studies, this would be irresponsible. Qualitative methods rarely attempt to control any of the factors that affect situations, so although one factor may appear to have caused an event, its influence cannot be confirmed without conducting more precise investigations. There is thus a tradeoff between flexibility and precision.

The advantages of doing qualitative research are numerous. One of the most important of these is that the flexibility of qualitative data collection methods can provide researchers access to individuals who would be unable or unwilling to respond in more structured formats. For this reason, much research on children is qualitative. Naturalistic observations of children are sometimes undertaken to assess social dynamics. For example, covert videotaping of elementary school playgrounds has revealed that bullying and aggression are far more common than most teachers and parents realize, and that bullying is not uncommon among girls. Similarly, comparative psychologists learn a lot about the social, behavioral, and cognitive abilities of animals by studying them in their natural habitats. A further advantage of this type of research is that the validity of the results is not jeopardized by the laboratory environment. An animal or child may not act the way they usually would in their natural surroundings if they are studied in a laboratory.

Another important application of qualitative research is in the study of new areas of interest, or topics about which not very much is known. Qualitative research usually yields a lot of information. In contrast with quantitative research, the information gathered by qualitative researchers is usually broadly focused. This means that qualitative methods can yield information about the major factors at play, highlighting areas that might warrant more in-depth quantitative study. Although many researchers believe quantitative methods to be superior to qualitative methods, the two are probably best seen as complementary. Qualitative research can suggest what should be measured and in what way, while controlled quantitative studies may be the most accurate way of doing the actual measuring.

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Further Reading
Race and intelligence

Throughout human history, people have tended to divide each other into groups. Most often, physical characteristics are used to distinguish between groups, and the groups are called races. Some people have long believed that many characteristics about a person could be determined by simply looking at the person’s race. Intelligence is one trait that has been studied in an attempt to correlate it to racial groups. In fact, at present the best evidence does not strongly support the idea that the people of any race are more or less intelligent than those of any other race. In addition, intelligence testing is an imperfect science. Traditional tests are skewed to favor certain segments of society.

Genes and intelligence: a clear verdict

Saying that intelligence is partly genetic—programmed in the genes and inherited from one generation to the next—is vastly different than saying that genes underlie any racial differences. To give a classic example, scatter two identical groups of seed on a rich and a barren, dry plot of land. Within the rich plot, genetics will determine any difference in seed growth. But environment will cause most of the difference between the two plots.

Studies estimate that genes account for between 30 and 80% of our intelligence. Using meta-analysis—a statistical method that allows researchers to compare data from different experiments—a group of researchers showed that, when all these studies are taken together, genetics appear to determine roughly half of intelligence, environment the other half. Interestingly, the meta-analysis also suggested that pre-birth environmental factors such as the mother’s nutrition, which are difficult to measure in any study, might underlie most of the environmental difference.

These results make some common sense. We know that intelligent people tend to have intelligent children—but not always. Some studies have also suggested that intensive programs may make a large difference in disadvantaged children’s intelligence quotient (IQ) scores.

The problem with this split is that unrecognized differences in either genetic inheritance or environment might skew otherwise carefully crafted studies of race and intelligence. This problem will haunt nearly every single study we discuss.

Race and IQ: not so clear

The question of whether human races possess different intellectual capacities comes, at least in part, from an early twentieth-century observation that African Americans’ IQ scores were, on the average, 15 points lower than those of white Americans. Recently, the black/white IQ difference has decreased; today it’s closer to 10 points.

It’s difficult to see how a five-point change in the IQ difference between black and white Americans could have come about in less than a century if genetics caused the difference entirely. Even more interesting, Americans and western Europeans today score 15 points higher on identical IQ tests than their great-grandparents did. A 15-point difference in IQ is significant (an IQ of 100 is “average,” 130 “gifted”); but we clearly aren’t more intelligent than our great-grandparents. It seems that environmental factors can and do play havoc with our attempts to measure intelligence.

A number of researchers have undertaken studies to uncover the source of the 10-point IQ difference between the races. One type of study measures the IQs of children of different racial backgrounds who are raised in similar environments. African Americans, on the average, have 70% African and 30% European ancestry. If whites were genetically more intelligent than blacks, we would expect black children with more European ancestry to have higher IQs than those with more African ancestry, even when they’re raised in the same family.

Psychologists have used three ways to estimate white ancestry in African Americans. (It is worth noting that there are no “pure” racial groups.) Skin color is an imper-