

批判性数据思维

数据挖掘与产业实践

案例1：重庆啤酒

 新浪财经

财经首页 | 新浪首页 | 新浪导航

 新浪新闻

这里的新闻**亮**瞎了

我和我的小伙伴们惊呆了

快速围观

新浪功能广告平台

加关注

重庆啤酒豪赌乙肝疫苗梦碎

起因：重庆啤酒乙肝疫苗项目试验逊于预期股价大跌|时间：2011年12月9日|制作：陈兴然

重庆啤酒股价 | 重庆啤酒财务摘要 | 重庆啤酒股本结构 | 重庆啤酒股吧 | 重庆啤酒资讯 | 重庆啤酒研报 | 重庆啤酒微博



大成基金
DACHENG FUND

大成:重仓重庆啤酒符合投资逻辑

1 2 3 4

大成基金称被公告误导 重仓重庆啤酒符合投资逻辑

摘要：重啤2011年12月7日公布乙肝疫苗揭盲进展，分析认为数据表明乙肝疫苗无效果，这导致重啤复牌后连续9跌停，重仓的大成基金浮亏巨大。重啤事件也引发一系列讨论。

分享到微博

重庆啤酒称乙肝疫苗无显著疗效

[重庆啤酒单独用药组试验尘埃落定 无显著疗效 或放弃后续研究]

- 重庆啤酒去年净利降6成 4季度泽熙扫货大成出逃
- 重庆啤酒年报解密换庄 内情股东人数骤增3倍

重庆啤酒简介

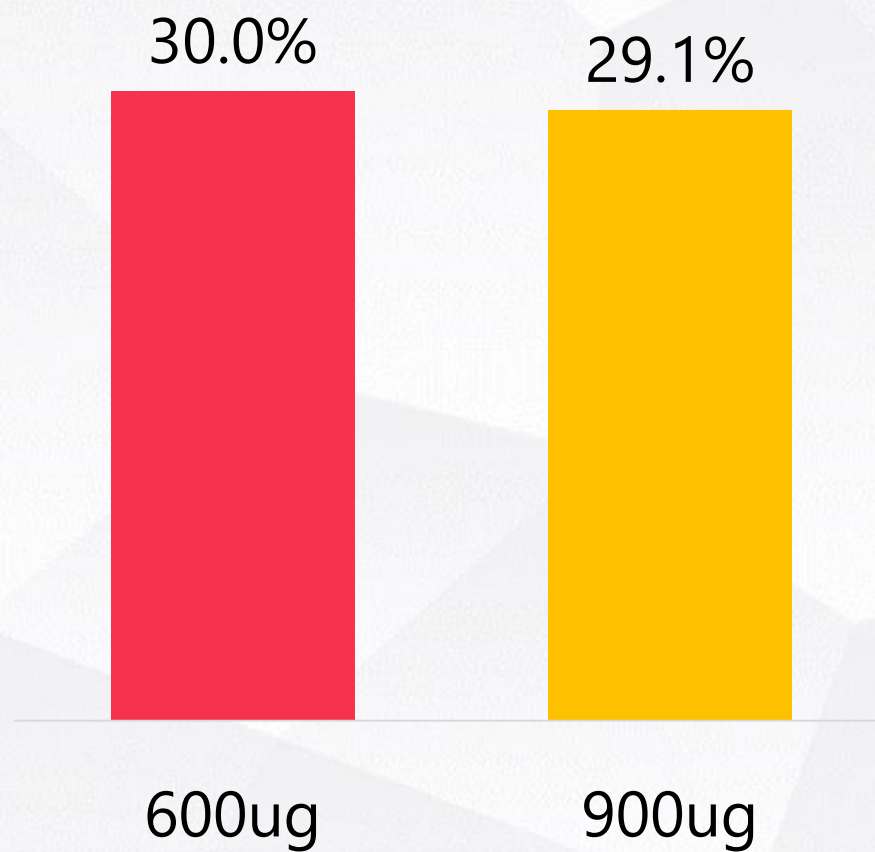


重庆啤酒股份有限公司由重庆啤酒集团有限责任公司作为独家发起人将重庆啤酒厂进行改组，采用定向募集方式设立的股份有限公司，公司于1997年10月在上交所上市交易。公司主要从事啤酒的生产和销售，主要产品有山城啤酒、重庆啤酒、大梁山啤酒、国人啤酒、九华山啤酒等。

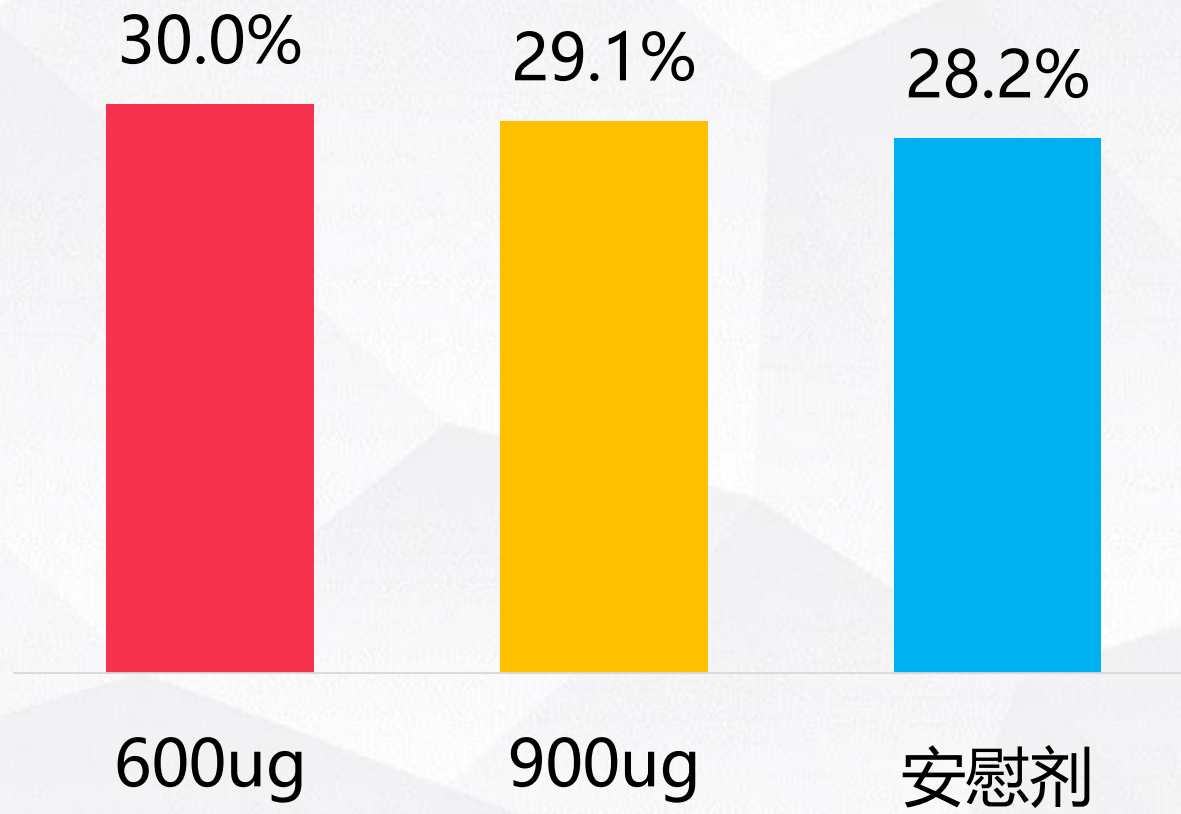
重啤乙肝疫苗大事记



疗效如何？



安慰剂.....



详细报表.....

表 12.5.1.-1 结束点 HBeAg/抗-HBe 血清学转换率及组间比较 - ITT 人群

	安慰剂 (N=117)	εPA-44 600μg (N=120)	εPA-44 900μg (N=117)	εPA-44 (N=237)
HBeAg/抗-HBe 血清学转换率, n (%)				
否	84 (71.8)	84 (70.0)	83 (70.9)	167 (70.5)
是	33 (28.2)	36 (30.0)	34 (29.1)	70 (29.5)
安慰剂组对照各 εPA-44 药物组				
比率比 (OR)		1.1	1.0	1.1
95%可信区间		(0.61 - 1.89)	(0.60 - 1.84)	(0.66 - 1.74)
P-值		0.79	0.87	0.79
εPA-44 600ug 组对照 εPA-44 900ug 组 ¹				
比率比 (OR)			1.0	
95%可信区间			(0.55 - 1.66)	
P-值			0.86	

Treatment: 30.0% > Placebo: 28.2%! 😊

重啤连续9跌停



2011.12.20 重啤

连续9跌停!

股价下跌近**63%**

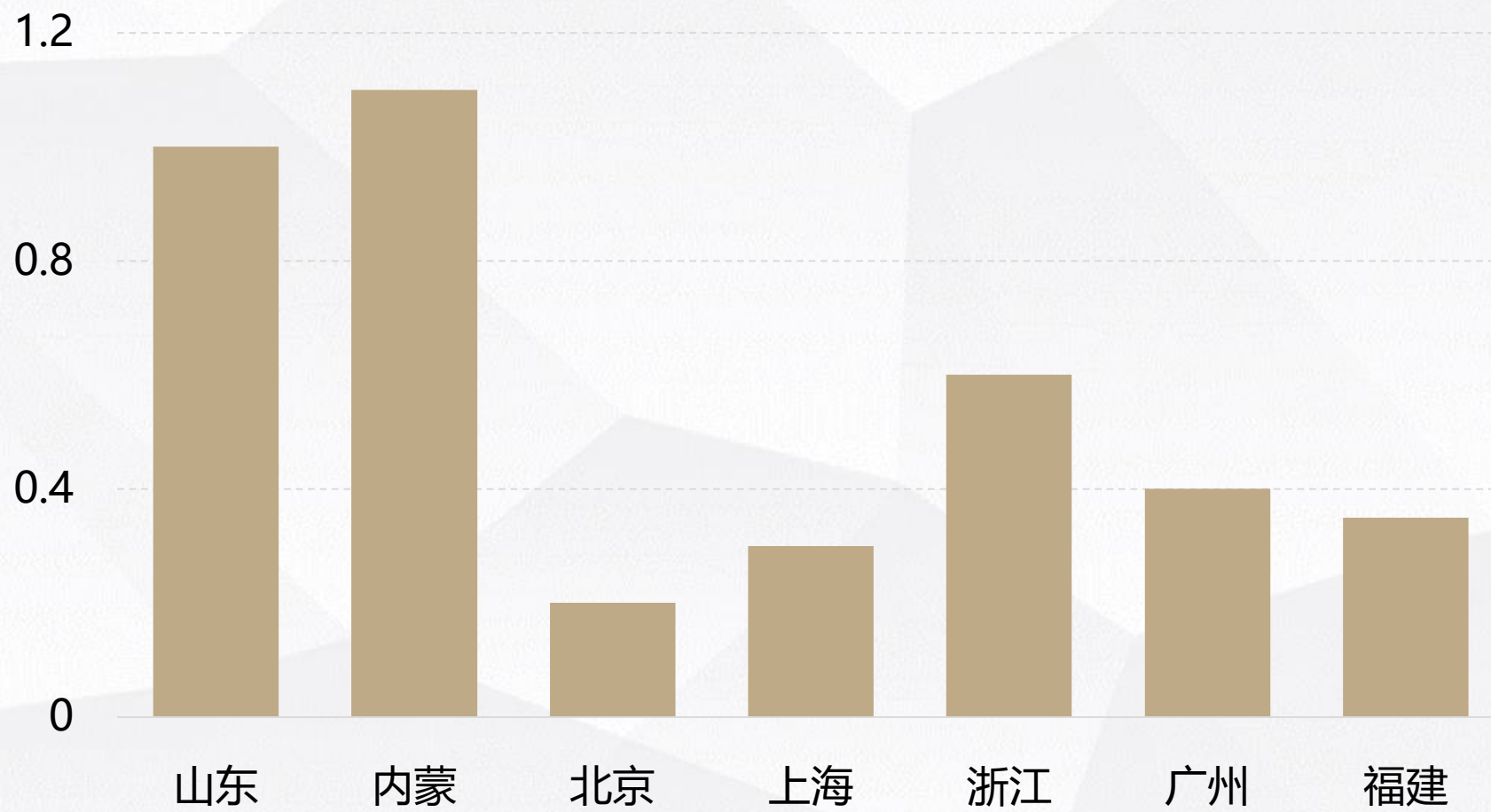
案例2：私立大学招生



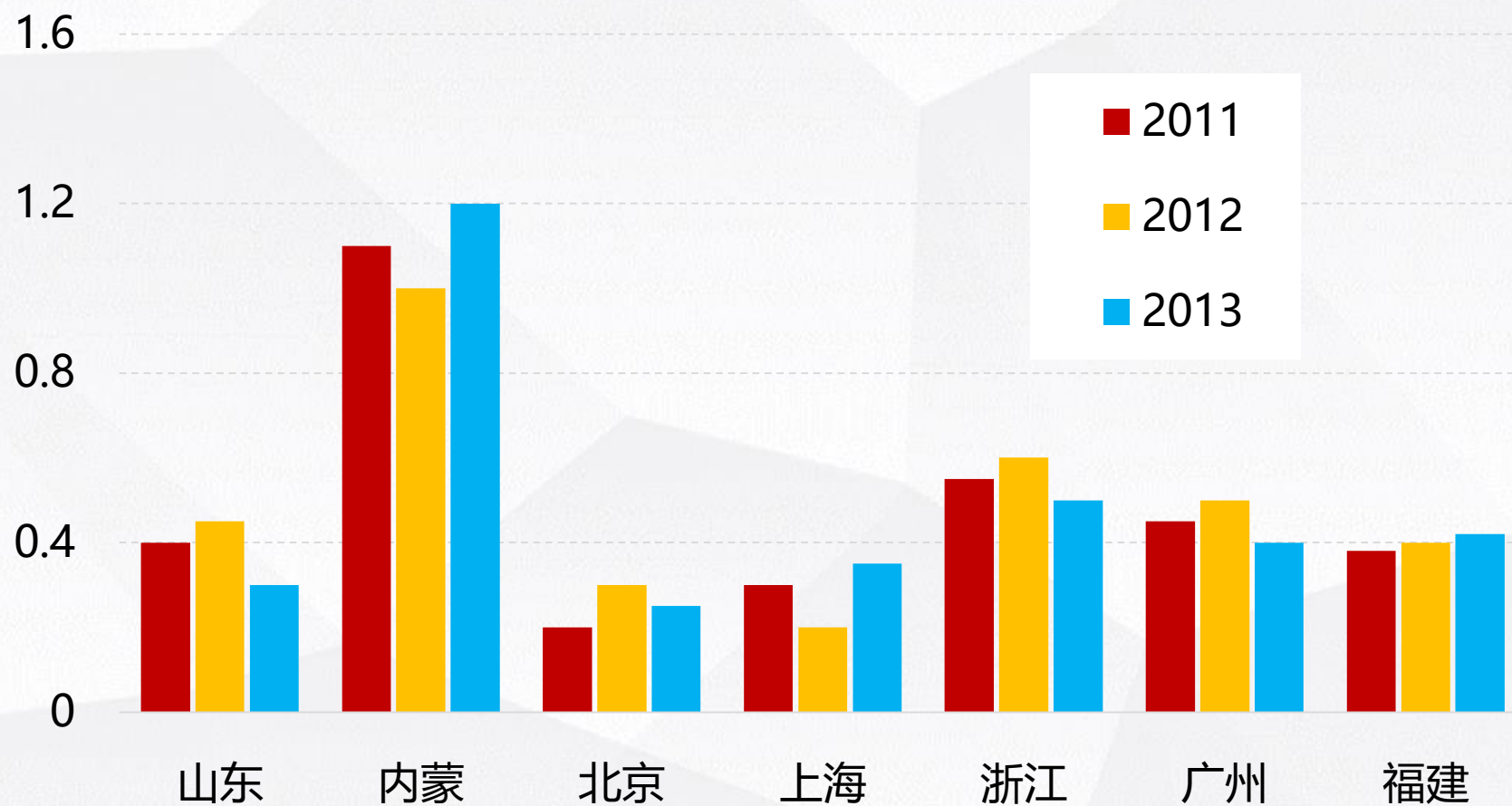
私立大学招生



各地区招生情况



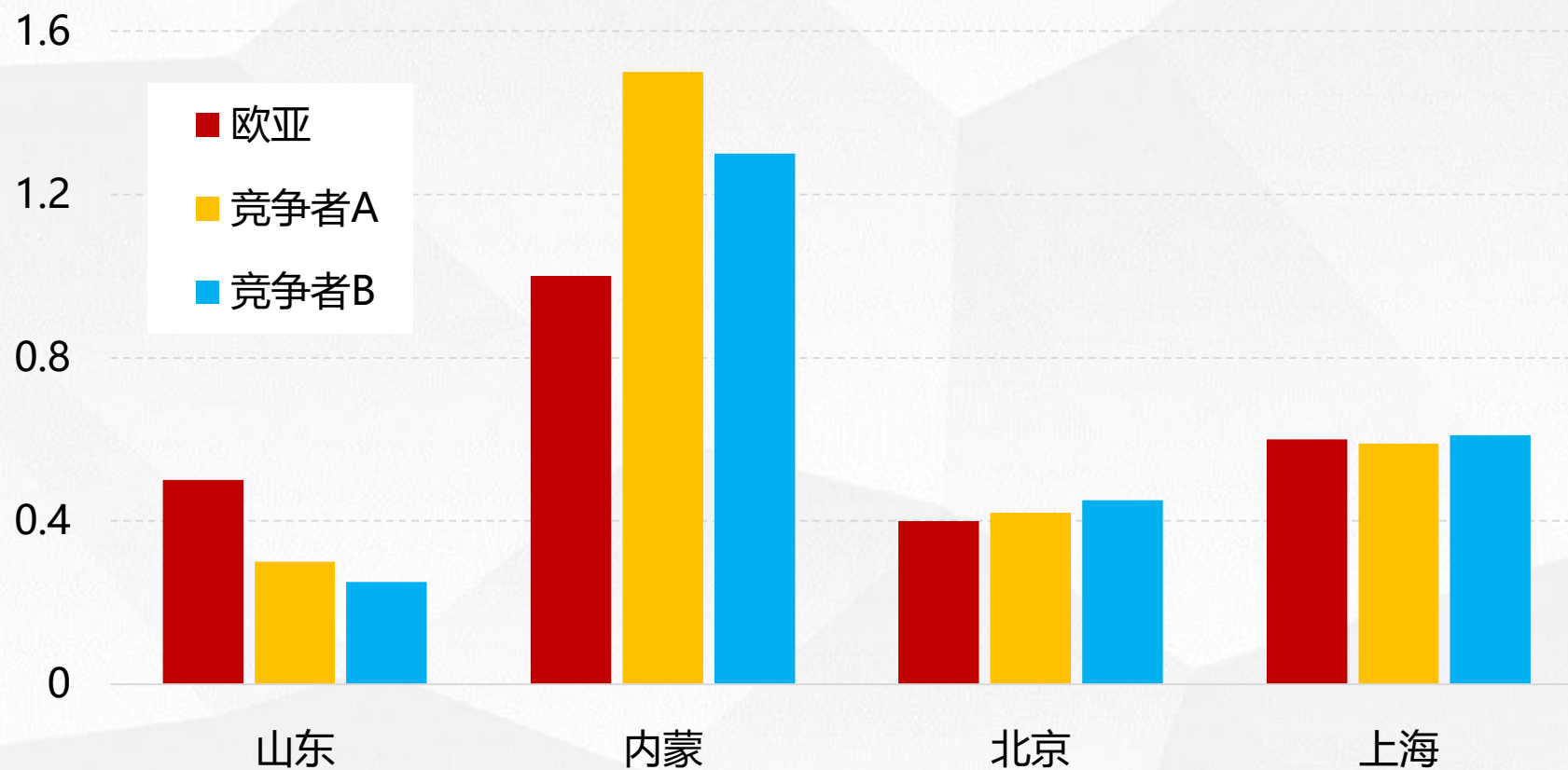
这几年怎么了



怎么办？



竞争对手?



要点1：确立参考系

案例3：罗斯福选举



Alfred Landon

?

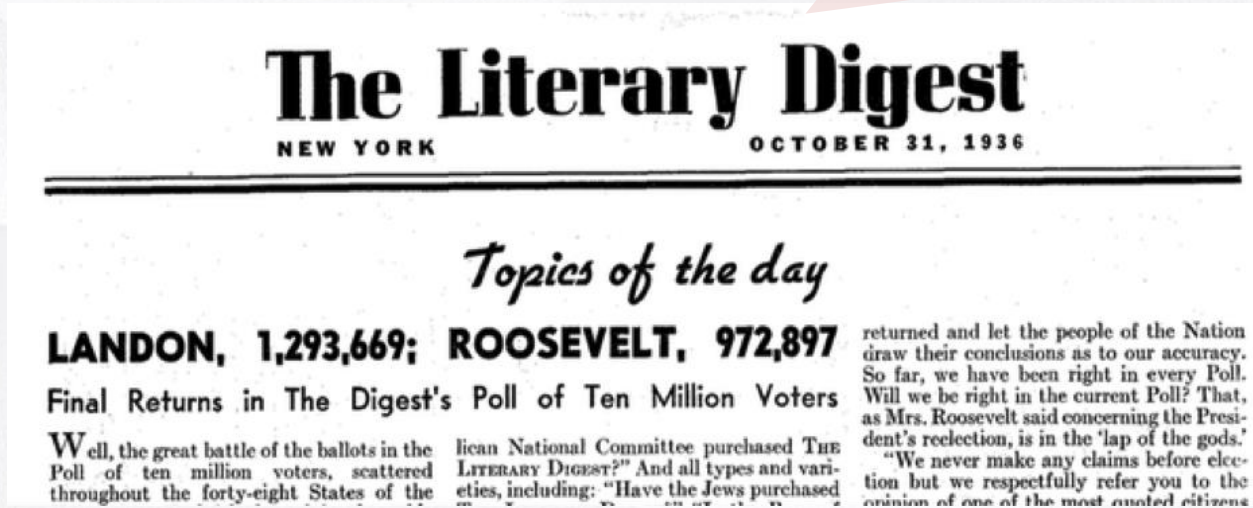
V.S.



Franklin Roosevelt

1936 President Election

回收230万份问卷，Landon将以55:41优势
击败Roosevelt



Alfred Landon

GALLUP

Franklin Roosevelt

3000份问卷认为：
Roosevelt更稳操胜券

最终的选举结果



Franklin Roosevelt

61 : 37



Alfred Landon



WHY?

要点2：抽样！

案例4：巧克力能减肥



METHODOLOGY

Methodology: In a study consisting of several weeks, we divided men and women between the ages of 19-67 into three groups. One group was instructed to keep a low-carb diet and to consume an additional daily serving of 42 grams of chocolate with 81% cocoa content (chocolate group). Another group was instructed to follow the same low-carb diet as the chocolate group, but without the chocolate intervention (low-carb group). In addition, we asked a third group to eat at their own discretion, with unrestricted choice of food. At the beginning of the study, all participants received extensive medical advice and were thoroughly briefed on their respective diet. At the beginning and the end of the study, each participant gave a blood sample. Their weight, BMI, and waist-to-hip ratio were determined and noted. In addition to that, we evaluated the Giessen Subjective Complaints List. During the study, participants were encouraged to weigh themselves on a daily basis, assess the quality of their sleep as well as their mental state, and to use urine test strips.

CONCLUSION

Conclusion: Consumption of chocolate with a high cocoa content can significantly increase the success of weight-loss diets. The weight-loss effect of this diet occurs with a certain delay. Long-term weight loss, however, seems to occur easier and more successfully by adding chocolate. The effect of the chocolate, the so-called "weight loss turbo," seems to go hand in hand with personal well-being, which was significantly higher than in the control groups.

I Fooled Millions Into Thinking Chocolate Helps Weight Loss. Here's How.



John Bohannon

5/27/15 4:23pm · Filed to: DEBUNKERY



1.1M



559



280



I am Johannes Bohannon, Ph.D. Well, actually my name is John, and I'm a journalist. I do have a Ph.D., but it's in the molecular biology of bacteria, not humans. The Institute of Diet and Health? That's nothing more than a website.

Other than those fibs, the study was 100 percent authentic. My colleagues and I recruited actual human subjects in Germany. We ran an actual clinical trial, with subjects randomly assigned to different diet regimes. And the statistically significant benefits of chocolate that we reported are based on the actual data. It was, in fact, a fairly typical study for the field of diet research. Which is to say: It was terrible science. The results are meaningless, and the health claims that the media blasted out to millions of people around the world are utterly unfounded.

Trick 1: 样本量


Onneken and Löbl wasted no time. They used Facebook to recruit subjects around Frankfurt, offering 150 Euros to anyone willing to go on a diet for 3 weeks. They made it clear that this was part of a documentary film about dieting, but they didn't give more detail. On a cold January morning, 5 men and 11 women showed up, aged 19 to 67.

Trick 2: 多重比较

Here's a dirty little science secret: If you measure a large number of things about a small number of people, you are almost guaranteed to get a “statistically significant” result. Our study included 18 different measurements—weight, cholesterol, sodium, blood protein levels, sleep quality, well-being, etc.—from 15 people. (One subject was dropped.) That study design is a recipe for false positives.

总结：批判性数据思维的要点

- 第一：参照系
- 第二：抽样
- 第三：样本量
- 第四：多重比较



谢谢！
