

2017

Reclaiming Attention in the Digital Generation Negotiation

Lauren A. Newell

Ohio Northern University, l-newell@onu.edu

Follow this and additional works at: https://digitalcommons.onu.edu/law_faculty

 Part of the [Communication Technology and New Media Commons](#), and the [Dispute Resolution and Arbitration Commons](#)

Recommended Citation

Lauren A. Newell, Reclaiming Attention in the Digital Generation Negotiator, in *The Negotiators Desk Reference 202* (Chris Honeyman & Andrea Kupfer Schneider eds., DRI Press 2017).

This Book Chapter is brought to you for free and open access by the Law at DigitalCommons@ONU. It has been accepted for inclusion in Law Faculty Scholarship by an authorized administrator of DigitalCommons@ONU. For more information, please contact digitalcommons@onu.edu.

Reclaiming Attention in the Digital Generation Negotiator

Lauren A. Newell

Editors' Note: So many successive generations of people have remarked on how they don't understand the next generation that it's now become a cliché. Yet the "digital generation" does represent a departure from years of assumptions of how people will typically get and process information, how they understand the world, and how many different things they ought to expect to do at the same time. Newell reviews the research on the digital generation's ability to maintain sustained attention over time, and finds that, yes, there is a difference. Multitasking—defended by many as an efficient way to process multiple concurrent streams of information—has been exposed as something of a myth. And there are other prices paid for assuming that one can handle multiple digital forms of communication, from cognitive overload to neurological changes. Yet communication technology is here to stay, Newell says: we have to learn how to handle it. She offers a succession of techniques for reclaiming and holding attention.

Introduction

Complaining about youth is a time-honored tradition. The basis for complaint changes—whether it is dancing the waltz, playing chess, or writing with ballpoint pens¹—but the underlying sentiment does not: There is something wrong with “kids today,” and the future will suffer because of it.

Complaints about today's youth—a group I refer to as the Digital Generation²—stem largely from the Digital Generation's affinity for technology. The ubiquity of cell phones, computers, tablets, mp3 players, and other forms of information and communication technologies (“ICTs”)³ in

Lauren A. Newell is an associate professor of law at the Ohio Northern University Pettit College of Law, where she teaches courses on negotiation, business organizations, and securities regulation. Her research focuses on the psychological aspects of negotiation and lawyering, including the emotional dimension of negotiation and the impact of new technology on negotiation and lawyering. She received her J.D. from Harvard Law School and her B.A. from Georgetown University.

the Digital Generation's lives has given rise to many accusations. Perhaps the most popular of these is that the Digital Generation's constant ICT usage renders them unable to pay sustained attention to anything. Concerns about the upcoming generation's attentional capacity are especially salient for those in disciplines that demand strong powers of attention, such as negotiation.

This chapter considers the relationship between ICTs and attention and the consequences of this relationship for the Digital Generation negotiators of the future. It proceeds in three parts. The first part explores the mechanics of attention and the importance of attention in negotiation. The second part, directed to elder generations of negotiators, aims to help these negotiators understand how ICTs affect the Digital Generation's attentional capacity.⁴ The third part, directed to Digital Generation negotiators, offers practical suggestions for improving their focused attention.

Understanding Attention and Its Role in Negotiation

Defining Attention

It is difficult to provide a precise definition of attention because attention is not a unitary concept. Rather, it is a property of multiple different perceptual and cognitive operations that are in extensive communication with each other. In fact, attention has become "a catch-all term for how the brain controls its own information processing" (Chun, Golomb and Turk-Browne 2011: 74). While recognizing that attention means different things to different people, this chapter adopts a narrower, more functional definition, namely "the ability to attend to desired or necessary stimuli and to exclude unwanted or unnecessary stimuli" (Jacobson 2010: 421). This section describes the anatomical bases of attention and the mechanisms of attentional control.

Where Does Attention Come From?

One influential theory of the source of attention envisions attention as an organ system composed of at least three constituent networks. Dr. Michael I. Posner, a leading researcher in the field of attention, refers to these networks as the alerting, orienting, and executive networks (Petersen and Posner 2012; Posner 2012). All of these networks work in concert together in our everyday lives.

The alerting network makes us sensitive to our surroundings and ready to take in information from the environment. It is akin to vigilance. For instance, when a loud noise startles us, our alerting network heightens our alertness as we try to determine what the sound was, where it came from, and whether it is significant.

The orienting network helps us to allocate attention to a particular sense or location in order to prioritize what our senses take in from the

environment. In other words, it helps us to pick what information we absorb from all the information available to our senses. We can align our attention with a source of sensory signals either overtly (our eyes move as our attention moves) or covertly (no eye movements). As we pay attention to one stimulus in the environment, the other stimuli competing for our attention lose their influence; we stop paying attention to them. For example, as we try to read a book while sitting in a bustling café, our orienting network overtly orients our attention toward the book (i.e., we look at its pages), and away from the sounds of the conversations happening around us.

The executive network monitors and resolves conflicts among thoughts, feelings, and responses occurring simultaneously in different brain areas. In this way, it helps us to make sense of the world. Activity in different parts of the brain creates competition for control of our behavior; the executive network permits expression of activity from one area and represses expression of competing activity in other areas. For instance, if we are sipping a cup of coffee and a bee flies straight at our face, our executive network resolves the conflict between the part of our brain that wants to keep holding onto the cup and the part that wants to drop the cup and wave away the bee.

The Types of Attentional Control

Posner's attentional networks model explains the anatomical mechanisms involved in paying attention, but it does not fully explain how it is determined what we pay attention *to*. For example, as we sit in the café, how does the orienting system decide whether to orient to the book or to the conversations? Researchers have discovered that we have both automatic and voluntary attentional control mechanisms. The automatic form of attentional control is widely referred to as "bottom-up" or "stimulus-driven" or "exogenous" attentional control, and the voluntary form is known as "top-down" or "goal-directed" or "endogenous" attentional control (e.g., Roda and Thomas 2006: 560; Jacobson 2010: 429; Chun et al. 2011: 77; Baker and Brown 2014: 348-49).

Bottom-up attentional control refers to the mechanisms by which external events capture our attention involuntarily. Factors external to us, such as the salience of stimuli (e.g., the brightness of a sudden flash of light), determine what we attend to (Awh, Belopolsky and Theeuwes 2012). Bottom-up control is largely instinctual and automatic; our brains constantly review the environment for disturbances and we are pre-programmed to attend to novel or sudden changes. At one time, these reflexive shifts in attention were an important survival mechanism to avoid having predators take us by surprise. Though times have changed, our brains have not—we still attend automatically to novel stimuli thanks to our bottom-up control mechanisms.

In contrast, top-down attentional control refers to the voluntary attention we pay to processing information and regulating our internal

mental lives. This control is goal-directed and driven by internal factors (e.g., we voluntarily allocate attention toward the goal of finding our favorite toothpaste among the thirty different types available on the shelf). Top-down attentional control draws upon the executive attention mechanisms to select between alternatives competing for attention, and allocates attention to the effortful mental activities that require it. Our exercise of top-down control can help us achieve conscious, high-level concentration.

Our top-down attentional processes are in a constant battle with our more powerful bottom-up attentional processes, which makes it hard to pay attention without getting distracted. While the top-down system fights to keep our attentional resources directed toward a particular activity (such as writing a memo), the bottom-up system continually determines whether other sensory information in the environment (like a knock at the door) deserves our attention at any given moment. It takes significant cognitive effort for the top-down system to maintain focus without interruption or interference from the bottom-up system. Often, top-down attentional control succumbs to bottom-up control and results in distraction (so we automatically look up from our memo when we hear the knock at the door). This distractedness is problematic because our success in performing tasks that involve reasoning and other higher-order cognitive operations is determined by our ability to control our attention. Simply put, we will have trouble finishing our memo if we keep getting distracted by people knocking on the door.

Why Attention Is Necessary During Negotiation

Knowing what attention is, negotiators might next wonder why they need it. Negotiators need strong powers of attention for two reasons. The first is that attention is crucial for everyone. Because our processing capacity is limited, we need our attentional mechanisms to focus our capacity efficiently on the information that is most important for our goals and behaviors at any given time. Every aspect of our basic daily functioning—from performing simple motor movements, such as reaching and grasping, to engaging in higher-order cognitive operations, such as planning, learning, and remembering things—requires attention.

The second reason is that negotiation is a highly complex endeavor. In any given negotiation, a negotiator may need to listen carefully, evaluate offers, propose options, respond to positions, calculate figures, plan strategies, read contracts, write emails, remember agreements, wait for replies, exercise patience, and soothe tempers, among countless other things. Negotiation makes demands upon negotiators' cognitive abilities, emotional competencies, and impulse control capabilities—all of which rely upon the negotiators' powers of attention, particularly their executive attention mechanisms. It stands to reason that a negotiator who cannot pay attention effectively is unlikely to be an effective negotiator.

How ICTs Interfere with the Digital Generation's Attention

Given attention's importance in negotiation, anything that prevents Digital Generation negotiators from paying attention is cause for concern for their elder counterparts. With this in mind, this second part explains to elder negotiators the various ways in which ICTs can interfere with the Digital Generation's attention.⁵

The Costs of Multitasking

It is frequently claimed that the Digital Generation love to “multitask.” They do not just watch television—they watch television while surfing the Internet on their phones. They do not just type an essay on their computers—they type an essay while sending instant messages to friends on Facebook and listening to music. The Digital Generation use ICTs a lot—more than seven and one-half hours per day, according to a recent Kaiser Family Foundation survey, not even counting the time they spend using media for school-related purposes, talking on a cell phone, or texting (Rideout, Foehr and Roberts 2010: 11).⁶ And almost a third of the time that youngsters are using digital media, they are using multiple media at once, which means they are exposed to more than ten and one-half hours of media per day (Rideout, Foehr and Roberts 2010: 11, 33).⁷ The Digital Generation find unitasking (doing only one thing at a time) utterly boring. What's more, they believe themselves to be good at juggling multiple tasks. They see nothing wrong with using their ICTs to multitask.

There is only one problem with this: Multitasking—defined as doing two or more things simultaneously—is something of a myth. Researchers generally agree that, rather than doing multiple tasks simultaneously, the Digital Generation are actually rapidly shifting their attention back and forth between tasks (Rosen 2012). Their inability to engage in true multitasking is due in large part to the fact that attention is a limited resource. Human brains have severe limitations in the amount of information they can process, the number of choices they can make, the number of tasks they can execute, and the number of responses they can generate.

Because of these limitations, the Digital Generation suffer three primary efficiency costs when they try to combine tasks (using ICTs or otherwise). First, they experience “switch costs” when they shift attention from one task to another. These switch costs are the time it takes for their brains to change their goals, remember the rules needed for the new task, and block interference from the prior task. Switch costs make shifting between tasks take about twenty percent longer than doing tasks sequentially (Jacobson 2010: 438). Second, they experience “resumption lags”—lag time, sometimes up to several minutes, between when they finish the interrupting task and go back to the original task. Third, their

performance slows down after an interruption even if they do not change tasks, exacting a “restart cost” before they resume what they were doing. Added to these efficiency costs are other performance costs from attempts to multitask, including decreases in accuracy (sometimes by as much as twenty to forty percent (Jacobson 2010: 440), impairments to memory, and increased feelings of stress and anxiety.

A simple example can illustrate these various costs. Jorge is doing his calculus homework. He is working through a complex proof when he receives a text message from Sara. He puts down his pencil, picks up his phone (three-second switch cost), types a response, puts down his phone, picks up his pencil, turns back to his proof, and tries to remember where he was and what the next step is (twenty-second resumption lag). The phone dings again, signaling another text. Jorge pauses again and looks at his phone, then decides to answer the message after finishing the proof (two-second restart cost). This twenty-five-second delay is hardly the end of the world; Jorge’s homework will get done. But now imagine that Sara sends Jorge forty texts and he answers all of them—his homework will take significantly longer, and the chance that he will make mistakes is greater. And now imagine that Jorge is a neurosurgeon who gets interrupted by an observer’s beeping pager in the middle of surgery—even a brief delay or lapse in concentration could make an appreciable difference to his patient.

Interference with Attentional Control

Neurological Changes

ICTs have other implications for the Digital Generation’s attention beyond their facilitation of multitasking. One issue that has received a lot of press coverage (and has played into a lot of the elder generations’ fears) is the possibility that ICT exposure may be causing neurological changes in the Digital Generation’s brains that in turn change how—and how well—the Digital Generation pay attention. The brain is a changeable, or plastic, organ and is capable of change throughout the lifespan. Though the research is still in its early stages, there is evidence to support the claim that ICT exposure is changing the Digital Generation’s brains in certain ways. Some believe the changes are primarily positive, suggesting that the Digital Generation may process, categorize, and absorb information more quickly, may have faster reflexes and greater ability to respond to visual cues, may be superior multitaskers, and may even have higher intelligence levels than their predecessors do. Others believe that the changes are primarily negative, accusing the Digital Generation of being socially awkward, impatient, incapable of sustained concentration, narcissistic, and unable to empathize. Still others believe that the Digital Generation’s brains are neither better nor worse, but merely different, than those of their elders. Adding to the confusion, it is not clear whether

these brain changes should be understood as “permanent,” or whether they are temporary and can be undone by virtue of the brain’s plasticity if the Digital Generation take a sufficient digital hiatus.

What has received greater scientific consensus—and is of greater immediate relevance to elder generations of negotiators—is the notion that ICT exposure is contributing to the erosion of the Digital Generation’s attentional control. Three significant factors linking ICT exposure to this erosion are (1) stimulus-driven distractions, (2) cognitive overload, and (3) stress and anxiety.

Stimulus-Driven Distractions

The first of these is the most intuitive: ICTs are designed to alert their users when something of interest is happening—to ding or ring or flash or buzz or pop up (or sometimes all of these) when a new call or message comes in, or when it is time for an appointment, or when a friend has just posted pictures on Instagram. These message indicators undermine the Digital Generation’s top-down attentional control mechanisms because they are designed to trigger their bottom-up processes. The flashes and dings and pop-up messages are novel or sudden changes in the Digital Generation’s environment—the very things their bottom-up attentional control systems are primed to be alert to. When the Digital Generation are engaged in a task and their ICTs produce an auditory or visual notification (the equivalent of the knock on the door), the battle between their top-down and bottom-up control systems ensues. This is not to say the bottom-up systems always win, but they frequently do.

As a result, the Digital Generation shift focus from their original task to the interrupting stimulus as they consult their ICTs to determine the reason for the notification. In other words, they try to multitask. For all the reasons explained above, this impairs their performance on both tasks. The more complex the original activity is, the more impairment the distraction causes. This is not to overstate the gravity of hearing a message indicator—compared to, say, a blaring fire alarm, a text message is a pretty mild stimulus. But neither does this mean an ICT disruption is a harmless one. Anything that engages the Digital Generation’s bottom-up mechanisms imposes an extra burden on their top-down mechanisms and makes it harder for them to exercise top-down attentional control. And anything that invites attempts to multitask brings with it the related performance costs.

Cognitive Overload

The second way in which ICTs interfere with attentional control is by contributing to cognitive overload. Cognitive load refers to the information that enters our working memory at any given time. When the amount of information being taken in exceeds working memory’s capacity to process it, we experience cognitive overload. In the grip of cognitive

overload, we are more likely to become distracted and lose focus, we are unable to transfer new information from working memory to long-term memory or to make connections between the new information and what is already in our long-term memory, we struggle to filter out irrelevant information, we become restless, and our attention span is reduced.

ICTs contribute to the Digital Generation's cognitive overload in two ways. First, ICTs add extraneous problem-solving to the primary task, meaning they force the brain to do something that is mentally demanding but superfluous to the primary task. For example, when the Digital Generation read an online newspaper article, they are exposed to hyper-text—text containing hyperlinks to related information located elsewhere. As they try to read the story, their brains have to make numerous decisions about whether each individual hyperlink is worth clicking on. This is an extraneous problem-solving task (Carr 2010); evaluating the relevance of a hyperlink is both cognitively demanding and yet not crucial to the primary task of reading the article.

Second, ICTs contribute to cognitive overload by dividing attention. In addition to bombarding the Digital Generation with distracting message indicators, ICTs also deliver information through “hypermedia”—the Internet's combination of hypertext and multimedia (Carr 2010: 129). For instance, not only is that online newspaper article full of hyper-text, but it also has embedded videos in it that play—sometimes automatically—as the Digital Generation are trying to read the article. Now their attention is divided between reading the text, evaluating the relevance of hyperlinks, and watching the videos. It was once thought that hypermedia would deepen comprehension and strengthen learning because it presents information in multiple forms (audio, video, text, etc.), but instead it appears to divide attention in a way that strains cognitive abilities, decreases learning, and weakens understanding.

Stress and Anxiety

The third way that ICTs diminish the Digital Generation's attentional control is by contributing to their stress and anxiety, which have adverse effects on attention and the capacity to control it. ICTs first contribute to stress and anxiety because, as noted previously, their message indicators are designed to be interruptive. Interruptions are a type of stressor, and frequent interruptions make us tense and anxious. Interruptions engage the body's autonomic nervous system (the “ANS”), which controls certain vital functions, such as the beating of our hearts. Arousal of the ANS sends a signal throughout the body that something is happening and something needs to be done about it. It also signals our attentional networks to seek out information about the interruption, which diverts our cognitive resources from whatever we were doing before the interruption. Coping with the interruption requires conscious effort and monopolizes our attentional resources, reducing our capacity for pursuing

thought processes and cognitive activities unrelated to the interruption. Our other cognitive functions suffer in the face of this stress.

It is easy to see the problems ICTs pose. According to one estimate, ICTs produce alerts—i.e., interruptions—at least twelve times per hour (Carr 2010: 132).⁸ Under the cumulative stress of all these alerts, the Digital Generations' brains ultimately begin to panic,⁹ and their bottom-up processes start to overwhelm their top-down processes. When the brain is in this "survival mode, the frontal lobes lose their sophistication, intelligence dims, and the brain is unable to think clearly" (Jacobson 2010: 433). In this way, ICTs cause the Digital Generation to lose not only cognitive efficiency and effectiveness, but also attentional control.

The second way that ICTs contribute to the Digital Generation's stress and anxiety is by dividing their attention, putting them in a state known as "continuous partial attention," a condition in which the Digital Generation's brains are "continually staying busy—keeping tabs on everything while never truly focusing on anything" (Small and Vorgan 2008: 18). Continuous partial attention is a state of inherently stressful hyper-alertness. The Digital Generation's brains never get to rest when they are on alert for new information and new contact at all times. As the Digital Generation become used to being constantly on alert, continuous partial attention starts to feel normal, even desirable, to them. This condition can be acculturating and potentially even addictive.¹⁰ But because human brains are not meant to maintain this heightened monitoring state for extended periods of time, trying to do so can cause a form of stress that in the long term can impair cognition, lead to depression and irritability, and diminish the capacity to pay full attention to anything.

The third way in which ICTs contribute to stress and anxiety is by creating a culture that makes possible—and demands—instantaneous communication and constant connectivity. Long gone are the days in which a letter sent to a friend might not receive a reply for weeks. Now, thanks to ICTs, the Digital Generation can be reached practically any time, anywhere, no matter what they are doing or how far they are physically from the people trying to reach them. While this is wonderful progress from a communications standpoint, this technological capability is also problematic insofar as it has led to societal expectations of instant responses. Modern message senders expect that the recipients will answer immediately and may grow anxious, frustrated, or angry in the face of unresponsiveness. In turn, message receivers feel the pressure of these expectations and may feel overwhelmed by the demands of keeping up with their digital lives. As a result, those on both sides of the screen may experience heightened arousal, feelings of stress and anxiety, and the associated cognitive and attentional decrements.

How Digital Generation Negotiators Can Improve Their Attention

Given the obstacles ICTs present to focused attention, it is tempting to recommend to Digital Generation negotiators a blunt solution: simply turning the ICTs off. But the Digital Generation's near obsession with ICTs makes this advice unlikely to work for Digital Generation negotiators.¹¹ This third part offers Digital Generation negotiators¹² two alternative solutions with greater potential.

Take Technology Breaks

The first is to take “technology breaks”—designated times during the day that are reserved for checking messages and otherwise interacting with ICTs. Some authors have suggested checking messages as infrequently as once a day, while others have advocated taking one- to two-minute technology breaks as frequently as every fifteen minutes, with intense periods of focus in between each break. The latter formulation has more promise for Digital Generation negotiators, since research shows they feel genuine anxiety when they are separated from their ICTs for long stretches of time (Tapscott 2009).

Implementing the technology break advice might look like this: During preparation for a negotiation, Digital Generation negotiators might set a countdown timer to alert them every fifteen minutes that it is time for a technology break, and a second countdown timer to alert them when the break is over.¹³ Otherwise, their ICTs would remain silenced, with visual alerts disabled, during the fifteen-minute work period. The process would be similar during the negotiation itself. The frequency of technology breaks could be negotiated at the beginning of the negotiation session with the other agenda items, such as meal breaks or breakout sessions.

The technology break suggestion neatly balances the benefits of minimizing distractions and the challenges posed by turning off ICTs altogether. Limiting ICT usage to specified break times should reduce external distractions similarly to turning the ICTs off. In addition, technology breaks may help to minimize the Digital Generation's internal distractions. Knowing that a break is coming makes it easier to focus on the current task for the specified amount of time, so their attention should improve during the time in between breaks. Moreover, having all parties take a technology break simultaneously during the negotiation should reduce the number of times that one or more negotiators is distracted by an ICT while another is talking.

Despite these benefits, a technology break is not a perfect solution. Designating specific times for technology breaks by no means prevents negotiators from checking their ICTs between scheduled break times. The technology break solution still requires some modicum of discipline and practice. And if Digital Generation negotiators become accustomed

to taking breaks with a certain frequency when they are on their own, it may be difficult for them to focus for longer intervals if the parties have agreed to less frequent breaks—much as it may be challenging for negotiators to wait until 1 p.m. for lunch if they are accustomed to eating at noon.

Further, technology breaks are inherently disruptive. Taking a technology break may mean cutting short a productive conversation, and taking frequent breaks may unnecessarily protract a negotiation, since it will surely take time to bring the parties back to attention after a scheduled break. The breaks may be worthwhile if there is a marked improvement in the parties' attention in between breaks, but they may be a waste of time if the parties remain distracted throughout the negotiation. Finally (perhaps obviously), technology breaks are best suited to negotiations conducted face-to-face; they are likely impractical for negotiations held via telephone or videoconference.

Practice Meditation

The second promising solution for improving Digital Generation negotiators' attention is one that, admittedly, requires some up-front investment: practicing meditation. The benefits of regular meditation practice are numerous and well-documented, including enhancing clarity of thought and focus, improving sensory data processing, reducing stress, and—most relevant here—strengthening various facets of attention. Pioneering educators have introduced the dispute resolution community to the benefits of including meditation practice as part of dispute resolution training,¹⁴ and incorporation of meditation training in dispute resolution classes is becoming more mainstream. If this training is offered in their classes, Digital Generation negotiators should embrace it.

But if Digital Generation negotiators are not taught to meditate as part of their dispute resolution education, they should develop a practice on their own. (Though some negotiators may find formal meditation instruction helpful, it is certainly not a prerequisite to learning how to meditate; any negotiator can become a meditator on his or her own and enjoy the benefits.) Meditation training is widely accessible through informal meditation groups, books and audio programs obtainable from bookstores and libraries, smartphone and tablet apps, and podcasts, many of which are free and available to everyone. These informal channels can help Digital Generation negotiators overcome any cost or access barriers to learning to meditate so they can reap the attentional benefits of regular meditation practice.

There are two obstacles to improving attention through meditation: time and effort—both as an initial matter, in learning to meditate, and on an ongoing basis, to maintain a meditation practice. Changing the brain through meditation requires at least twenty minutes of regular practice, preferably daily (Horstman 2010: 31). The Digital Generation may have

trouble resisting the siren song of their ICTs for long enough to establish a regular meditation practice, especially if they do not view themselves as suffering from attentional problems. They may also find it challenging to carve out blocks of time from their busy schedules to sit quietly and meditate. Or they may view meditation as unrelated to negotiation and deem it not worth their time. Admittedly, improving attentional powers through meditation is a solution in which Digital Generation negotiators must actively invest themselves. But if they do, they may find it to be a powerful one.

Conclusion: ICTs Are Inevitable

It is easy to complain about a younger generation and, given the research about ICT exposure's effects on attention, it is easy to feel justified in complaining about the Digital Generation's rampant ICT usage. The elder generations are correct in believing that attention is important, both generally and particularly in negotiation. But the solution cannot be to shun ICTs entirely. ICTs are a fact of our current society, the same as sewing machines, cars, microwaves, and all the other forms of technology that were once seen as radical and destructive by those who lived before they were invented. ICTs are tools—only as “good” or “bad” as the ways we employ them. We must learn to live with ICTs, not simply run from them. To this end, negotiators—both current and future—should embrace techniques that help improve their attention but still permit them to enjoy all that ICTs have to offer.

Notes

¹ The waltz, introduced to the English court in 1816, was seen as a “contagion” that threatened respectable society, an “indecent foreign dance” involving “voluptuous intertwining of the limbs and close compressure of the bodies” (Knowles 2009: 32). In 1859, *Scientific American* railed against the “pernicious excitement to learn and play chess” then sweeping the nation, calling chess “a mere amusement of a very inferior character, which robs the mind of valuable time that might be devoted to nobler acquirements” (Munn, Wales and Beach 1859: 9). And in 1950, ballpoint pens were decried as “the ruin of education in our country” (Collins and Halverson 2009: 31).

² The eldest of the Digital Generation are currently in their early thirties, while the youngest are just being born. Others have divided this broad span of years into at least two different generations, but the dividing lines seem rather arbitrary and are not consistent from researcher to researcher. I consider the entire group to be the Digital Generation. However, because most of the research on this group focuses on today's “tweens,” teens, and college-age youth—i.e., young people roughly ages eleven to twenty-two—I use “Digital Generation” primarily in reference to American youth in this age group. For a more expansive discussion of the Digital Generation and many of the topics addressed in this chapter, see Newell (2015).

³ I refer to ICTs in the broadest, most inclusive sense, including both the devices we use (e.g., tablets, smartphones) and the websites and programs we run on those devices (e.g., email, social media websites). The broad generalizations I make about “us” and “the Digital Generation” are intended to reflect the average experience of adults and youths in the United States, with the caveat that these generalizations are likely not applicable to adults or youths in every country worldwide, or even in every socioeconomic group within the United States.

⁴ Newell (2015) provides a more in-depth discussion of the science of attention and the effects of ICT exposure on attention, including citations to the research mentioned in this chapter.

⁵ As this chapter's focus is the impact of ICT exposure on the Digital Generation, the neurological effects and attentional impediments outlined here are described as if they apply only to the Digital Generation. Despite this choice of language, all ICT users—regardless of their generation—likely experience these effects and suffer from these impediments.

⁶ This figure includes the average amount of time that American children between eight and eighteen years old spend watching TV and movies, playing video games, listening to music, using computers, and—for just a small part of this time—reading print media (Rideout, Foehr and Roberts 2010). These findings come from a nationally representative survey conducted in 2008 and 2009 of 2,002 third through twelfth grade public, private, and parochial school students aged eight to eighteen, including 702 volunteers who completed seven-day media use diaries, with a plus or minus 3.9 percent margin of error (Rideout, Foehr and Roberts 2010: 6).

⁷ Media exposure refers to the amount of media content young people consume in a day, without taking multitasking into account (e.g., if a teenager listens to music for the entire hour he spends using a computer, the report accounts for two hours of media use) (Rideout, Foehr and Roberts 2010).

⁸ Carr (2010: 132) estimates that the Internet interrupts an average person with at least twelve alerts per hour, and possibly many more.

⁹ Dr. Edward M. Hallowell (2005: 58), a psychiatrist and leading expert in the field of attention deficit hyperactivity disorder, describes this “panic”:

Beneath the frontal lobes lie the parts of the brain devoted to survival. These deep centers govern basic functions like sleep, hunger, sexual desire, breathing, and heart rate, as well as crudely positive and negative emotions. When you are doing well and operating at peak level, the deep centers send up messages of excitement, satisfaction, and joy. They pump up your motivation, help you maintain attention, and don't interfere with working memory, the number of data points you can keep track of at once. But when you are confronted with the sixth decision after the fifth interruption in the midst of a search for the ninth missing piece of information on the day that the third deal has collapsed and the 12th impossible request has blipped unbidden across your computer screen, your brain begins to panic, reacting just as if that sixth decision were a bloodthirsty, man-eating tiger.

¹⁰ Though many authors (e.g., Palfrey and Gasser 2008; Small and Vorgan 2008; Jacobson 2010; Rosen 2012) refer to Internet “addiction,” the most recent version of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* published by the American Psychiatric Association does not include Internet usage as a disorder. *DSM-5* lists “Internet Gaming Disorder” as a condition warranting more research, though “the criteria for this condition are limited to Internet gaming and do not include general use of the Internet, online gambling, or social media” (American Psychiatric Association 2013).

¹¹ Newell (2015) discusses this solution's shortcomings in detail.

¹² Though offered to the Digital Generation, these suggestions likely also have value for negotiators of other generations, particularly insofar as they have begun adopting the Digital Generation's habits.

¹³ This sounds somewhat cumbersome, but a quick Google search reveals countless free online programs that do all the heavy lifting. <http://www.online-stopwatch.com/> is just one example.

¹⁴ Professor Leonard L. Riskin of the University of Florida Levin College of Law is one such pioneer. Riskin (2004) provides an overview of the value of meditation (particularly mindfulness meditation) to dispute resolution and some of the ways in which meditation has been incorporated into dispute resolution training.

References

- American Psychiatric Association. 2013. "Internet Gaming Disorder Fact Sheet." Accessed August 17, 2015. <http://www.dsm5.org/Documents/Internet%20Gaming%20Disorder%20Fact%20Sheet.pdf>.
- Awh, E., A. V. Belopolsky and J. Theeuwes. 2012. Top-Down Versus Bottom-Up Attentional Control: A Failed Theoretical Dichotomy. *Trends in Cognitive Science* 16: 437-443.
- Baker, R. L. and D. P. Brown. 2014. On Engagement: Learning to Pay Attention. *University of Arkansas at Little Rock Law Review* 36: 337-385.
- Carr, N. 2010. *The Shallows: What the Internet Is Doing to Our Brains*. New York: W. W. Norton.
- Chun, M. M., J. D. Golomb and N. B. Turk-Browne. 2011. A Taxonomy of External and Internal Attention. *Annual Review of Psychology* 62: 73-101.
- Collins, A. and R. Halverson. 2009. *Rethinking Education in the Age of Technology: The Digital Revolution and Schooling in America*. New York: Teachers College Press.
- Hallowell, E. M. 2005. Overloaded Circuits: Why Smart People Underperform. *Harvard Business Review* January: 55-62.
- Horstman, J. 2010. *The Scientific American Brave New Brain*. San Francisco: Jossey-Bass.
- Jacobson, M. H. S. 2010. Paying Attention or Fatally Distracted? Concentration, Memory and Multi-tasking in a Multi-media World. *Journal of the Legal Writing Institute* 16: 419-462.
- Knowles, M. 2009. *The Wicked Waltz and Other Scandalous Dances: Outrage at Couple Dancing in the 19th and Early 20th Centuries*. Jefferson, NC: McFarland.
- Munn, O. D., B. H. Wales and A. E. Beach. Chess-Playing Excitement. *Scientific American*, July, 2: 1859.
- Newell, L. A. 2015. Redefining Attention (and Revamping the Legal Profession?) for the Digital Generation. *Nevada Law Journal* 15: 754-825.
- Palfrey, J. and U. Gasser. 2008. *Born Digital: Understanding the First Generation of Digital Natives*. New York: Basic Books.
- Petersen, S. E. and M. I. Posner. 2012. The Attention System of the Human Brain: 20 Years After. *Annual Review of Neuroscience* 35: 73-89.
- Posner, M. I. 2012. *Attention in a Social World*. New York: Oxford University Press.
- Rideout, V. J., U. G. Foehr and D. F. Roberts. 2010. Generation M2: Media in the Lives of 8- to 18-Year Olds. *The Henry J. Kaiser Family Foundation*. Available at <http://kff.org/other/event/generation-m2-media-in-the-lives-of/> (last accessed February 15, 2017).
- Riskin, L. L. 2004. Mindfulness: Foundational Training for Dispute Resolution. *Journal of Legal Education* 54: 79-90.
- Roda, C. and J. Thomas. 2006. Attention Aware Systems: Theories, Applications, and Research Agenda. *Computers in Human Behavior* 22: 557-587.
- Rosen, L. D. 2012. *iDisorder: Understanding Our Obsession with Technology and Overcoming Its Hold on Us*. New York: Palgrave Macmillan.
- Small, G. and G. Vorgan. 2008. *iBrain: Surviving the Technological Alteration of the Modern Mind*. New York: Collins Living.
- Tapscott, D. 2009. *Grown Up Digital: How the Net Generation Is Changing Your World*. New York: McGraw-Hill.

Section XII: Organizations and Teams

This section turns our attention to organizations and teams. Following a chapter analyzing how some real, live—and even famous—teams actually work in their internal and external dealings, the second chapter argues that organizations that hope to be truly successful in their negotiations should learn from those which foster a consistent, company- or organization-wide approach.

Next is a chapter, by contrast, on the productive uses of disagreement within a team or organization; this is followed by one on the negotiator's role—which includes a moral role—within a whole framework for participating in as well as designing disputing systems. And finally, there is a chapter that reviews the history, in one major industry and two other domains, of parties actually and productively thinking ahead about inevitable conflict, so as to avert it. The chapter goes on to propose that other industries and organizations learn to do likewise.

66. Two Heads Are Better than One: Team Negotiations in Research and in Professional Soccer
David F. Sally, Kathleen O'Connor and Ian Lynam
67. The Organization as Negotiator
Adrian Borbély and Andrea Caputo
68. Productive Disagreement
Howard Gadlin
69. The Negotiator's Role Within a Dispute System Design: Justice and Accountability
Lisa Blomgren Amsler
70. Thinking Ahead
James Groton, Chris Honeyman and Andrea Kupfer Schneider