Figure 2.1 is a screenshot from Cyberball (courtesy of Kipling D. Williams). If you are a player in this game, the left hand that you see at the bottom of the screen is yours, and you see the other two players in the game in front of you. In the screen shot, you are observing one of the other players (on the left) throwing the ball to the other player (on the right). You are therefore not involved in this particular ball toss. The player on the left has chosen the other player, not you, to whom to toss the ball.

Unbeknownst to the human player, however, the other two players on the screen are simulated actors programmed by the researchers to behave in certain ways. The experiment has a 2 (inclusion vs. exclusion) × 2 (gain vs. loss) design. In some games, the human player is included in a fair share of the ball tosses. This is the “inclusion” condition. In other games, after a couple of tosses at the beginning, the human player is completely excluded from the ball toss, and watches the other two players toss the ball back and forth with each other, completely ignoring and excluding the human player. This is the “exclusion” condition.

In some games, in both “inclusion” and “exclusion” conditions, the human players earns 50 cents every time they touch the
The Intelligence Paradox

Here is an example of a question item from Raven’s Advanced Progressive Matrices. The test comes with only one instruction: Choose the figure that fits the next in the progression of matrices. Which one of the eight alternatives comes next?

All question items in all versions of Raven’s Progressive Matrices are very similar to this one. Can anyone tell me exactly how this question, and all the other similar questions that comprise the Raven’s Progressive Matrices, can possibly be culturally biased against any group? The question is a pure measure of reasoning ability. The only thing it’s biased against is the inability to think logically.

By the way, if you are wondering, the correct answer to the above question is 7.

Misconception 2: Nobody Knows What Intelligence Is, because Intelligence and IQ Are Not the Same Thing

A related misconception that people have is the claim that IQ is not a measure of general intelligence. Some people believe
The Intelligence Paradox

This indeed appears to be the case. Among contemporary Americans in the GSS data, the association between the lifetime number of sex partners and the number of children is positive among less intelligent individuals (who are below the median in verbal intelligence), but negative among more intelligent individuals (who are above the median in verbal intelligence). The more sex partners less intelligent individuals have, the more children they have, as a natural consequence of greater sexual activity with more partners. In sharp contrast, the more sex partners more intelligent individuals have, the fewer children they have. You cannot have fewer children on average by having more sex partners, unless you employ effective contraception.

Figures 4.1 shows the partial association, after controlling for age, race, sex, education, marital status, and religion, between
When Intelligence Matters (and When It Doesn’t)

Figure 4.2 Partial association between lifetime number of sex partners and number of children among the more intelligent

the lifetime number of sex partners and the number of children, among individuals who are below the median in verbal intelligence. As you can see, the relationship is positive, as indicated by the regression line with an incline.

Figure 4.2 presents the same relationship among individuals who are above the median in verbal intelligence. Here the relationship between the lifetime number of sex partners and the number of children is negative, as indicated by the regression line with a decline.

The contrast between these two graphs suggests that more intelligent Americans are indeed more efficient in employing (evolutionarily novel) modern means of contraception than their less intelligent counterparts.
Are Liberals More Intelligent than Conservatives?

This indeed appears to be the case. Even when statistically controlling for such relevant factors and potential confounds as age, race, education, income, and religion, more intelligent children are more likely to grow up to become more liberal than less intelligent children. Intelligence measured in junior high and high school strongly predicts adult political ideology seven years later. The more intelligent American adolescents are in junior high and high school, the more liberal they become as young adults.

Figure 5.1 shows that young adults in their early 20s who identify themselves as “very conservative” have the average adolescent IQ of 94.82 in junior high and high school, whereas young adults who identify themselves as “very liberal” have the average adolescent IQ of 106.42. And the association between
The Intelligence Paradox

you were walking in the forest, and a large fruit falling from a tree branch hit you on the head and hurt you. Now what’s going on?

Given that the situation is inherently ambiguous, you can either attribute the phenomenon to impersonal, inanimate, and unintentional forces (for example, wind blowing gently to make the rustling noises among the bushes and leaves, or a mature fruit falling by the force of gravity and hitting you on the head purely by coincidence) or attribute it to personal, animate, and intentional forces (for example, a predator hiding in the dark and getting ready to attack you, or an enemy hiding in the tree branches and throwing fruits at your head to hurt you). The question is, which is it?

As you can see in the $2 \times 2$ table in Figure 6.1, there are four possible outcomes. In the two diagonal cases, you have made the correct inference. You inferred that the cause of the ambiguous situation was personal, animate, intentional, and it was; or you inferred that the cause of it was impersonal, inanimate, unintentional, and it was. There are no negative consequences if you made the correct inference.

<table>
<thead>
<tr>
<th>True state of nature</th>
<th>Impersonal, inanimate, unintentional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal, animate, intentional</td>
<td>Correct inference</td>
</tr>
<tr>
<td></td>
<td>Consequence = paranoia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inference</th>
<th>Impersonal, inanimate, unintentional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impersonal, animate, intentional</td>
<td>False negative (Type II) error</td>
</tr>
<tr>
<td>Consequence = potential death</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6.1** Error management theory applied to religiosity
The Intelligence Paradox

attacked by predators and enemies that they assumed didn’t exist, then the human mind must necessarily make a large number of Type I errors.

You cannot simultaneously be paranoid and oblivious (or relaxed). The more paranoid you are, then, necessarily, the less oblivious (or relaxed) you are. The more oblivious (or relaxed) you are, then, necessarily, the less paranoid you are. In the face of a potentially dangerous yet ambiguous situation, the human mind is designed to be more paranoid and less oblivious.

Think of a smoke detector, which is designed, not by evolution by natural and sexual selection, but by engineers. Just like the human mind’s inference system, smoke detectors can make errors of inference. It can sound the alarm, “thinking” there is fire, when there isn’t (Type I error of false positive), or it can remain silent, “thinking” there is no fire, when there is (Type II error of false negative). The consequence of Type I error is that you are woken up in the middle of the night by the fire alarm, when there is no fire. The consequence of Type II error is that you sleep through the fire and are potentially burned to death.

<table>
<thead>
<tr>
<th>True state of nature</th>
<th>Fire</th>
<th>No fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct inference</td>
<td>False positive (Type I error)</td>
<td>Consequence = woken up in the middle of the night</td>
</tr>
<tr>
<td>Inference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No fire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>False negative (Type II error)</td>
<td>Correct inference</td>
<td></td>
</tr>
<tr>
<td>Consequence = potential death</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6.2** The smoke detector principle
Why Atheists Are More Intelligent than the Religious

Figure 6.3 Association between childhood intelligence and adult religiosity

Societal Implications

Once again, if more intelligent individuals are more likely to be atheistic, then it follows that, at the societal level, the average intelligence of a population should decrease its average level of religiosity. The more intelligent the population, the less religious (and more atheistic) it should be. This indeed appears to be the case.\(^\text{11}\)

Across nations, even after statistically controlling for such relevant factors and potential confounds as economic development, education, history of communism, and geographic location, the average intelligence of a population significantly and strongly reduces its average level of religiosity. Average intelligence in society decreases the proportion of the population who believe in God,
The Intelligence Paradox

polygynous men will be even smaller. So the proportion of polygynous men in any society must always be lower than 50%. Most men in polygynous societies either have only one wife or no wife at all.

However, at least some men throughout evolutionary history were polygynous, and we are disproportionately descended from polygynous men with a large number of wives, because such men had more children than monogamous or wifeless men. Nor does the human evolutionary history of mild polygyny mean that women have always remained faithful to their legitimate husband. There is clear anatomical evidence in men’s genitals to suggest that women have always been mildly promiscuous over human evolutionary history.13

As you can see in Figure 7.1, under polygyny, one man is married to several women, so a woman in a polygynous marriage still (legitimately) mates with only one man, just as a woman in a monogamous marriage does. So a woman in a polygynous marriage and a woman in a monogamous marriage are both (supposed to be) sexually exclusive to one man. In sharp contrast, a man in a polygynous marriage concurrently mates with several women, quite unlike a man in a monogamous marriage, who mates with only one woman. So throughout human evolutionary history, men have mated with several women concurrently while women have (legitimately) mated with only one man.

![Figure 7.1 Marriage institutions: Monogamy vs. polygyny](image-url)

Figure 7.1 Marriage institutions: Monogamy vs. polygyny
Why More Intelligent Men Value Sexual Exclusivity

Here’s what Clark and Hatfield found.

### 1978 Percentage Saying “Yes”

<table>
<thead>
<tr>
<th>Sex of requestor</th>
<th>Date</th>
<th>Apartment</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>56%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>69%</td>
<td>75%</td>
</tr>
</tbody>
</table>

### 1982 Percentage Saying “Yes”

<table>
<thead>
<tr>
<th>Sex of requestor</th>
<th>Date</th>
<th>Apartment</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>69%</td>
<td>69%</td>
</tr>
</tbody>
</table>

There are two interesting findings here, although they are wholly unsurprising to anyone with common sense. First, both in 1978 and 1982, absolutely none of the dozens of women who were approached by a handsome strange man agreed to have sex with him. Second, an overwhelming majority of men (75% in 1978 and 69% in 1982) agreed to have sex with a beautiful strange woman whom they had never met before. Notice that a much smaller proportion of men (exactly 50% in both 1978 and 1982) would go out on a date with her. In other words, many men who would not go out on a date with the woman would nonetheless have sex with her! More women than men in 1978 and exactly as many women as men in 1982 were willing to go out on a date with the stranger, but none of the women would sleep with him.

This classic study was recently replicated in Denmark in 2009, even though the sex difference in the proportion saying “yes” (2% vs. 38%) is not as stark in the Danish study as it was in the original American study (0% vs. 75%). Interestingly, while none of the Danish women who were not currently in relationships said...
had an extramarital affair (102.4 vs. 100.5). Among women, the difference is slightly larger (104.6 vs. 101.5).

The association between IQ and extramarital affairs remains significant, for both men and women, even after I control for education, income, and social class, as well as race, age, current marital status, number of children, religion, and religiosity. The effect of IQ is much stronger for women than for men. It is not clear to me why more intelligent women are more likely to have affairs than less intelligent women. Interestingly, as is quite often the case, intelligence and education have opposite effects on extramarital affairs for women. While more intelligent women are more likely to have affairs, more educated women are less likely to have them.

Unfortunately, the GSS does not measure the respondent’s height or physical attractiveness, so I cannot control for them in
Why More Intelligent Men Value Sexual Exclusivity

Figure 7.3 Association between intelligence and having an affair among women

the analysis. Add Health and NCDS, both of which do measure height and physical attractiveness, do not measure the respondents' experience of extramarital affairs. It therefore remains to be seen whether the significant association between intelligence and the propensity to have affairs among men is a function of the greater physical attractiveness and height of more intelligent men.

Note that the Intelligence Paradox is about individual preferences and values, what people desire and want in their heads; it's not necessarily about what people actually do. If people have complete choice over their behavior, they are expected to pursue what they desire and want, but they do not always have such complete choice. And, when it comes to sex and mating, men have very little choice.
The Intelligence Paradox

Figure 8.1 Association between childhood intelligence and weekday time to go to bed

never have ended in the summer and would never have begun in the winter. Thus humans in higher latitudes would have had to wake up before dawn and stay up after dusk if they wanted to have days of roughly the same length throughout the year. Incidentally, the average intelligence of populations tends to be higher at higher latitudes (and longitudes), even controlling for the average temperature.²²

Ethnographic evidence of traditional societies therefore suggests that our ancestors probably had a largely diurnal lifestyle, and sustained and routine nocturnal activities may be evolutionarily novel. The Intelligence Paradox would therefore predict that
Why Night Owls Are More Intelligent than Morning Larks

Figure 8.2 Association between childhood intelligence and weekend time to go to bed

more intelligent individuals are more likely to be nocturnal, getting up later in the morning and going to bed later in the evening, than less intelligent individuals.

Previous to my 2009 article with Kaja Perina, there had only been one study which examined the association between intelligence and circadian rhythm. The 1999 study found that, in a small sample of US Air Force recruits, evening types were significantly more intelligent than morning types. This is consistent with the prediction of the Intelligence Paradox.

The analysis of the Add Health data confirm this prediction of the Intelligence Paradox. Net of age, sex, race, marital status,
Figure 8.3 Association between childhood intelligence and weekday time to wake up

parental status, education, income, religion, whether currently in school, and the number of hours worked, more intelligent children are more likely to grow up to be nocturnal in their early adulthood. More intelligent individuals go to bed later, both on weeknights and on weekend nights, and they wake up later on weekdays (but not on weekends, for which the positive effect of general intelligence on nocturnality is not statistically significant).

Figures 8.1 through 8.4 show that the association between childhood IQ and adult nocturnality is monotonically positive, even though absolute differences are not very large. For example,
Why Night Owls Are More Intelligent than Morning Larks

![Chart showing the association between childhood intelligence and weekend time to wake up.](chart)

**Figure 8.4** Association between childhood intelligence and weekend time to wake up

On weeknights, “very dull” children (with IQs below 75) on average go to bed at 23:41 in early adulthood, whereas “very bright” children (with IQs above 125) on average go to bed at 00:29. In general, the more intelligent they are in junior high and high school, the later they go to bed and the later they wake up in early adulthood. The probability that one would get the patterns as strong as those represented in the four figures above purely by chance, when there is actually no association between childhood intelligence and adult circadian rhythm, is one in 10,000 or smaller.
So are Asians really more nocturnal than other races, as was my impression on my frequent trips to Countdown in Christchurch at three o’clock in the morning? I don’t have data on Kiwis, but Add Health data on Americans do suggest that they are.

Compared to all other races (whites, blacks, and Native Americans), Asians go to bed significantly later on weeknights (00:43 vs. 00:08) and on weekend nights (01:27 vs. 01:12). However,

![Figure 8.5](image)

**Figure 8.5** Association between race and weekday time to go to bed
Why Night Owls Are More Intelligent than Morning Larks

Asians do not wake up significantly later than others either on weekdays (07:38 vs. 07:32) or on weekends (10:20 vs. 10:18). In general, races differ significantly from each other in what time they go to bed, both on weeknights and weekend nights, but they do not differ significantly from each other in what time they wake up, either on weekdays or on weekends.

So it appears that my casual observations at Countdown in Christchurch so many years ago may have some empirical basis. Compared to other races, Asians do appear to stay up (and, presumably, shop for groceries, among other things) later into the night. The bivariate associations between being Asian and
nocturnality (what time they go to bed at night), represented in Figures 8.5 and 8.6, remain statistically significant even when childhood IQ is controlled for. Even net of childhood intelligence, Asians go to bed significantly later than others every night. So it is not because they are slightly more intelligent than other races that Asians are more nocturnal.

However, the association disappears once I control for all the other social and demographic variables included in the multiple regression analyses (age, sex, current marital status, parental status, education, income, religion, whether currently in school, and the number of hours worked). In fact, the only significant effect of
Why Night Owls Are More Intelligent than Morning Larks

![Bar chart showing weekend time to wake up by race](image)

**Figure 8.8** Association between race and weekend time to wake up

race in the multiple regression analyses is being black. Compared to whites (the reference category), blacks go to bed later on weekends (but not on weeknights) and wake up later on weekends (but not on weekdays).

Unfortunately, the Intelligence Paradox is completely mute on genuine race differences in nocturnality (or anything else) net of general intelligence. So I do not know why Asians or blacks stay up later into the night or wake up later in the morning.
The Intelligence Paradox

religion, more intelligent children are more likely to identify themselves as homosexual in early adulthood than less intelligent children. The more intelligent Add Health respondents are in junior high and high school, the more homosexual they identify themselves to be in their 20s. The effect of childhood intelligence on adult homosexual identity does not differ for men and women.

Even though childhood intelligence and education are naturally positively associated (the more intelligent they are in childhood, the greater education they attain by early adulthood), intelligence and education have opposite effects on adult homosexual identity. While more intelligent individuals are more likely to identify themselves to be homosexual, the more educated individuals are less likely to do so.

![Figure 9.1 Association between childhood intelligence and adult sexual identity](image-url)

**Figure 9.1** Association between childhood intelligence and adult sexual identity
Figure 9.2 Association between childhood intelligence and expressed adult homosexual attraction

homosexual attraction than “bright” children, who are in turn more likely ever to have experienced it than “normal” children, etc. In fact, “very bright” children are nearly twice as likely to grow up to experience adult homosexual attraction as “very dull” children. The probability that one would observe a pattern as strong as the one depicted in Figure 9.2 purely by chance, when there is actually no association between childhood intelligence and expressed adult homosexual attraction, is less than one in 10,000.

GSS

While Add Health has precise measures of homosexual identity and feelings (corresponding to 1 and 3 in the list of definitions
measures of homosexuality are significantly positively associated with intelligence. The more intelligent the individuals, the more homosexual they are, even net of a large number of potential confounds and correlates of intelligence.

However, Add Health and GSS have one small problem, as I mention in the Introduction when I discuss the details of the data sets. Both Add Health and GSS have measures of verbal intelligence, not general intelligence. While verbal intelligence is very strongly and significantly correlated with general intelligence—in fact, it is an important component of general intelligence—it is not exactly the same as general intelligence. NCDS rectifies this problem, as it has a very good and highly reliable measure of general intelligence, assessed by 11 cognitive tests administered at three different ages.
Unfortunately, the only measure of sexual orientation that NCDS has is the number and sex of cohabitation partners. At age 47, NCDS asks its respondents how many same-sex and opposite-sex cohabitation partners they have had, defined as someone with whom the respondents have lived “as married” and shared an accommodation for six months or longer.

Using this measure of sexual orientation, the analysis of the NCDS data show that more intelligent children (before the age of 16) have significantly more lifetime homosexual cohabitation partners 30 years later than less intelligent children, even after statistically controlling for sex, whether currently married, whether ever married, whether ever a parent, education, income, and religion. In sharp contrast, childhood general intelligence is not at all associated with the lifetime number of heterosexual partners.
The Intelligence Paradox

![Diagram](https://via.placeholder.com/150)

**Figure 10.1** Mithen’s view on the evolution of music and language into two systems of communication: *music* to express emotions, and *language* to transmit information.

To demonstrate the common evolutionary origin of music and language, Mithen surveyed a large number of clinical cases of individuals with amusia (the absence of musical abilities while retaining some linguistic abilities) and aphasia (the absence of linguistic abilities while retaining some musical abilities). These case studies largely show that music and language are based on discrete modules in the brain; some of these are separate and dedicated to one or the other while others are shared.

**Songs Are Evolutionarily Familiar, but Instrumental Music Is Evolutionarily Novel**

If Mithen is right, if music and language share a common evolutionary origin in holistic, musical utterances designed to convey messages, one possible implication is that music, in its evolutionary origin, was *songs* that individuals sang to express their desires and emotions, in an attempt to induce desired emotions and behavior in others. In other words, *music in its evolutionary origin was always vocal and never purely instrumental.* Purely instrumental music, unaccompanied by singing, may therefore be evolutionarily novel.

It may be instructive to note in this context that Blackfoot Indians have a word for “song” but not for “instrumental
Why More Intelligent People Like Classical Music

Figure 10.2 Association between intelligence and preference for classical music: GSS

that one would observe a pattern as strong as the one depicted in Figure 10.2 purely by chance, when there is actually no association between verbal intelligence and preference for classical music, is less than one in 100 quadrillion (or 100 thousand trillion or 10^{17})!

And here is the association between intelligence and whether they usually listen to classical music among the BCS respondents. As you can see, British teenagers who usually listen to classical music are much more intelligent than their classmates who don’t usually listen to classical music, by more than 7 IQ points. The probability that one would observe a pattern as strong as the one depicted in Figure 10.3 purely by chance, when there is actually no association between verbal intelligence and preference for classical music, is less than one in 10 nonillion (that’s 1 followed by 31 zeroes or 10^{31}). In other words, it’s less likely than impossible.
The Intelligence Paradox

Do you usually listen to classical music?

Figure 10.3 Association between intelligence and preference for classical music: BCS86

Evolutionary Novelty or Cognitive Complexity?

The analyses of two separate large, nationally representative data sets, with one sample of teenagers in the United Kingdom and another of adults in the United States, suggest that more intelligent individuals are more likely to prefer evolutionarily novel instrumental music than less intelligent individuals, while intelligence does not affect individuals’ preference for evolutionarily familiar vocal music. One potential objection to this conclusion is that the dimension of evolutionary novelty, captured by the distinction between instrumental and vocal music, is confounded with cognitive complexity of music, which is defined by chordal complexity (the number of chords, tones, and instruments used in the music and their interrelationships).
Why Intelligent People Drink and Smoke More

Figure 11.1 Association between childhood general intelligence and frequency of alcohol consumption (NCDS)

are separated by nearly a full standard deviation. In Figure 11.2 for quantity, they are separated by four-fifths of a standard deviation. These effects are very large.

More Intelligent People Are More Likely to Binge Drink and Get Drunk

There are occasional medical reports and scientific studies which tout the health benefits of mild alcohol consumption, such as drinking a glass of red wine with dinner every night. So it may be tempting to conclude that more intelligent individuals
Figure 11.2 Association between childhood general intelligence and quantity of alcohol consumption (NCDS)

are more likely to engage in such mild alcohol consumption than less intelligent individuals, and the positive association between childhood general intelligence and adult alcohol consumption reflects such mild, and thus healthy and beneficial, alcohol consumption.

Unfortunately for the intelligent individuals, this is not the case. More intelligent children are more likely to grow up to engage in binge drinking (consuming five or more units of alcohol in one sitting) and getting drunk.

Add Health asks its respondents specific questions about binge drinking and getting drunk. For binge drinking, Add Health asks: “During the past 12 months, on how many days did you drink
Why Intelligent People Drink and Smoke More

five or more drinks in a row?” For getting drunk, it asks: “During the past 12 months, on how many days have you been drunk or very high on alcohol?” For both questions, the respondents can answer on a six-point ordinal scale: 0 = none, 1 = 1 or 2 days in the past 12 months, 2 = once a month or less (3 to 12 times in the past 12 months), 3 = 2 or 3 days a month, 4 = 1 or 2 days a week, 5 = 3 or 5 days a week, 6 = every day or almost every day.

As you can see in Figure 11.3, there is a clear monotonic positive association between childhood intelligence and adult frequency of binge drinking. “Very dull” Add Health respondents (with childhood IQ < 75) engage in binge drinking less than once a year. In sharp contrast, “very bright” Add Health respondents (with childhood IQ > 125) engage in binge drinking roughly once every other month.

Figure 11.3 Association between childhood general intelligence and frequency of binge drinking (Add Health)
The association between childhood intelligence and adult frequency of getting drunk is equally clear and monotonic, as you can see in Figure 11.4. “Very dull” Add Health respondents almost never get drunk, whereas “very bright” Add Health respondents get drunk once every other month or so, just as frequently as they engage in binge drinking, which makes sense, since binge drinking almost necessarily and by definition would make most people drunk.

In a multiple ordinal regression, childhood intelligence has a significantly positive effect on adult frequency of both binge drinking and of getting drunk ($ps < .00001$), controlling for age, sex, race, ethnicity, religion, marital status, parental status, education, earnings, political attitudes, religiosity, general satisfaction
Why Intelligent People Drink and Smoke More

**Figure 11.5** The association between childhood intelligence and adult tobacco consumption (NCDS)

*Why Does Intelligence Affect Smoking Differently in the US and the UK?*

I’m not sure what accounts for the divergent results from NCDS and Add Health when it comes to the effect of childhood intelligence on adult smoking. However, mine is not the only study which shows such varied results. Other studies\(^\text{16}\) have also shown that more intelligent Brits are less likely to smoke, while more intelligent Americans are more likely to smoke.

In my study, the two data sets are different in two major respects. First, NCDS is conducted in the United Kingdom, while Add Health is conducted in the United States. Second, NCDS respondents were born in March 1958, while Add Health
The association between childhood intelligence and adult tobacco consumption (Add Health)

Figure 11.6 The association between childhood intelligence and adult tobacco consumption (Add Health)

respondents were born between 1974 and 1983. Further research is necessary to determine whether it is the cultural differences between the two (otherwise very similar) nations or the generational differences between the NCDS and Add Health cohorts that produce the strikingly divergent results when it comes to the effect of childhood intelligence on adult tobacco consumption.

Among the possible differences between the US and the UK, the public anti-smoking campaign has been far more aggressive and blatant in the UK than in the US. For example, in the US, each pack of cigarettes carries the Surgeon General’s (relatively tame and clinical) warning (“Smoking causes lung cancer, heart
Why Intelligent People Drink and Smoke More

Criminologists have long known that criminals on average have lower intelligence than the general population. Juvenile delinquents are less intelligent than nondelinquents, and a significant difference in IQ between delinquents and nondelinquents appears as early as ages 8 and 9. Chronic offenders are less intelligent than one-time offenders, and serious offenders are less intelligent than less serious offenders. The negative association between general intelligence and criminality is not an artifact of a selection bias, whereby less intelligent criminals are more likely to be caught than more intelligent criminals who get away, because...
Why Intelligent People Are the Ultimate Losers in Life

Do you ever want children?

Figure 12.1  Association between mean childhood IQ and desire for parenthood at 23: women (NCDS)

want no children have a mean childhood IQ of 105.5 whereas those who want some children have a mean childhood IQ of 99.9.

The picture is identical among men. Those who do not want to have any children at all have a mean childhood IQ of 104.3 whereas those who want some children have a mean childhood IQ of 100.0. The differences between the two categories of NCDS respondents are highly statistically significant among both women and men.

However, once I control for whether currently married, whether ever married, religiosity, religion, income, education, social class at birth, mother’s education, father’s education, and number of siblings, childhood IQ has a significantly negative effect on the desired number of children only among men, not among women. Among men, childhood general intelligence still has a significantly negative effect on the desired number of
The Intelligence Paradox

Figure 12.2 Association between mean childhood IQ and desire for parenthood at 23: men (NCDS)

children at age 23. No other variables have any significant effect on the number of desired children for men.

Among women, the number of siblings has a significantly positive effect on the desired number of children. The more siblings the women have themselves, the more children they want to have. But childhood general intelligence no longer has a significant association with the desired number of children once all the social and demographic factors are statistically controlled.

However, even net of the same social and demographic factors, childhood general intelligence has a significantly negative effect on the desired parenthood—whether they want to become parents or remain childless—both among men and women. More intelligent men and women are significantly more likely to want to remain childless than less intelligent men and women.

So it appears that general intelligence makes a difference only in the decision to become parents or not for both sexes. Less intelligent individuals are significantly more likely to want to become

180
Have you ever had children?

Figure 12.3  Association between mean childhood IQ and parenthood at 47: women

less intelligent women. In contrast, more intelligent men, despite having wanted to have fewer children at age 23, do not actually have fewer children by age 47. Among women, childhood general intelligence significantly decreases the number of children they have had in their lifetimes. Among men, it does not. While the effect of childhood general intelligence on women’s fertility is consistent with the prediction of the Intelligence Paradox, the lack of the same effect among men is inconsistent with it.

As you can see in Figures 12.3 and 12.4, more intelligent women are significantly more likely to remain childless—and significantly less likely to become parents—than less intelligent women. The mean childhood IQ of women who have remained childless for life is 105.3, whereas the mean childhood IQ of women who have become parents is 101.7. The difference in mean childhood IQ between the two categories of women is very large and statistically significant.
Why Intelligent People Are the Ultimate Losers in Life

![Bar chart showing mean childhood IQ for men who have and have not had children.](image)

**Figure 12.4** Association between mean childhood IQ and parenthood at 47: men

In contrast, more intelligent men are no more likely to remain childless for life than less intelligent men. The mean childhood IQ of men who have remained childless is 102.2 while the mean childhood IQ of men who have become parents is 103.0. The difference is not statistically significant. Men who remained childless and men who have become parents have essentially the same mean childhood IQ. This is once again contrary to the prediction of the Intelligence Paradox.

**Why Women, Not Men?**

It is not clear to me why more intelligent men, who wanted fewer children than less intelligent men at the start of their reproductive careers, do not actually have fewer children. This is in sharp contrast to more intelligent women who wanted fewer children and in fact do have fewer children than less intelligent...
likely to live longer and stay healthier. They are therefore much more likely to have become our ancestors.

Vegetarianism would therefore be an evolutionarily novel value, as well as a luxury of abundance. The Intelligence Paradox would predict that more intelligent individuals are more likely to choose to become a vegetarian than less intelligent individuals.

This indeed appears to be the case. Among the NCDS sample, those who are vegetarian at age 42 have significantly higher childhood general intelligence than those who are not vegetarian. Vegetarians have the mean childhood IQ of 109.1 whereas meat eaters have the mean childhood IQ of 100.9. The difference is large and highly statistically significant.

The association between childhood general intelligence and adult vegetarianism holds among both women and men separately. Among women, vegetarians have a mean childhood IQ of 108.0 while meat eaters have the mean childhood IQ of
The Intelligence Paradox

100.7. Among men, vegetarians have the mean childhood IQ of 111.0 and meat eaters have the mean childhood IQ of 101.1, a **10-point difference**!

The fact that the difference in childhood IQ between vegetarians and meat eaters is larger among men than among women makes sense in light of the historical division of labor between the sexes. Throughout evolutionary history, men have traditionally hunted animals for their meat while women have traditionally gathered plant food. So vegetarianism—a complete and total eschewal of animal meat—should be even more evolutionarily novel for men than for women. Women are 60% more likely to be vegetarians than men are (3.33% vs. 2.07%).

Childhood general intelligence has a significantly positive effect on the likelihood of vegetarianism at age 42, even net of a large number of social and demographic factors, such as sex, whether ever married, whether currently married, education,
Other Possible Consequences of Intelligence

**Figure 13.3** Association between childhood general intelligence and adult vegetarianism: women (NCDS)

**Figure 13.4** Association between childhood general intelligence and adult vegetarianism: men (NCDS)
The Intelligence Paradox

income, religion, religiosity, social class at birth, mother’s education, and father’s education, both in the full sample and among men and women separately.

There appears very little doubt that more intelligent children are more likely to grow up to be vegetarian as adults in the United Kingdom. One standard deviation (15 points) increase in childhood IQ increases the odds of adult vegetarianism by 37% among women and by 48% among men.

Interestingly, the strong association between childhood intelligence and adult vegetarianism is not replicated with Add Health data in the US. American vegetarians in early adulthood do have significantly higher childhood intelligence in junior high and high school, but the difference is not large (101.5 vs. 99.3). And it is only significant among women (101.4 vs. 98.5), not among men (101.7 vs. 100.1). This is very strange given the historical division of labor by sex that I note above. The significant effect of

Figure 13.5 Association between childhood intelligence and adult vegetarianism (Add Health)
Other Possible Consequences of Intelligence

Are you a vegetarian?

Figure 13.6 Association between childhood intelligence and adult vegetarianism: women (Add Health)

childhood intelligence on adult vegetarianism among Americans disappears entirely once mother’s or father’s education or religion is statistically controlled.

It is not at all clear to me why the difference in childhood intelligence between vegetarians and meat eaters is so much larger and stronger in the UK than in the US. As I note in Chapter 11, when I discuss the divergent effects of childhood intelligence on the adult consumption of tobacco, there are two principal differences between NCDS and Add Health: the national differences between the UK and the US; and the generational differences between those born in March 1958 and those born between 1974 and 1983. I am not sure if it is the national differences or the generational differences, or something entirely different, that account for the observed differences in the association between childhood intelligence and adult vegetarianism in the UK and the US.
The Intelligence Paradox

Crime and Punishment

As I note above in Chapter 11, the fact that criminals on average are less intelligent than noncriminals is consistent with the Intelligence Paradox. Much of what we call interpersonal crime today was probably a routine means of intrasexual male competition in the ancestral environment, so, in this sense, crime is “natural.” In contrast, the technologies and institutions of law enforcement and criminal punishment are evolutionarily novel, so, in this sense, the police and the courts are “unnatural.” It therefore makes sense from the perspective of the Intelligence Paradox that less intelligent men are more likely to resort to the “natural” means of criminal behavior to achieve their goals but they do not fully comprehend the “unnatural” entities of the criminal justice system.

Further, as I also explain in Chapter 11, what matters is not the criminality of the behavior per se, but its evolutionary novelty.