Everything You Wanted to Know About Introverts But Were Afraid to Ask

Brian L. Currie, LCSW

“It is very difficult for an extrovert to understand an introvert” Jill D. Burruss and Lisa Kaenizg, College of William and Mary

“In an extroverted society, the difference between an introvert and an extrovert is that an introvert is often unconsciously deemed guilty until proven innocent.” ~ Criss Jami
Disclaimers

Presentation
Me
You
Treatment
Extroversion and Introversion by State

Percentage of Extraverted (more purple) to Introverted (less purple) (16)
How Do You Know Which One You Are?
Basically…

extrovert

I’m staying in tonight

introvert

I’m staying in tonight!!
Basically, if you are outgoing then you must be an extrovert. If you are shy, then you must be an introvert.
Those are just myths. However…
If you tend to get your energy from being around people, then you are an extrovert. If you tend to get your energy from being alone, then you are an introvert.
If the following applies…

- Having a weekend night off, but no one is available to hang out disappoints you.
- Your friends cancel your weekend plans and you are disappointed.
- Feeling like you should have more shame or sense of embarrassment than you do, because you don’t mind being the center of attention.
- You like/love audience participation.
- You recharge by connecting with someone.
- You do not like dealing with unexpected alone time.
- Feeling more comfortable working with a large group than working by yourself.
- You want to do yoga or meditate, but the thought of being silent for that long seems exhausting.
- Feeling like you’re burning out from socializing constantly, but also feeling like you can’t stop.
- The idea of living on a deserted island with no people is horrific.
Then you are probably an extrovert

Sociable and outgoing.
Energized by social interaction.
Gregarious.
Has many friends.
Friendly and “easy to approach”.
Speaks and acts, and then thinks later.
More easily distracted.
Risk taker.
Shorter life span than introverts.
Two Kinds of Extroverts (Erica Gordin and Tara White)

• **Affiliative:** This kind of extroversion is all about social warmth and friendship — people who have this trait form close social bonds with a lot of people and get a lot of happiness and meaning out of them. They feel a strong sense of connection with the people and things that are important to them, but would not necessarily feel the need to seek out a leadership position.

• **Agentic:** This kind of extroversion is about taking leadership positions, sensitivity to reward, persistence, and generally being comfortable in the limelight. White noted that those who are higher in agentic extroversion are perhaps a little less likely to feel a strong sense of connection with other people and have more interest in going for rewards in social or workplace contexts. (21)
The parts of the brain involved in incentive reward and approach of reward were more active for agentic extroverts, in addition to the parts that are active for all extroverts in general.
However, if the following applies…

• Having a weekend night off, someone drops by unexpectedly, and you become annoyed.
• Your friends cancel your weekend plans and you have to feign disappointment.
• You hate being the center of attention.
• You avoid situations that have the slightest possibility of audience participation.
• You recharge by being alone.
• You deal with unexpected alone time as if it were your favorite Christmas present.
• You would much rather work by yourself than with a large group.
• Doing yoga or meditation is something you always have time for.
• Feeling like you’re burning out after socializing for three minutes (and even that may be two minutes too long).
• The idea of living on a deserted island with no people is something you secretly wish for.
Then you are probably an introvert

Private.
Enjoys solitude.
Energized alone.
Has a rich internal world.
Thinks before speaking and acting.
Prefers a few intimate friends.
Doesn’t enjoy loud, sociable situations.
Independent.
Longer life span than extroverts.
Four Kinds of Introverts (Jonathon Cheek)

- **Social**: Social introversion is the closest to the commonly held understanding of introversion, in that it's a preference for socializing with small groups instead of large ones. Or sometimes, it's a preference for no group at all — solitude is often preferable for those who score high in social introversion. But it's different from shyness, in that there's no anxiety driving the preference for solitude or small groups.

- **Thinking**: Thinking introversion is a newer concept. People with high levels of thinking introversion don't share the aversion to social events people usually associate with introversion. Instead, they're introspective, thoughtful, and self-reflective.

- **Anxious**: Unlike social introverts, anxious introverts may seek out solitude because they feel awkward and painfully self-conscious around other people, because they're not very confident in their own social skills. But, often, their anxiety doesn't fade when they're all alone. This kind of introversion is defined by a tendency to ruminate, to turn over and over in their minds the things that might or could or already have gone terribly wrong.

- **Restrained**: Another word for this one is *reserved*. Restrained introverts sometimes seem to operate at a slightly slower pace, preferring to think before they speak or act.
However, maybe you say to yourself, “I have things that apply to me in the introvert AND extrovert areas.”
Then you are probably an ambivert (most people are)

• Enjoys socializing, but also being alone at times.
• Behavioral decisions usually rely on “how one feels”, or the context of the situation.
• Usually has a smaller group of friends.
• Ability to appreciate both inner and outer worlds.
• Easygoing.
You need to think of it as a continuum
But it comes back to…

If you tend to get your energy from being around people, then you are an extrovert. If you tend to get your energy from being alone, then you are an introvert.
But it is just a matter of how you were raised and what environment you were raised in, right?
Let’s look at some differences between introverts and extroverts to see if that gives us the answer to “nature vs. nurture”.
Introverts and extroverts do not define all words the same
Do Not Speak the Same Language

To go out, v.

Extrovert's Definition:
Requires at least two people, and the more the better. Constant chatter, loud music, sports, crowds, and food consumption are all fun components of going out.

Introvert's Definition:
Can be done alone or with others. Enjoyable if there's some point to it; i.e. in order to see a band, a movie, a play, or perhaps have a stimulating discussion with one or two close friends.
# Difference in Definitions

<table>
<thead>
<tr>
<th>WORD</th>
<th>Extrovert's Definition</th>
<th>Introvert's Definition</th>
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</thead>
<tbody>
<tr>
<td>Alone, adj.</td>
<td>Lonely.</td>
<td>Enjoying some peace and quiet.</td>
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<tr>
<td>Book, n.</td>
<td>1) Doorstop.</td>
<td>1) Source of comfort.</td>
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<tr>
<td></td>
<td>2) Paperweight.</td>
<td>2) Safe and inexpensive method of traveling, having adventures, and meeting interesting people.</td>
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<td>Bored, adj.</td>
<td>Not frantically busy.</td>
<td>Stuck making small talk, and unable to escape politely.</td>
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<tr>
<td>Extrovert, n.</td>
<td>A nice, normal, sociable person. Never surprises you with anything weird.</td>
<td>A boisterous person who may be very nice, but who is somewhat exhausting to spend time with. Usually not too deep, but fun.</td>
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<tr>
<td>Free time, n.</td>
<td>A time when you do group activities. (See Introvert's Definition of work.)</td>
<td>A time when you read without interruption until you're in danger of going blind.</td>
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<tr>
<td>Friend, n.</td>
<td>Someone who makes sure that you're never alone.</td>
<td>Someone who understands that you're not rejecting them when you need to be alone.</td>
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<tr>
<td>Good manners, n.</td>
<td>Making sure people aren't left all by themselves. Filling in any silences in a conversation.</td>
<td>Not bothering people, unless it's necessary, or they approach you. (Sometimes you can bother people you know well, but make sure they aren't busy first.)</td>
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<tr>
<td>Home, n.</td>
<td>A place to invite everybody you know.</td>
<td>A place to hide from everybody you know.</td>
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Tend to remain calm in stressful situations (so please do not expect them to react like you do)

<table>
<thead>
<tr>
<th>Introverts</th>
<th>Extraverts</th>
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<tr>
<td>Get energy from inside themselves</td>
<td>Get energy from interaction in the outside world</td>
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<tr>
<td>Real world is the inner world of ideas, understanding and meaning</td>
<td>Real world is the outer world of people and things</td>
</tr>
<tr>
<td>People of ideas and abstract invention, difficult to understand, often shy</td>
<td>People of action and practical achievement, easy to understand, often sociable</td>
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<tr>
<td>Have a public and private self</td>
<td>Are the same in public and in private</td>
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<tr>
<td>Intense and passionate, tend to bottle up emotions</td>
<td>Expansive and less impassioned, unload emotions as they go along</td>
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<td>Feel drained by people, need privacy</td>
<td>Feel energised by people</td>
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<tr>
<td>Have a few close friends</td>
<td>Make lots of friends easily</td>
</tr>
<tr>
<td>Quiet in large groups, fear humiliation</td>
<td>Outspoken in groups, take risks</td>
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<tr>
<td>Can concentrate intently for long periods</td>
<td>Can be distracted easily</td>
</tr>
<tr>
<td>Mentally rehearse before speaking, need time to make decisions</td>
<td>Think out loud, make decisions quickly</td>
</tr>
<tr>
<td>Learn by observing, live life only when they understand it</td>
<td>Learn by doing, understand life after they have lived it</td>
</tr>
<tr>
<td>Go from considering to doing and back to considering</td>
<td>Go from doing to considering and back to doing</td>
</tr>
</tbody>
</table>
• Introverts prefer concrete language when they talk.
• Do NOT mistake this for being a concrete thinker. (more on this later)
• This is because words matter to the introvert. Introverts spend a lot of time thinking about what they are going to say and therefore usually mean what they say, whereas the extrovert commonly speaks without fully thinking before they speak.
• Introverts see this as precise vs. concrete.
• Introverts absolutely hate small talk.
• Why?
• Because it is meaningless.
• When out with friends you may thing I could be doing “X” right now (reading, internet surfing, playing video games, watching a movie – something a little less social).
• If I go for a snack in the kitchen, will I run into my roommates?
• The best kind of friend is one you do not have to talk to.
• I’d rather play an organized game than socialize.
• I would be so much better at this conversation online.
• Being expected to talk before 3:00 PM is unreasonable.
• Don’t ask me why I am so quiet.
• Going to a party is basically a chore.
• Maybe I am a little bit too observant.
• I’m not in a bad mood, I’m just content with my mouth not moving right now.
So big deal. Introverts have different ways of seeing or doing things than extroverts. What is all the fuss about anyway?
INTROVERTS

UNITE

SEPARATELY

IN YOUR OWN HOMES
So bad, even introverts are here.
Have long been told to change due to being an introvert in an extrovert society

The introvert is pressured daily, almost from the moment of awakening, to respond and conform to the outer world.

Marg Olsen Laney
If you are an extrovert, you might not think this is true. However, consider the following...
One teacher, William Pannapacker, an associate professor of English at Hope College in Holland, Michigan, joined his students in taking the Myers-Briggs personality test. He planned assignments in which students would discuss the differences in their results.
Not one of the 20 students, according to the test results, was an introvert. This despite the fact that the teacher knew which students never spoke up or said anything in class. And the students were more evenly distributed on the other personality areas.

He hypothesized that perhaps the questions were too stigmatizing.
Take the question “Would you rather go to a party or stay home reading a book?”.

This question has a clear “right” (that is, socially acceptable) answer.
“Given that introversion is frowned upon almost everywhere in U.S. culture, the test might as well have asked, "Would you prefer to be cool, popular, and successful or weird, isolated, and a failure?". Pannapacker writes that, in the discussion following the scoring of the tests, students generally agreed that “introversion was a kind of mental illness” or “a sign of spiritual brokenness”. (20)
Did you know that though introversion was not necessarily classified as pathological, as early as the 1920s, when shyness was equated with introversion, child guidance experts saw it as a “maladjusted personality.” “Shyness could lead to dire outcomes, they warned, from alcoholism to suicide, while an outgoing personality would bring social and financial success.” (13)
William Whyte’s *The Organization Man*, a 1956 best-seller, describes how parents and teachers conspired to overhaul the personalities of quiet children. “Johnny wasn’t doing so well at school,” Whyte recalls a mother telling him. “The teacher explained to me that he was doing fine on his lessons but that his social adjustment was not as good as it might be. He would pick just one or two friends to play with, and sometimes he was happy to remain by himself.” Parents welcomed such interventions, said Whyte. “Save for a few odd parents, most are grateful that the schools work so hard to offset tendencies to introversion and other suburban abnormalities.”
Another dean told Whyte that “in screening applications from secondary schools he felt it was only common sense to take into account not only what the college wanted, but what, four years later, corporations’ recruiters would want. ‘They like a pretty gregarious, active type,’ he said. ‘So we find that the best man is the one who’s had an 80 or 85 average in school and plenty of extracurricular activity. We see little use for the “brilliant” introvert.’ ”
So what? That was over 60 years ago. No one thinks like that now…
Did you know the International Classification of Diseases (ICD) 9, published by the World Health Organization (WHO), had diagnosis code 301.21, “Introverted Personality”?
The ICD 10 has eliminated this diagnosis code, but only after originally proposing that “introversion” be included as a contributing factor in diagnosing certain personality types. WHO ultimately relented and used “other language”. (17)
Which diagnoses were these and what “other language” was used?
Schizoid Personality Disorder
Personality disorder characterized by withdrawal from affectional, social and other contacts with preference for fantasy, solitary activities, and introspection. There is a limited capacity to express feelings and to experience pleasure.

Schizotypal Disorder
The symptoms may include a cold or inappropriate affect; anhedonia; odd or eccentric behavior; a tendency to social withdrawal; paranoid or bizarre ideas not amounting to true delusions…

(18)
Susan Cain explains that in Western society — the United States, in particular — is extroversion-centric. Schools and workplaces are designed for extroverts, under the belief that collaboration is key to creativity and productivity (the opposite of which is true for introverts). What's more, extroverted traits, such as being a gregarious "people person," are highly valued in today's society, and this can make introverts feel like something is wrong with them (and perhaps, make them unhappy). She calls for a new system that gives introverts the solitude they need to thrive. (13)
Extroversion is seen as the ideal, and just as it is often said we live in a “man's world”, it can similarly be said that we live in an extrovert's world. We strive to become louder, faster-talking, more confident and more gregarious, with larger-than-life personalities. (1)
Workplaces value “team players”, and will seek any excuse to hold large group meetings. We are taught that humans are meant to socialize, and distaste for constant socialization is viewed as sort of a pathology, a disorder. (1)
Even science makes extroversion seem like the ideal by reporting findings that extroverts are happier than introverts (more on this in the next session about treatment and the introvert)
There is a definite stigma to being an introvert…

- Your parents (or co-workers) may have apologized for you being “shy”.
- Someone may have said to you, “Why can’t you be more like…” (an extrovert).
- “People skills” are what is highly valued in the workplace.
- Try walking down the hall of your workplace and not greeting people. What do people think about you?
- If you continually reject co-workers offers to go out to lunch, what do people think?
- Group decision making.
- We know those who promote themselves the best, including schmoozing, are the ones that get the pay raises and/or promotions. (Research supports this.)
- What do people think of the person who sits in meetings yet almost never says anything?
- Harvard Business School unabashedly strives to recruit only extroverts because that is the personality type they believe is necessary for success in the workplace.
- Our education system, as a whole, is more interested in getting students to memorize information to pass the necessary tests that make the school look good vs. learning the information for incorporation into their lives.
- Negative connotations associated with being an introvert: Aloof, unapproachable, quiet, too serious, arrogant, rude…you are not generally going to hear “fun-loving” associated with an introvert.
Talkative people rated as smarter, better-looking, more interesting, and more desirable as friends. In groups, talkative people are viewed as smarter.
"In verbal cultures, remaining silent presents a problem," report Anio Sallinen-Kuparinen, James McCroskey, and Virginia Richmond, who have studied communication styles in the U.S. and Finland. Perceptions of competence tend to be based on verbal behavior. An introvert who is silent in a group may actually be quite engaged—taking in what is said, thinking about it, waiting for a turn to speak—but will be seen in the U.S. as a poor communicator. (15)
The bias of individuals towards extroversion is reinforced in the media, which emphasize the visual, the talkative, and the sound bite—immediacy over reflection.
There's zero correlation between being the best talker and having the best ideas.
- Susan Cain
Ever heard of:

Isaac Newton
Albert Einstein
Charles Darwin
Rosa Parks
Eleanor Roosevelt
Mark Zuckerberg
Steve Wozniak
JK Rowling
Abraham Lincoln
Mahatma Gandhi
Warren Buffett
Larry Page
Dr. Seuss
Frederic Chopin
Steven Spielberg
Bill Gates
Yet extroverts continually believe they are doing a community service to draw out the introvert
Jerome Kagan, Ph.D. launched a longitudinal study in 1989. 500 four-month old infants introduced to various new stimuli. About 20 percent cried lustily and pumped their arms and legs. These were labeled “high-reactive”. About 40 percent stayed quiet and placid, moving their legs and arms occasionally, but without the dramatic limb-pumping. These were labeled “low-reactive”. About 40 percent fell between these two extremes. (2) This study has been continued by Carl Schwartz, M.D. using brain scanning.
Other biological difference Jerome Kagan found as his research continued...

- Introverts eyes dilated more when they were solving problems.
- Introverts vocal cords became more tense while uttering words.
- Introverts heart rate patterns were unique.
- Introverts amygdalae was more sensitive to unfamiliar faces.
- Group decision making.
- Introverts have higher activity in right hemisphere, extroverts higher activity in left hemisphere, and those who fall in-between have roughly equal amount of activity in both hemispheres.
And now, a very brief biology review…
(Don’t start leaving just yet, it will be brief)
Neurotransmitters

• It is helpful to think of neurotransmitters as messengers of the brain. These chemicals, which originate within the body, assist in delivering messages from one neuron to another.

• More than 100 have been identified, we all have them.

• They all have receptors that exist to receive their “messages”.

• Because of this, neurotransmitters have certain pathways they travel in the brain. As the neurotransmitter travels, it directs where blood circulates and regulates how much of it flows to various brain centers.

• The route and quantity of blood flow influences what parts of the brain and central nervous system are activated.

• Our response to the world and how we behave depend on what parts of the systems are activated.
Neurotransmitters

- We will only talk about two:
- Dopamine: Linked to pleasure. Gives us immediate, intense zaps of happiness when we act quickly, take risks, and seek novelty.
- Acetylcholine: Linked to pleasure but has an opposing effect compared to dopamine. Also rewards us, but its effects are more subtle — it makes us feel relaxed, alert, and content. It also fuels our ability to think deeply, reflect, and focus for long periods of time on one thing. Acetylcholine increases blood flow and alertness in the front of your brain.
• Introverts are sensitive to dopamine, so they do not need much to feel its effects. Introverts have a short D4DR gene (a dopamine receptor).

• Extroverts are less sensitive to dopamine so need more than introverts to feel its effects. Extroverts have a long D4DR gene.

• When you read, concentrate, or use your mind, acetylcholine is released and you feel good.

• Introverts thrive on acetylcholine.

• Extroverts barely register acetylcholine’s happiness bump.
Nervous System’s Two Sides

Sympathetic: Prepares the body for intense physical activity, also known as the “fight, fright, or flight” response. Thinking is reduced. Dopamine is linked to the sympathetic side.

Parasympathetic: Relaxes the body and inhibits or slows many high energy functions. Thinking is increased. Acetylcholine is linked to the parasympathetic side.
When information from the outside world — like someone’s voice or images on a computer screen — enters an extrovert’s brain, it travels a shorter pathway, passing through areas of the brain where taste, touch, sight, and sound are processed. This pathway is activated by dopamine and is the sympathetic nervous system. (22, 23)
But for introverts, the pathway is much longer. Stimulation travels through many areas of the brain, including:

> The **right front insular**, which is an area associated with empathy, self-reflection, and emotional meaning. This is also the area of the brain that notices any errors.
> **Broca’s area**, which plans speech and activates self-talk.
> The **right and left front lobes**, which select, plan, and choose ideas or actions. These areas also develop expectations and evaluate outcomes.
> The **left hippocampus**, which stamps things as “personal” and stores long-term memories.

This pathway is activated by acetylcholine (22, 23)
This is why introverts tend to overthink. Because it is traveling through, and therefore activating, more regions of the brain, there is quite literally more to think about.
In 1999, scientists measured the cerebral blood flow of introverted and extroverted people with positron emission tomography (PET) scans while they thought freely. They found that the introverts had more blood flow in their frontal lobes, anterior thalamus, and other structures associated with recalling events, making plans, and solving problems.
Extroverts had more blood flow in brain areas involved with interpreting sensory data, including the anterior cingulate gyrus, the temporal lobes and the posterior thalamus, regions involved in interpreting sensory data. The data suggested—as Jung believed—that the extroverts' attention focused outwards and the introverts' attention focused inwards. (4)
In 1967, German psychologist Hans Eysenck based his theory on the belief that compared with extroverts, introverts have naturally high cortical arousal, and may process more information per second. (4, 5)
This means, essentially, that if you put introverts into an environment with a lot of stimulation, such as a loud restaurant, they will quickly become overwhelmed or overloaded, causing them to sort of shut down to stop the influx of information. Because of this fact, introverts tend to avoid such active environments. Extroverts, on the other hand, are only minimally aroused, so they seek out highly stimulating environments to augment their arousal levels.
To dig up the roots of extraversion in the brain, in a study published in June 2013 Yu Fu and Richard Depue, demonstrated that extroverts strongly associated their environment and contexts with reward, whereas the introverts showed little to no association. This suggests that introverts have a fundamental difference in how strongly they process rewards from their environment, with the brains of introverts weighing internal cues more strongly than external motivational and reward cues. (9, 10)
Another study in 2005 asked participants to perform a gambling task while in the brain scanner. When the gambles they took paid off, the more extroverted group showed a stronger response in two crucial brain regions: the amygdala and the nucleus accumbens. The amygdala is known for processing emotional stimuli, and the nucleus accumbens is a key part of the brain's reward circuitry and part of the dopamine system. The results confirm the theory – extroverts process surprising rewards differently. (8)
A study in 2010 finds extroverts are more likely to jump on immediate gratification, while introverts tend to delay rewards and instead invest the money in hopes of a larger payoff down the road.
The finding may explain why extroverts are more impulsive, since when they are exposed to potential rewards that puts them into a positive mood, which in turn cues them that now is the time to pursue that reward.

"We treat positive mood as universally desirable, but this research suggests there may be a bit more of a tradeoff," Hirsh said. "It may bias us to think only of immediate rewards and not long-term opportunities."
Studies have also suggested that the brains of extroverts pay more attention to human faces than the brains of introverts. In fact, researchers have found that the brains of introverts respond to faces in a similar way that they respond to images of flowers, whereas the extroverts' brains show a stronger response to faces — this suggests that human faces, or people in general, hold more significance to extroverts (which, perhaps, partially explains why they seek out other people's company). (11)
The lead study author, Inna Fishman, said "[This] supports the claim that introverts, or their brains, might be indifferent to people — they can take them or leave them, so to speak. The introvert's brain treats interactions with people the same way it treats encounters with other, non-human information, such as inanimate objects for example" (14)
https://www.youtube.com/watch?v=fsEPMB5UscK
https://www.youtube.com/watch?v=8VS6dQ9bw1
Resources

1) The Stigma of Introversion And Why It's Wrong by Skela, 

2) The Long Shadow of Temperament Jerome Kagan and Nancy Snidman
http://www.thedivineconspiracy.org/Z5235J.pdf


5) The Biological Basis of Personality by Hans J. Eysenck

6) How brain arousal systems determine different temperament types and the major dimensions of personality by David L. Robinson


11) Do extraverts process social stimuli differently from introverts? (http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3129862/)
Resources (cont.)

- 13) Quiet: The Power of Introverts in a World That Can’t Stop Talking by Susan Cain
- 14) http://www.livescience.com/8500-brains-introverts-reveal-prefer.html (Brain of Introverts Reveal Why They Prefer Being Alone)
- 16) Personality Geography of the United States (http://www.16personalities.com/articles/personality-geography-of-the-united-states)
- 19) http://introvertspring.com/ (Infographics)
- 20) http://www.chronicle.com/article/Screening-Out-the-Introverts/131520
- 23) http://www.magicaldaydream.com/2013/06/the-introvert-brain-explained.html
Resources (cont.)

Additional Resources

• Who’s More Productive, Introverts or Extroverts? (http://www.fastcompany.com/3016100/leadership-now/whos-more-productive-introverts-or-extroverts)

• 10 Ways Introverts Interact Differently with the World (http://www.huffingtonpost.com/2014/11/07/physical-behavior-of-introverts_n_6069438.html)

• http://www.humanmetrics.com


• http://lonerwolf.com/introvert-or-extrovert-test/

• 7 Persistent Myths about Introverts and Extroverts (http://psychcentral.com/blog/archives/2013/09/11/7-persistent-myths-about-introverts-extroverts/)

• http://psychologytoday.tests.psychtests.com/take_test.php?idRegTest=1311

• http://www.reticularactivatingsystem.org/reticular-activating-system-definition/

• http://www.quietrev.com