

# Shamelessness Shouldn't Be Anyone's Nature

## —An Open Letter to *Nature* (Part XIX)

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**【Summary】** In April, 2002, Fang published a lengthy article about IQ test and general intelligence in a Chinese popular science magazine. It was discovered 8 years later that the article was mainly translated from Harvard Professor Stephen J. Gould's *The Mismeasure of Man*, and Canadian mathematician A. K. Dewdney's *Yes, We Have no Neutrons*. A complete analysis and comparison is provided.

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#### Fang's Plagiarism History: The Harvard Case (II)



Major players: Drs. [Stephen Jay Gould](#) and [A.K. Dewdney](#), the victims; and Fang, the thief

## The Story

On April 3, 2002, Fang published an article in *Newton-Science World* magazine, entitled *The Misreading of IQ*<sup>[1]</sup>. The article contains 6,134 Chinese characters, but contains not a single reference, citation, or attribution. Fang would republish it four more times in the next ten years.



### A stolen goods sold five times

Fang's *The Misreading of IQ* was first appeared in April, 2002, in *Newton-Science World* magazine; then in January, 2003, in *Youth Science* magazine; in May, 2003, in *Teacher's Digest* magazine; in 2007 in *Fang Zhouzi Solves World Mysteries*, a book published by Shan'xi Normal University Press; and in 2012 in *Mysterious Phenomena Are not Mysterious*, a book published by Guangxi Science and Technology Press.



### The publishers of Fang's fraudulent article and books

From left: Mr. Tang Yunjiang, editor-in-chief of *Newton-Science World* (now *Science World*); Mr. Liu Dongfeng, the president of Shan'xi Normal University Press; and Mr. He Xing, the president of Guangxi Science and Technology Press.

In *The Misreading of IQ*, Fang introduced the history of IQ test, questioned the definition of intelligence, denied the existence of “general intelligence,” and excluded the possibility of finding intelligence genes. It is quite weird that Fang could hold such opinions, because Fang was, and still is, an avid genetic determinist. For example, in December, 1999, 28 months before *The Misreading of IQ*, Fang claimed that “gene therapy could permanently increase the intelligence, strength, and the capabilities of sensory organs and all other aspects in normal children, even adults.” He even claimed that the genetic research could elongate human being's life span indefinitely<sup>[2]</sup>. In 2005, 3 years after *The Misreading of IQ*, Fang wrote: “Genetic factors could affect a person's eating habit and appetite.”<sup>[3]</sup> So, why did Fang slap his own face in 2002? Considering the fact that Fang had no training in psychology, and his plagiarist history, it would be logical to speculate that Fang had stolen someone's article and adopted the victim's opinions.

The speculation was confirmed in 2010, when I found out that Fang's article was mainly, 75%, translated from the 5<sup>th</sup> chapter (*The Hereditarian Theory of IQ: An American Invention*) of Dr. Stephen Jay Gould's *The Mismeasure of Man* (W. W. Norton & Co., 1981) and the 2<sup>nd</sup> chapter (*Mind Numbers: The Curious Theory of the Intelligence Quotient*) of Canadian mathematician Dr. A.K. Dewdney's *Yes, We Have No Neutrons* (John Wiley & Sons, Inc., 1997). I wrote an article, *Original Writing, Translation, Compilation, or Plagiarism: Comment on Fang Zhouzi's The Misreading of IQ*, to expose the plagiarism case, and submitted it to *Newton-Science World*, but received no response from the magazine. The article was later published on *Academic Criticism Net* on January 22, 2011, then on *Guangming Net* 4 days later. On Feb. 25, 2011, *Shenzhen Economic Daily* reported the case<sup>[4]</sup>. As I have mentioned repeatedly, that was the first time a Chinese news medium reports Fang's plagiarism history.



### **A historic event: The page image of *Shenzhen Economic Daily's* report**

Ten years after the exposure of Fang's first plagiarism case, and five months after the arrest of Dr. Xiao Chuanguo, one of the whistleblowers of the first case, China's news media finally found the guts to expose Fang's dirty secrets.

Fang had been trying his best to ignore the allegations leveled against him on the internet, and threatening any print media with lawsuits if they dare to expose his dirty secrets. Since *Shenzhen Economic Daily* was

the first print medium who broke his prohibition, Fang felt he had to respond. And his responses were very entertaining. Here is his first reaction:

*“Shenzhen Economic Daily* reporter Zheng Jianyang played dumb, claiming he had been watching my microblog, but he didn’t know why ‘Dr. Xin Ge who lives in the U. S. would care about Fang’s article,’ didn’t know that so called Xin Ge was the Fang expert Yi Ming who had written more than a million characters slandering me and supporting Xiao Chuanguo? He didn’t know I had responded several times to his plagiarism allegations against me on my microblog and blog? This person ‘has demonstrated’ many of my articles were ‘plagiarized,’ you keep reporting.”<sup>[5]</sup>

Here is his second:

*“Just like the journalists who slandered my wife last time, the manipulator of this time is Southern Weekly’s executive-rumor-spreading-editor Xu Qingliang. It’s time for Southern Media Group to revenge for Zhu Xueqin. Fang experts should be excited. For the past ten years or so, they have scolded me on the internet, now they can finally scold me in the print media.”*<sup>[6]</sup>

Here is his third:

*“For many years, Yi Ming (Ge Xin) has been accusing me every day that all of my popular science articles were plagiarism. If I respond to every one of his accusations, how can I have time to do my proper job? There is an e-friend who did analyses before on how Yi Ming slandered me by cheating those who don’t know English: see: *Yi Ming’s Ignorance and Vexatiousness*, <http://t.cn/hCyROa>, and *Whether It Is Fang Zhouzi’s Fault if Fang Expert Yi Ming Does Not Understand a Popular Science Article?* <http://t.cn/h4msBa>.”*<sup>[7]</sup>

No one in this world knows what Fang’s “proper job” is, except for attacking and stealing other people. The two articles Fang mentioned in the third response were written by that idiotic [james hussein bond](#), the first one had already been refuted by me right after it was posted<sup>[8]</sup>; and the second article was the one he defended Fang’s ignorance by admitting Fang’s plagiarism in the Nature-Science case (see [Part XVII](#)).

Besides citing [james hussein bond](#), Fang also urged his other followers to come to his rescue. On Feb. 26, 2011, Pan Haidong, who received his Ph. D. degree from Boston University in 2004, and padded his CV so he could join Chinese government’s “1000 Talents Plan,” issued a brief statement:

*“I have examined, that article was not plagiarism.”*<sup>[9]</sup>

76 minutes later, another person named Zhang Zhaojin also issued a statement:

*“I used to be an editor with *Science World*, and this article was edited and released by me after strict examination, absolutely no plagiarism. Please shut up, you rumormongers. What you are doing can only expose your nature of ignorance and shrew.”*<sup>[10]</sup>



### Fang's feeble-minded defenders

Left: Mr. Zhang Zhaojin, the ex-deputy managing editor of *Newton-Science World*, who, not knowing English, testified that Fang's article was not plagiarism. Mr. Zhang is currently an editor with People's Posts and Telecommunications Press and is the editor of the upcoming *Self-selected Works of Fang Zhouzi*<sup>[11]</sup>;

Right: Pan Haidong, CEO of hudong.com, who hired Fang as its chief science advisor in July, 2012. The alliance between the scandalous Fang and the fraudulent Pan was most likely for the purpose of deceiving government for funds<sup>[12]</sup>. I have challenged Dr. Pan publicly to show the world how he "examined, that article was not plagiarism" since July, 2012, and Dr. Pan has not responded yet.

Fang's own formal response to the event came about two weeks later, when a reporter with *Xinan Evening News*, a newspaper based in Anhui where Fang's alma mater USTC located, asked Fang:

"In late February, *The Misreading of IQ* you wrote was accused of plagiarism by someone. It seems that you haven't responded so far?"

Fang's reply:

"Things like that happened long before. Ten years ago when I started busting frauds, someone said several of my science essays were plagiarized from some American magazines, they even reported to these magazines. In the end, the magazine, after investigation, rejected the allegation, saying it was not plagiarism.

"There are too many plagiarism allegations leveled against me on the internet, [saying my] popular science articles were plagiarism, my poems were plagiarism, essays were plagiarism, they are really absurd. If you want to say *The Misreading of IQ* was plagiarized from foreign magazine, most people's English is not good enough to judge, so they can be easily fooled. However, if they say my *Sunshine on the Wall* plagiarized Anhui poet Liang Xiaobin's *Snow-white Wall*, it is a pure joke. Comparing the two poems, except for walls, they have no relationship at all.

"Some people complain every day that I have plagiarized, so it is impossible for me to have time to respond. I only respond when I feel it is necessary."<sup>[13]</sup>

Please pay attention to the sentence "someone said several of my science essays were plagiarized from some American magazines." Please also pay attention to the fact that Fang brought the poem incident into this case. Why did he use plural forms (essays, magazines), when, in fact, only one essay and one magazine was involved "ten years ago" in the *Science* case? What the poem incident has anything to do with the plagiarism case of *The Misreading of IQ*? The answer is simple: that's how Fang has been fooling Chinese people, as well as American people, British people, for the last 15 years. In a Chinese proverb, it is called "muddy the water in order to fish."



## 2. Astonishing Ignorance

In his article, Fang not only expressed opinions to which he had been strongly opposing, he also showed extreme ignorance in psychology. For example, to pretend to be a non-biodeterminist, Fang ended *The Misreading of IQ* by this sentence:

“The possibility of finding a certain intelligence gene is virtually zero.”<sup>[19]</sup>

However, just a few years earlier, several papers were published reporting the identification of loci linked to intelligence<sup>[20]</sup>. In fact, Dr. Robert Plomin, a well-known psychologist, declared in *Nature* in 1999: “genes that contribute to the heritability of *g* will certainly be identified.”<sup>[21]</sup> Didn’t Fang claim, a few months before writing his *The Misreading of IQ*, that “due to his job’s nature, [he] reads the newest papers in molecular biology almost every day”?<sup>[22]</sup>

If Dr. Lard Fang’s ignorance in molecular biology or biochemistry was surprising, his ignorance in psychology and human intelligence was astonishing. In *Yes, We Have no Neutrons*, Dr. Dewdney wrote:

“For the foregoing reason and others as well, the IQ school has been under more or less continuous attack from the beginning. The concept of IQ has been criticized by psychologists, biologists, physicists, mathematicians, and philosophers of science. To counter these criticisms, the IQ school has cleverly drawn its intellectual wagons into a circle.” (p.37)

Obviously not knowing the current opinions and conditions in psychological community in general, and the expression of “circle wagons” in particular, Fang translated the above into the following sentence in *The Misreading of IQ*:

“However, from the beginning, the IQ school was criticized in academia, and the criticism has continued till now; and the IQ school has never thoroughly responded to these criticisms in the past few decades.” (Sentence IX-1 in the table below.)

Of course “the IQ school” has responded: *The Mismeasure of Man* has been severely criticized by “the IQ school,” as [Harvard Professor Bernard Davis](#) summarized concisely in a sentence:

“While the nonscientific reviews of *The Mismeasure of Man* were almost uniformly laudatory, the reviews in the scientific journals were almost all highly critical.”<sup>[23]</sup>

The fact is, “the IQ school,” led by Dr. Linda Gottfredson, a professor at the University of Delaware, even issued a statement, appropriately entitled “*Mainstream Science on Intelligence*.”<sup>[24]</sup>

Unaware of all these things, on the day of the publication of *The Misreading of IQ*, April 3, 2002 (Beijing Time), Fang posted the article in the forum of the New Threads. One person, identified himself as “wintersing,” cited Dr. Linda Gottfredson’s *Scientific American* article, *The General Intelligence Factor*, and asked Fang:

“Is the opinion in your article just a prevailing opinion current scientific circle but there are still minority different opinions on this issue, or your opinion is the definitive theory just like Darwin evolution theory in Biology?”<sup>[25]</sup>

Fang didn’t answer the question directly; rather, he attacked Dr. Linda Gottfredson’s credential:

“That [*Scientific American*] article was written by a social science person, with nothing new, what

value it has?”<sup>[26]</sup>

“wintersing” kept asking:

“But you are not an expert on human intelligence either, right? What is your counter argument to disapprove her points other than attack her credential. Can you be more specific about why she is wrong.”<sup>[27]</sup>

Fang:

“I only summarized the popular opinions in academia, [what I wrote] is not my original idea. All of her arguments have been refuted [by other people], including me.”<sup>[28]</sup>

Of course Fang was lying: he didn’t summarize, he just translated or plagiarized; and what he stole was not “the popular opinions in academia,” on the contrary, it was just the opinions expressed by a paleontologist, and these opinions, using a *Nature* reviewer’s words, “all have the routine flavour of Radio Moscow news broadcasts.”<sup>[29]</sup>

So, how did the debate between Fang and wintersing end? Ironically, it ended by Fang’s scolding the latter “low IQ,” “a wiseacre with a low IQ,” and “moron.”<sup>[30]</sup> What an idiot!

### 3. Fang and Gould

There are literally mountains of evidence showing that Fang has indeed plagiarized Dr. Gould. First, the structure and development of argument in Fang’s article were similar or identical to those in Gould’s book; Second, almost all the knowledge, information, examples, and the ideas/opinions, including those quotations without attributions, in Fang’s article were present in Gould’s book; Third, many of Fang’s wordings were the same as Gould’s. (See, for example, sentences III-6, III-7, and III-12 in the table below.) In other words, Fang’s article provided essentially nothing new to its readers, except for those copied from Dr. Dewdney.

<b>The linearity of Fang’s article with its sources</b>		
Paragraphs of Fang’s article	<b>Corresponding pages in the victims’ books</b>	
	Gould’s book	Dewdney’s book
1		
2	146-148	29-30
3	149-150	30-31
4	151-152	31
5	159-162	32
6	157-164	33
7	164-168	32-33
8	172-182	33
9	175-176	37-40
10	242	34-38
11		42-43
12		
13		



Even though these evidences are compelling, it is still possible for Fang and his followers to “demonstrate” that all these similarities and identicalness are just coincidental; therefore the allegation has not been substantiated. To shut them up, one needs what Fang called “ironclad evidences”: technical errors, the small errors which are identical to the sources<sup>[31]</sup>.

In his book, Gould accused Dr. Henry H. Goddard of a lot of things, including retouching photographs of the Kallikak family “to produce an appearance of evil or stupidity.” (p.172). And Fang did include one of the photos in his 2007 book with the following legend: “A photograph of feebleminded children in Goddard’s book. To enhance the effect of stupidity, Goddard purposefully darkened the eyes of these children in the picture with ink.”<sup>[32]</sup> Of course Fang didn’t know that someone had already pointed out in 1987 that retouching of photographs was a common procedure at Goddard’s time<sup>[33]</sup>.

According to Gould, Goddard seemed to be an evil-minded person, he hated and despised the immigrants, and his reports were biased, to say the least:

“Binet tests on the four groups led to an astounding result: 83 percent of the Jews, 80 percent of the Hungarians, 79 percent of the Italians, and 87 percent of the Russians were feeble-minded—that is, below age twelve on the Binet scale. Goddard himself was flabbergasted: could anyone be made to believe that four-fifths of any nation were morons? ...Eventually, Goddard monkied about with the tests, tossed several out, and got his figures down to 40 to 50 percent, but still he was disturbed.” (p.166)

And Fang’s parroting:

“The results were astounding: 83 percent of the Jews, 80 percent of the Hungarians, 79 percent of the Italians, and 87 percent of the Russians had mental age below twelve years old, i. e. feebleminded. Were four-fifths of the population in these nations mentally retarded? Even Goddard himself couldn’t believe it. He revised the test results so that the percentage of the feebleminded fallen to 40% to 50%, but the figures were still too high to be credible.” (Sentences VII-4 to VII-7)

In fact, the first sentence in Goddard’s report is:

“This is a study not of immigrants in general but of six small highly selected groups, four of ‘average normals’ and two of apparent ‘defectives,’ all of them steerage passengers arriving at Ellis Island.”(See image below.)

Then, exactly what did Gould mean by “Goddard monkied about with the tests”? According to Goddard’s paper, there were different criteria or “ratings” to evaluate the test results. To make sense of his results, Goddard gradually lowered the rating, and this is what he wrote:

“Nevertheless after omitting these non-valid questions there is still enough left of the scale to give the examinee the chance to make a rating of X. More than 40 per cent of the Jewish immigrants fail to do even this. (See original data, Table I). According to this criterion more than 40 per cent (for all groups it is 39.1 per cent) would be considered feeble-minded according to the usual definition. It must be admitted that this gives the immigrant the benefit of every doubt.” (p.249)

Yes, according to Goddard, the “more than 40 per cent” feeble-minded rate was for the Jews only, and the overall result was 39.1%. Therefore, the number “50 percent” was invented by Gould, and Fang’s “50%,” as well as his “He revised the test results,” was, undoubtedly, stolen from Gould.

# The Journal of Delinquency

Volume II.

SEPTEMBER, 1917

Number 5

## MENTAL TESTS AND THE IMMIGRANT

HENRY H. GODDARD, PH.D.

*Director of Research, Training School, Vineland, N. J.*

### SUMMARY

1. This is a study not of immigrants in general but of six small highly selected groups, four of "average normals" and two of apparent "defectives," all of them steerage passengers arriving at Ellis Island.
2. The study makes no determination of the actual percentage, even of these groups, who are feeble-minded.
3. It seems evident that mental tests can be successfully used on immigrants, although much study is still necessary before a completely satisfactory scale can be developed.
4. One can hardly escape the conviction that the intelligence of the average "third class" immigrant is low, perhaps of moron grade.
5. Assuming that they are morons, we have two practical questions: first, is it hereditary defect or; second, apparent defect due to deprivation? If the latter, as seems likely, little fear may be felt for the children. Even if the former, we may still question whether we cannot use moron laborers if we are wise enough to train them properly.

[The summary of Goddard's Immigrant Mental Test Report](#)  
[The Journal of Delinquency 2:243-277.](#)

Does anyone still believe that Fang wrote his sentences based on reading Goddard's report, instead of copying Gould's book?

Of course, Dr. Gould's "misrepresentation," a term which has been used frequently by "the IQ school" to blame their critics in general, and Dr. Gould in particular<sup>[34]</sup>, was not limited to the poor Goddard. In his book, Gould picked a few IQ questions from Lewis Terman's Stanford-Binet test to argue that they do not really test intelligence. One such question was "My neighbor": "My neighbor has been having queer visitors. First a doctor came to his house, then a lawyer, then a minister. What do you think happened there?" Among Gould's comments was the following sentence:

["He did not accept the combination 'divorce and remarriage,' though he reports that a colleague in Reno, Nevada, had found the response 'very, very common.'" \(p.176\)](#)

Fang copied almost everything Gould wrote about the question, including the above one:

["He considered all other answers incorrect, and the most common incorrect answer was 'divorce and remarriage,'..." \(Sentence IX-9\)](#)

The fact is, both Gould and Fang were wrong. What Terman wrote was as following:

["The most common incorrect responses are: 'A baby born' \(accounting for 5 out of 66 failures\); 'A divorce' \(very common with the children tested by Dr. Ordahl, at Reno, Nevada!\); 'A marriage'; 'A divorce and a remarriage'; 'A dinner'; 'An entertainment'; 'Some friends came to chat,' etc. In failures out of 66, marriage was incorrectly connected with a will, a divorce, the death of a child, etc."»<sup>\[35\]</sup>](#)

In other words, “the combination ‘divorce and remarriage’” was neither the “‘very, very common’” response in Reno, Nevada, as Gould said, nor “the most common incorrect answer,” as Fang said. Then, where did Fang’s statement come from?

Does anyone still believe that Fang wrote his sentence based on reading Terman’s report, instead of copying Gould’s book?

#### 4. Fang and Dewdney

Many people have pointed out that Dr. Dewdney’s *Yes, We Have no Neutrons* is not a good science book, and his chapter 2, *Mind Numbers*, was written mainly based on Dr. Gould’s *The Mismeasure of Man*<sup>[36]</sup>. The questions are: Why did Fang plagiarize a second hand article when he had the original one? Besides the similarities, are there more concrete evidences supporting the notion that Fang plagiarized Dewdney?

The answer to the first question is, Fang is unbelievably ignorant. Even if he has required the other people to do science writing based on reading original papers, he seldom follows his own rule. More likely than not, Fang would plagiarize a popular article rather than an original academic paper. Gould’s book is more than 300 pages long (the expended, 1996 edition is more than 400 pages long), contains detailed analyses, arguments, and discussions. And Dr. Dewdney’s chapter is only 17 pages long, written in layman’s language, even though it isn’t sound scientifically, it is enjoyable to read. And these are exactly the features Fang needs. As a matter of fact, Fang enjoyed Dr. Dewdney’s book so much in 2002 that he would come back six years later to plagiarize it one more time. In that case, about the cold fusion fiasco, more than 3,000 characters in Fang’s article were translated from the chapter 6 of *Yes, We Have no Neutrons*, including its mistakes. Fang was convicted by an academic misconduct panel organized by AIR-China on Feb. 17, 2011, and the verdict and the certificate was sent to both Dr. Dewdney and journal *Nature*<sup>[37]</sup>.



**Certificate of Plagiarism**

Serial No. 004

*After long deliberation, the Academic Misconduct Assessment Panel has unanimously reached the following verdict:*

Dr. Shimin Fang (aka Fang Zhouzi) committed plagiarism and violated copyright laws of China and Canada by directly translating a chapter of **Dr. A. K. Dewdney's** book:

**YES, WE HAVE NO NEUTRONS**

into his own article:

*"The famous fraud Cases in science history: The incident of cold fusion,"*  
without proper attribution.

*This Certificate is hereby issued to the offender as a part of the punishment.*

*Academic Misconduct Assessment Panel*

China Academic Integrity Review  
www.2250s.com  
Feb. 17, 2011

**Plagiarizer Profile**

Name: Shimin Fang  
Aka: Fang Zhouzi  
Age: 44  
Career: Ex. US Bio Co Consultant  
(Self-claimed, never verified)  
Residence: Beijing, China  
POB: Yunxiao, Fujian, China  
Edu.: U. of Sci. & Tech. of China, BS  
Michigan State University, PhD

中國學術 Integrity  
China Academic Integrity Review  
Signed by [Signature]

The 4<sup>th</sup> Certificate of Plagiarism awarded to Fang

In this IQ case, it appeared that Fang plagiarized mainly from Gould at the beginning, because these parts were historical stories, and they were easy for him to understand. However, when Fang reached the 6<sup>th</sup> chapter of Gould's book, about correlation and factor analyses, he got lost, totally. So he had to resort to translating Dewdney's popular version.

The answer to the second question, what evidence do I have to say Fang plagiarized Dr. Dewdney, is easy. To demonstrate that IQ is not genetic, innate, and unchangeable, Dr. Dewdney cited "a classic study in the journal *Psychological Monographs*" by "Bernadine Schmidt, a young social scientist from Chicago." Dr. Dewdney used 186 words to summarize Schmidt's 144 pages report, and guess what? Fang not only cited the "classic study," his summary of the study, which contains 280 Chinese characters (equivalent to 160 English words), was almost identical to that by Dewdney (See sentences XI-1 to XI-9 in the table below). How could that happen?

Even more unthinkable is, the so called "classic study" is nothing but an academic fraud, which was exposed by Dr. Samuel A. Kirk, a professor at the University of Illinois, shortly after it appeared<sup>[38]</sup>. As a matter of fact, if you want to search for the "classic study" right now, you would probably end up with Dr. Kirk's paper. So, how did Fang found the paper by the "American social scientist Bernadine Schmidt"?

Of course, it is a joke that the prestigious British journal *Nature* certified "fraud fighter" plagiarizes a Canadian mathematician to preach an American fraudulent study to Chinese people in the name of science popularization. But the question is, the joke is on whom?

## A Complete Comparison Between Fang's *The Misreading of Man* and Gould's *The Mismeasure of Man* and Dewdney's *Yes, We Have no Neutrons*

Note: The Chinese text of Fang's article is retrieved from his New Threads website and presented here in its entirety. The article is translated by me from the beginning to the 9<sup>th</sup> sentence in the 11<sup>th</sup> paragraph (The Roman numerals indicate the paragraph order, and the Arabic numerals indicate the sentence order in a paragraph.) The sources of the rest parts of Fang's article have not been affirmatively identified yet. The portions highlighted in yellow are my notes. The pagination and texts of Gould's *The Mismeasure of Man* and Dewdney's *Yes, We Have no Neutrons* are based on the 1981 (W. W. Norton & Co.) and 1997 (John Wiley & Sons, Inc.) editions of their books, respectively.

Fang's Article			The victims' articles
Seq.	Chinese	English Translation	
I-1 I-2  I-3  I-4 I-5 I-6 I-7  I-8 I-9 I-10 I-11 I-12 I-13  I-14 I-15 I-16  I-17 I-18  I-19	<p>许多生物学家都会同意，人并不是地球上唯一的智能生物。类人猿和海豚也有一定的智能，不过与人类的智能相比，其实是微不足道的。我们也找不到有其他的生物像人类一样，智力在生活中占了主宰地位。在进入文明社会以后，人类的竞争更多地表现为斗智而非斗勇。白痴恐怕是最严重的残疾。既然智力对人类生活是如此重要，研究其高低强弱就成了一个令人感兴趣的问题。我们很容易区分白痴和正常人。但是要区分正常人的智力高低，却不是容易的事。聪明和愚蠢只是定性的判断，而且并非固定不变。有没有可能定量地测定一个人天生的智力？在大脑被确定为思维器官之后，许多研究者就试图通过测量人脑的大小、形状判定智力的高低。这在一定程度上并非没有道理。人和类人猿的智力区别，很大程度上就是由于脑容量的悬殊。人类的进化史，也经常被描述为脑容量不断增加的历史。但是脑容量的大小，是否也能够适用于现代人的内部？直至 19 世纪末，仍有一些科学家对此坚信不疑。</p>	<p>Many biologists would agree that human being is not the only intelligent organism on the earth. Anthropoid apes and dolphins have certain intelligence also, even though it is negligible compared with that of human's. We could not find other organisms, like human, to which intelligence plays a dominant role in their life. After entering the civilized society, the competitions among human beings are more about intelligence than about strength. Idiocy is probably the most serious disability. Since intelligence is so important to human life, it became an interesting subject of study. We can differentiate an idiot from a normal person easily. However, it is not easy to tell the differences in intelligence among normal people. Smartness and stupidity is only a qualitative judgment, and such a judgment is not fixed. Is it possible to quantitatively measure the innate intelligence of a person? After the brain was identified as the organ for thinking, many researchers tried to determine the level of intelligence by measuring the size and shape of the human heads. To some extent, it is not unreasonable. The difference in intelligence between human being and anthropoid ape is mainly due to the difference in brain capacity. Human's evolutionary history is often described as a history of increasing brain capacity. However, whether the brain volume can also be used to measure the intelligence among modern people? Until the end of 19<sup>th</sup> century, there were still some scientists who believed so.</p>	
II-1 II-2  II-3 II-4	<p>其中最著名的大概是法国解剖学家、人类学家保罗·白洛嘉(Paul Broca)。他对人脑研究有重要贡献，发现了人脑的语言运动中枢，被称为“白洛嘉中枢”。他认为人的智力越高，大脑越大。另一位法国人、心理学家阿弗雷德·比纳(Alfred Binet)起初也接受</p>	<p>The most famous one among these scientists probably was French anatomist and anthropologist Paul Broca. He made important contributions to human brain research, discovered the language motor center in brain which is named Broca's Area. He believed that the more intelligent people are, the larger their heads. Another French, psychologist Alfred Binet</p>	<p>Gould: When Alfred Binet ( 1857-1911) , director of the psychology laboratory at the Sorbonne, first decided to study the measurement of intelligence, he turned naturally to the favored method of a waning century and to the work of his great countryman Paul Broca. He set out, in short, to measure skulls, never doubting at first the basic conclusion of Broca's school: (p.147)</p>

	这种见解，并决定通过测量证明之。	accepted the belief initially, and decided to prove it with craniometry.	Dewdney: Years earlier, he [Binet] had followed with fascination the craniometric studies of another famous countryman, Paul Broca (after whom Broca's Area of the human brain is named), who claimed that more intelligent people had larger heads. (p.29)
II-5 II-6	从 1898 年到 1900 年，比纳对几所小学做了调查。他先让教师选出一个班级中最聪明的和最笨的学生，然后用白洛嘉建议的方法测量这些学生的脑袋大小。	From 1898 to 1900, Binet surveyed a few elementary schools. He first asked the teachers to pick their smartest and stupidest pupils, then measured their heads using the method recommended by Broca.	Gould: Binet went to various schools, making Broca's recommended measurements on the heads of pupils designated by teachers as their smartest and stupidest. (p.146)  Dewdney: Determined to test this idea for himself, Binet visited several schools. After the teacher had identified the brightest and the dullest students in each class he visited, Binet measured the heads of these students, assiduously following the techniques recommended by Broca. (pp.29-30)
II-7	在这项研究结束的时候，比纳不得不改变了看法。	By the end of the study, Binet had to change his belief.	Gould: By the end of this effort, he was no longer so sure. (p.146)  Dewdney: Binet found the results sufficiently discouraging to abandon the idea of physical measurements altogether. (p.30)
II-8	聪明学生的平均脑袋大小仅仅比笨学生的大了大约一毫米，可以忽略不计，而且可能是由于聪明学生的平均身高比笨学生略高的结果。	The average size of good pupils was merely about 1 mm bigger than the average of the bad pupils, which was negligible, and could be caused by the difference in their height: good pupils on average were slightly taller than bad pupils.	Gould: Binet found his differences, but they were much too small to matter and might only record the greater average height of better pupils (1.401 vs. 1.378 meters). Most measures did favor the better students, but the average difference between good and poor amounted to a mere millimeter — "extremement petite" as Binet wrote. (p.147)  Dewdney: The average difference between the brightest students and the dullest came to about a millimeter. (p.30)
II-9	另外，脑袋大小在学生中差异很大，脑袋最大的和脑袋最小的，都属于笨学生。	In addition, the head sizes varied among the pupils, both the biggest and smallest heads belonged to bad pupils.	Gould: The differences were too small, and Binet also found that poor students varied more than their smarter counterparts. Thus, although the smallest value usually belonged to a poor pupil, the highest often did as well. (p.147)  Dewdney: Moreover, individual numbers varied so widely that some dull students had larger heads than some bright ones. (p.30)
II-10	比纳还发现了脑袋测量的结果很容易受测量者的偏向的影响，即在认定被测量者是聪明的时测量结果会下意识地偏大，反之则偏小，这种误差能达到三毫米，超过了聪明学生和笨学生的平均差异。	Binet also found that the measurement results were easily influenced the bias of the researchers, i. e. when making measurements on the head of an intelligent pupil, the result could be unconsciously increased, otherwise be decreased. Such a difference could reach 3 mm, more than the average difference between the good and bad pupils.  【Note: Fang's last sentence might be the result of his misreading of Gould's following sentence: "To make matters worse, some measures usually judged	Gould: Binet also fueled his own doubts with an extraordinary study of his own suggestibility, an experiment in the primary theme of this book—the tenacity of unconscious bias and the surprising malleability of "objective," quantitative data in the interest of a preconceived idea. "I feared," Binet wrote (1900, p. 323), "that in making measurements on heads with the intention of finding a difference in volume between an intelligent and a less intelligent head, I would be led to increase, unconsciously and in good faith, the cephalic volume of intelligent heads and to decrease that of unintelligent heads." (p.147)

		crucial in the assessment of mental worth favored the poorer pupils—for anteroposterior diameter of the skull, poorer students exceeded their smarter colleagues by 3.0 mm.” (p.147)】	
II-11	这三个结果都说明了测量脑袋大小不是一种测定智力的可靠办法。	These three results suggested that craniometry is not a reliable method for measuring intelligence.	Gould: Craniometry, the jewel of nineteenth-century objectivity, was not destined for continued celebration. (p.148)  Dewdney: The method was clearly not useful in determining the intellectual future of individuals. (p.30)
III-1 III-2	在 1904 年，比纳被法国教育部要求研究一种办法鉴定那些学习能力有问题、需要特别辅导的小学生。或者说，要找出一种鉴定学生智力高低的办法。	In 1904, Binet was asked by French ministry of education to study a method for identifying those pupils who need for special education. In other words, to find a way to identify the intelligence of the students.	Gould: In 1904 Binet was commissioned by the minister of public education to perform a study for a specific, practical purpose: to develop techniques for identifying those children whose lack of success in normal classrooms suggested the need for some form of special education. (p.149)  Dewdney: The request from the Ministry of Education gave Binet the opportunity to try a new, more inherently psychological approach to the problem. (p.30)
III-3	这时候，比纳已放弃了从大脑形态鉴定智力的努力，而改用测试办法。	At this time, Binet had already abandoned his effort in craniometry, and changed to test method.	Gould: When Binet returned to the measurement of intelligence in 1904, he remembered his previous frustration and switched to other techniques. He abandoned what he called the "medical" approaches of craniometry and the search for Lombroso's anatomical stigmata, and decided instead on "psychological" methods. (pp.148-149)
III-4	他发明了一套与功课的内容没有关系，只测试学生的推理能力的试卷。	He devised a test that was not related to the content in classrooms; instead it measured a student's ability to reason.	Dewdney: He devised a test that resembled an examination but which did not address scholastic questions. Instead, the questions on this test reflected a student's ability to reason about simple things such as coins, faces, and other everyday object. (p.30)
III-5	到 1911 年比纳去世时，他共发表了三种智力测试的版本。	Before Binet's death in 1911, he published three versions of intelligence tests.	Gould: Binet published three versions of the scale before his death in 1911. (p.149)
III-6 III-7	1905 年发表的第一版只是把测试问题按从易到难排列。在 1908 年发表的第二版中，比纳把这些问题按“心理年龄”排列。	In the first version published in 1905, he arranged the tasks in the order of difficulty. In the second version published in 1908, Binet arranged the questions in the order of "mental age.”	Gould: The original 1905 edition simply arranged the tasks in an ascending order of difficulty. The 1908 version established the criterion used in measuring the so-called IQ ever since. (p.149)  Dewdney: By 1905 Binet had completed the first version of his test, in which he arranged the tasks in order of difficulty. In the second version of his test, completed in 1908, Binet rearranged the questions in order of "mental age.” (p.30)
III-8	他设想，对每一个问题，智力正常的小孩要能够回答的话，最少要有多少岁，这个年龄被当做“心理年龄”。	He reasoned, for each question, at what minimum age a normal child could answer it correctly. This age was considered as "mental age.”	Gould: Binet decided to assign an age level to each task, defined as the youngest age at which a child of normal intelligence should be able to complete the task successfully. (p.149)  Dewdney: For each question, he reasoned, there would be a minimum age at which a normal or average child might

			reasonably be expected to answer it correctly. (p.30)
III-9 III-10	受测试者从为最小的心理年龄设计的问题开始测试，难度逐渐增加，与受测试者所能回答的最后问题相关的心理年龄就是这个受测试者的心理年龄。受测试者的心理年龄减去其实际年龄，即是其智力水平。	A test taker was tested with the tasks for the youngest age, and the difficulty increased gradually, and the last tasks he could answer correctly became his "mental age." His intellectual level was calculated by subtracting his true chronological age from this mental age.  【Note: In the last sentence, Fang should have said "His intellectual level was calculated by subtracting his mental age from his true chronological age."】	Gould: A child began the Binet test with tasks for the youngest age and proceeded in sequence until he could no longer complete the tasks. The age associated with the last tasks he could perform became his "mental age," and his general intellectual level was calculated by subtracting this mental age from his true chronological age.(pp.149-150)  Dewdney: The mental age assigned to a student taking the test would be the age level associated with the last question that the child answered successfully before running into trouble. (p.30)
III-11	如果心理年龄低于实际年龄，说明未达到同龄人的学习能力水平，那就需要特别辅导。	If a child's mental age was lower than his true chronological age, it suggested that he didn't reach the learning ability level of the others of the same age, therefore needed special educational programs.	Gould: Children whose mental ages were sufficiently behind their chronological ages could then be identified for special educational programs, (p.150)
III-12	在 1912 年，德国心理学家威廉·斯登 (William Stern)认为，将心理年龄除以实际年龄，更能准确地反映智力水平，“智商”(IQ)由此诞生。	In 1912, the German psychologist W. Stern proposed that dividing mental age by chronological age could reflect intelligence level more accurately, the intelligence quotient, or IQ, was thus born.	Gould: In 1912 the German psychologist W. Stern argued that mental age should be divided by chronological age, not subtracted from it, and the intelligence quotient, or IQ, was born. (p.150)  Dewdney: The German psychologist William Stern argued that Binet should not take the difference between these ages, but the quotient. If one divided the mental age (as revealed in the test) by the student's chronological age, one would have a quotient. Thus was the Q of IQ born. (pp.30-31)
IV-1	但是比纳本人很清楚，他发明的这套测试，并不是真正在测量智力，“因为智力的好坏是不能叠加的，因此不能像测量线性表面那样地测量。”	But Binet was aware of the fact that the test he invented was not really measuring the intelligence, "because intellectual qualities are not superposable, and therefore cannot be measured as linear surfaces are measured."  【Note: Fang quoted Binet without citation.】	Gould: Yet, beyond this obvious desire to remove the superficial effects of clearly acquired knowledge, Binet declined to define and speculate upon the meaning of the score he assigned to each child. Intelligence, Binet proclaimed, is too complex to capture with a single number. This number, later called IQ, is only a rough, empirical guide constructed for a limited, practical purpose: "The scale, properly speaking, does not permit the measure of the intelligence, because intellectual qualities are not superposable, and therefore cannot be measured as linear surfaces are measured (1905, p. 40)." (p.151)  Dewdney: As if aware of how his test might be later abused, Binet gave specific warnings about the dangers of misuse: "The scale, properly speaking, does not permit the measure of the intelligence, because intellectual qualities are not superposable, and therefore cannot be measured as linear surfaces are measured." (p.31)
IV-2 IV-3	换言之，智力是一种极其复杂的、多样化的现象，不能简单地以一个数字来表示。	In other words, intelligence is an extremely complex and diverse phenomenon, it could not be simply indicated by a	Gould: Moreover, the number is only an average of many performances, not an entity unto itself. Intelligence, Binet



	而且，比纳也很清楚，这套测试所设定的所谓“心理年龄”，只是许多测试者的平均结果，并不代表一个真正的实在。	number. Moreover, Binet knew, the so called mental age was an average result from many tests, it was not an entity.	reminds us, is not a single, scalable thing like height. (p.151)  Dewdney: What Binet feared most of all was the process Gould calls "reification," a word we may translate as "thingifying." Just because we have a name in our mind does not mean that something specific or real has been named. (p.31)
IV-4	在去世的那一年，他警告说：如果根据测试结果说一个八岁小孩有七岁或九岁的智力，那只是一种简单化的、主观的说法，容易引起误解，导致其智力测试是真正在测量智力的幻觉。	In the year when he passed away, he cautioned: it was of simplicity and subjectiveness to say a child of 8 years has the intelligence of a child of 7 or 9 years based on a test result, it easily led to misunderstanding, resulting in the illusions that the intelligence test really measures intelligence.	Gould: "We feel it necessary to insist on this fact," Binet (1911 ) cautions, "because later, for the sake of simplicity of statement, we will speak of a child of 8 years having the intelligence of a child of 7 or 9 years; these expressions, if accepted arbitrarily, may give place to illusions." (p.151)
IV-5	总之，比纳测试只是一种实用性的测试，目的是为了发现学习能力有问题的儿童，并不是真正在测量智力，也不用于对正常儿童划分智力等级。	In summary, Binet's test was a practical test for identifying children with learning problems, it was not a real intelligence measurement, nor was designed for ranking the normal pupils according to their intellectual level.	Gould: Not only did Binet decline to label IQ as inborn intelligence; he also refused to regard it as a general device for ranking all pupils according to mental worth. He devised his scale only for the limited purpose of his commission by the ministry of education: as a practical guide for identifying children whose poor performance indicated a need for special education — those who we would today call learning disabled or mildly retarded. (p.152)
IV-6	那些被发现学习能力有问题的儿童，也不一定是天生如此、不可改变，通过特殊的训练有可能提高其能力。	Those pupils identified as having learning difficulty were not necessarily born so, their learning abilities could be improved with special training.	Gould: But of one thing Binet was sure: whatever the cause of poor performance in school, the aim of his scale was to identify in order to help and improve, not to label in order to limit. Some children might be innately incapable of normal achievement, but all could improve with special help. (p.152)  Dewdney: Binet regarded intelligence not as a fixed quality or quantity, but one that could grow under the right tutelage. On the basis of special classes that he had designed and taught, Binet had no doubt that intelligence could increase: ... (p.31)
V-1 V-2	比纳所担心的，恰恰在美国出现。在1910年，一个叫戈达德 (H. H. Goddard) 的美国心理学家将比纳测试译成英文，引进美国，但为它找到了一个全新的、经久不衰的用途。	What Binet worried about appeared in America. In 1910, an American psychologist named H. H. Goddard translated Binet's tests into English, introduced them to America, but found a brand new and long lasting use.	Gould: Goddard was the first popularizer of the Binet scale in America. He translated Binet's articles into English, applied his tests, and agitated for their general use. (p.159)
V-3	在当时，心理学上把精神发育迟滞分成两种：心理年龄不到三岁，不具有完备的语言能力的被称为白痴，心理年龄在三岁到七岁之间，有语言能力但没有阅读、书写能力的被称为痴愚。	At that time, psychologists classified mental retardation into two classes: those with a mental age below a three year-old, and without full speech ability were called idiots; those with a mental age of somewhere between three and seven years old, with speak ability but without abilities of reading or writing were called imbeciles.	Dewdney: In Goddard's time, psychologists defined "idiots" as those who never developed full speech and could barely progress beyond the general competence of a three year-old. The next higher classification, "imbeciles," could speak well enough but seemed incapable of learning to read or write. An imbecile, by definition, had a mental age of somewhere between three and seven years. (p.32 )
V-4	戈达德认为，在痴愚和正常人之间，还应	Goddard believed that between imbeciles and normal people, there should be a class with mental ages between eight and	Gould: Yet, to Goddard, all people with mental ages between eight and twelve were morons, ... (p.160)

V-5	该存在一个心理年龄在八到十二岁的等级，他称之为愚鲁。愚鲁的人能够学会阅读、书写，但是其能力永远达不到正常人的水平。	twelve, he called them morons. Morons might learn to read and write, but their skills would never reach the level of a normal person.	Dewdney: To bring the taxonomy of mental retardation up to date, Goddard coined the word "moron." One level above imbeciles, morons occupied a gray area between idiots and imbeciles on the one hand, and fully competent people the other. Morons might learn to read and write, but their skills would always be somewhat marginal. (p.32 )
V-6	在戈达德看来，愚鲁对社会的危害更大，许多犯罪分子，绝大多数酗酒者和妓女，甚至不适应社会的人，全都是愚鲁者。	According to Goddard, the morons had greater harm to society, many criminals, most alcoholics and prostitutes, and even those who simply don't fit in the society, are morons.	Gould: Many criminals, most alcoholics and prostitutes, and even the "ne'er do wells" who simply don't fit in, are morons: "We know what feeble-mindedness is, and we have come to suspect all persons who are incapable of adapting themselves to their environment and living up to the conventions of society or acting sensibly, of being feeble-minded". (p.161)
V-7	我们很容易识别白痴和痴愚，他们一般没有生殖能力或无生殖的兴趣，有兴趣的话也难以有机会，因此其劣质基因难以遗传。	We could recognize the idiots and imbeciles, they generally have no ability or interest in breeding, even though they do, they don't have the opportunity. Therefore, their inferior genes cannot be inherited.	Gould: We all recognize the idiot and imbecile and know what must be done; the scale must be broken just above the level of the moron. "The idiot is not our greatest problem. He is indeed loathsome...Nevertheless, he lives his life and is done. He does not continue the race with a line of children like himself... It is the moron type that makes for us our great problem (1912, pp. 101-102)." (p.162)  Dewdney: Idiots and imbeciles posed no such threat, since they appeared to have little interest in (or competence at) reproduction, but morons were another matter. (p.32)
V-8 V-9 V-10	但是愚鲁在表面上难以与正常人区别开来，他们有正常的生殖能力，甚至生殖力旺盛，其劣质基因将会遗传下去、扩散开去。如何鉴别愚鲁者并防止其生殖，是当时“优生学”运动的主要目标。戈达德认为，比纳测试就是鉴定愚鲁者的一个好办法。	However, morons are difficult to be differentiated from normal people. They have normal, even stronger reproductive capacity; therefore their inferior genes could be inherited and proliferated. How to identify the morons and prevent them from reproduction became the major goal of eugenics movement of that time. Goddard thought Binet's test was a good method to detect morons.	Gould: The moron threatens racial health because he ranks highest among the undesirable and might, if not identified, be allowed to flourish and propagate. ...“It is the moron type that makes for us our great problem.” (p.162)  Dewdney: Binet's new tests, he discovered, were just the thing to detect morons. The eugenics movement, started by the statistician Francis Galton in England two decades earlier, had taken root in America. There was much concern in some quarters that if the feebleminded and moronic were allowed to breed and produce children, the population as a whole would become polluted with these undesirable genes. (p.32)
VI-1 VI-2	这完全背叛了比纳的初衷。戈达德认为比纳测试是真正地测试智力，而且是先天的、遗传而来的、不可改变的智力。	This completely betrayed Binet's original intention. Goddard believed that Binet's test really measured the intelligence, the intelligence which was innate, inherited, and unchangeable.	Gould: American psychologists perverted Binet's intention and invented the hereditarian theory of I Q . They reified Binet's scores, and took them as measures of an entity called intelligence. (p.157)  Dewdney: In the hands of H. H. Goddard they became precisely what Binet had feared. Goddard, after all, believed in "intelligence" as a single, fixed entity that could be measured

			more or less precisely. (p.33)
VI-3	今天我们已认识到，有许多因素可以导致精神发育迟滞，例如孕期生病、滥用药物，胎儿、婴儿营养不良，大脑受到外伤，等等，当然也有的是遗传病。	We now know that many factors could cause mental retardation, for example, maternal illness during pregnancy, poor nutrition of fetuses and babies, brain traumas, etc., of course including genetic diseases.  【Note: This is not a direct translation, but a development of one of Gould's ideas.】	Gould: Consider some of the potential causes: inherited patterns of function, genetic pathologies arising accidentally and not passed in family lines, congenital brain damage caused by maternal illness during pregnancy, birth traumas, poor nutrition of fetuses and babies, a variety of environmental disadvantages in early and later life. (p.160)
VI-4	人体的任何主要性状，都是许多基因彼此相互作用、基因与环境相互作用以及偶然因素的影响的结果。	Any major features of human body are the results of the interaction of many genes with each other, with an external environment, and causal factors.	Gould: We now know that virtually every major feature of our body is built by the interaction of many genes with each other and with an external environment.(p.162)
VI-5 VI-6 VI-7 VI-8	然而，戈达德却把所有的精神发育迟滞全都归为遗传引起的。他甚至认为智力就像孟德尔豌豆的颜色、性状一样，是由一对等位基因决定的，一个来自父亲，一个来自母亲。那些没有正常的智力基因而只有与之等位的“隐性的”精神迟滞基因的，就会是愚鲁、痴愚、白痴。那些只有一个正常的智力基因的，则是只适于干粗活的笨蛋。	However, Goddard believed all mental retardations were caused by genetic reason. He even believed that intelligence is, like the color and traits of Mendel's peas, determined by a pair of allelic genes, one from father, one from mother. Those who received no normal intelligence genes, but received the allelic recessive mental retardation gene would be morons, idiots, or imbeciles. Those who received only one normal intelligence gene would be fools fitting only for doing dull work.	Gould: But in these early days, many biologists naively assumed that all human traits would behave like the color, size, or wrinkling of Mendel's peas: they believed, in short, that even the most complex parts of a body might be built by single genes, and that variation in anatomy or behavior would record the different dominant and recessive forms of these genes. (p.162) Goddard had broken his scale into two sections at just the right place: morons carried a double dose of the bad recessive; dull laborers had at least one copy of the normal gene and could be set before their machines. (p.163)  Dewdney: Goddard, after all, believed in “intelligence” as a single, fixed entity that could be measured more or less precisely. He also believed that it was passed on by a specific gene from each parent. Those who received no genes for intelligence would be morons, or worse. Those who received only one gene would be fit for “dull labor” but little else. (p.33)
VI-9	如果智力障碍真的是由一个基因决定的，那么就有一个简单的办法将其消灭：禁止智力障碍者生育。	If mental deficiency is the effect of a single gene, then there is only one simple method to eliminate it: do not allow such people to bear children.	Gould: If mental deficiency is the effect of a single gene, the path to its eventual elimination lies evidently before us: do not allow such people to bear children: (p.163)
VI-10	如果愚鲁者能够为了人类的幸福未来而自觉地控制自己的性欲，那么我们还可以允许他们自由地生活。	If morons could consciously control their own sexual urges for the good of mankind, we might permit them to live freely.	Gould: If morons could control their own sexual urges and desist for the good of mankind, we might permit them to live freely among us. (p.163)
VI-11	但是愚蠢必然导致不道德，愚鲁者是不可能自觉地放弃自己的生殖权利的，因此必须采取强制措施。	But stupidity inexorably leads to immorality, morons cannot give up their right to reproduction, therefore compulsory measures must be taken.	Gould: But they cannot, because immorality and stupidity are inexorably linked. (p.163) So that if we are absolutely to prevent a feeble-minded person from becoming a parent, something must be done other than merely prohibiting the marrying. (p.164)
VI-12	戈达德并不反对对愚鲁者实施绝育手术，但是他认为把他们像精神病人一样关起来与社会隔离，是个更容易被接受的做法。	Goddard did not oppose sterilization of morons, but he believed that colonization of morons like institutionalization of psychiatric patients was a practice more easily accepted.	Gould: Goddard did not oppose sterilization, but he regarded it as impractical because traditional sensibilities of a society not yet wholly rational would prevent such widespread mayhem. Colonization in exemplary institutions like his own at Vineland,

			New Jersey, must be our preferred solution. (p.164)
VII-1 VII-2	同时，美国做为一个移民国家，还面临着一个外来的威胁：外国的愚鲁者正蜂拥而来，必须把他们挡在国门之外。这显然要比隔离美国本地的愚鲁者更容易做到。	Meantime, as an immigrant country, America was facing a threat from outside: foreign morons came in flocks; they must be kept out. Obviously, it was easier to do that than to colonize the native morons.	Gould: Preventing the immigration and propagation of morons Once Goddard had identified the cause of feeble-mindedness in a single gene, the cure seemed simple enough: don't allow native morons to breed and keep foreign ones out. (pp.164-165)  Dewdney: Domestic morons could be dealt with either by sterilization or by isolation (as in Goddard's school). But clearly, the arrival of new morons on American shores was much easier to deal with. Detect them and send them back to wherever they came from. (p.32)
VII-3	在 1912 年，戈达德及其助手到了纽约埃利斯岛，用比纳测试测定申请移民者的智力。	In 1912, Goddard and his associates arrived at Ellis Island to examine the intelligence of the immigrants with Binet test.	Gould: As a contribution to the second step, Goddard and his associates visited Ellis Island in 1912 "to observe conditions and offer any suggestions as to what might be done to secure a more thorough examination of immigrants for the purpose of detecting mental defectives". (p.165)  Dewdney: In 1912 Goddard was commissioned by the U.S. Public Health Service to test incoming immigrants at the infamous Ellis Island facility. (p.32)
VII-4	结果令人吃惊：83%的犹太人，80%的匈牙利人，79%的意大利人和87%的俄国人的心理年龄都低于十二岁，也即属于低能。	The results were astounding: 83 percent of the Jews, 80 percent of the Hungarians, 79 percent of the Italians, and 87 percent of the Russians had mental age below twelve years old, i. e. feeble-minded.	Gould: Binet tests on the four groups led to an astounding result: 83 percent of the Jews, 80 percent of the Hungarians, 79 percent of the Italians, and 87 percent of the Russians were feeble-minded — that is, below age twelve on the Binet scale. (p.166)  Dewdney: Enthusiastically applying the Binet test to immigrants who could barely speak English and who were for the most part scared witless, Goddard arrived at some frightening figures. He found that 87 percent of Russian immigrants, 83 percent of Jews, 80 percent of the Hungarians, and 79 percent of the Italians (among others) were feeble-minded. (pp.32-33)
VII-5 VII-6 VII-7	难道这些民族的五分之四的人口居然都精神发育不全？连戈达德本人都不敢相信，对测试结果进行了修正，使移民申请者中低能的比例降到了40%到50%。但是这个比例仍然高得离谱。	Were four-fifths of the population in these nations mentally retarded? Even Goddard himself couldn't believe it. He revised the test results so that the percentage of the feeble-minded fallen to 40% to 50%, but the figures were still too high to be credible.	Gould: Goddard himself was flabbergasted: could anyone be made to believe that four-fifths of any nation were morons? ..... Eventually, Goddard monkied about with the tests, tossed several out, and got his figures down to 40 to 50 percent, but still he was disturbed. (p.166)
VII-8	原因本来不难设想，这些受测试者绝大多数是穷人，从未上过学，有的甚至从未握过笔，一句英语不懂，在经过长途海上颠簸之后，疲顿不堪，精神紧张，惶恐不安地立即接受智商测试，怎么能指望他们发挥正常水平？	The reason for the results were obvious: most of these test takers were poor, had never gone to school, some even had never held a pen, spoke no English, after enduring a long distance voyage in the ocean, they were tired, nervous, frighten, took the IQ tests immediately, how could they be expected to perform normally?	Gould: Goddard's figures were even more absurd than he imagined for two reasons, one obvious, the other less so..... For the evident reason, consider a group of frightened men and women who speak no English and who have just endured an oceanic voyage in steerage. Most are poor and have never gone to school; many have never held a pencil or pen in their hand. They march off the boat; one of Goddard's intuitive women takes them aside shortly thereafter, sits them down, hands them a

			pencil, and asks them to reproduce on paper a figure shown to them a moment ago, but now withdrawn from their sight. Could their failure be a result of testing conditions, of weakness, fear, or confusion, rather than of innate stupidity? (p.166)
VII-9	但是戈达德却排除了这些环境因素，而把测试结果不佳归于先天的愚蠢，认定这些新移民的确有令人惊讶的低等智力，而愚鲁者比例奇高的原因，是因为移民的质量在下降，外国高智商者倾向于留在本国，而低智商者倾向于移民美国。	However, Goddard excluded these environmental factors, attributing the poor performance to innate stupidity, believing these new immigrants were indeed of surprisingly low intelligence, the high proportion of morons was because of the decrease in the quality of the immigrants: intelligent people tended to stay in their native countries, and morons tended to immigrate to America.	Gould: Since environment, either European or immediate, could not explain such abject failure, Goddard stated: "We cannot escape the general conclusion that these immigrants were of surprisingly low intelligence" (1917, p. 251). The high proportion of morons still bothered Goddard, but he finally attributed it to the changing character of immigration: "It should be noted that the immigration of recent years is of a decidedly different character from the early immigration... We are now getting the poorest of each race" (1917, p.266). "The intelligence of the average 'third class' immigrant is low, perhaps of moron grade" (1917, p. 243). Perhaps, Goddard hoped out loud, things were better on the upper decks, but he did not test these wealthier customers. (p.167)
VII-10 VII-11	因此，严格把好移民关就成了当务之急。戈达德非常自豪地报道说，在那些相信可以用智商测试检测低能外国人的美国医生的不懈努力下，在1913年，由于智力不健全而被驱逐的移民增加了350%，在1914年则比前五年的平均人数增加了570%。	Therefore, tightening the standards for immigration became a priority. Goddard proudly announced that due to the untiring efforts of the physicians who were inspired by the belief that mental tests could be used for the detection of feebleminded aliens, deportations for mental deficiency increased 350% in 1913, and 570% in 1914 over the average of the five preceding years.	Gould: Nonetheless, Goddard rejoiced in the general tightening of standards for admission. He reports that deportations for mental deficiency increased 350 percent in 1913 and 570 percent in 1914 over the average of the five preceding years. "This was due to the untiring efforts of the physicians who were inspired by the belief that mental tests could be used for the detection of feeble-minded aliens. . . . If the American public wishes feeble-minded aliens excluded, it must demand that congress provide the necessary facilities at the ports of entry (1917, p. 271)." (p.168)
VIII-1  VIII-2	到了1928年，戈达德改变了看法，承认那些比纳测试的心理年龄低于十二岁者，只有一小部分是真正的低能，而即使是愚鲁，也能通过教育和训练使他们过上正常的社会生活，而不必加以隔离。至此，戈达德的立场与比纳的立场已没有什么区别。	By 1928, Goddard had changed his mind and admitted that only a small percentage of the people whose mental age were 12 and below were actually feebleminded. And even those morons were curable by education and training to live a normal life, no need to be segregated in institutions. By now, Goddard's position was indistinguishable from that of Alfred Binet's.	Gould: By 1928 Goddard had changed his mind and become a latterday supporter of the man whose work he had originally perverted, Alfred Binet. Goddard admitted, "..... We now know, of course, that only a small percentage of the people who test 12 are actually feeble-minded....." (p.172) Goddard concluded (1928, p. 225) in reversing the two bulwarks of his former system: "1. Feeble-mindedness (the moron) is not incurable [Goddard's italics]. 2. The feeble-minded do not generally need to be segregated in institutions." (p.174)
VIII-3 VIII-4	但是在这时候，比纳测试被做为测试天生智力的方法，早已在美国流传开去。这得归功于另一位心理学家、斯坦福大学教授路易斯·特曼(Lewis M. Terman)。	However, by that time, as a test for intelligence, Binet tests had already been popularized in America, thanks to another psychologist, Professor Lewis M. Terman at Stanford University.	Gould: Goddard introduced Binet's scale to America, but Terman was the primary architect of its popularity. (p.175)  Dewdney: Problems with the Binet scale and its application led Lewis M. Terman, an educational psychologist at Stanford University, to revise the test, producing by 1917 what we now call the Stanford-Binet scale. (p.33)
VIII-5	1911年比纳测试的最后版本包括54道题，	Binet's last version of test in 1911 included 54 tasks, graded	Gould: Binet's last version of 1911 included fifty-four tasks,

VIII-6	只测试到十六岁水平。特曼在 1916 年对比纳测试做了扩展，包括 90 道题，测试到“超级成人”水平。	to 16 years old. Terman extended the test in 1916, increased the number of tasks to 90 and scale to "superior adults."	graded from prenursery to mid-teen-age years. Terman's first revision of 1916 extended the scale to "superior adults" and increased the-number of tasks to ninety. (p.175)  Dewdney: Terman extended the number of questions from 54 to 90. Many of the new questions were for "superior adults." (p.33)
VIII-7	特曼将每个年龄的儿童平均得分设为 100(即心理年龄等于实际年龄)，允许有 15 分的偏差。	Terman set the scale so that "average" children would score 100 at each age (i. e. mental age equal to chronological age), allowing a standard deviation of 15 points.	Gould: By careful juggling and elimination, Terman standardized the scale so that "average" children would score 100 at each age (mental age equal to chronological age). Terman also evened out the variation among children by establishing a standard deviation of 15 or 16 points at each chronological age. (p.177)
VIII-8	他把这个测试称为斯坦福—比纳测试。	He named the test the Stanford-Binet.	Gould: Terman, by then a professor at Stanford University, gave his revision a name that has become part of our century's vocabulary—the Stanford-Binet, the standard for virtually all "IQ" tests that followed. (p.175)
VIII-9 VIII-10 VIII-11 VIII-12	和戈达德一样，特曼认为低能是社会败坏的根源，“并非所有的犯罪分子都是低能者，但是所有的低能者都至少是可能的犯罪分子。谁都难以否认，每一个低能的妇女都是可能的妓女。道德判断，就像商业判断、社会判断或其他任何高等层次的思维品质，是智力的功能。如果智力滞留在幼稚状态，道德不可能开花结果。”	Like Goddard, Terman also believe that feeble-mindedness was the primary cause of social decay, “Not all criminals are feeble-minded, but all feeble-minded persons are at least potential criminals. That every feeble-minded woman is a potential prostitute would hardly be disputed by anyone. Moral judgment, like business judgment, social judgment, or any other kind of higher thought process, is a function of intelligence. Morality cannot flower and fruit if intelligence remains infantile.”  【Note: Fang quoted Terman without a citation.】	Gould: Terman argued that “...The primary cause of social pathology is innate feeble-mindedness. (p.180) “Not all criminals are feeble-minded, but all feeble-minded persons are at least potential criminals. That every feeble-minded woman is a potential prostitute would hardly be disputed by anyone. Moral judgment, like business judgment, social judgment, or any other kind of higher thought process, is a function of intelligence. Morality cannot flower and fruit if intelligence remains infantile (1916, p. 11).” (p.181)
VIII-13	特曼认为智商高低决定了在社会上的成功与否，一个理想的社会是根据每个人的智商进行分工的社会，智商低于 75 只适合于干粗活，75—85 只适于干半技术活，“智商高于 85 者当理发师，可能是一种严重的浪费”，而要在社会上成功，可能需要有 115 或 120 以上的智商。	Terman believed that the intelligence determines a person's success in society, and an ideal society should be the one in which jobs are assigned according to people's IQ, people with IQ below 75 are only suitable for unskilled labor, 75-85 for semi-skilled labor. "Anything above 85 IQ in the case of a barber probably represents so much dead waste." A substantial success in society probably required an IQ above 115 or 120.  【Note: Fang quoted Terman without a citation, again.】	Gould: Terman virtually closed professions of prestige and monetary reward to people with IQ below 100 (1919, p. 282), and argued that "substantial success" probably required an IQ above 115 or 120. (pp.181-182) IQ of 75 or below should be the realm of unskilled labor, 75 to 85 "preeminently the range for semi-skilled labor." More specific judgments could also be made. "Anything above 85 IQ in the case of a barber probably represents so much dead waste" (1919, p. 288). (p.182)
VIII-14 VIII-15 VIII-16	因此特曼希望能测定社会上每个人的智商，由此有了另一个创新：使智力测试大众化、商业化。比纳测试必须由经过训练的人员主持，每次只能对一个儿童进行测试，因此不可能大规模地进行。但是特曼却希望每个人都接受斯坦福—比纳测试，为测试提供了标准答案，因此任何人都可	Therefore Terman wished to test everybody's IQ, so came a new innovation: the popularization and commercialization of IQ test. While the Binet test had been administered by a trained tester, only one pupil could be tested at a time, therefore impossible for a large scale application. But Terman, in hoping testing everyone with the Stanford-Binet test, provided standard answers, so anyone could administer the test and evaluate the results.	Gould: Binet's tasks had to be administered by a trained tester working with one child at a time. They could not be used as instruments for general ranking. But Terman wished to test everybody, for he hoped to establish a gradation of innate ability that could sort all children into their proper stations in life: “What pupils shall be tested? The answer is, all. .... Universal testing is fully warranted (1923, p. 22).” (pp.176-177)

	以主持测试、评定结果。		Dewdney: Problems with the Binet scale and its application led Lewis M. Terman, an educational psychologist at Stanford University, to revise the test, producing by 1917 what we now call the Stanford - Binet scale. Terman extended the number of questions from 54 to 90. Many of the new questions were for "superior adults. While the Binet test had been administered orally by a trained tester, the new Stanford-Binet test was to be a written one. The new test, moreover, would hardly be confined to selected students. Terman already foresaw a universal IQ test: "What pupils shall be tested? The answer is All." (p.33)
VIII-17	一个儿童在经过五次 30 分钟的测试后，就被测定了智商高低，该结果可能影响其一生。	After 5 30-minutes tests, a child's IQ was determined, and the result could affect him for life.	Gould: Thirty minutes and five tests might mark a child for life, if schools adopted the following examination, advertised in Terman 1923, and constructed by a committee that included Thorndike, Yerkes, and Terman himself.(p.177)
VIII-18 VIII-19	智商测试很快成为了一个产值数百万美元的大工业，各种各样的版本被发明、推销，而所有这些版本都以斯坦福一比纳测试为依据。斯坦福一比纳测试成了以后所有智商测试的标准，一直被使用到现在。	IQ test soon became a multimillion-dollar industry, many different versions were invented and marketed, but all these versions were based upon the Stanford-Binet. The Stanford-Binet became the primary criterion for IQ tests, and remains to this day.	Gould: Testing soon became a multimillion-dollar industry; marketing companies dared not take a chance with tests not proven by their correlation with Terman's standard. ……the Stanford-Binet became (and in many respects remains to this day) the primary criterion for judging a plethora of mass-marketed written tests that followed. (p.177)  Dewdney: The Stanford-Binet test would be the foundation for all the tests to follow: Yerkes's Army Alpha and Beta tests, the Wechsler Adult Intelligence Scale, the California Test of Zmental Maturity, the Cognitive Abilities test, the Lorge-Thorndike Intelligence Test, the Otis-Lennon Mental Ability test, and many others. (p.33)
IX-1	但是从一开始，“智商”学派就在学术界遭到了批评，这些批评至今也没有平息，而智商学派几十年来也未能充分地回应这些批评。	However, from the beginning, the IQ school was criticized in academia, and the criticism has continued till now; and the IQ school has never thoroughly responded to these criticisms in the past few decades.	Dewdney: For the foregoing reason and others as well, the IQ school has been under more or less continuous attack from the beginning. The concept of IQ has been criticized by psychologists, biologists, physicists, mathematicians, and philosophers of science. To counter these criticisms, the IQ school has cleverly drawn its intellectual wagons into a circle. (p.37)
IX-2 IX-3	智商学派声称智力测试与文化背景、学习内容无关，测试的是抽象的推理能力。但是他们提供的某些问题和标准答案，显然是在测试对一个特定的文化中的社会规范的理解程度。	The IQ school claims that IQ tests are unrelated to cultural background and education content, what tested is abstract reasoning ability. But some of the questions and the answers to the questions provided by them were obviously for testing the understanding of the social norms in a certain culture.  【Note: the two sentences were based on Gould's discussion on pages 176-177, and an example is shown to the right.】	Gould: I … present two examples to show how Terman's tests stressed conformity with expectation and downgraded original response. When expectations are society's norms, then do the tests measure some abstract property of reasoning, or familiarity with conventional behavior? (pp.175-176)
IX-4	例如在斯坦福一比纳测试中，有一道题是：“我的邻居来了三个不寻常的访问者，	For example, in the Stanford-Binet test, there was this question: "My neighbor has been having queer visitors. First	Gould: Terman also included this item from Binet's original: "My neighbor has been having queer visitors. First a doctor came to

IX-5 IX-6	先是一位医生到他家，然后是一位律师，然后是一位牧师。你认为那里发生了什么事？”特曼提供的标准答案是“死亡”：医生做最后抢救和死亡鉴定，律师草拟遗嘱，牧师接受临终忏悔。	a doctor came to his house, then a lawyer, then a minister. What do you think happened there?” Terman’s standard answer was "a death," the doctor came to perform the final rescue and death identification; the lawyer to draft a will; and the minister to accept the shrift.  【Note: Fang quoted Terman without a citation, for the third time.】	his house, then a lawyer, then a minister. What do you think happened there?" Terman permitted little latitude beyond "a death," though he did allow "a marriage" from a boy he described as "an enlightened young eugenist" who replied that the doctor came to see if the partners were fit, the lawyer to arrange, and the minister to tie the knot. (p.176)
IX-7 IX-8	显然，一个不了解西方临终习俗的人，很难做出正确的回答，将会被认为“愚蠢”。即使是在西方国家生活智力正常的人，也不一定会按标准答案回答。	Obviously, it is difficult for a person without the knowledge of the western custom of death to answer the question correctly, thus is considered a moron. Even a normal person living in a western country may not answer the question according to the standard answer.	Dewdney: Such questions clearly beg a certain cultural familiarity that might well elude (or temporarily puzzle) a recently arrived immigrant, an inner-city child, or a laborer who has rarely held a pencil, much less written or drawn anything. ... These questions are clearly outside the experiences of many children in inner-city schools. (p.40)
IX-9	特曼只对一名他称为“有觉悟的年轻优生学者”的男孩的非标准答案破例接受(这名男孩回答说是“结婚”：医生来查看未婚夫妻是否适合结婚，律师草拟婚约，牧师主持婚礼)，但是对其他答案一概认为是错误的，最常见的错误答案是“离婚后再婚”，至于其他虽然合理但是太简单的答案像“聚餐”、“娱乐”都不被允许，过于复杂的、富有创造性和想象力的答案(比如“某人病危，在临死前结婚和立遗嘱”)也被认为是不可接受的。	Terman only accepted a nonstandard answer from a boy he described as "an enlightened young eugenist" (this boy's answer was "a marriage": the doctor came to see if the partners were fit, the lawyer to arrange, and the minister to tie the knot.) He considered all other answers incorrect, and the most common incorrect answer was "divorce and remarriage," as for other reasonable but too simple answers like "a dinner" or "an entertainment" were not permitted, neither were other answers which were too complicated, too original, and too imaginary (such as "someone is dying and is getting married and making his will before he dies").	Gould: Terman permitted little latitude beyond "a death," though he did allow "a marriage" from a boy he described as "an enlightened young eugenist" who replied that the doctor came to see if the partners were fit, the lawyer to arrange, and the minister to tie the knot. He did not accept the combination "divorce and remarriage," though he reports that a colleague in Reno, Nevada, had found the response "very, very common." He also did not permit plausible but uncomplicated solutions (a dinner, or an entertainment), or such original responses as: "someone is dying and is getting married and making his will before he dies." (p.176)
X-1 X-2 X-3 X-4 X-5 X-6 X-7 X-8	难道创造性和想象力不被算是智力？这正是智商学派遭受到的批评中最致命的一点：什么是智力？智力是极其复杂的现象，不论是从科学的角度还是从社会的角度，都没有人能对智力下一个能被学术界公认的、恰当的定义，更没有人能够提出一个关于智力的理论解释极其多样的与智力有关的种种现象。有些人有很强的分析、推理能力，却缺乏想象力；有些人数学能力很差，但是语言能力很强；有些人言语迟钝，但是思维反应敏捷；有些人学习能力不强，但是却善于处理社会关系……如何能够客观地判定这些具有不同的能力的人的智力高低？又如何能够对具有丰富的内容的智力做线性的数量排列？许多学者把智力定义为学习能力，但是学什么呢？数学、语言、图像识别、音乐、	Don't originality and imagination belong to the intelligence? That is the very fatal spot where the IQ school has been criticized: What is intelligence? Intelligence is an extremely complex phenomenon, either from a scientific or a social point of view, no one has been able to appropriately define intelligence which is widely accepted by academia; and no one has been able to propose a theory of intelligence to explain the great variety of intelligence-related phenomena. Some people are good at analysis and reasoning, but lack the ability of imagination; some people are poor at mathematics, but good at language; some speak slow, but think fast; some are poor at learning, but good at dealing social relations…… How could the intelligence of the people with different abilities be evaluated? How could the intelligence with such abundant content be arranged in a linear manner mathematically? Many scholars define intelligence as the ability to learn, the thing is, learning what? Mathematics, languages, image recognition, music, painting and drawing, personal relation, or survival ability in the wild? What IQ	Dewdney: By a theory of intelligence, I mean a theory that defines intelligence as a quality that inheres to some degree in every compartment of human mental activity. At a minimum, such a theory would have to be capable of identifying intelligent behavior as observed in a variety of natural settings from social interactions to athletic performance to intellectual work. .... One might well add that some people seem to show more intelligence in one area than another. For example, some people are excellent at calculating social relationships, but are quite lost when it comes to weights and measures. Some people see analogies between things almost instantly, but seem unable to imagine new situations. (p.38)



X-9 X-10	绘画、处理人际关系还是野外生存能力？智商测试以及当代其他学习能力测试所测量的，只是数学、推理和语汇能力，这最多只能说是智力的一小部分。但是智商学派却认为智商测定的是正常人必有的普遍智力。	tests and other contemporary learning ability tests measure is only the abilities of mathematics, reasoning, and vocabularies, and these abilities at most constitute a small part of intelligence. However, the IQ school believes that what IQ tests measure is the general intelligence required for normal people.  【Note: This part is Fang's development or elaboration of Dewdney's ideas.】	
X-11 X-12 X-13 X-14 X-15	在 20 世纪初，英国统计学家斯皮尔曼 (Charles Spearman)为了分析智力测试的结果，发明了因子分析法。他发现，人们在回答不同的智力测试时，其得分具有相关性，即在某一套智力测试得分高的人，在另一套智力测试中也倾向于得分高，反之亦然。这些不同的智力测试的结果是不是存在一个共同因子呢？他用因子分析法进行分析，发现的确存在一个相关因子，他称之为 g，代表普遍智力。由于他已认定人的智力具有天生的“普遍因素”，便认为这个抽象的 g 真的是测量了普遍智力。	At the beginning of 20 <sup>th</sup> century, English statistician Charles Spearman invented factor analysis technique for analyzing IQ test results. He found high degree of correlation between scores achieved by people who took different tests, i. e. if a person scored high in one test, he tended to score high in other tests, and vice versa. Was there some underlying factor common to the tests? He applied factor analysis and discovered that, indeed, there was a related factor, he called it g, stand for general intelligence. Because he had already believed that human's intelligence has an innate general factor, hence he thought this abstract g is the real measurement of general intelligence.	Dewdney: About the time that Binet was commissioned by the French Ministry of Education to compose his famous test, English statistician Charles Spearman invented factor analysis, a technique for teasing out underlying uniformities in large numbers of correlations. (p.34 ) When examining the data of IQ tests, Spearman was struck by the high degree of correlation between scores achieved by people who took two different tests. Was there some underlying factor common to the tests? To find out, he applied factor analysis and discovered that, indeed, there was. He called it g. Spearman meant this letter to stand for “general intelligence,” a perfect example of thingifying. (p.36)
X-16	但是我们知道，机理未明的相关性很可能是没有意义的，由此而得的因子也不过是个抽象的、很可能同样没有具体意义的符号，它可能反映的是环境因素(某些人在各种智力测试中得分高，是因为有良好的营养、家庭、教育)，可能反映的是遗传因素(某些人在各种智力测试中得分高，是因为他们天生就聪明)，可能反映的是环境因素和遗传因素的共同作用，当然可能什么也反映不了。	However, we know that a correlation could be meaningless without understanding the underlying mechanism, and the factor derived from such a correlation is nothing but an abstract, similarly meaningless symbol. What it reflects might be environmental factors (some people achieved high scores in IQ tests because of better nutrition, family, education), genetic factors (some people achieved high scores in IQ tests because of innate intelligence), and the interactions between environmental and genetic factors. Of course, it might reflect nothing at all.  【Note: Both Gould and Dewdney spent a lot amount of energy to discuss the limitations of correlation and factor analysis. See: Gould: pp.239-255; Dewdney: pp.34-36.】	Gould: Yet, lest anyone become too hopeful that correlation represents a magic method for the unambiguous identification of cause, consider the relationship between my age and the price of gasoline during the past ten years. The correlation is nearly perfect, but no one would suggest any assignment of cause. The fact of correlation implies nothing about cause. It is not even true that intense correlations are more likely to represent cause than weak ones, for the correlation of my age with the price of gasoline is nearly 1.0. (p.242)  Dewdney: Many positive (and, equally, many negative) correlations are entirely spurious. For example, I might find a very high correlation between daily stock prices and temperature from March to August. (p.34)
XI-1 XI-2 XI-3 XI-4 XI-5	但是智商学派却认定他们测定的是受遗传因素决定的、天生的、不可改变的普遍智力。在 40 年代，美国社会学家史密特 (Bernadine Schmidt)决定验证这个说法。他在芝加哥选定了 254 名来自社会底层的 12 到 14 岁少年做为研究对象。这些少年都被认为低能，平均智商只有 52。史密特对这	However, the IQ school believes that what they have measured is the genetic, innate, and unchangeable general intelligence. In 1940's, American social scientist Bernadine Schmidt decided to test that theory. He selected 254 children of ages between twelve and fourteen from Chicago's bottom society as his study objects. These children had all been classified as “feebleminded,” and their average IQ was	Dewdney: To the degree that IQ (as measured) turns out to be a highly plastic number, one cannot claim that it is inherited to any significant degree. Perhaps the most telling demonstration of the plasticity of IQ came in 1946 when Bernadine Schmidt, a young social scientist from Chicago, published a classic study in the journal Psychological Monographs. Schmidt's article, an unprecedented 144 pages long, described changes in the social,

XI-6 XI-7 XI-8 XI-9	些少年进行了三年的强化训练，包括培养他们良好的学习习惯、生活作风、学术基本技能等。三年后重新对他们进行智商测试，发现他们的平均智商增加到 72，整整长了 20 分。五年后，史密特对他们再次做了测试，发现其平均智商继续增加，达到了 89，进入了正常人范围，而且有四分之一的人的智商增长在 50 分以上。这个实验已说明了智商的高低并不是不可改变的，也就不可能完全由遗传因素决定，而与后天的教育有关。	merely 52. Schmidt trained these children intensively for three year, the training involved good study habits, personal behavior, and basic academic skills, etc. Three years later, they were tested again, and the results showed their average IQ increased to 72, a full 20-point increase. Five years later, Schmidt tested them again and found the average had increased to 89, entering the range of normal people; with one-quarter of the students having gained more than 50 points. This experiment demonstrated that IQ is not unchangeable, in other words, it is not determined completely by genetic factors; rather, it is related to education.	cultural, and intellectual behavior of 254 children of ages twelve to fourteen. The children, who all came from disadvantaged or dysfunctional homes in the Chicago area, had all been classified as “feble-minded.” Their average IQ was 52, as compared with a nationwide average of about 100. Schmidt conducted an intensive three-year training program that involved personal behavior, fundamental academic skills, manipulative arts, and good study habits. At the end of the period the students were tested again and proved to have an average IQ of 72, a full 20-point increase. Five years later, Schmidt tested her subjects again and found the average had increased to 89 with one-quarter of the students having gained more than 50 points. (pp.42-43)
XI-10 XI-19	那么智商在多大程度上是与遗传因素有关的呢？在遗传学上，用遗传率来表示某项性状受遗传影响的程度。这是一个在 0 和 1 之间的数字。如果不同个体的性状差异完全是由于基因差异引起的，遗传率为 1；如果完全是由环境因素导致的，则遗传率为 0。研究孪生子的性状异同，是确定遗传率的一个好办法。一对同卵孪生子的基因组是完全相同的，如果他们从小被分开、在不同的家庭长大，那么他们某个性状的相似程度，就被认为代表着该性状受基因影响的程度。30 多项孪生子研究（合计包括一万多对孪生子）的结果表明，智商的遗传率大约是 0.5。但是这样得到的遗传率事实上指的是先天因素，而先天因素并不完全是由基因决定的，出生前母亲体内环境也会对一个人的先天状况有重要影响。由于孪生子是同时在一个子宫发育的，他们共同的先天因素并不仅仅包括相同的基因的影响，还包括相同的母体环境。在考虑了孕期母体环境因素后，智商的遗传率只有大约 0.34。		
XII	可见环境和随机因素对智商高低的影响其实是更加重要的。即使是受遗传因素影响的那部分，也只是个统计结果，究竟有多少基因、什么样的基因参与其中，作用机理如何，我们都一无所知。近来英国和美国联合开展了一项研究，试图寻找影响智商的基因。研究者将数百名实验对象按其智商高、中、低分成几组，并提取其 DNA 加以分析。研究者选定了大约 90 种与神经功能有关的基因加以比较，看其中是否有与智商差异有关的。至今他们还没有找到任何与智商高低相关的基因。如果有一天他们发现了某个基因的差异与智商的高低相关，我们是否可以说这就是智商基因甚至是智力基因呢？不能。打一个比方，如果蓄电池坏了，就能影响汽车发动机的起动机，但是我们并不能说蓄电池是发动机的“基因”，它甚至算不上是发动机的一部分。同样，任何能影响神经元的构造、功能、代谢和营养的基因，都有可能影响人的智力活动，并成为影响智商的基因。有的这类基因与智力活动并无直接的关系。例如，有极少数人，大约在三、四十岁就会得阿兹海默症（老年痴呆症），他们如果做智商测验，无疑得分会很低。他们得病的原因，是某个基因（例如 app 基因）发生突变，生产异常的淀粉状蛋白。这些淀粉状蛋白在大脑中沉积下来，就会抑制周围的神经元的功能，从而导致痴呆症。显然，任何能够引起整个神经元功能失常或死亡的基因都能导致智力缺陷，但是这些基因本身的正常功能不太可能与智力活动有任何的关系。		
XIII	要而言之，智力是一种极其复杂的、多样的现象，不可能做定量的线性测量。并不存在一种可以比较正常人的智力高低的“普遍智力”。所谓智商测试，测量的不过是数学、推理、语汇方面的学习能力。智商测试在学校教育中有其应用价值，但不宜夸大其作用，更不能产生它是在测量智力的误解。智商的高低并非真正反映智力的高低。智商并不是完全由遗传因素决定、不可改变的，环境因素的影响可能更为重要。影响智力的遗传因素是极其复杂、多样的。遗传性的智力迟滞往往是由于与智力活动没有		

	关联的基因突变导致的。任何能够影响神经系统的活动的基因都有可能影响智力活动。找到某个特定的“智力基因”的可能性，可以说为零。	
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## Notes

[1] See: 方舟子: 《[“智商”的误区](#)》. In his 2007 book, *Fang Zhouzi Solves World Mysteries*, the article is under a different title (*Is IQ Unchangable?*).

[2] Fang's original Chinese: “正常的儿童甚至成年人, 也将能够通过接受基因疗法, 永久性地提高智力、体力、感官和其他各方面的能力。”“最终, 人类的个体寿命有可能被无限制地延长。”(See: Fang Zhouzi. *Looking to the Digitalized, Networked, and Geneticized 21<sup>st</sup> Century*. *China Reading Weekly*, December 29, 1999. 方舟子: 《[展望数字化、网络化和基因化的二十一世纪](#)》, 1999年12月29日《中华读书报》).

[3] Fang's original Chinese: “事实上, 一个人的‘正常’体重的确基本上是由遗传决定的。一个人的胖瘦当然和饮食习惯、食欲有关, 但是遗传因素既会影响到饮食习惯、食欲, 也会使相同的饮食出现不同的后果。我们已经发现有许多基因与肥胖有关。”(Fang Zhouzi. “I Blame Genetics!” *China Youth Daily*, July 6, 2005. 方舟子: 《[“我怪罪遗传!”](#)》, 2005年7月6日《中国青年报》).

[4] Zheng Jianyang. *Famous Fraud Fighter Fang Zhouzi Was Exposed Stealing Others' Works*. *Shenzhen Economic Daily*. 郑健阳: 《[“打假”名人方舟子被曝剽窃他人著作](#)》, 2011年2月25日《深圳商报》).

[5] Fang's original Chinese: “《深圳商报》记者郑健阳装聋作哑, 号称关注我的微博, 却不知‘葛莘博士为何会远在美国而特意关心方舟子的文章’, 不知所谓葛莘就是写了上百万文字诽谤我、支持肖传国的‘方学家’亦明? 不知道我对其指控我抄袭一事已在微博和博客上回应过几次了? 此人已‘证明’我许多篇文章都是‘抄’的, 你继续报。”(See: [2011-2-25 01:19](#)).

[6] Fang's original Chinese: “和上次媒体人集体污蔑我妻子一样, 此事的推手是南都周刊执行传谣主编许庆亮西门不暗。南方报系也该来为朱学勤报仇了。‘方学家’该兴奋了, 十年来天天在网上骂我, 终于骂上报刊了。”(See: [2011-2-25 01:53](#)).

[7] Fang's original Chinese: “亦明(葛莘)多年来天天在网上指控我科普文章都是抄的, 我要是都去回应, 还干不干正事了? 他为污蔑我抄袭是如何蒙骗读不懂英文原文的人的, 以前已有网友分析过: 见《亦明的无知和无理取闹》<http://t.cn/hCyROa> 和《“方学家”亦明读不懂科普文章是否该算作方舟子的错》<http://t.cn/h4msBa>.”(See: [2011-2-25 02:01](#)).

[8] Yi Ming. *Let's Watch Fang Fan james\_hussein\_bond's Shamelessness and Scoundrel*. Nov. 13, 2010, <http://www.rainbowplan.org/bbs/edu>. (See: 亦明: 《[且看方粉 james\\_hussein\\_bond 的无耻和无赖](#)》).

[9] Pan Haidong's original Chinese: “我已经鉴定过, 那篇文章不是抄袭的。”(See: [2011-2-26 01:59](#)).

[10] Zhang Zhaojin's original Chinese: “我曾在科学世界当编辑, 这篇文章是我编发的, 经过严格审核, 绝无抄袭。请造谣者闭嘴吧。这样只能暴露你的无知和泼妇本性。”(See: [2011-2-26 03:15](#)).

[11] See: [2012-12-25](#), [01-08 22:31](#), [01-22 14:39](#), [01-22 14:42](#), [02-22 11:00](#), [03-04 11:03](#), [03-04 11:24](#).

[12] Yi Ming. *Gigantic cheater in '1000 Talents Plan*. (亦明: 《[千人巨骗潘海东](#)》).

[13] Original Chinese: “新安晚报: 2月下旬, 你的《‘智商’的误区》一文被有人揭露出来说是抄袭、剽窃他人著作, 你好像至今没有回应?”“方舟子: 这种事很早就有了, 十年前我刚开始打假的时候, 就有人说我好几篇科普文章是抄袭美国一些杂志, 还告到这些杂志去, 最后杂志调查后否定了, 说不是抄袭。网上说我抄袭的太多了, 科普文章是抄的, 我写的诗是抄的, 散文也是抄的, 真是荒唐。你要说《‘智商’的误区》抄袭外国的杂志, 一般人外语水平不高还容易被糊弄, 但他们说我写的《墙上的阳光》抄袭你们安徽诗人梁小斌的《雪白的墙》, 真是笑话, 两首诗一比较, 里面除了都有一个‘墙’字外, 没有任何关系。一些人每天

都说我抄袭，所以我不可能也没时间去回应，只是觉得有必要的时候才去回应下。” (See: 杨远亮、李欢、刘建昌: 《[方舟子: 打假不是“一天狂欢”](#)》，2011年3月14日《新安晚报》)。

<sup>[14]</sup> As of March 23, 2013, there are 799 articles on the New Threads' Newly Arrived containing the word “弱智,” among them, 78 articles are written by Fang. In the forum of the New Threads, there are 3,946 posts containing the word “弱智,” and among them, 383 are Fang's.

<sup>[15]</sup> Fang praised his own, as well as his USTC classmates' “superb IQ” (智商高超) in 2000 (See: 方舟子: 《[关于中国科大的现状和未来](#)》, XYS20000130). In 2006, Fang laughed at a person, who opposed Fang's anti-TCM position, having an IQ below 80. (Original Chinese: “在被我判定其智商不足 80 之后, 他越发来劲, 又接连写了三篇攻击我的文章, 套路都一样, 似乎就是为了证明其智商确实不足 80。” See: 《[中医之争中的智力问题——以“社会学者”侯宁为例](#)》, XYS20061101). In 2012, Fang told his followers: “I invented some expressions, such as ‘humanities fool,’ etc., the purpose is to show that intellectually we are more advanced than you people,” and let them think they are really stupid.” (Original Chinese: “我发明了一些说法, ‘文傻’啊什么的, 这实际上就是从智力的角度就觉得我比你高, 觉得他们这些人就是很傻。” See: Fang Zhouzi. *China needs a new Atheism movement*. 方舟子: 《[中国需要一场新无神论思想运动](#)》, XYS20120831).

<sup>[16]</sup> The dialogue was: Reporter: “I heard some readers saying that your personality is like that of Sheldon in the American sitcom *The Big Bang Theory*, high IQ, low EQ, sometimes he is so serious that unbearable for other people.” Fang: “Ha ha, it's not like that. In real life, I am not that serious. I separate academic and life very well.” (Original Chinese: “Q: 曾见过有读者说觉得你性格有点像美剧《生活大爆炸》里的“谢耳朵”, 智商高情商低, 有时候较真得让人难忍受。” “A: 那也没有, 哈哈, 我在生活上没有那么较真, 我的学术和生活分得很开。” See: Wang Jingxue. *Fang Zhouzi: Beyond Personal Tastes, Beyond Arguments*. Xinhua Daily Telegraph, Jan. 25, 2013. 王京雪: 《[对话方舟子: 好恶之外, 争议之外](#)》, 2013年1月25日《新华每日电讯》)。

<sup>[17]</sup> Fang's original Chinese: “还原主义是一种科学思想, 它认为高层次可以还原成低层次、整体可以还原成各组分加以研究。” (See: Fang Zhouzi. *The Victory of Reductionism*. *China Reading Weekly*, March 15, 2000. 方舟子: 《[还原主义的胜利](#)》, 2000年3月15日《中华读书报》); “还原是一种完善的研究方法, 研究各组分的关系足以推导、解释整体的性质。” (See: Fang Zhouzi. *Reductionism and Holism*. *Studies in Dialectics of Nature*, Nov. 2000. 《[还原主义和整体主义述评](#)》, 《自然辩证法研究》2000年11期)。

<sup>[18]</sup> *Gould's criticism against reductionism*: “The depth records the link of biological determinism to some of the oldest issues and errors of our philosophical traditions—including reductionism, or the desire to explain partly random, large scale, and irreducibly complex phenomena by deterministic behavior of smallest constituent parts (physical objects by atoms in motion, mental functioning by inherited amount of a central stuff),” “Errors of reductionism and biodeterminism take over in such silly statements as ‘Intelligence is 60 percent genetic and 40 percent environmental.’” (Gould, SJ. Introduction to the Revised and Expanded Edition: Thoughts at Age Fifteen. *The Mismeasure of Man*. W. W. Norton & Company, 1996. p.27, p.34).

<sup>[19]</sup> Fang's original Chinese: “找到某个特定的“智力基因”的可能性, 可以说为零。”

<sup>[20]</sup> Chorney, MJ., et al. 1998. A Quantitative Trait Locus Associated With Cognitive Ability in Children. *Psychol Sci*. 9: 159-166. (Note: this study was invalidated later. Hill L., et al. 2002. A quantitative trait locus not associated with cognitive ability in children: a failure to replicate. *Psychol Sci*. 13:561-2.) Fisher PJ., et al. 1999. [DNA pooling identifies QTLs on chromosome 4 for general cognitive ability in children](#). *Hum Mol Genet*. 8:915-22. Plomin R., et al. 2001. [A genome-wide scan of 1842 DNA markers for allelic associations with general cognitive ability: a five-stage design using DNA pooling and extreme selected groups](#). *Behav Genet*. 31:497-509.

<sup>[21]</sup> Plomin R. 1999. [Genetics and general cognitive ability](#). *Nature* 402(6761 Suppl):C25-9.

<sup>[22]</sup> In *An ignorant and presumptuous person majoring humanities raving about genetics* (《[“文史哲” 妄人胡说遗传学](#)》), published on Dec. 23, 2001, Fang wrote: “It really makes people wonder whether they should laugh or cry that a person who majors in humanities, based on his meager qualification of high school biology, spent a half

day on an ‘in-depth study,’ read a dozen or so recent important literatures in genetics, then he thought he knew more genetics than a person who has received his biochemistry doctor’s degree in the area of molecular genetics, who has conducted frontier research in molecular genetics for more than ten years, who, although no longer conducts research personally, but due to his job’s nature, reads the newest papers in molecular biology almost every day. That person reprimanded me ‘posing as an expert, pretending as a mainstream representative,’ accused me of spreading ‘true lies.’” (Original Chinese: “一个搞‘文史哲’出身的人, 临时抱佛脚, ‘仅凭高中生物学的微薄“资历”, 用了半天时间“深入研究”了一下, 查阅了十几篇近年来重要的遗传学专业文献’, 就自以为比一位拿了分子遗传学研究方向的生物化学博士、做过十年来分子遗传学前沿研究、至今虽然不再从事具体研究但因为工作需要几乎每天都还在阅读分子生物学的最新论文的人更懂遗传学, 训斥我‘冒充专家, 谎称主流’, 揭露我散布了‘真正的谎言’, 实在是令人啼笑皆非。”)

[23] Davis BD. 1983. Neo-Lysenkoism, IQ, and the press. *Public Interest*. 73:41-59.

[24] Gottfredson, LJ., et al. Mainstream Science on Intelligence. *Wall Street Journal*, December 13, 1994; Editorial. 1997. Mainstream Science on Intelligence. *Intelligence* 24: 13–23.

[25] The original post was in English. See: [2002-04-03 13:59:12](#).

[26] Fang’s original Chinese: “[一个搞社会科学的人写的, 没有任何新东西, 能说明什么问题?](#)”

[27] See: [2002-04-03 16:08:23](#).

[28] Fang’s original Chinese: “[我只是综合学术界较普遍的意见, 又不是我的创见她的那些观点都早就被驳斥过, 包括我的文章中也提到。](#)”

[29] Blinkhorn, S. 1982. What Skulduggery? *Nature* 296:506.

[30] Fang’s original Chinese: “从你这种比较就说明你的智商不高”; “说你智商不高却偏要自作聪明”; “真是个弱智”. (See: [2002-04-03 18:08:40](#); [2002-04-04 02:45:10](#); [2002-04-04 14:34:37](#)).

[31] In 1999, Fang wrote: “U.S. courts convict plagiarism using ironclad evidences: the original author’s technical mistakes, such as citation errors, typos, are made by plagiarists. So some publishers leave some small errors on purpose in their publications for the evidence to accuse other people’s plagiarism.” (Original Chinese: “美国法庭, 在认定抄袭时, 使用一条铁证: 原作有技术性错误的地方 (比如引文错误、错别字等), 抄袭者也一一跟着犯错。以至有些辞典、目录的出版商, 故意留几个无关紧要的、不起眼的小错误, 以使用做指控别人抄袭的铁证。” See: Fang Zhouzi. 1999. *Did Guo Moruo Plagiarize Qian Mu? House Book*, 25(5):21-29. 方舟子: 《[郭沫若抄袭钱穆了吗?](#)》, 1999年5期21-29页). In 2000, Fang wrote: “In American courts, the ‘technical errors’ made by the plagiarists are the ironclad evidences for plagiarism.” (Original Chinese: “在美国法庭上, 抄袭者没有意识到的“技术性错误”乃是抄袭的铁证。” See: Fang Zhouzi. *The Ironclad Evidence of Plagiarism Committed by [www.dwnnews.com](#)*. 方舟子: 《[多维新闻网剽窃的铁证](#)》, XYS20000410).

[32] Fang’s original Chinese: “戈达德著作中展示的愚鲁儿童照片。为了增加其‘愚鲁’效果, 戈达德故意在照片上用墨水将这些儿童的眼睛涂黑。” (See: p.145. 《方舟子破解世界之谜》145页).



[33] Fancher, RE., 1987. Henry Goddard and the Kallikak family photographs. *American Psychologist* 42:585-590.

[34] See: Carroll, JB. 1995. Reflections on Stephen Jay Gould's *The Mismeasure of Man* (1981): A Retrospective Review. *Intelligence* 21:121-134; Gottfredson, LS. 1998. *The General Intelligence Factor*. *Scientific American Presents* 9(4):24-29.

[35] Terman, LM. *The Measurement of Intelligence*. Houghton Mifflin Co., 1916. p.317.

[36] Morrison, D. R. O. 1997. Bad Science, Bad Education. *Scientific American*, Nov. 1997, 114-118; Sarle, WS. [Bad Science Writing](#). Nov 13, 1997; Sherman, M. 1998. [Trials of Errors](#). *American Scientist*, March-April, 1998.

[37] AIR-China. [The Verdict No. 004](#). Feb. 17, 2011.

[38] KIRK, S. A. 1948. An evaluation of the study by Bernardine G. Schmidt entitled, Changes in personal, social, and intellectual behavior of children originally classified as feebleminded. *Psychol Bull.* 45:321-333.

## THE PREVIOUS PARTS OF THE OPEN LETTER

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