CHAPTER 3
PERSONALITY TRAITS: PRACTICAL MATTERS

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PERSONALITY TRAITS: THEORETICAL AND PRACTICAL CONCLUSIONS

CHAPTER SUMMARY

REVIEW QUESTIONS

KEY TERMS
Can you judge someone’s personality from his or her handshake? If we express our personalities in our decorating tastes, can something as simple as a handshake also express who we are? Amazingly enough, the answer to these questions is yes—at least when it comes to the five factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness.

In one study, participants came to the laboratory for a study on “personality questionnaires” where they were greeted by four experimenters, one at a time (Chaplin, Phillips, Brown, Clanton, & Stein, 2000). Each experimenter shook hands with the participant on arrival and departure, twice in all, for each participant. These experimenters, two men and two women, were trained extensively to rate handshakes on various scales including strength, grip, dryness, temperature, vigour, duration, eye contact, and texture (training took about a month for the experimenters to standardize and validate their judgments). Participants took a version of the Big Five Inventory which measured their personalities on the five factors.

Because a number of the handshake qualities were related to one another, the experimenters created a Firm Handshake Composite from ratings of duration, eye contact, completeness of grip, strength, and vigour. They discovered that men had firmer handshakes than women and that personality for three of the five factors was significantly correlated with this Firm Handshake Composite (Chaplin et al., 2000).

Neurotic participants tended to have a weak handshake, whereas those who were more emotionally stable had a firmer handshake. In addition, extraverts had a firmer handshake than introverts. Interestingly, there was a correlation between handshake and Openness for women only, such that women who had a firmer handshake were more open to experience than women with a softer handshake. Have you ever heard the advice, “You never have a second chance to make a first impression”? Well, the authors noted that you might want to take the results of this study to heart, especially if you are nervous and shy on a job interview, graduate school interview, or when meeting business contacts (advice your mother might agree with!).

Aside from handshakes, observers form first impressions based on quick glimpses of other people’s behaviour. Jeremy Biesanz, an assistant professor at the University of British Columbia, has conducted research on first impressions of personality. In one study, he and his colleagues (Chan, Rogers, Parisotto, & Biesanz, 2011) tested gender differences in making first impressions based on short video clips (“thin slices”) of strangers. Each participant answered questions from an interviewer as well as using the 44-item Big Five Inventory. The researchers found that there was no difference in the accuracy of judging specific traits with respect to gender; however, female perceivers achieved higher levels of accuracy, but only with respect to normative accuracy or perceiving what others are like in general. Biesanz and colleagues have done more research on the topic of first impressions by adding a motivation for accuracy factor (Biezanz & Human, 2010). In this study they found that with heightened motivation, perceivers were, in fact, more accurate in assessing distinctive personality traits in others but, consequently, they...
saw others as less normative (for example, less positively on desirable traits). In their other work, they found that people do judge a book by its cover, but a beautiful cover prompts a closer reading, leading more physically attractive people to be seen both more positively and more accurately (Lorenzo, Biesanz, & Human, 2010).

Our personality is expressed in many aspects of our lives, from our way of interacting with others to the kinds of music we enjoy to the kinds of careers we choose. Indeed, not only do we carry our personality around with us in various situations, but we are who we are across our lifetimes as well. In this chapter we consider whether there are traits left out of the five factors and if this model adequately explains the personality of non-Westerners. Then we take a look at how we express our personalities in various areas of our lives. Finally, we consider how personality develops—both stays consistent and changes—over time and how we maintain a coherent personality over our lifespans: all very practical matters for the topic of traits.

What’s Missing from the Five Factors?

Take a moment to describe yourself. Do you use standard traits such as sociable, outgoing, fun-loving, and sarcastic? But do you also have responses such as “exhausted,” “good time manager,” “athletic,” “handy,” and “beautiful”? Where do these fall on the five factors?

Some critics have claimed that the five factors are complete and describe such highly specific traits (Saucier & Goldberg, 1998). Michael Ashton at Brock University is a well-established researcher in this domain and has completed multiple research projects on the primary factors of personality. He and his colleagues conducted a recent study on whether there were higher order factors of personality and found that there is no need for additional factor construction (Ashton, Lee, Goldberg, & de Vries, 2009). Others—reanalyzing the same data—take a more liberal view and identify additional factors (Paunonen & Jackson, 2000) exemplifying how choosing the right number of factors is more art than science, as we saw in Chapter 2. What is out there beyond the five factors? If we eliminate adjectives that describe physical characteristics (short, beautiful, heavy), demographics (employed, unemployed), unusual behaviours (evil, cruel) and other adjectives not typically used to refer to personality, we have 10 possible candidates (see Table 3.1). Paunonen (2002) even created the Supernumerary Personality Inventory to measure these factors! Just for the record, these clusters also fall outside the six-factor HEXACO model (Lee, Ogunfowora, & Ashton, 2005), discussed in Chapter 2.

Are these parts of personality? Are these traits? Or, are they attitudes, values, or social behaviours? We consider a few of these questions in turn as we take a closer look at three possible traits: intelligence, religiosity, and sexuality.

<table>
<thead>
<tr>
<th>Table 3.1 Adjectival Clusters beyond the Five Factors</th>
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<tbody>
<tr>
<td>1. Religious, devout, reverent</td>
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<tr>
<td>2. Sly, deceptive, manipulative</td>
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<tr>
<td>3. Honest, ethical, moral</td>
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<td>4. Sexy, sensual, erotic</td>
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<td>5. Thrifty, frugal, miserly</td>
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<td>6. Conservative, traditional, down-to-earth</td>
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<td>7. Masculine-feminine</td>
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<tr>
<td>8. Egotistical, conceited, snobbish</td>
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<tr>
<td>9. Humorous, witty, amusing</td>
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<td>10. Risk taking, thrill seeking</td>
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Is Intelligence a Personality Trait?

Generally, cognitive abilities are not considered personality traits. However, an early personality psychologist, Raymond Cattell, identified ability traits such as memory, mathematical ability, and intelligence (Cattell, 1946). So, is intelligence considered a personality trait today? Maybe not. First, recall that early studies of the Big Five defined Openness as consisting of sophistication, artistic and intellectual interests, and intelligence (Norman, 1963). Psychologists in the lexical tradition thought of this factor as Culture rather than Openness to experience, as we do today. However, other studies find that adjectives such as intelligent, knowledgeable, and cultured load on a Conscientiousness factor (McCrae & Costa, 1985).

Second, when people rate themselves or a close friend on “intelligence” they are generally thinking of intelligent, rational and logical, clear-minded, mature, and similar adjectives (Borgatta, 1964). These are personality descriptors that are clearly different from cognitive ability or IQ, which is what we generally think of when we think of intelligence. We seem to think of productive, motivated, hardworking, and well-organized people as having academic intelligence, even though they do not score as such on IQ tests (Sternberg, Conway, Ketron, & Bernstein, 1981). Indeed, when participants rate themselves on intelligence adjectives such as hardworking, smart, and knowledgeable, these end up loading on a Conscientiousness factor and are not related to measured intelligence (McCrae & Costa, 1985).

Although it is generally accepted that intelligence is not a personality trait, a recent study conducted at the University of Western Ontario suggests that intelligence level may affect personality measurement (McLarnon & Carswell, 2013). That is to say that that personality measurement may not be consistent across groups of different intelligence levels. The authors affirm that personality testing is a valuable tool but conclude that more sophisticated measures are needed so that personality scores can be compared across different intelligence levels.

Third, there is evidence that there are individual differences in how people perceive and process information about the social world. Some psychologists call this emotional intelligence (Goleman, 1995; Salovey & Mayer, 1994).

Canadian researchers Livia Veselka and colleagues at the University of Western Ontario were interested in defining a general factor of personality that included an additional dimension of personality not captured by the Big Five (2009). They used the HEXACO model of personality (Ashton & Lee, 2001), which adds honesty–humility to the personality construct, and examined how it related to emotional intelligence (EQ) in the context of a large study of monozygotic and dizygotic twins. They found that EQ was negatively predicted by Emotionality/neuroticism but positively predicted by Extraversion.

Finally, the whole topic of intelligence as an ability in the form of IQ has a long and controversial history in psychology. Because IQ is quite a different concept than traits, this topic is best covered in other psychology classes, not in personality classes.

Is Religiosity a Personality Trait?

Think about the following adjectives: spiritual, prayerful, mystical, worshipful, devout, pious, orthodox, godly, born-again, heretical, irreverent, and agnostic (Saucier & Goldberg, 1998, p. 514). Do you think these form an important dimension of personality beyond the five factors?

Despite the importance of religion in many people’s lives, religion has not occupied a central role in psychology, and certainly not in the study of personality (Emmons, Barrett, & Schnitker, 2008). A chapter on the psychology of religion made its debut in only the third edition of the Handbook of Personality in 2008 (Emmons et al., 2008). For many people—up to 75% in some polls—spirituality is more than a belief, an attitude, a demographic, a tradition, or a habit: It is a core part of who they are (Emmons et al., 2008).

Whether religiosity is an important dimension of personality beyond the five factors is a matter of some debate (cf. Paunonen & Jackson, 2000; Saucier & Goldberg, 1998). For example, Saucier and Goldberg (1998) suggested that religiosity, like many dimensions beyond the five factors, is more appropriately considered a secondary trait, applicable for certain purposes, but not a core aspect of personality. Researchers consistently find correlations between religiosity and Agreeableness, Conscientiousness, and sometimes Openness and Extraversion depending
Consider the concept of **spiritual transcendence**, the ability of individuals to “stand outside of their immediate sense of time and place to view life from a larger, more objective perspective” (Piedmont, 1999, p. 988). According to Piedmont, spiritual transcendence includes a personal search for a greater connection rather than a spiritual encounter with a higher being. The concept of spirituality goes beyond any particular religious tradition, and in fact, Piedmont and his colleagues designed the Spiritual Transcendence Scale (STS) after first meeting with experts from various faiths including Buddhism, Hinduism, Quakerism, Lutheranism, Catholicism, and Judaism (Piedmont, 1999; Piedmont & Leach, 2002). The scale has three facets: Prayer Fulfillment, feelings of joy and contentedness from connection with the transcendent; Universality, seeing humanity as a single interrelated whole such that harming one harms all; and Connectedness, feeling belongingness to and social responsibility and gratitude for others across generations and across social groups (You can see how you score in spiritual transcendence by completing the short form of the scale in Table 3.2 and finding your score in Table 3.3).

In two different validation samples, Piedmont and colleagues discovered that scores on each of the three transcendence scales were only slightly related to scores on the five factors as measured by both adjectival scales and by scores on the NEO-PI-R. Further, factor analysis yielded six independent factors: five for each of the five factors and one for spiritual transcendence. Together, this suggests that spiritual transcendence is a dimension of personality separate from the five factors of personality (Piedmont, 1999; see also MacDonald, 2000, who came to the same conclusion using his own measure, the Expressions of Spirituality Inventory).

Further, scores on the STS predicted scores on measures of life outcomes beyond the five factors and, in some cases, the effect of spirituality was stronger than the effect of personality! Specifically, spiritual transcendence and personality together predicted scores on locus of control beliefs for health issues, vulnerability to stress, responsiveness to others, perceived social support, prosocial behaviour, positive sexual attitudes, and prochoice and prolife attitudes toward abortion (Piedmont, 1999).

### Table 3.2 The Spiritual Transcendence Scale Short Form (STS-R)

| Agree or disagree with each of the nine questions below using the following scale: |
| Strongly Agree = SA |
| Agree = A |
| Neutral = N |
| Disagree = D |
| Strongly Disagree = SD |

| 1. In the quiet of my prayers and/or meditations, I find a sense of wholeness. | SA A N D SD |
| 2. I have done things in my life because I believed it would please a parent, relative, or friend that had died. | SA A N D SD |
| 3. Although dead, memories and thoughts of some of my relatives continue to influence my current life. | SA A N D SD |
| 4. I find inner strength and/or peace from my prayers and/or meditations. | SA A N D SD |
| 5. I do not have any strong emotional ties to someone who has died. | SA A N D SD |
| 6. There is no higher plane of consciousness or spirituality that binds all people. | SA A N D SD |
| 7. Although individual people may be difficult, I feel an emotional bond with all of humanity. | SA A N D SD |
| 8. My prayers and/or meditations provide me with a sense of emotional support. | SA A N D SD |
| 9. I feel that on a higher level all of us share a common bond. | SA A N D SD |

To score, points are assigned to your responses to each item. For items 1, 2, 3, 4, 7, 8, and 9 assign 5 points for each Strongly Agree response, 4 points for each Agree, 3 points for each Neutral, 2 points for each Disagree, and 1 point for each Strongly Disagree. For items 5 and 6, the opposite applies; give 1 point for each Strongly Agree, 2 points for Agree, 3 points for Neutral, 4 points for Disagree, and 5 points for Strongly Disagree. Add your scores for all nine items together. See Table 3.3 for how you compare to others who have taken the test.

Source: STS-R short form copyright © 1999, 2005 by Ralph L. Piedmont, Ph.D. No further copying, distribution, or usage is allowed without the explicit permission of Dr. Piedmont.
A collaboration among various researchers across Canada examined how the Big Five traits are associated with how one views the meaning in life (Lavigne, Hofman, Ring, Ryder, & Woodward, 2013). Individuals who took meaning from things such as questioning and learning were higher in certain aspects of Openness to experience. People who were more focused on work and family tended to be higher in aspects of Conscientiousness and Extraversion. This evidence suggests that, indeed, we may think of spirituality as an important part of personality. Whether spirituality, gratitude, ultimate concerns, or some additional aspect of religiosity is best thought of as a trait, dimension, or as some other important part of human personality is still to be determined by researchers (Emmons et al., 2008).

Is Sexuality a Personality Trait?

Do you know somebody who is “charming,” “flirtatious,” or “coy”? Can you account for these aspects of his or her personality within the five factors? No, and here’s the background for that: Words that described aspects of sexuality or that were more applicable to one gender or the other were purposely excluded from early lexical studies (Buss, 1996). This, according to renowned evolutionary psychologist David Buss, “resulted in the near total omission of the individual differences in sexuality” (p. 203).

To rectify this problem, Buss and his colleagues identified all adjectives referring to sexuality from standard dictionary and similar lexical sources (Schmitt & Buss, 2000). Undergraduate students rated themselves on each of these 67 words along with an adjectival measure of the Big Five. When Schmitt and Buss factor-analyzed these responses they found 7 sexuality factors, referred to as the Sexy Seven: Sexual Attractiveness (e.g., sexy, stunning, attractive), Relationship Exclusivity (e.g., faithful, monogamous, not promiscuous), Gender Orientation (e.g., feminine, womanly, manly, masculine), Sexual Restraint (e.g., virginal, celibate, chaste), Erotophilic Disposition (e.g., obscene, vulgar, lewd), Emotional Investment (e.g., loving, romantic, compassionate), and Sexual Orientation.

Both the Big Five and Canadian researchers’ Ashton and Lee’s HEXACO model have been examined in terms of their relationship to the Sexy Seven. It was found that both models were similarly associated with the Sexy Seven, with the HEXACO model better predicting Sexual Attractiveness, Relationship Exclusivity, and Sociosexuality (Bourdage, Lee, Ashton, & Perry, 2007).

Are these Sexy Seven factors personality traits beyond the Big Five? In an extensive series of tests, Schmitt and Buss discovered that the sexuality factors overlap almost 80% with the

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Total STS</th>
<th>Prayer Fulfillment (Items 1, 4, 8)</th>
<th>Universality (Items 6, 7, 9)</th>
<th>Connectedness (Items 2, 3, 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Up to age 21</td>
<td>29–35</td>
<td>9–12</td>
<td>9–12</td>
<td>10–12</td>
</tr>
<tr>
<td></td>
<td>Ages 30 and up</td>
<td>35–39</td>
<td>11–14</td>
<td>11–13</td>
<td>10–12</td>
</tr>
<tr>
<td>Men</td>
<td>Up to age 21</td>
<td>27–33</td>
<td>8–11</td>
<td>9–11</td>
<td>9–12</td>
</tr>
<tr>
<td></td>
<td>Ages 21–30</td>
<td>23–29</td>
<td>7–11</td>
<td>6–10</td>
<td>8–11</td>
</tr>
<tr>
<td></td>
<td>Ages 30 and up</td>
<td>34–38</td>
<td>13–15</td>
<td>11–13</td>
<td>10–12</td>
</tr>
</tbody>
</table>

Table 3.3 Average Scores on the Spiritual Transcendence Scale by Gender and Age

This table presents the average range of scores by gender and age group. If your total score falls in this range, then you have an interest in understanding broader, transcendent issues, but also have concerns for immediate needs. You balance both perspectives. If your score is higher than these values, then you have a strong spiritual transcendent orientation. You are concerned with living a life that is in accord with values and meanings that originate with some larger understanding of the purpose of the universe. You tend to see life in terms of “both and” rather than “either or.” Individuals whose score is lower than the tabled values are more focused on the tangible realities of daily living. There may be more of a self-oriented focus to life, where personal concerns and issues are of greater concern.

Source: STS-R short form copyright © 1999, 2005 by Ralph L. Piedmont, Ph.D. No further copying, distribution, or usage is allowed without the explicit permission of Dr. Piedmont.
five factors, suggesting that they are not really separate factors. For example, when both the Big Five and sexuality adjectives were factor-analyzed together, the result was five factors. Each of these factors included a combination of both types of adjectives: Agreeableness and Emotional Investment; Extraversion, Sexual Attractiveness, Erotophilic Disposition, Sexual Restraint; Openness and Sexual Orientation; Neuroticism and Gender Orientation; and Conscientiousness and Relationship Exclusivity. Because sexuality can be accounted for by a combination of factors and facets of the five factors, sexuality is not a separate personality trait. Rather, sexuality is—along with musical tastes, room decorating, and handshaking—another way in which we express our traits of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness.

Indigenous Personality: Unique Personality Traits?

Although some have claimed that five factors misses important aspects of personality in American culture, the picture is even more complicated when trying to apply the model to other cultures. Because the five-factor taxonomy relies on measures that were validated in mostly American samples, even if they adequately explain personality in another culture, it is possible that we may have missed personality traits that are unique to that culture. For example, consider a person who is polite, generous, responsible, respectful, and has a strong sense of honour. We can readily understand what this means, but can you think of a single word to describe these qualities? If you were Greek, you would immediately recognize this as *philotimo*.

How about the qualities of caring for the mental and physical well-being of one’s elderly parents, continuing the family line, and bringing honour to one’s family and ancestors? For the Chinese, *filial piety* is a very desirable personality trait and is much more than obeying and honouring one’s parents. Disappointing a family member is like letting down all of your ancestors—and your future progeny (Ho, 1996; Zhang & Bond, 1998). According to cultural tradition, this trait must be internalized by young people. Filial piety is not captured by the five-factor model alone; indigenous personality traits are necessary to fully explain this construct in Chinese college students (Zhang & Bond, 1998).

Can you think of a person on whom others depend? This person may even have a strong social obligation to take care of others. Whereas this sounds a lot like the relationship between parents and their children to Western sensibilities, this characteristic of *amae* would seem very natural among Japanese adults. Amae characterizes relationships between people of lower and higher status, such as bosses and workers, in addition to the relationship between parents and children (Doi, 1973).

Although these concepts are readily understandable by an outsider, they are examples of indigenous culture-specific traits (cf. Goldstein, 2000). There is also the Korean concept of *cheong* (human affection; Choi, Kim, & Choi, 1993), the Indian concept of *hishkama karma* (detachment; Sinha, 1993), the Mexican concept of *simpatia* (avoidance of conflict; Triandis, Marin, Lisansky, & Betancourt, 1984), and the Filipino concept of *pakikisama* (going along with others; Enriquez, 1994), among others (Church & Ortiz, 2005). For the most part, these indigenous personality traits lie beyond the five factors.

The fact that the five-factor model is unable to account for certain culture-specific traits has drawn criticism that it is not a sufficient model of personality. Brad Piekkola, based out of Vancouver Island University, believes that it is actually a theory of temperament rather than personality (Piekkola, 2011). He believes the five-factor model focuses too much on the biological bases of human behaviour while neglecting cultural and societal factors, as well as new traits that come about as society evolves. He holds that personality is intended to focus on individuals rather than innate behaviours that are common to the species as a whole. For instance, the term “couch potato” has emerged in recent years to describe a person who spends too much time watching television. Although many of us are able to think of someone we know who we would describe as a couch potato, this term does not fit into the five-factor model because television is not universally available and thus the term would have no meaning in some cultures.
The Five Factors in Other Cultures

How do we go about applying the five-factor taxonomy to other cultures? Do we take the “transport and test” approach where we translate English measures and see if they apply to people in other cultures? Or, do we start with the lexicon of a particular culture and try to identify indigenous personality traits? There are pros and cons to each of these approaches and the results depend on which method, as well as the specific measures, experimenters employ. Together, this line of research gets us closer to both identifying human universals in personality and understanding the impact of culture on personality. There are five main findings:

1. Questionnaire measures of the five-factor model reliably replicate across many cultures and languages. The question-based NEO-PI-R, when translated and then carefully back-translated to ensure that the items are comparable, applies very well across many countries and cultures. So far, the FFM has been tested and validated in more than 50 countries including most Western ones as well as Israel, Argentina, Botswana, Ethiopia, Japan, Malta, Peru, South Korea, and Nigeria (McCrae, 2001, 2002; McCrae & Costa, 1997b; McCrae, Terracciano, & 78 Members of the Personality Profiles of Cultures Project, 2005; McCrae, Terracciano, & 79 Members of the Personality Profiles of Cultures Project, 2005). In all of these countries, self-ratings and peer ratings converge just as they do in the United States. In addition, five-factor scores correlate impressively with meaningful external criteria on life outcomes such as life satisfaction and getting along with others (Benet-Martínez & Oishi, 2008). In sum, there is “considerable evidence that the FFM dimensions are in fact universally applicable” (McCrae et al., 2005b, p. 408).

2. Adjectival measures of the Big Five reveal variations of Neuroticism, Extraversion, Agreeableness, and Conscientiousness but not Openness in many different cultures. The closer a culture is to a Northern European culture, the closer the results are to the Anglo-based Big Five (Saucier & Goldberg, 2001). This held true for 12 languages including German, Polish, Czech, Turkish, Dutch, Italian, Hungarian, Korean, Hebrew, Filipino, Spanish, and Catalonian (Saucier & Goldberg, 2001).

3. Openness varies across cultures. Why is this the case? Recall that for the lexical Big Five model Openness is defined as intellect and imagination, but for the five-factor model using sentences (as in the NEO-PI-R) this factor is Openness to experience. Lexical models find Openness (Norman’s V factor) to be language and culture specific. For example, according to Saucier and Goldberg (2001) there were slight variations in which adjectives loaded on the Openness factor in German (intelligence, competence, talents), Turkish (intellectual and unconventionality), Hebrew (sophisticated, sharp, knowledgeable), Filipino (intellect, competence, talent), and Dutch (intellectual autonomy vs. conventionality).

   Because the Openness factor does not consistently appear in other languages it may be that this factor, though it exists cross-culturally, is defined differently in ways unique to a specific culture (Bond, 1994). Indeed, Benet-Martínez and Oishi (2008) suggested that Openness might be unique to Anglo-Saxon cultures. Aspects of Openness, particularly the facets of it such as imagination, emotionality, psychological liberalism, and adventurousness, may tap into Western culture’s emphasis on intellectual freedom, emotional expressiveness, and individual uniqueness.

   However, consider the item “Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.” This is one of the strongest predictors of scores on Openness of the NEO-PI-R in over 40 languages in 51 cultures, not just in Western cultures but also in Brazil, Hong Kong, Japan, Lebanon, and Malaysia (McCrae, 2007). McCrae (2007) explains that this item performs less well as a marker of Openness in African cultures in Botswana, Burkina Faso, Ethiopia, Uganda, and Nigeria, possibly due to measurement problems (e.g., acquiescence, and the fact that the NEO-PI-R was not given in their native language). That this one item seems to embody a more visceral or physiological response leads us to suspect that it may transcend culture and instead capture a human universal. Perhaps
the feeling of chills when one is moved is universal, whereas what is likely to give us chills varies by culture.

4. **In some cultures more than five factors are needed to fully describe personality.** In cultures where this happens, such as Hungarian and Korean (Saucier & Goldberg, 2001), these additional factors tap culture-specific forms of Extraversion or Agreeableness, or aspects of social evaluation (power, morality, attractiveness) that are particularly salient in that culture (Benet-Martínez & Oishi, 2008). Because interpersonal relations are so important, natural languages have developed many terms for getting along with others. No wonder that these traits may fall out on two factors in other languages, but on only one in English (McCrae & Costa, 2008)! In this way Agreeableness and Conscientiousness may tap both universal and culture-specific aspects of personality (Benet-Martínez & Oishi, 2008).

5. **We need more research on indigenous personality to truly see which aspects of personality are universal and which are unique to a culture.** Although McCrae and Costa (2008) claimed that indigenous traits, traits originating in another language and which are unique to a culture, are “interpretable as characteristic adaptations within the Five Factor Theory” (p. 169), others counter that both questionnaire measures and adjectival measures may miss indigenous terms (Benet-Martínez & Oishi, 2008). To remedy this problem, some researchers start with the lexicon of a specific culture and, like Allport and Odbert (1936) did with English, see how many factors best account for personality in these cultures. This kind of research is rare, but it has identified both convergence with the five factors and some culturally unique factors (Benet-Martínez & Oishi, 2008; Cheung & Leung, 1998).

A Canadian example highlights the important influence of culture on personality. Researchers from Bishop’s University studied the personality differences between Anglophones and Francophones living in Sherbrooke, Québec (Gibson, Mckelvie, & de Man, 2008). While it was found that overall these two groups did not greatly differ in personality traits, some differences did emerge. Francophones were higher in psychoticism than Anglophones, while Anglophones scored higher than Francophones on conservatism. This demonstrates that although these two groups lived in close proximity, they had different cultural experiences which is thought to account for their differences in personality.

To understand some of these issues—as well as all of these findings on personality traits in other cultures—let’s consider some of this research in depth in the next section.

**Personality Traits Cross-Culturally: Personality Traits in China**

To understand how complicated it can be to test the five factors in other countries, consider current research in a country very different from North America: China. China has a collectivistic culture, stemming from roots in Confucianism that emphasizes the fundamental relatedness among individuals (Ho, 1998). When the five-factor model is tested using the NEO-PI-R, the results replicate the FFM for 29 out of the 30 facets (McCrae, Costa, & Yik, 1996). Indeed, Chinese college students had scores that were virtually identical to their North American counterparts on this translated version of the NEO-PI-R (McCrae et al., 1996). However, the facet of Actions, part of Openness, did not load on any of the factors. This may indicate problems with the scale, a genuine difference among the Chinese on this dimension, or simply measurement error (McCrae et al., 1996).

Some have wondered if the basic replication of the five-factor model is due to the structure of the questionnaire, the ubiquitous influence of Western culture in the world, or some other explanation (McCrae et al., 1996). A more convincing case for the universality of the five factors would be to start with traditional Chinese values—that is, traits important within Chinese culture—and see how these attributes apply to Chinese personality (McCrae et al., 1996).

Cheung et al. (1996) developed the Chinese Personality Assessment Inventory (CPAI) by using a sort of lexical approach by identifying descriptions of Chinese personality from literature, proverbs, surveys, and previous research. This led to the identification of 10 trait clusters unique to the Chinese personality and not covered by Western personality
inventories: Harmony (tolerance, contentment), Ren Qing (traditional relationship orientation emphasizing give and take and connectedness), Modernization (vs. traditionalism), Thrift (vs. extravagance), Ah-Q mentality (defensiveness; named for Ah-Q, a well-known fictional Chinese character depicted in a classic novel), Graciousness (courtesy, kindness, patience, vs. meanness), Veraciousness-Slickness (trustworthiness), Face (reputation, social approval), Family Orientation, and Somatization (expression of distress via physical symptoms). When factor-analyzed, four factors emerged: Dependability (responsibility, practical-mindedness, graciousness), Chinese Tradition (Harmony, Ren Qing, Face), Social Potency (leadership, adventurousness), and Individualism (self-orientation, logical, Ah-Q mentality). These are not quite the five factors we might expect!

However, perhaps focusing solely on traditional Chinese values is too narrow a conceptualization of Chinese personality. What would happen if we factor-analyzed them all together? After all, if Chinese personality is composed of both culturally unique and human universal aspects this would be the way to find them.

Cheung et al. (2001) conducted a follow-up study in which they factor-analyzed responses to the CPAI and the Chinese NEO-PI-R together. They found six factors: five from the five-factor model, as one might expect, plus an indigenous personality factor they called Interpersonal Relatedness made up of Harmony, Ren Qing, Ah-Q, and Face. This factor taps the indigenous factors identified in the earlier study, traits that are uniquely encouraged in Chinese culture and not in Anglo-Saxon cultures: instrumentality of relationships, propriety, avoidance of conflict, support of traditions, and compliance with norms (Benet-Martínez & Oishi, 2008).

This six-factor model not only explained the variance among the responses of post-secondary students, but it also applied equally well to a sample of nonstudent workers. However, the six-factor model did not apply as well as the traditional five-factor model did to non-Chinese undergraduate students. Here, items from the sixth indigenous factor loaded among the regular five factors. This study supports the existence of a uniquely Chinese personality factor beyond the Western five factors (Cheung et al., 2001).

Perhaps you’ve noticed that much of the research just reviewed on personality traits, including personality traits in other cultures, is all based on self-report. How can we be sure that we are capturing what people are really like and not what people claim to be like? This is one of many problems with self-report data, but alas, self-report is often the most direct way to find out what a person is like. However, personality psychologists have developed a way to compensate for the weaknesses of any single research method, a topic we take up in Research Methods Illustrated.
In ancient times, people would use triangles to measure distance or the height of objects such as the pyramids. Imagine a triangle connecting three points: two on one side of a river and one on the other side. By measuring the angles and applying geometry, they could figure out how far away or high up an object was. This image applies to research in personality: By using different methods we can better understand what a person is like than by using only one method. This process of using multiple methods within a single program of research is called triangulation (Brewer, 2000; Campbell & Fiske, 1959). Each method compensates for the weaknesses of the others.

There are four kinds of data that a personality psychologist might collect. The most obvious is to administer personality tests or other self-report questionnaires, called self-report data or S data. S data include objective personality tests, interviews, narratives, life stories, and survey research (John & Soto, 2007). Even experience sampling procedures, where participants are “beeped” via pagers or cell phones to fill out a questionnaire, are examples of S data. In one study, participants were beeped every two hours, on average, to fill out a self-esteem questionnaire and mood measures. Participants who had generally high self-esteem that fluctuated over the day were angrier and more hostile than participants with stable self-esteem (Kernis, Grannemann, & Barclay, 1989).

We could also place a person in controlled situations that test them to see how they respond. Test data or T data include information from testing situations (not to be confused with self-report personality tests, which are examples of S data). T data come from experimental procedures or standardized measures that have objective rules for scoring a person’s performance. Examples of T data include intelligence tests, task persistence, and reaction times (John & Soto, 2007). The Implicit Association Test (IAT; Greenwald & Farnham, 2000), a computerized reaction-time test, for example, has been used to measure self-esteem. Some projective tests, such as the Thematic Apperception Test (TAT; Morgan & Murray, 1935) or the Rorschach Inkblot Test (Rorschach, 1921), which use standardized stimuli and have explicit scoring guidelines, are also examples of T data.

Instead of relying on only self-reports, we might collect observation data or O data by watching people in the laboratory or in their daily lives. One can also collect O data by coding behaviour from photos or video. Information from knowledgeable informants including friends, spouses, parents, children, teachers, interviewers, and the like are also examples of O data (John & Soto, 2007). Indeed, this is exactly what Costa and McCrae (1992) and others have done to measure the five factors. Another study found that the facial expression of women in their post-secondary yearbook photos predicted their marital satisfaction and personal well-being 30 years later (Harker & Keltner, 2001). Observing people’s actual behaviour, even when it is captured in a photo or a video, gets around the problem of potential bias or memory problems in self-reports (Dunning, Heath, & Suls, 2004).

Finally, we could track down information about a person that is publicly available. Life data or L data include graduating from university, getting married, getting divorced, moving, socioeconomic status, memberships in clubs and organizations, number of car accidents, internet activity, and significant life events (John & Soto, 2007). Researchers have used sources as varied as criminal records to measure antisocial behaviour (Caspi, McClay, et al., 2005), counting bottles and cans in garbage containers to measure alcohol consumption (Webb, Campbell, Schwartz, Sechrest, & Grove, 1981), and counting the number of Facebook friends to measure social connectedness (Ellison, Steinfield, & Lampe, 2007).

Together, these four methods of data collection spell out LOTS, which should remind us to include lots of sources of data in our studies to maximize the validity of our research (John & Soto, 2007). During World War II, the U.S. Office of Strategic Services (OSS, a forerunner of the CIA) set up a program to select the best candidates for espionage jobs behind enemy lines (OSS Assessment Staff, 1948). It collected S data, O data, and T data on the candidates.

Men and women were brought to a special assessment center where they filled out personality questionnaires (S data) and were interviewed (S data) and observed by psychologists who wrote a paragraph describing each candidate’s personality (O data). To ensure that the assessment staff would judge the candidates solely on their performance, they had no idea about the background of the candidates (a notable absence of L data).

They even put the candidates through special tests (T data) to see if they could tolerate stress and frustration such as getting their whole group over a large wall, building a wooden structure with recalcitrant workers (who were actually confederates of the assessment staff), staging a mock
interrogation, and performing other tasks to see if the candidates could stand up to the emotional stress and the intellectual demands of keeping up a false identity while collecting information behind enemy lines.

Using all these kinds of data, the assessment team rated each candidate on intelligence, physical ability, motivation, skill, and aspects of personality including emotional stability, leadership, and social relations (a combination of Extraversion and Agreeableness). They hoped to be able to track the actual performance of candidates to see which measures best predicted performance.

Despite the best efforts of the assessment staff—which included many notable psychologists such as Urie Bronfenbrenner, Donald Fiske, Clyde Kluckhohn, Henry Murray, Theodore Newcomb, Edward Tolman, and Kurt Lewin—the government was unwilling to reveal how a particular candidate fared in his or her eventual position due to security issues. The best the assessment team could do was to select promising candidates and to eliminate obviously unsuitable ones.

Although the Assessment Center failed in its original mission to develop a valid selection procedure for selecting spies, it stands today as a fascinating example of how triangulation—the use of multiple methods—can yield a more complete picture of a person.

Expression of Traits in Everyday Life

Our personality traits reveal themselves in lots of ways: body language, taste in decorating and in music, our online presence on the internet, and also in the careers we choose—even if we happen to be the Prime Minister of Canada! We can see the influence of traits in numerous ways in our everyday lives.

Music Preferences and Personality Traits

What’s your favourite type of music? Certainly, your choice of music reflects your personal taste, but is it related to your personality? Do people high in Neuroticism enjoy different kinds of music from extraverts? Interestingly enough, Cattell wondered about this back in the 1950s and believed that musical choice reflected unconscious motives (Cattell & Anderson, 1953; Cattell & Saunders, 1954).

More recently, Rentfrow and Gosling explored how the personality traits of the five-factor model relate to musical taste (2003). First, they asked over 1700 students to take the Short Test of Music Preferences (STOMP). In this test, participants rate how much they enjoy different types of music on a 1 (Not at all) to 7 (A great deal) scale. The researchers then used factor analysis to identify the major types, or genres, of music (see Table 3.4).
Participants also filled out a series of personality questionnaires including the Big Five Inventory (BFI; John & Srivastava, 1999). The researchers correlated scores on the STOMP with scores on the BFI to see if there was a relationship between the kind of music students liked and their personality traits.

What did they find? First, there were no gender differences in music preference. Men and women had similar tastes in music according to the STOMP test. Second, chronic mood, like being depressed, had no impact on what music the participants liked. Although students might choose to listen to various songs depending on mood, overall there was no relationship between mood and the kind of music participants preferred. Finally, different personalities did indeed prefer different kinds of music (see Table 3.5).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Musical Genres</th>
<th>Representative Songs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective and Complex</td>
<td>Blues</td>
<td>Ray Charles: “Ray’s Blues”</td>
</tr>
<tr>
<td></td>
<td>Folk</td>
<td>Bob Dylan: “Blowin’ in the Wind”</td>
</tr>
<tr>
<td></td>
<td>Classical</td>
<td>Mozart: “Marriage of Figaro,” Overture</td>
</tr>
<tr>
<td></td>
<td>Jazz</td>
<td>Miles Davis: “All Blues”</td>
</tr>
<tr>
<td>Intense and Rebellious</td>
<td>Alternative</td>
<td>Nirvana: “Verse Chorus Verse”</td>
</tr>
<tr>
<td></td>
<td>Heavy metal</td>
<td>Marilyn Manson: “Fight Song”</td>
</tr>
<tr>
<td></td>
<td>Rock</td>
<td>Jimi Hendrix: “Voodoo Child”</td>
</tr>
<tr>
<td>Upbeat and Conventional</td>
<td>Country</td>
<td>Johnny Cash: “Rusty Cage”</td>
</tr>
<tr>
<td></td>
<td>Religious</td>
<td>Praise Band: “Rock of Ages”</td>
</tr>
<tr>
<td></td>
<td>Pop</td>
<td>Christina Aguilera: “Don’t Make Me Love You”</td>
</tr>
<tr>
<td>Energetic and Rhythmic</td>
<td>Funk</td>
<td>James Brown: “Superbad Part 1”</td>
</tr>
<tr>
<td></td>
<td>Hip-hop/rap</td>
<td>Tupac Shakur (featuring Snoop Doggy Dogg): “2 of Amerikaz Most Wanted”</td>
</tr>
<tr>
<td></td>
<td>Soul</td>
<td>Aretha Franklin: “Chain of Fools”</td>
</tr>
<tr>
<td></td>
<td>Electronica</td>
<td>DJ Shadow: “What Does Your Soul Look Like”</td>
</tr>
</tbody>
</table>


As you can see, people who were high in Neuroticism did not like classical, jazz, folk, or blues, what the researchers called Reflective and Complex music. Or, to put it another way, emotionally stable people enjoyed this kind of music, especially those low in angry hostility.

Table 3.5 Sample Correlations between Five-Factor Traits and Types of Music

<table>
<thead>
<tr>
<th>Trait</th>
<th>Reflective and Complex</th>
<th>Intense and Rebellious</th>
<th>Upbeat and Conventional</th>
<th>Energetic and Rhythmic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>*</td>
<td>0.01</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.01</td>
<td>0.00</td>
<td>0.24*</td>
<td>0.22*</td>
</tr>
<tr>
<td>Openness</td>
<td>0.44*</td>
<td>0.18*</td>
<td>*</td>
<td>0.03</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.01</td>
<td></td>
<td>0.23*</td>
<td>0.08*</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td></td>
<td>0.15*</td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note: Numbers in the table are correlations between traits and liking of music. Recall that correlations can be positive or negative. Higher numbers mean that there is a stronger relationship among the variables. Significant effects are noted by asterisks.

* = p < 0.05.

and vulnerability (this later finding comes from a more detailed study of facets and genres by Zweigenhaft, 2008). Extraverts tended to be fond of the Energetic and Rhythmic music such as hip-hop, funk, soul, and electronica, and Upbeat and Conventional music such as country, religious, and pop, especially if they were high on excitement seeking or positive emotions (see also Dollinger, 1993; Rawlings & Ciancarelli, 1997; Zweigenhaft, 2008). This result makes sense; after all, where might you find a highly extraverted person on a Saturday night? Out clubbing with other extraverts!

What about people who were high in Openness? As you might expect, they liked the more cerebral classical and jazz music, part of the Reflective and Complex genre. This preference was related to scores on openness to fantasy, openness to aesthetics, openness to actions, and openness to ideas (Zweigenhaft, 2008). These people also liked Intense and Rebellious music, especially if they were high on openness to values, but they disdained the Upbeat and Conventional especially if they were high in openness to fantasy, aesthetics, ideas, and values (Zweigenhaft, 2008). Again, it makes sense that people who are open to new ideas and experiences would be attracted to the rebellious and turned off by the conventional, even when it comes to musical preferences (see also Dollinger, 1993; Rawlings & Ciancarelli, 1997). Similarly, they also liked bluegrass, world music, opera, punk, and funk, genres not part of the Rentfrow and Gosling (2003) study (Zweigenhaft, 2008). Finally, people who were high in Conscientiousness showed only a slight preference for the Upbeat and Conventional music, especially for people high in dutifulness or achievement striving (Zweigenhaft, 2008). Interestingly enough, many of these findings were replicated in a sample of students from the Netherlands (Delsing, TerBogt, Engels, & Meeus, 2008).

Even the way people engage with music seems to be related to personality (Chamorro-Premuzic & Furnham, 2007). People high in Openness, as measured by the NEO Five Factor Inventory (Costa & McCrae, 1992), tended to engage with music in a more intellectual way, concentrating on what they are hearing, enjoying analyzing complex compositions, and admiring the techniques of the musicians. In contrast, people high in Neuroticism and low in Extraversion and Conscientiousness were more likely to engage with music in a more emotional way, for example, to change or enhance their mood. These people tended to feel emotional after listening to music, whether it was happy, sad, or nostalgic, and they often associated specific memories with a particular song.

Do you know somebody who loves to listen to loud music with the bass turned up extra high? McCown, Keiser, Mulhearn, and Williamson (1997) looked at the relationship between preference for exaggerated bass and scores on the Eysenck Personality Inventory. They found that men, more so than women, and people high in Extraversion or Psychoticism enjoyed this music more so than introverts or people low in Psychoticism. The part about extraverts preferring the stimulation of a strong bass makes sense because, as you will read later in this text, introverts need less sensory stimulation than extraverts (see Chapter 8). Personality preferences for this type of music are particularly interesting, because exaggerated bass is a key component in club and rap music. The authors wondered if boosting bass might make less popular forms of music—like classical—more appealing to certain audiences.

What about musicians themselves? If there are personality differences in the kind of music people like to listen to, maybe rock musicians are different from, say, classical musicians. One early study found that pop musicians were slightly higher on Neuroticism and Psychoticism (Wills, 1984) than the average adult. Any ideas how the average self-taught, guitar-playing rocker around age 30 would score on Openness? What about Conscientiousness or Agreeableness? Gillespie and Myors (2000) recruited rock musicians from the metropolitan Sydney, Australia, area for their study. One hundred musicians took the NEO-PI-R (Costa & McCrae, 1992) and answered questions about their musical background. These musicians were high in all six facets of Neuroticism and Openness. Although they were about average in Extraversion, they were especially high in positive emotions and excitement seeking. In contrast, they tended to be low in Agreeableness, especially on the facets of trust, straightforwardness, and compliance, and low in all six facets of Conscientiousness! This is shown graphically in Figure 3.1.

Given how much of our personality we express in the music we like to play as well as listen to, perhaps we should swap our iPod playlists of musical favourites instead of astrology signs when making new friends.
Webpages and Personality Traits

Living spaces, handshakes, musical preferences—is there any aspect of our behaviour that doesn’t reflect our personality? What about our presence on the internet, such as usernames and Facebook pages; do these also reflect our personalities? They sure do—of course, they may reflect our true personality or they may reflect managed impressions specifically formulated to impress others (Gosling, 2008).

One study found a personality difference between people who blog and people who don’t (Guadagno, Okdie, & Eno, 2008). Bloggers tend to be higher in Neuroticism and Openness than nonbloggers. In particular, women who are high in Neuroticism are more likely to blog than more emotionally stable women.

Vazire and Gosling (2004) took the idea of online self-expression a bit further and judged people’s personalities from their personal webpages. They had trained experts rate 89 randomly selected websites listed in Yahoo!’s personal directory. Then they recruited webpage owners to take part in their study. Webpage owners rated themselves and their ideal selves on the five factors using the BFI. The researchers also recruited close friends of the owners so they could get an outside opinion of what the owners were really like. They used these ratings to judge the extent to which the webpages reflected what the owners were really like or if the page reflected what the owner wanted people to think they were like.

What did they find? First, observers got clear impressions about webpage owners. Raters not only agreed with each other, but they also could correctly judge a person’s Neuroticism, Openness, and Conscientiousness. Openness was the easiest trait to judge from webpages and was judged the most accurately.

Ratings of Extraversion and Agreeableness, although accurate, were closer to page owners’ ideals than to their true selves. After statistically removing the effect of “reality” (i.e., friends’ ratings) from owners’ ratings, Extraversion and Agreeableness were still judged accurately by observers. That is, raters tended to see a person as extraverted or as agreeable as the person wanted them to see it, rather than the true level of these traits. These results suggest that personal websites reflect both the owners “true” selves with a bit of impression management—of how outgoing and likable one is—thrown in.
Another study, coming from researchers at the University of Toronto, examined how personality is conveyed through online blogs (Li & Chignell, 2010). In the first phase of the study they had participants write a single blog entry, which was then read and judged by a second set of participants. It was found that bloggers who were extraverted tended to use more positive emotion words, while people who were high in Neuroticism or low in Conscientiousness tended to use more negative emotion words. Interestingly, blog readers were in agreement regarding their ratings of the blog writer’s Big Five personality traits, although these ratings did not necessarily reflect the writer’s self-reported personality traits. Readers were more likely to prefer the blogs of people they perceived to have similar personalities as them, even if these perceptions were not in line with the writer’s self-reported personality. If these findings have you wondering about what your own web presence says about you, check out the Personality of Everyday Life box below.

The Personality of Everyday Life

What does your online presence say about your personality?

Are you on Facebook? Twitter? Nearly everybody has some sort of an online presence these days, whether it is a personal webpage, a blog, a social media account, or a photo on a school or employer’s page. The research reviewed in this chapter suggests that our web presence reflects our personality, even without our awareness. What does your presence say about you?

First, consider what impression your e-mail address or username creates. One study found that people low in self-esteem picked usernames such as emotional_void_82 and empty_heart, whereas kingtony23 and gorgeouschic were all high in self-esteem. Similarly, people’s perceived competence also shone through—intentionally or unintentionally—in their usernames. Compare stevethepokemon and smartguy to spacystacy and sloppycrazy.al (Gosling, 2008).

Next, how does your page’s layout and design as well as content reveal your personality? Recall that observers easily and accurately judged users’ levels of Openness, Conscientiousness, and Neuroticism from webpages. Other studies show that bloggers reveal their personalities by their choice of words. People high in Neuroticism use words...
Careers and Personality Traits

Do you have what it takes to be a successful astronaut? Would you like to be a clinical psychologist? As you might imagine, there are personality differences among various careers and personality assessment is an important part of personnel selection in many businesses, a point we will take up in the personality assessment in Chapter 4. Consider the career of astronaut.

A successful astronaut must be able to work effectively and smoothly with others in the complex and highly stressful setting of a tiny spacecraft in close quarters far away from loved ones back on Earth. The National Aeronautics and Space Administration (NASA) must routinely process 2000 to 4000 applications to select the less than 1% who will eventually be selected as astronauts (Musson & Helmreich, 2004). What are the characteristics that make up the “right stuff”?

According to research reviewed by Musson and Helmreich (2004), successful astronauts—as well as anybody, both women and men, who must live and work in confined and dangerous settings with others—must be high in independence, achievement striving, and goal orientation (what they call instrumentality); high in interpersonal warmth, sensitivity, and concern related to negative emotions, whereas people low in Agreeableness use words related to positive emotions. People low in Agreeableness use more swear words than people high in Agreeableness who refer more to community. People high in Conscientiousness write about achievement more so than people low in Conscientiousness (Yarkoni, 2010).

Along with the increasing popularity of Facebook has come a surge in the number of Facebook-related research studies being conducted. Of course, Facebook profiles are an easy way for people to get to know you (Evans, Gosling, & Carroll, 2008). Visitors are particularly likely to accurately judge personality when users talk about their beliefs, joys, embarrassing moments, proud moments, spirituality, heroes, and when they link to funny videos. Sharing information about least-favourite things is not as helpful in understanding what a person is like. Many specific Facebook-related behaviours have been linked to the Big Five personality factors; for instance, individuals high in Extraversion tend to belong to more Facebook groups, according to Canadian studies (e.g., Ross et al., 2009). However, the authors of this study, from the University of Windsor, noted that the Big Five factors were not as strongly linked to Facebook use as previous studies have suggested. They propose that perhaps more specific personality traits such as narcissism or shyness may more fully explain Facebook use.

Researchers at the University of Windsor followed this line of research and found that interesting information about one’s personality can be drawn from whether they have a Facebook profile. They compared people who frequently used Facebook to people who did not use Facebook and found several differences. As a testament to the increasing ubiquity of social media in our culture, only 8% of the university population they sampled did not have a Facebook account! Although at first glance we may expect frequent users to be high in narcissism and non-users to be low in narcissism, this study revealed it might be more complex than that. Frequent users of Facebook were more likely to score high in overt narcissism, while non-users scored higher in measures of covert narcissism. The authors posit that perhaps the difference between these two groups is not in the level of narcissism they possess but more in their communication preferences and willingness to self-disclose (Ljepava, Orr, Locke, & Ross, 2013). This group of researchers also explored their hypotheses regarding shyness and Facebook use, and found that although shy individuals tended to have fewer friends than non-shy individuals, they spent more time on Facebook and reported more positive attitudes toward Facebook than non-shy individuals (Orr et al., 2009).

In sum, are you comfortable with what your online presence says about you? By making yourself aware of the subtle and not-so-subtle ways self-esteem and traits are manifested through online media, you can create a good impression and yet not reveal more than you intend.
for others (expressivity); and low in arrogance, egotism, complaining, nagging, and verbal
sniping (interpersonal aggression). In their analysis of the personality traits of aspiring astro-
nauts, these characteristics correlated with high Conscientiousness, high Agreeableness, and
low Neuroticism. Applicants who were low in Agreeableness were clearly not cut out for space
travel with longer missions and more diverse crews travelling and working in space.

What about professionals, police officers, managers, and sales and semiskilled workers?
Which traits are related to success in these occupations? In a meta-analysis of over 117 studies,
Barrick and Mount (1991) found that among the five factors, only high Conscientiousness was
related to high performance ratings, productivity, training proficiency, low job turnover, and
higher salaries. This held true across all of the occupations studied for both men and women
including engineers, architects, attorneys, accountants, teachers, doctors, ministers, police
officers, clerical workers, farmers, flight attendants, medical assistants, truck drivers, and grocery
clerks. In addition, being extraverted was helpful for managers and people in sales; introverts
were just as likely as extraverts to be working in any of the other occupations. In addition,
Openness and Extraversion were related to job training proficiency.

Rubinstein and Strul (2007) looked for personality differences among doctors, lawyers,
clinical psychologists, and artists in Israel using a Hebrew version of the NEO-FFI (McCrae
& Costa, 1989). Even though the men and women who volunteered for this study were all
Israeli professionals, their results were about what we might expect: Artists were the highest in
Openness to experience, but they were only significantly higher than doctors, who scored the
lowest in this trait. Artists and lawyers were the highest in Neuroticism whereas doctors were
the most emotionally stable (clinical psychologists fell in between these groups but did not dif-
fer significantly from the others). No differences were found among these occupational groups
in Conscientiousness, supporting previous findings that high Conscientiousness is related to
occupational success regardless of specific job (Barrick & Mount, 1991).

A study of sales personnel at a chain of health clubs in Great Britain echoed these results
(Furnham & Fudge, 2008). Sales associates, regardless of gender, were more likely to make their
quota of selling memberships if they were high in Conscientiousness and Openness, and low in
Agreeableness. The authors surmised that people high in Openness may have a more positive
attitude and open mind that helps them succeed at job training (cf. Barrick & Mount, 1991),
which may then lead to better on-the-job performance. Contrary to popular opinion,
the best salespeople are not necessarily those
who are sociable and enjoy the company of
others. Rather it is the hardworking, persist-
tent go-getter—putting in long hours making
cold calls, following up with clients—who is
most likely to succeed. And being a bit tough,
pushy, and dogged (low in Agreeableness)
doesn’t hurt either!

Some employers engage in pre-
employment personality screening in an
attempt to select the candidates best suited
for the job. However, research out of the
University of Calgary suggests that personal-
ity traits that employers often do not measure
are equally important in selecting employees
(O’Neill, Lee, Radan, Law, Lewis, & Carswell,
2013). It was found that individuals reporting
a higher level of deviance in their jobs tended
to be low in Honesty-Humility, Integrity, and
Morality, and high on Risk Taking. The irony
of these findings is that these individuals are
the most likely to be hired! Previous research
by O’Neill and colleagues (2011) has noted

Does it take special
personality traits to be an
astronaut?
the importance of considering traits other than the Big Five, such as Honesty-Humility (from the HEXACO model), which are related to workplace deviance (O’Neill, Lewis, & Carswell, 2011). Taken together, these studies suggest that employers should specifically screen for traits such as Honesty-Humility, which would allow them to identify and screen out individuals who are more likely to engage in deviant workplace behaviour.

Personality Development Over the Lifespan: Continuity, Change, and Coherence

Think back to what you and your friends were like in high school. Can you imagine what some of your friends might be like today? Will you be amazed at how much some people have changed? Will some people have not changed at all? Will some people be into different activities and seem like different people, but underneath it all, are really still the same? Of course, we know that everybody matures as they grow and move through adolescence and into young adulthood—or do they?

This mash-up of personality consistency, personality change, and personality coherence is what makes school reunions both fun and scary. The research on personality across the lifespan reflects the experience of running into old friends: Some people change, some people don’t, and some aspects of personality are bound to change because people mature. How can we make sense of all this?

First, when psychologists talk about development they refer to both continuity and change in personality (Roberts, Wood, & Caspi, 2008). When we say that personality develops as we grow from childhood into adulthood, we are saying that some aspects of personality stay the same—perhaps how sociable or nervous a person is—whereas some aspects are different: say how much self-esteem a person has or how thrill seeking he or she is. Continuity or consistency in personality means that the amount of a trait stays about the same. Personality change means that the amount of trait is different, either increased or decreased from what it was previously. The difference is often one of degree rather than kind; people generally don’t change into something opposite of what they were. That is, an extraverted child is not likely to grow into an introverted adult nor is an anxious, nervous child likely to become a calm, even-tempered adult.

Notice that we can talk about how traits change or are consistent in a group of people or we can talk about how a person changes or remains consistent over time. People may change or remain consistent compared to what they were like at a previous point in their lives or they may change or remain consistent relative to their peers or some other comparison group.

Even when traits stay the same, we wouldn’t expect a trait, say thrill seeking, to look the same in a 6-year-old as in a 16-year-old or a 26-year-old. A sensation-seeking 10-year-old might enjoy exploring the neighbourhood on bicycle whereas a sensation-seeking 26-year-old might enjoy extreme sports. This is an example of personality coherence in the trait of sensation seeking.

Personality coherence means that the underlying trait stays the same but the way it is expressed changes (Roberts et al., 2008). We can think of personality coherence as a type of
continuity. However, to identify true examples of personality coherence researchers must have a theory for explaining how the two different behaviors are manifestations of the same underlying trait (Caspi & Roberts, 2001).

For example, children who show high task persistence in childhood show high achievement orientation in adulthood. You can see that working hard and striving to excel are two aspects of an underlying desire for accomplishment. Shyness also shows personality coherence: Shy children live at home with their parents longer and marry older than their socially bolder peers (Caspi, Elder, & Bem, 1988).

Aggression is another personality variable that shows strong coherence from childhood to adulthood. People who had been rated by their peers as aggressive at age 8 were more likely to commit serious criminal acts by age 30. Men who were rated as aggressive as children were also more likely to engage in physical aggression and abuse their spouses by age 30 (Huesmann, Eron, Lefkowitz, & Walder, 1984; see Figure 3.2).

The only way to answer the question of how people develop over their lives is to, well, take a bunch of people and follow them over their lives! This is called a longitudinal study. In the last 10 years or so there has been an increase in longitudinal studies and so our knowledge of how people—and traits—change across the lifespan has increased as well.

A good metaphor to explain how personality changes over time is to picture a harbor filled with different kinds of boats (Roberts, 2010). Some boats might sit lower or higher in the water depending on their shapes, sizes, or cargo. The action of the tide coming in and going out lifts and lowers all the boats in the water at the same time. This action is like general change or

I love a parade. Personality coherence in Extraversion: Although the activities may change, this extravert was always a joiner and loved the limelight, whether it was Girl Scouts in elementary school or folk dancing as an adult.

Figure 3.2 Personality coherence in aggressiveness: Mean seriousness of criminal acts committed by age 30 as a function of peer ratings of aggression at age 8.

mean-level change that affects nearly everybody as we grow from infancy to adulthood. The boats are like individual people. Differences between the boats in how they sit in the water is like individual change in personality. Each boat can change in its own unique way due to the actions of the owner, who can change the load of a boat so that it rises and falls independently of the other boats.

To understand how personality develops over the lifespan, we need to understand both general change and individual change. Let’s consider three questions about personality development (Roberts, 2010). First, how consistent are people over time? This is a general question about the nature of personality. Second, how much do people change in general? This is a question about general change in personality traits that affect nearly everybody. Third, how and why do individuals develop in their own particular ways? This question looks at individual differences in consistency and change over the life course.

**How Consistent Are People over Time?**

Personality is relatively enduring over time; in fact, people become more consistent in their traits across the lifespan (Roberts et al., 2008). Adults are more consistent in their traits than teens, and teens are more consistent than children, a finding verified by many longitudinal studies (Caspi & Silva, 1995). This makes sense; after all, children are still in the process of developing their personalities.

Personality is about as consistent as cognitive ability; more consistent than income, blood pressure, and cholesterol levels; and much more consistent than happiness and self-esteem across a person’s lifetime (Roberts, 2010). The peak of consistency is around age 50, a fact that is surprising given that some notable theorists thought that personality was set in childhood or adolescence. Sigmund Freud, for example, believed that personality was set by age 5, and Erik Erikson believed that personality was set by the end of adolescence. Despite popular notions of an adolescent identity crisis or a midlife crisis, people remain consistent in their traits through these times. In fact, there are no periods of particularly dramatic personality change anywhere in the life course (Caspi & Roberts, 2001; Caspi, Roberts, & Shiner, 2005; Roberts et al., 2008).

During this time, and even beyond, the traits of the five factors are the most consistent of all, showing great consistency across all five traits regardless of type of test (self-report, projective tests) or rater (self, observer; Roberts et al., 2008). Traits of the five factors start to become consistent at age 3 and increase in consistency until after age 50. This means that personality is remarkably consistent, despite the turmoil of the teen years or the massive changes that come
with starting careers and families in the 20s. These results illustrate the saying “the child is father to the man.”

For example, based on a meta-analysis (see Chapter 11), a statistical summary of effects from 152 longitudinal studies, Roberts and DelVecchio (2000) came to two conclusions. First, stability increases over the lifespan, a finding illustrated in Figure 3.3. Second, personality traits measured closer in time tend to be more similar than traits measured further apart in time.

According to reviews and meta-analyses, traits of the five factors show moderate consistency across the lifespan (Ardelt, 2000; Bazana & Stelmack, 2004; Roberts & DelVecchio, 2000; Schuerger, Zarrella, & Hotz, 1989). According to one study, the overall consistency in all five factors across 81 studies suggests that about 29% of the variance in your personality at one point in time can be explained by your personality at another point in time (Bazana & Stelmack, 2004). Stability coefficients for overall personality were 0.54 for both men and women, 0.56 for women, and 0.55 for men. These are strong correlations showing the consistency in personality over time.

William James (1890) observed that “in most of us by the age of thirty, the character has set like plaster, and will never soften again” (p. 121), a view once endorsed by many trait theorists (Costa & McCrae, 1994). However, we now know that this isn’t so. Personality change does not stop, nor does it slow down after age 30. Instead, personality shows small gradual changes with age (Srivastava, John, Gosling, & Potter, 2003). Personality is consistent—but not unchanging.

Think about it: If less than a third of your personality stays about the same, then what happens to the other two-thirds? That’s where mean-level change and individual change comes in. Even as personality stays consistent, there are subtle changes as we grow and develop, even into adulthood and old age. Psychologists now believe that personality is like an open system that can change throughout life in response to events and new environments. In this way personality change is subtle at any one point in time, but cumulative over the life course (Roberts & Mroczek, 2008).

**How Much Do People Change in General?**

Here we are asking about normative change (Roberts, 2010). Across both cross-sectional and longitudinal studies there are similar changes in personality that, like how an incoming tide affects all the boats in the harbour, affect everybody. The period of greatest normative change occurs in young adulthood between ages 20 and 40. In general, people become more consistent, as we just saw, and better with age.
Specifically, people become more assertive, warm, and self-confident (aspects of Extraversion), agreeable (nice, nurturing), conscientious (responsible, organized, hardworking, rule-oriented), and emotionally stable (calm and relaxed). Openness increases early in life—paralleling being in school—and declines in old age, suggesting that maybe you can’t teach an old dog new tricks. Emotional stability increases early in life and remains constant whereas Agreeableness increases later in life. Agreeableness and Conscientiousness continue to rise into old age (Roberts, Walton, & Viechtbauer, 2006).

In an extensive meta-analysis of 92 longitudinal studies, Roberts, Walton, and Viechtbauer (2006) found evidence for continuity and change in six traits over the life course (see Figure 3.4). They reached three conclusions. First, all six traits showed changes past the age of 30 and indeed four of them—social vitality, Agreeableness, Emotional Stability, and Conscientiousness—showed significant changes in middle or old age. This suggests that personality continues to develop across the life course. Second, contrary to popular belief, young adulthood (ages 20 to 40) and not adolescence appears to be a key period in life when personality traits change the most. Finally, except for Openness and social vitality, which decreased with age, suggesting that we experience less positive emotions and sociability, all of the other traits became more positive with age. As we age, we become more self-confident, agreeable, emotionally stable, and conscientious. This same pattern of results was echoed in a study using a different design. In a cross-sectional study, the researchers compared responses of 132,515 adults aged 21 to 60 who responded to an internet survey (Srivastava et al., 2003). One interesting difference, however, was that in this study, women but not men were more emotionally stable after age 30; older men had the same level of emotional stability as men at age 30. They also found that people were less open in old age. These results also supported the idea that personality continues to change slowly but steadily with age, showing small to moderate systematic changes.

This pattern of older adults showing lower levels of Neuroticism, Openness, and some aspects of Extraversion, and higher levels of Agreeableness and Conscientiousness than university students, also holds for samples outside the North America including Germany, Italy, Portugal, Croatia, and South Korea (McCrae et al., 1999).

Whereas consistency implies that there is a similarity in personality from one age to another, it also suggests that there is a change. One reason personality changes from childhood to adulthood and from young adulthood to old age is that people mature. Therefore, a certain amount of change in personality is due to maturation (Roberts et al., 2008). In particular, we develop higher levels of assertiveness, self-control, responsibility, and emotional stability, especially from age 20 to age 40 (Roberts, Walton, & Viechtbauer, 2006). These changes may be a result of positive experiences in work and personal relationships.

For example, working longer hours or attaining higher status increases aspects of Extraversion (dominance, independence, and self-confidence) and Conscientiousness (self-discipline, competence, and responsibility) in both men and women (Clausen & Gilens, 1990; Elder, 1969; Roberts, 1997; Roberts, Caspi, & Moffitt, 2003). Positive work experiences may also help people become more emotionally stable (Roberts & Chapman, 2000; Scollon & Diener, 2006; Van Aken, Denissen, Branch, Dugas, & Goossens, 2006). For women, higher status at work is also associated with an increase in masculinity and a decrease in femininity (Kasen, Chen, Sneed, Crawford, & Cohen, 2006).

A stable and happy home life can also change people for the better. In particular, both men and women in fulfilling relationships during their young adult years become less neurotic (Roberts & Chapman, 2000; Robins, Caspi, & Moffitt, 2002; Scollon & Diener, 2006), and more conscientious (Lehnart & Neyer, 2006; Roberts & Bogg, 2004) and agreeable (Lehnart & Neyer, 2006) over time. Even men who married or remarried in late middle age or old age also showed a decrease in Neuroticism with age (women were not studied; Mroczek & Spiro, 2003).

As you can see, all of these normative changes are in the direction of greater maturity and better functioning. The years from a person’s 20s to 40s are when most people are busy with the twin concerns of family and career. This is the age when most people seek out a partner and start a family. At the same time, people are choosing and starting careers and their life’s work. Young people are also building identities by making commitments to social institutions such as work, marriage, family, and community. These new roles come with expectations, demands,
and reinforcements that shape a person into becoming more socially dominant, agreeable, conscientious, and less neurotic (Roberts et al., 2008). Social investment in the conventional roles of adulthood, such as career or family, leads to normative increases in dominance, conscientiousness, and emotional stability in most people. These changes are small over short periods of time, but are quite large over longer periods.

**Figure 3.4** Accumulated changes in traits over the life course. The graphs show the average change (d) in each trait from the beginning to the end of a decade, added together over the life course. Social dominance and social vitality reflect two different aspects of Extraversion. Social dominance includes dominance, independence, and self-confidence in social situations; social vitality includes sociability, positive affect, gregariousness, and energy level.

Our personality determines which situations, environments, experiences, or social roles we choose. Once we choose an environment or role, the new situation reinforces these aspects of our personalities. The most common effect of life experiences on personality development is that our choice of environments and roles strengthens the very personality traits that selected them in the first place. Life experiences that elicit behaviours corresponding to a person’s disposition are validating and rewarding, often leading to similar behaviours and similar choices in the future.

The saying “life happens while you are busy making other plans” can apply to personality: By making plans and acting on them, we both express and develop our personalities, often without awareness of how we’ve changed. This type of personality change isn’t likely to make headlines or be the topic for a movie-of-the-week, but it is quite powerful nevertheless.

This explains why personality change in adulthood is most often slow and steady, as a result of being exposed to situations of our own choosing and less often as a result of a so-called life-altering experience. Life-altering experiences are actually very rare, and their impact on personality perhaps a bit overblown. In truth, people respond to devastating events with more of their true selves: Individual differences are magnified when people face unpredictable or ambiguous situations without guidelines for how to respond (Caspi & Moffitt, 1993).

How and Why Do Individuals Develop in Their Own Particular Ways?

Have you heard the saying “there’s an exception to every rule”? When it comes to normative influences (the tide) on personality (the boats in a harbour), some people do not experience these normative changes. There are individual differences in personality development (Mroczek & Spiro, 2003; Roberts, 1997; Roberts & Mroczek, 2008). Basically, nonnormative experiences make for nonnormative development. For example, women who continued to smoke marijuana into midlife (Roberts & Bogg, 2004) and people who engaged in stealing, fighting, or coming to work drunk (Roberts, Walton, Bogg, & Caspi, 2006) did not increase in Conscientiousness and actually decreased in emotional stability in their adult years. By consciously taking a stand against socializing roles—wife, mother, responsible employee—some people exposed themselves to different experiences and missed out on the kinds of personality development that most people go through.

In fact, researchers have identified reliable individual differences in personality change during all stages of life (Roberts et al., 2008): childhood and adolescence (De Fruyt et al., 2006; Pullman, Raudsepp, & Allik, 2006), young adulthood (Donnellan, Conger, & Burchette, 2007; Vaidya, Gray, Haig, & Watson, 2002), middle age (Van Aken et al., 2006), and old age (Steenenberg, Twisk, Beekman, Deeg, & Kerkhof, 2005). These individual differences in personality development are important because personality traits are linked to important outcomes in work, physical health, mental illness, and longevity (Roberts & Mroczek, 2008).

For example, in a study of university students aged 20 to 32 enrolled in an introductory psychology class, participants varied in how much they changed in positive emotions (related to Extraversion) and negative emotions (related to Neuroticism) over the subsequent 2.5 years (Vaidya et al., 2002). Those who had significantly decreased in negative emotions had experienced fewer negative events, such as a family member passing away, receiving a failing grade in a course, becoming a regular smoker, or experiencing divorce or separation of their parents, compared to their peers. Those who had significantly increased in positive emotions had experienced more positive events in their lives, such as receiving academic honours or awards, getting promoted at a job, getting engaged, getting accepted into grad school, or getting married, compared to their peers. This study illustrates that we do not merely react to life experiences, but we may internalize them and become changed by them bit by bit until over longer periods of time we become permanently changed by them.

In another study, both men and women who increased in hostility as they developed from university age to about age 40 experienced a range of negative outcomes. People who increased in hostility over their adulthood, compared to those who either maintained or decreased their
level of hostility, showed increased obesity, inactivity, social isolation, lower income (women only), worse physical health, greater risk of depression, and the perception that their work and family life was changing for the worse (Siegler et al., 2003).

Similarly, personality change in midlife was associated with successful adaptation to the day-to-day concerns of this period of life: well-being of family members, work stress, and life satisfaction (Van Aken et al., 2006).

Finally, in a longitudinal study of male veterans aged 43 to 91, those who became more neurotic over time showed a 32% increase in mortality over men whose level of Neuroticism decreased (Mroczek & Spiro, 2007). In fact, the direction of change in neuroticism over the 18 years of the study—whether it was increasing or decreasing—was more important than whether it was high or low to begin with (see Figure 3.5). Among men who were high in Neuroticism, those who were changing to become less neurotic lived longer than men whose neuroticism was increasing.

Where Does Adult Personality Come From?

There is still one big unanswered question: Where does adult personality come from? We know that children have differing temperaments, or individual differences, that emerge during the first year of life (Buss & Plomin, 1994). But how and when do these temperaments develop into the five factors of Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness? To answer this question, we need longitudinal studies that follow infants from birth to adulthood. Given that researchers have only recently reached consensus on the five-factor model, it will be a good while until we can collect the right evidence to answer this question. However, there is little doubt that childhood temperament does predict to adult personality (Caspi, Roberts, & Shiner, 2005; Caspi & Shiner, 2006; Caspi & Silva, 1995; Digman, 1989; Shiner & Caspi, 2003).

For example, in one study researchers identified five temperament groups among a sample of 3-year-old children in New Zealand, based on psychologists’ ratings of the child’s behaviour (Caspi & Silva, 1995). The groups were Well-adjusted, Undercontrolled, Inhibited, Confident, and Reserved. When the children were 18 years old, the five groups showed differences in their personalities. Compared to Well-adjusted children, the children who were Undercontrolled at age 3 were higher in impulsivity, danger seeking, aggression, and interpersonal alienation at age

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**Figure 3.5** Survival curves for four groups of men according to neuroticism level and change over time, controlling for age, physical health, and depression.


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**THINK ABOUT IT**

Are babies born with a personality? With personality traits? With all five factors?
18, whereas Inhibited children scored low on these variables. Confident children scored high in impulsivity. Reserved children scored low on dominance. The Well-adjusted group grew up to be, as you might imagine, typical teenagers. By age 3, children have developed individual differences in behaviour that are manifested as personality differences by age 18 and last to at least age 26 (Caspi, Harrington, et al., 2003).

**Then and Now**  
*The Grant Study of Harvard Graduates*

Only a longitudinal study can address the kinds of questions we’ve been asking about personality in this section. As mentioned earlier, a longitudinal study follows the same group of participants over time—from as short as a few months to as long as many years (Fleeson, 2007; Mroczek, 2007). Currently, only a handful of studies exist that have followed participants for more than 20 years, and far fewer than that have followed children from birth to the end of their lives.

The longest-running study is the study of gifted children begun in 1921 by Lewis Terman and slated to continue until the participants are no longer living (Holahan & Sears, 1995; Terman, 1926). Another famous one is the Mills Longitudinal Study of Women, following women from the 1958 and 1960 graduating classes from Mills College, a small, private college in California, to the present, when many of the original participants are in their 70s (Helson, 1967; Helson & Wink, 1992; Roberts & Helson, 1997). These women came of age and lived through some of the most exciting and volatile times of the last century, including the civil rights movement and the women’s movement. Many of the findings discussed in this section come out of the study of the Mills women (e.g., Roberts & Bogg, 2004; Roberts & Chapman, 2000; Roberts & Helson, 1997).

Perhaps the most famous longitudinal study of all is the Grant Study of Harvard Graduates. The study began in 1938 when Arlie Bock, frustrated that medicine focused on pathology, wanted to find out what combination of physical and mental health led to a successful life (Shenk, 2009). The department store magnate W. T. Grant supported the fledgling research project for the first 10 years, which is why today the study is known as the Grant study. They recruited the most physically and mentally healthy members of the Harvard classes of 1942 to 1944 to volunteer for a lifetime of close scrutiny from a medical, psychological, and social standpoint. They even questioned the men’s parents and close family members. The participants received questionnaires every 2 years, physicals every 5 years, and interviews every 15 years. In more recent years participants have been put through MRIs, DNA testing, and even a request that they donate their brains to the study upon their death.

As the men grew into middle age, many of the study participants achieved great success, including President John F. Kennedy; former editor of the Washington Post Ben Bradlee; four former senate hopefuls; one presidential cabinet member; and one best-selling novelist. At the same time, almost a third of the participants struggled with mental illness by age 50 (Shenk, 2009).

Psychiatrist George Vaillant, who took over the study in 1967, sought not so much to find out what kind of troubles these men faced over a lifetime, but rather how they responded and adapted to what occurred in their lives (Vaillant, 1977, 2002a). For Vaillant, the most inspiring cases were often those where the men had overcome great hardships.

Vaillant studied the kind of defence mechanisms the men used to cope. He identified the classic Freudian defence mechanisms and many others (Vaillant, 1977). Defences ranged from the most unhealthy such as paranoia or passive aggressiveness, to the healthiest or most mature adaptations such as altruism, humour, and sublimation. Vaillant found that as people matured, their defence mechanisms matured too. Between ages 50 and 75 the men used altruism and humour more frequently and passive aggressiveness and fantasy less frequently. Mature adaptations turned pain and emotional turmoil into occasions for achievement, creativity, and connections with others.

Amazingly, the accomplishments of men from the original Grant study can be predicted from their personality during university (Soldz & Vaillant, 1999). Out of the five factors, traits measuring Conscientiousness were the best predictors of the men’s lives across a variety of domains including personal adjustment, family relationships, work success, and health behaviours. Conscientious young men grew into successful and better-functioning older men.

However, neuroticism at age 65 was a good indicator of poor adjustment across various domains as a result of, presumably, difficulties in life since university. Neurotic older men had more
psychiatric visits, depression, smoking, and use of drugs and alcohol in the course of their lives as compared with more emotionally stable men.

Based on their results, the authors surmise that Extraversion in young adulthood drove career and monetary success, whereas Neuroticism was related to adjustment and the inability to quit smoking in adulthood. Openness was related to adult creativity. Low Openness was related to a more conservative traditional and authoritarian political outlook and to psychiatric usage in adulthood, although this may reflect a greater willingness to explore their inner lives or an experience with psychological distress.

Today, the original Grant study is part of the Harvard Study of Adult Development. Due to the efforts of then-Harvard Law professor Sheldon Glueck, the study was expanded in 1939 to include a control group of nondelinquent boys who were growing up in the inner-city neighbourhoods of Boston from 1940 to 1945. In the 1970s Vaillant and his colleagues joined the project, now called the Glueck study, and conducted follow-ups with these men (Vaillant, 1995). At one point, Vaillant even tracked down and interviewed women from the Terman study (Vaillant & Vaillant, 1990)! These additional cohorts were Vaillant’s way of broadening his sample so that he could draw conclusions about adult development that were not limited to a sample of upper-class, university-educated, elite men.

A journalist asked Vaillant what he had learned from his research on the Grant study. “That the only thing that really matters in life are your relationships to other people” he replied (Shenk, 2009, p. 46). From the Glueck study he learned that industriousness in childhood, things such as holding a part-time job, taking on chores, or joining sports teams, was a more important predictor of adult mental health than all other factors including family relationships. From the women of the Terman study he learned that whereas social interventions can increase a person’s chance of success, they can also destroy human potential (Vaillant, 2002b). Despite having superior intellectual potential and educational advantages, only 5% of the Terman women went on to successful business or professional careers.

At the heart of these findings are biology, environment, personality, and how experiences in our lives affect who we are and what we grow up to be—the kinds of questions that can only be answered with longitudinal studies like the Grant study.

**Personality Traits: Theoretical and Practical Conclusions**

There you have it: all about traits in a nutshell! From the original lexical studies to modern factor-analytic studies, from the ancients to the cutting-edge research of today, understanding traits is key to understanding people. In particular, the identification of key dimensions of personality—recognized in a simple handshake, as we saw in the opening of this chapter—and
their applicability across cultures has inspired lines of research on nomothetic universals, indigenous personality traits, and the numerous ways we express our personality, our traits, in all aspects of our lives.

Of course, there is much more to personality than trait descriptions. (See Block, 1995, 2001, 2010 for an impassioned critique of the five factors in particular) We might well wonder, for example, how we form an identity or how we are influenced by social roles (McCrae & Costa, 1996). One commentator noted that trait models are essentially “psychology of the stranger” because they describe personality at only a superficial level. In particular, McAdams (1992, p. 229) noted, trait models fall short when it comes to

1. Accounting for personality functioning and personality differences between people beyond the surface level.
2. Adequately describing the richness of persons’ lives.
3. Providing a true causal explanation for human behaviour rather than circular reasoning (“Raj is outgoing because he’s extraverted. We know he’s extraverted because he likes to meet new people.”).
4. Addressing the social context of human experience—that is, how the ways we interact with others affect who we are.
5. Explaining personality integration and organization within an individual.

Only by studying other aspects of personality—genetics, physiology, identity, motivations, to name only a few—can we come to a complete understanding of human personality.

**Chapter Summary**

In this chapter we questioned whether the five-factor model leaves out important traits such as intelligence, religiosity, and sexuality and culture-specific traits such as philotimo, filial piety, and amae. In some cases these traits are indeed an omission (e.g., spiritual transcendence); in other cases these traits are a combination of facets and factors (e.g., sexuality), or abilities (e.g., intelligence). However, the most important question is whether the five factors adequately account for personality in other cultures.

We discovered that there are culture-specific indigenous personality traits that are not accounted for by the five factors (e.g., philotimo in Greece, filial piety in China, amae in Japan). Sentence or questionnaire measures of the five factors replicate across many cultures and languages, but adjectival measures are more sensitive to cultural differences. In particular, Openness varies across cultures and some cultures are best described by more than five factors. Research that combined measures of the five factors with Chinese indigenous trait terms found the five factors plus a unique sixth factor, Interpersonal Relatedness, tapping the traditional Chinese values of harmony, connectedness, defensiveness, and social approval.

People express their traits in many aspects of their everyday lives including handshakes, music preferences, webpages, and careers.

To study individuals in depth, psychologists use multiple methods, called triangulation, in which they use lots of different methods including L data, O data, T data, and S data to understand personality. They also use longitudinal designs to study people across time. Longitudinal studies such as the Grant Study of Harvard Graduates let us draw conclusions about personality consistency, change, and coherence over the life course.

Through these studies, we now know that personality is consistent over time, and that consistency increases with age. The traits of the five factors are about as consistent as cognitive abilities are, and show consistency across measures and raters as well as over a lifetime. By age 3 children have developed individual differences in temperament which develop into traits in adulthood.

Against this backdrop of consistency, people do change over the course of a lifetime. In particular, we mature, showing more Agreeableness, Conscientiousness, Emotional Stability,
and some aspects of Extraversion (assertive, warm, self-confident) as we enter into old age, but less Openness and other aspects of Extraversion (positive emotions, sociability, and vitality). People’s personalities change the most between ages 20 to 40, as they take their place in the adult world of work, family, and community. At the same time, there are individual differences in consistency and change, some related to important health outcomes and well-being.

Traits are but one aspect of human personality, perhaps only scratching the surface of understanding what people are like.

**Review Questions**

1. What traits may be missing from the five-factor model? Are they traits or abilities or something else? If they are traits, can they be accounted for by some combination of factors and facets of the five-factor model?
2. What are indigenous personality traits? What do we know about universals in human personality and about the impact of culture on personality? How many factors best account for personality in China? How would you describe these factors?
3. What is triangulation? What four kinds of data do psychologists use to understand personality? Give commonly used examples of each.
4. In what ways do we express personality traits in our everyday lives?
5. What is development? What is personality consistency, personality change, and personality coherence?
6. How consistent are people over time? What traits are particularly consistent over the lifespan?
7. How much do people change in general? What traits are particularly likely to change over the lifespan?
8. Are there individual differences in personality development? How does adult personality develop out of childhood temperaments?
9. What is a longitudinal study? What are some famous longitudinal studies? What have we learned about human personality from these longitudinal studies?

**Key Terms**

- Spiritual transcendence
- Ah-Q
- Interpersonal relatedness
- Longitudinal study
- Mean-level change
- Individual change
- Meta-analysis
- Normative change
- Maturation
- Temperaments