged,” Mushan noted. “The human race can only perish once.¶

#### Vote neg – refusing the narrative of progress is necessary to allow Latin American movements to rise up to check dominant narratives of exceptionalism

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THIS BOOK is about the avant-gardes of Latin America and their critique of modernity.1 Rather than engaging in the construction of an alternative modernity or attempting to renegotiate the modern in relation to the traditional, these vanguardists, I contend, sought to produce a critique of the modern as a global project.¶ From the perspective of a narrative of progress, Latin America seems to be cast either as a relic from the primitive past or as an unrealized but promising future. The linear temporality of the Judeo-Christian tradition— "ascending, descending, progressive or regressive," as Gianni Vattimo (1992, 87) characterizes it—and its modern varieties—evolution, decadence, revolution, and novelty—were as deeply embedded in the Latin American discourses of emancipation as they were in every project of modernity. But the difference that the avant-gardes opened to inquiry, a difference that cannot be reduced to the contours of "cultural difference" in the traditional anthropological sense, is that at both ends of the foundational narrative—the promise of the future and redemption through and of the past—Latin American discourse reencountered itself as subject to a larger order. It is as if the various futurisms and primitivisms that European movements displayed in an attempt to articulate a reaction against a bourgeois, conservative order (to express it in blatantly vanguardistic terms) were untenable from the Latin American position. For the Latin American avant-gardes, these alternatives kept referring back to the subaltern situation of Latin Americans themselves vis-a-vis the idea of the West, a concept that neither clearly included nor excluded Latin America.-¶ From this position, Latin American avant-gardes could undertake a critique of modernity and its narratives, including those of "international"1 modernism and its avant-gardes, but along a different axis, not through rushing the temporalities of progress forward or through a return to primitive origins. Instead, they developed narratives of space that articulated the Latin American situation in a shifting world order. Some European avant-gardes movements (cubism, dadaism, surrealism, etc.) attempted to undermine the legacy of the Enlightenment and its foundation in the white man as the model of rationality and historical agency under the direction of universal, abstract progress. Because of their investment in modernity and their peripheral position in its foundational narratives, however, Latin Americans were forced to level their criticism through and with a particular attentive-ness to spatial issues that addressed this problematic inclusion but that were repressed by the same idea of progress that they embraced.¶ This is not to say that Latin American avant-gardes were at any point more "advanced" than their European counterparts. While they tried to unravel European cultural supremacy, European avant-gardes usually remained attached to an assumption of their own universality. Artistic flights overseas were one way in which this was expressed, as the search for non-Western ways of life and perception became an exploration into the repressed soul of the universal human. For Latin American avant-gardists, (many times, no doubt, inspired by the Europeans), that position was untenable because the process of "discovery" was carried out under the suspicion of reproducing colonial dynamics. Therefore, tracking down influences and assessing the degree to which Latin American movements followed or did not follow European movements, as has been done repeatedly, misses the point and reproduces a colonial logic of unilinear development that, as we will see, Latin American avant-gardes tried to destabilize.¶ Vicky Unruh rightly argues in her seminal book Latin American Vanguards (1994) that these movements overcame an idea of national and/or continental identity as rooted in an original nature and landscape.4 What Peter Burger in his Theory of the Avant-Garde (1984) called the nonorganic character of the work of art, that is, the possibility of assembling different components with no final resolution of the internal tensions, is akin to this moment in which identity was conceived as a collage (Unruh, chapter 3). The connection Unruh makes between the collagelike constitution of the work of art and issues of national and continental identity is compelling, since ideas of hybridism, transculturation, and cultural anthropophagy or cannibalization—conceptual tools that the avant-gardes favored—traversed the twentieth-century Latin American discussion. But to what degree did the vanguards represent only another step in the constitution of national or regional identities? No doubt, the different movements and writers are inevitably embedded in national traditions. But some texts of the vanguards, I propose, suggest that the question of identity is intertwined with a redefinition of the location of discourses about it in the context of a global negotiation. In these texts, the problem of loci of enunciation—that is, the conditions of possibility for Latin American artists and writers to intervene in the larger debate about modernity—takes precedence and redefines the problem of identity.¶ As part of a geopolitical shift that, with the advent of World War I, shook loose the assumptions of nineteenth-century liberal culture, the avant-gardists in Latin America explored the limits of a national, culturalist response to crisis of the universality of civilization. The concern of the national Creole elite in the constitution of its hegemony—namely, how to organize the nation (or Latin America, for that matter) so as to inscribe its culture more firmly in the annals of universal history—was for the first time left in suspense, owing to the war that put an end to the nineteenth century's faith in the rationality of European history and the worldwide projection.¶ Since literary criticism in Latin America was by and large engaged in the travails of the national cultural elite, I intend to open up the vanguard texts to this different set of concerns, shedding light by the same token on the makeup of that critical tradition. I am interested in the moments of interruption when vanguard experiments called attention to contemporary places of identification and symbolic production that were neither national cultures nor reducible to them. Such interruptions occurred as literary discourses exhibited an openness to planetary concerns that resulted in an exploration of vanguardistic ambition. As a result, the vanguards were led to recognize the indebtedness of literary discourses to the reproduction of colonial perspectives and to occupy positions of utterance that they imagined to dislodge this coloniality.¶ "From 1922 (the date is tentative, it is a situation of consciousness that has been defining itself little by little) all that has ended," writes Jorge Luis Borges (1926,15), the vanguardist, in reference to the sea change that set in motion a Latin American artistic and intellectual field that would no longer voice "our longing for Europe."5 Without attempting to reduce cultural production to a set of contextual conditions, I want to point out certain major historical trends that framed this alternative imaginary. The 1920s and 1930s were decades when the political order was reconfigured as the consequence of an ongoing change in the global geopolitical balance following World War I. It was a time of increasing democratization in the Latin American social space, but it was also an era of new pacts between conservative forces in different national arenas. The upheavals and revolutions that provoked regime changes in more than one national context at the end of the 1920s differed in character, yet they shared a common soil, as historian Tulio Halperin Donghi (1996, 371) makes clear:¶ The world crises that erupted in 1929 had an immediate and devastating impact in Latin America, the loudest sign of which was the collapse, between 1930 and 1933, of the majority of the political situations that had consolidated during the good times that came before. What was not immediately evident was that the crash differed from previous complications along the way not only in terms of its unprecedented intensity; this crisis ushered in a new era in which the painful solutions that had allowed the continent to incorporate itself into an increasingly global economy proved ineffectual. 6¶ We are not referring to a discrete event but to a broad historical pattern that subtly undermined faith in the viability of national autonomy as a way to frame, understand, and localize the production of culture. The question of what might constitute Latin Americas possibilities, its conditions of cultural production in this "increasingly global economy," was at stake in many avant-garde texts of the early 1920s.¶ A parallel demographic change touched on the imaginary of positive modernity and its inception in foundational national narratives. The rural-urban balance of power on which modernity as spatial conquest was carried out (that is, the city as a model of govern mentality whose effects were to be projected onto the rest of the territory) was unsettled with the formation of what the historian Jose Luis Romero (1986, chapter 7) called the "massified city." Major demographic changes were already occurring in many Latin American cities and had produced an overall change in the cultural landscape at the end of the nineteenth century. But the vanguard movements were the first artistic enterprises of the cultural elite that didn't react to this shift with strategies of domination, separation, or rejection. Instead, in an effort to cross the "great divide" between mass culture and elite culture, they integrated with and accommodated themselves to the logic of mass production and consumption.' The well-studied phenomena of unabashed promotion of artistic movements, the circulation of ideas through magazines, the interest in new media, and the political engagement with increasingly visible nonelite subjects can all be traced back to the vanguards' attempts to break through the narrowly conceived boundaries of literary culture.¶ This change of cultural practices entailed a broader concern with what I will call positionality. At a time when the hierarchies embedded in a notion of a progress that promised to spread from center to periphery and from city to countryside were being questioned, some cultural actors found themselves needing to gauge new configurations of production, circulation, and consumption within an expanded horizon, a world-system of attribution of cultural value and meaning. Countering modernity as a merely expansionist force, to the unilinearity of universal history, Latin American artistic movements would continue to posit places of resistance to anchor their identities in the midst of historical flows. Consequently, the elemental refuge of the baroque rain forest that magically eschews Western categories or the boundary-less hinterlands that haunt the gaze of the observer, though refractory of positivist discourse, would continue to be revamped (by early travelers of the nineteenth century, regional writers of the early twentieth century, and practitioners of magic realism) as a cornerstone of cultural formation. But the avant-gardes opened the possibility of a different strategy. Amid so much praise and condemnation of speed and transportation as icons of the universalized, homogeneously modern abolition of spatial constraints, the vanguards elaborated, for the first time, their own loci of enunciation imbricated in the circulation of goods, discourses, and peoples. Two seminal manifestos of the early 1920s—one Argentinean, the other Brazilian—are exemplary in that regard:¶ A single struggle—the struggle for the way. Lets divide it up: poetry for import. And Brazilwood poetry for export. (Schwartz 1991, 138)¶ Martin Fierro accepts the consequences and responsibilities of situating oneself. . . . Instructed on his antecedents, his anatomy, the meridian on which he walks, he consults the barometer, the calendar, before stepping into the street in order to live it with the nerves and mentality of nowadays... .8 To accentuate and to expand to the rest of the intellectual activities, the independent movement in language initiated by [poet] Ruben Dario doesn't mean .. . that we will renounce, much less pretend not to recognize, that every morning we use Swiss tooth paste, French towels, and English soap (Schwartz 1991, H3-I4)-9¶ Two native, national products, one commercial ("Brazilwood," the first Brazilian export to the metropolis and the source of the regions name) and one cultural (Martin Fierro, the mythic character in the epic poem about an autochthonous gaucho as a founder of Argentinean nationality) are not only the anchor for a renewed nationalism, as has been argued widely, but also become vantage points from which to understand an expanded geopolitics. The map projected to elaborate this position needs to be altogether different from the one inherited from the period of nation-state formation. The modern and the new, so the "Manifesto Martin Fierro" seems to claim, necessarily come from an elsewhere that also has the power to define modernity and its others, whereas the "Brazilwood manifesto" foregrounds the fact that what stands as artistically new also depends on a sort of validation that is not at all foreign to a global circulation of commodities.