А.И. Матяшевская, Е.В. Тиден

English in the Hyperconnected World: part 2

Учебное пособие

Саратов

2017

Составители - А.И. Матяшевская, Е.В. Тиден

English in the Hyperconnected World: part 2: Учебное пособие по иностранному языку для студентов неязыкового вуза /Сост. А.И. Матяшевская, Е.В. Тиден. — Саратов, 2017. — 80 с.

Рецензент:

Кандидат философских наук Шилова С.А.

Table of Contents

PREFACE

Настоящее учебное пособие включает актуальные тексты учебно-познавательной тематики для студентов-бакалавров факультета компьютерных наук и информационных технологий (направление 02.03.02 «Фундаментальная информатика и информационные технологии»).

Целью данного пособия является формирование навыка чтения и перевода научно-популярных и собственно научных текстов, а также развитие устной речи студентов.

Пособие состоит из 4 разделов, рассматривающих значение информационных технологий в современном мире. Каждый из них содержит аутентичные материалы (источники: *Aeon, BBC Future, Nautilus, Psychology Today, The Guardian, The Atlantic*) и упражнения к ним. Раздел “Supplementary reading“ служит материалом для расширения словарного запаса и дальнейшего закрепления навыков работы с текстами по специальности.

Пособие может успешно использоваться как для аудиторных занятий, так и для внеаудиторной практики.

1. Would you let an algorithm manage your relationships?

Part 1

Exercise I.

Say what Russian words help to guess the meaning of the following words: aspect, emotion, articulating, enthusiasm, communicate, social, horoscope, nerve, formal, anonymous

Exercise II

Make sure you know the following words and word combinations.
common anxiety, to communicate via email, social media posts, face-to-face, non-verbal cues, to take for granted, to talk in person, on the phone, to provoke discussion, tongue-in-cheek, to startle, self-absorbed, off-load

Would you let an algorithm manage your relationships?

There are few aspects of our lives that are not influenced by algorithms. But would you let one manage your relationships with other humans?

"I had this everyday feeling – stress about not properly articulating my emotions in my emails to people," artist and writer Joanne McNeil tells me over the phone from Boston. "I was feeling as though I had to over-do it with enthusiasm or I would sound too

sarcastic or disinterested." It's a common anxiety of modern day life: in an age where we increasingly communicate via email, text messages, and social media posts instead of face-to-face, it can be hard to judge whether we are getting the tone right. Are we being too formal? Are we being too familiar? Are we unintentionally coming across as angry or unfriendly? Without the non-verbal cues we take for granted when talking in person with someone – or even on the phone – it can be hard to know whether what you're saying is being taken the right way. But what if there was an app for that? What if you could hand some of that responsibility over to an algorithm that calculated what to write in an email? Would you trust a piece of software to communicate with your boss or your loved one for you? Or – going even further – would you let it advise you on what to say when you were on a date, or tell you which of your friends you should hang out with, and which you should avoid? It was while thinking over these issues that McNeil came up for the idea of Emotional Labor, a plugin for Gmail that scans your messages and inserts lighthearted touches to make them seem more friendly. Full stops become multiple exclamation marks, 'lols' are dropped into sentences, and formal sign-offs become rows of kisses. "It's over-the-top. It's completely over-the-top," explains McNeil. "I could have easily had it just swap out periods for exclamation marks, but it swaps out one period for multiple exclamation marks. I made it really overwhelmingly crazy friendly. The idea came first from imagining this future where email would be written for you by some automated software that would perfectly articulate a friendly tone of voice. I was building something that works and does the job but also makes fun of the possibility of that

kind of app existing.” (1)

McNeil’s app seemed to hit a nerve when she released it online, getting shared across social media and, of course, by email. “I didn't expect that would happen. I didn't realise how many people also have that stress in email communication. Not just emailing friends, but emailing a coworker and being afraid that you're not sympathetic enough to someone who is, say, sick from work and you want to express that you wish they're healthier soon. There aren’t many non-cliched ways of expressing that, or expressing concern or caring for someone.” While Emotional Labor was clearly a tongue-in-cheek art piece, McNeil believes people might be ready for some assistance with these kinds of tricky communication tasks. “That experience of anxiety, of not knowing what words are right – it’s not just that we might outsource it to algorithms. We sometimes outsource it to your friends because this is just a constant problem. How do we come up with the right words? For example, when you meet someone and you like that person, people often have friends ‘workshop’ their texts. If you're trying to set up a date with someone you might reach out to a bunch of your friends and say, ‘What should I say to this person? How should I sound flirty? How should I not be too overt with a come on but also sound interested?” (2)

This idea of crowd-sourcing advice on how to handle a date or a personal interaction is also a common theme in the work of Lauren McCarthy, a software developer and assistant professor at UCLA’s Design Media Arts programme. Her smartphone app Crowdpilot allows you to surreptitiously stream a conversation – say, on a tricky first date – from your phone to a group of other people online. Some of them might be your friends, whilst some are just randomly selected, anonymous

Crowdpilot users. While listening in they can use the app to give you tips on what to say, suggest topics of conversation, or tell you how to react to the other person. There's a wonderfully cheerful, realistic advert-like video that explains how it might work. Although, like Emotional Labor, intended as a work of art, the app was also available to download on the App Store. "It was important to us to build a functioning app, so that it would go beyond speculative design fiction," McCarthy says. "Because it is a real app, when you encounter it, you are faced with choices and questions. Will you download it? Will you use it? Maybe you find it terrifying, but what happens if it actually improves your life?" "While my work deals with technology, it is at its core dealing with being a person in modern society, which happens to involve a lot of technology. I am most interested in social life and how we navigate relationships and interactions. Adding technologies into that, making apps, offers another way to explore this." "I've always felt like I was sort of awkward and socially inept, and I initially wondered if I could build technologies that would help me out with this," she adds. "This investigation started with a hat that would detect if I was smiling, and stab me in the back of the head if I stopped, in order to condition my brain to smile all the time. What I realized through doing this work was that there was always this element of failure – I became really critical of the potential for tech to solve all our problems and realised it actually created a lot of new ones, too." (3)

Moving on from crowdsourcing relationship advice from other humans, McCarthy started looking at how the technology itself might start offering guidance. Along with her partner Kyle McDonald, she developed Us+, a rather startling app that monitors your video chat

conversations and gives direct instructions on what to say and do. “I had been doing a lot of research into linguistic analysis and Kyle had been doing a lot of computer vision research, and we wondered what would happen if it was applied in real time to a conversation,” she says. The app analyses both what you say and your facial expressions while you talk, and will give you feedback on your performance. It’ll tell you if you’re being too self-absorbed or aggressive, suggest you be more positive or sympathetic, and tell you if the other person looks sad or happy. It’ll even mute you altogether if it thinks you’re talking too much. It feels very much like science fiction, but McCarthy says they had surprisingly positive reactions to the project when it was released. “We meant to pose a question – do we want a future where humans have their every word and expression and reaction monitored and augmented by technology? We were critical of this idea, but at the same time, there were a lot of people that got in touch interested in Us+ as a real product – a business solution, self-help tool, or relationship improvement app. Even when we explained it was an art project, they didn’t really care, they still wanted it.” Another McCarthy and McDonald art project that’s also a real world app is pplkpr. Designed to ‘optimise your social life’, the app combines GPS data from your smartphone with heart rate data from a smart watch to work out when you are meeting people and how you are reacting emotionally to them. An algorithm then crunches this data to report back to you on which people you should be hanging out with more, and which you should avoid. It knows who makes you happy and excited and will send them texts asking them to hang out with you more, while it’ll even delete the contact details of people that make you

bored or angry. “When the app was first released online, there was a huge range of reactions and a lot of loud debate,” says McCarthy. “Some people were outraged – they felt this represented technology going too far and the end of humanity. Others thought it seemed practical and useful and wanted to try it themselves.” “We heard from doctors and therapists that wanted to try it with their patients, researchers that wanted to collaborate and share findings, start-ups that were working on similar ideas and wanted to hire us, and people that felt they just really wanted and needed it. The point was to provoke discussion and thought, and I think that can happen regardless of whether you know it's an art project or not.” You can still grab pplkpr from the App Store, so I installed it and tried it for a week as I ran around to meetings here in New York. I don’t have a smart watch, so instead the app constantly nagged me via notifications about how I felt. It seemed to me like the app was transferring one kind of work – emotional labour – into another; it became digital labour, the endless tasks that our so-called time-saving devices end up making us do. In all I found the experience rather depressing, but I wondered if that was perhaps me projecting my own fears, especially as I might be older than many of its users. “Younger people often find it much less depressing and are willing to engage and try it,” McCarthy says. “When we tried this with undergrads we realized how much more open to different technologies and interactions they were. They didn't come in with preconceptions or fear. “They are not afraid. They are willing to understand something before they judge it, and hopefully this will mean a future where we can openly debate changes and new tools, and play an active role in building the world we

want to live in." (4)

What's interesting is that while both McNeil's and McCarthy's art pieces are forms of speculative design, since they were first released an increasing number of 'real' similar apps have been developed, apparently aimed at more serious users. But McNeil is doubtful about how seriously they're used. "I haven't met a single person that uses these things on a regular basis. It's too much of an experience that feels inauthentic or like you're cheating. These apps are out there and they've been talked about but it doesn't appear that anybody is really incorporating them in their work. I think it's just because even if you're unsure about the words you put in an email they're still your words. They weren't offered by someone else." Not that she rules these apps out completely, and offers an interesting comparison as to why they might appeal to some people even when they know they're offering an inauthentic experience. "I do think it's like astrology in this sense where, not everybody, but plenty of people know that it's fake and yet still read it because there's something comforting about having answers." And maybe that's the real answer as to why some of us might use apps and algorithms to advise us on tricky personal relationships: not because we truly think it works, but that it gives us a little bit of hope. Amongst all the rationalisation of our technologically regimented lives, we still want to believe that something might support us, allow us to off-load our self-doubt, and give us the answers we don't have. Whether it's advice from our friends, horoscopes, or a smartphone app – maybe in uncertain times we all just want to believe in something more than ourselves. (5)

Adapted from BBC Future.

Exercise III.

Find paragraphs, dealing with the following: coworker, tongue-in-cheek, surreptitiously, advert-like video, self-absorbed, speculative, inauthentic, astrology, fake, self-doubt

Exercise IV.

Fill in the gaps according to the text.

1. This idea of crowd-sourcing advice on how to handle a date or a personal interaction is also a common theme in the work of…….. , a software developer and assistant professor at UCLA's Design Media Arts programme.
2. Her smartphone app Crowdpilot allows you to ……. stream a conversation – say, on a tricky first date – from your phone to a group of other people online.
3. Along with her partner Kyle McDonald, …….. developed Us+, a rather startling app that monitors your video chat conversations and gives direct instructions on what to say and do.
4. The…….. analyses both what you say and your facial expressions while you talk, and will give you feedback on your performance.
5. It'll tell you if you're being too ……or aggressive, suggest you be more positive or sympathetic, and tell you if the other person looks sad or happy.
6. It'll even …… you altogether if it thinks you're talking too much.

7. It feels very much like science fiction, but …… says they had surprisingly positive reactions to the project when it was released.
8. Another McCarthy and McDonald art project that's also a …..... is pplkpr.
9. Designed to 'optimise your social life', the app combines GPS data from your …… with heart rate data from a smart watch to work out when you are meeting people and how you are reacting emotionally to them.
10. …….. knows who makes you happy and excited and will send them texts asking them to hang out with you more, while it'll even delete the contact details of people that make you bored or angry.

Exercise V.

Make up sentences of your own with the following word combinations: common anxiety, communicate via email, social media posts, face-to-face, non-verbal cues, to take something for granted, to talk in person, on the phone, to provoke discussion

Exercise VI.

Determine whether the statements are true or false. Correct the false statements:

1. This idea of crowd-sourcing advice on how to handle a date or a personal interaction is also a common theme in the work of Lauren McCarthy, a software developer and assistant professor at UCLA's Design Media Arts programme.

2. The app'll tell you if you're being too self-absorbed or aggressive, suggest you be more positive or sympathetic, and tell you if the other person looks sad or happy.
3. It'll even mute you altogether if it thinks you're talking too much.
4. It feels very much like science fiction, but McCarthy says they had surprisingly negative reactions to the project when it was released.
5. Another McCarthy and McDonald art project that's also a real world app is pplkpr.
6. "When the app was first released online, there was a huge range of reactions and a lot of loud debate," says McDonald.
7. Some people were outraged – they felt this represented technology going too far and the end of humanity.
8. "We heard from doctors and therapists that wanted to try it with their patients, researchers that wanted to collaborate and share findings, start-ups that were working on similar ideas and wanted to hire us, and people that felt they just really wanted and needed it.
9. "Older people often find it much less depressing and are willing to engage and try it," McCarthy says.
10. And maybe that's the real answer as to why some of us might use apps and algorithms to advise us on tricky personal relationships: because we truly think it works.

Exercise VII .

Match the words to the definitions in the column on the right:

stream	having or showing the ability to speak fluently and coherently

scan	marked by or given to using irony in order to mock or convey contempt.
tone	a mobile phone that performs many of the functions of a computer, typically having a touchscreen interface, Internet access, and an operating system capable of running downloaded apps
message	a person who you work with, especially someone with a similar job orlevel of responsibili ty
articulate	a musical or vocal sound with reference to its pitch, quality, and strength
sarcastic	if you say something tongue in cheek, you intend it to be understoodas a joke, although you might appear to be serious
smartphone	done secretly, without anyone seeing or knowing
coworker	to listen to or watch sound or video on

	a computer directly from the internet rather than downloading it and saving it first
tongue-in-cheek	a verbal, written, or recorded communication sent to or left for a recipient who cannot be contacted directly
surreptitiously	to look at something carefully, with the eyes or with amachine, in order to get information

Exercise VIII.

Summarize the article "Would you let an algorythm manage your relationships."

Part 2

Exercise I.

Identify the part of speech the words belong to:

positive, enthusiasm, tricky, personal, sympathetic, therapist, patients, researcher, collaborate, download

Exercise II .

Form adverbs from the following words:

emotional (1), personal (3), cheerful (3), realistic (3), real (3), social (3), initial (3), critical (3), potential (3), positive (4)

Exercise III.

Find synonyms to the following words. Translate them into Russian:

sarcastic (1), tone (1), articulate (1), emotional(1), enthusiasm (1), surreptitiously(3), anonymous (3), positive (4), tricky(5), personal(5)

Exercise IV .

Find antonyms to the following words. Translate them into Russian: emotional (1), enthusiasm (1), sympathetic (2), surreptitiously (3), anonymous (3), social (3), awkward(3), positive (4), tricky (5), personal (5)

Exercise V.

Match the words to make word combinations:

communication	message
first	task
day	posts
smartphone	relationships
common	mark
non-verbal	app
media	anxiety
personal	cues
text	life
exclamation	date

Exercise VI .

QUIZ (Are you a computer geek?)

1) The first time a computer was used to predict the results of a presidential election was in 1952. Conventional wisdom and the UNIVAC computer disagreed. Whose side did Walter Cronkite take?

A. Neither: Walter Cronkite just sat on the information

B. Walter Cronkite went with the opinion polls and reported a victory for Adlai Stevenson and a crushing defeat for the reputation of the computer

C. Walter Cronkite sided with the computer and announced Dwight D. Eisenhower would be the 34th president of the United States

D. Walter Cronkite wasn't there.

2) In 1997, a computer named Deep Purple beat chess wizard Garry Kasparov.

A. True

B. False

3) The type of UNIVAC computer delivered to the U.S. Census Bureau in 1951 was sold with a printer that cost...

A. $250

B. $260,000

C. $92,500

D. $185,000

4) Computer demos have a long and glorious history that all started in 1960, with the PDP-1, a $125,000 precursor to the minicomputer. What game was played to test the setup of the PDP-1?

A. Pac Man

B. Spacewar!

C. Space Invaders

D. Splat man

5) Which of the following is not a computer language?

A. BASIC

B. Fortran

C. Algol

D. PEMDAS

6) What of the following is the oldest personal computer?

A. HAL

B. The TRS-80

C. The Kenbak-1

D. The Apple

7) In 1984, Apple Computer kicked off its campaign for the Macintosh computer in a $1.5 million Super Bowl ad. What was the name of the $10,000 flop the Mac replaced?

A. Bart

B. Homer

C. Maggie

D. Lisa

8) What type of memory is used to temporarily store information that the computer is currently working with?

A. RAM

B.BIOS

C. ROM

D. SHEEP

9) How do you pronounce SCSI?

A. sicksy

B. ess cee ess eye

C. sucksy

D. scuzzy

10) Who may have said, "I think there is a world market for maybe five computers"?

A. Microsoft Chairman Bill Gates

B. Internet advocate and former Vice President Al Gore

C. Hewlett Packard Co-Founder David Packard

D. IBM Chairman Thomas Watson

2. And their eyes glazed over

Part 1

Exercise I.

Say what Russian words help to guess the meaning of the following words: college, students, class, problem, minutes, chemistry, comfort, collective, focus

Exercise II

Make sure you know the following words and word combinations.

to turn off, to shut off one's phones, to take classes on, middle-school students, high-school students, internet addiction, excessive internet use, to elicit, peeve, to shoot the breeze, delusion, to retain, reductive, awareness, to induce, to oblige, tricky, power-browsing, to facilitate, to half wish.

And their eyes glazed over

My college students are never entirely present in class, addicted to texts and tech. Is there any hope left for learning?

I have a rule about cellphones in class: if one disrupts us by ringing, vibrating or sounding an alarm, the owner has to sing a song or bust some dance moves in front of the class. At first, it elicits snickers, but it's no laughing matter. You need to be able to turn off your phones and pay attention, I say. On the first day of class, they shut off their phones. But it doesn't stay that way. While my students –

undergraduates at Boston University who are taking classes on writing and research – agree that there's a problem if they can't go 50 minutes without checking their phones, few of them can resist, despite knowing that this is my biggest peeve. A University of Nebraska-Lincoln study indicates that 80 per cent of college students send text messages during class. Nearly 100 per cent of them text before and after class. In the minutes before class – the ones I used to spend shooting the breeze with students about TV shows, sports or what they did over the weekend – we now sit in technologically-induced silence. Students rarely even talk to each other anymore. Gone are the days when they gabbed about the impossible chemistry midterm they just took or the quality of the food at the dining halls. Around the 30-minute mark in class, their hands inch toward their backpacks or into their pockets, fingers feeling around for the buttons as though their mere shape offers comfort. When I end class, they whip out their phones with a collective sigh of relief, as though they've all just been allowed to go to the bathroom after having to hold it all day. Even when my students stash their cellphones, my classes look like an Apple commercial – faces hide behind screens embossed with the same famous fruit. I have no delusions that they're taking notes for class or referencing that day's reading. A University of Waterloo professor who put a postgraduate at the back of his lecture hall to observe his students learned that 85 per cent of them did something unrelated to class on their laptops; a Cornell University study confirms that most students engage in 'high-tech "doodling"' and communication during class. One might think that the whopping $65,000 cost of attending Boston University for a year would provide ample reason to

maintain focus during class, but one would be wrong. (1)

Even students who take notes on their laptops miss out. A study from Princeton University shows that we process information better when taking notes by hand because writing is slower than typing (an argument often spun in favour of laptops), which helps students learn and retain the material. Similarly, people better comprehend what they're reading if it's on paper rather than on the screen. In a study from the University of Stavanger in Norway, readers on Kindle struggled to remember plot details in comparison with those who read printed books, perhaps because the physical act of turning the pages helps our memories encode the words. Another study revealed comprehension loss for subjects reading PDF versions of texts. Such findings have caused professors to ban computers in the classroom, which is something I used to do but can't any more. An increasing number of students present me with documentation from the student disabilities office that entitles them to use a laptop to take notes. If students see a few classmates with laptops, they inevitably start using theirs too. I can't tell them that only a couple people are sanctioned to use the computers because of learning difficulties without infringing on the students' privacy, so I try instead to encourage students to take notes by hand and I ask to see their faces, not their Apples. In an effort to save my students exorbitant coursepack fees, I used to photocopy course readings. But when my department clamped down on copier use, I scanned the articles and put them online, which meant I had to allow students to open their laptops during discussions. On the one hand, they're adults – if they want to go to shop for shoes on the website or look at celebrities' Instagram accounts during class, they'll have to deal with the consequences. But our discussions suffer,

which makes my job harder. When reading on screens, students don't annotate or reread. They get glassy-eyed, zone out, and then struggle to find quotes they only vaguely remember when it comes time to write the paper. The endless opportunities for distraction also mean that they miss other aspects of class, including important instructions.That's when they come to me and we have some version of the following conversation:

Student: 'I have no idea what's going on.' Me: 'What do you mean "no idea"? The assignment sheet details all the requirements, we've reviewed them in class, and we've read example essays. What exactly are you having trouble understanding?' Student: 'I don't know… everything?' (2)

I used to jump to the conclusion that students with whom I had such interactions were academic lost causes. But that's a reductive explanation, and doesn't get at the heart of the problem; it's not just that they have trouble paying attention or are distracted by their phones or laptops in the classroom. The problem is their use of technology in general. Technology demands a significant amount of time and attention and has conditioned them to not question it. It takes up more and more of their attention, and the net effect is lobotomising. Consumed by technology that they cannot bear to disable or ignore, my students lose awareness of what's going on around them. They don't know what they've missed – often, they don't know that they've missed anything. Such mindlessness has become an epidemic: a study from the Ohio State University found that walking while texting has caused a significant rise in injuries. In China sidewalks contain a special lane for people who can't be bothered to look up from their phones. And in the Germany there are traffic signals on the ground for people who would otherwise

endanger themselves by failing to notice red lights. Part of the reason people can't seem to look up from their phones is that we've convinced ourselves we're multitasking, rather than failing to focus (like the way I toggle between various apps even as I write this). A California State University study monitored middle-, high-school and college students who had been instructed to research something important for 15 minutes. Two minutes in, students' focus started to wane as they checked messages, texts and various websites. The average student lasted six minutes before caving to the temptation to engage in social media. Despite being watched, students spent only approximately 65 per cent of the allotted time studying. Given that most students spend far longer than 15 minutes trying to do coursework, it's easy to see how little gets done, and how checking messages or opening up another browser tab would be increasingly difficult to resist, especially if we tell ourselves it's related to work or study. (3)

At the end of each semester, my students submit a portfolio that chronicles their work over the past 16 weeks. I ask them to reflect on what they've learned. Students write insightful and honest self-analyses; they confess to all kinds of bad habits they've developed in college, such as procrastinating, skipping proofreading or staying up all night playing video games.Increasingly, students express dismay at their ability to manage time and to stay focused. Though I'm grateful on a daily basis that Facebook and cellphones weren't around when I was in college, this isn't a new problem. Students have always found more satisfying ways to spend time than writing essays and studying for tests; even with nothing urgently (or not so urgently) fun to do, they have

always waited until the last minute. But now students who aren't necessarily procrastinators, or who used to be able to focus on assignments, find it harder and harder to fight distraction. This semester, a student who initially impressed me as a rising star in my class wrote the following in his final portfolio: *I constantly procrastinate, leaving huge chunks of writing until the last minute, or sometimes until a few minutes past the last minute. Even now, on the last, easiest assignment, I left it until the last minute, and am still procrastinating. It's 3 in the morning, and instead of consistently working on my portfolio, I'm watching a video review of a hammock. I've never even used a hammock. I have a serious problem in making myself do work, and even I'm not entirely sure why. Even when the work interests me, as this class does, and the work is important, I am still bizarrely capable of feeling absolutely no compulsion to work.* It is almost like the student is getting taken over by forces he's aware of but can't seem to control. What are those forces, exactly? And can he – or anyone – really control them? (4)

Sure, students can use one of many available products to curtail their online forays and curb their appetite for distraction. But these products block websites or internet use – they don't block text messages or Skype calls, and they can't induce focus. While it might sound easy enough to simply turn off a phone or leave it at home when heading to the library or to class, most people aren't comfortable with that. After all, 75 per cent of Americans take their phones into the bathroom. People between the ages of 18-24 check their phones an average of 74 times a day. But why? The simple answer is that we're obsessed, but that term requires unpacking. Even though it might make us anxious – the official term is "TechnoStressed" – we feel we must

constantly check our various accounts because we can. Many people are also driven by the fear of missing out (FOMO). Because of how much happens in any given instant, we're missing *something* when we're unplugged, and we're often compelled to log back on to see what's happened since our last visit, or to confirm that nothing has. Cultural and professional expectations play into this behaviour as well. Employers expect responses to email at night and on weekends – as do students – and most of us feel pressured to oblige. And as people become accustomed to getting immediate answers, they do less digging for information themselves. I can't count how often my students email me to ask when my office hours are. I write back the same way every time: 'Check the first page of the syllabus.' They email me without checking to see if the syllabus has the answer because they can, because I'm supposed to be accessible and answer their questions. This is one of the main reasons I won't get a smartphone. I would check my work email in bar bathrooms and feel compelled to answer such emails, thereby training students that such behaviour isn't just acceptable, but fruitful. Back when I was in college, my only outside-of-class access to my professors was in office hours. Would I have trudged to my professor's office to enquire when she held office hours? (5)

Some researchers think that we're addicted to our technology. Psychologists have for years debated whether to add Internet Addiction Disorder to the *Diagnostic and Statistical Manual* (Internet Gaming Disorder is currently in the 'Conditions for Further Study' section of the DSM). Advocates argue that internet addiction involves all the classic components of addiction: excessive use, withdrawal and negative

repercussions. But it's tricky to distinguish between compulsion and addiction – some psychologists don't believe that internet addiction is an actual disorder, but rather a consequence of boredom or unhappiness (similarly, television addiction isn't an official disorder, either). Subjects who exhibit excessive internet use often have conditions such as depression, so it's difficult to isolate and examine internet use on its own. But research in China and South Korea in particular highlights the growing problem of excessive internet use. More than 210,000 children aged 6-19 in South Korea could require medication or even hospitalisation for internet addiction, and the country has trained counsellors to specifically address the problem. Roughly 10 million Chinese teenagers have been identified as internet-addicted; China has regulations discouraging online gaming for more than three hours a day. Like South Korea and China, the United States now has internet-addiction treatment and rehab programmes. Much as drug addicts adapt their behaviour to obtain and use drugs, many people do the same with technology – we crave the way it makes us feel, and getting a fix gives us a rush. Psychologists believe that social media creates a "a dopamine induced loop" of craving and satisfaction. All we have to do is see that someone has given one of our Facebook posts the thumbs-up, and dopamine feeds our brain's pleasure centre, satisfying the craving. When the effect wears off, we crave it again. In addition to altering our bodies' production of chemicals, smartphone use changes our brains. Measuring subjects' brain waves, researchers found significant differences between people who use smartphones and people who don't. Because we text with our thumbs and swipe with our index fingers, smartphone users'

brains register more activity in the parts of the brain that correspond to these digits; these areas of the brain are also bigger. Our brains could be changing, and scientists still don't know whether for better or worse. (6)

No matter what the technology might be doing to the brain, it's become increasingly clear to me as a teacher that learning is impaired.Today's university students, accustomed to wordprocessing software with autocorrect, don't actually know the rules of grammar, and don't think that they're important – at least, not until they lose points on a paper. A recent study from the University of Florida shows that what we read affects how we write, particularly when it comes to syntactic complexity. That explains why many college professors continue to note a decrease in students' writing skills. Apparently, online content, which tends toward simplistic syntax, has a greater impact on student writing than do writing courses aimed at students. An even bigger problem is the way that technology damages critical-thinking skills. Because knowledge is so ubiquitous, we don't have to hone it as sharply and we don't have to commit much to memory – we can just Google everything. Researchers from University College London report that readers skim information, rarely reread, and engage in something called 'power browsing' rather than actual reading. 'The picture that emerges,' the study reports, 'is that most visitors to scholarly sites view only a few pages, many of which do not even contain real content, and in any case do not stop long enough to do any real reading.' This could signal the emergence of 'a whole new form of online reading behaviour… one based on skimming titles, contents pages and abstracts'. The psychologist Maryanne Wolf at Tufts University in

Massachusetts argues that: ‘We are not only what we read. We are how we read,’ and that our online habits might cause us to lose the ability to read closely and critically. (7)

I use technology in the classroom every day – specifically, an LCD projector hooked up to my laptop to facilitate discussion and the evaluation of writing. My students submit their papers via an online site; I comment on them using Microsoft Word and then upload the comments. This approach is eco-friendly, nothing gets lost, there are no disputes about whether or when something was turned in, and I can copy and paste examples to use in class. There are clear benefits to using technology and social media as tools, and I try to teach my students how to use them appropriately. They’re all required to create Twitter accounts and to follow publications, researchers, scholars, organisations and university departments in the field they’re researching. I teach them how to use Wikipedia for preliminary research. We look for Facebook groups related to our topics. It doesn’t make sense to banish them from using these sites – they’re going to use them anyway, so they might as well learn how to do it responsibly and productively. (8)

For a generation who grew up online, they know very little about assessing the content of the virtual world, and we talk about how to evaluate the validity of information found online. Regardless of whether technology ultimately proves to be a force for progress or for devolution, for connection or for isolation, for knowledge or for brainwashing, getting savvier about technology and its effects can only help. My students investigate the questions raised in this essay during the seminars I give on writing and researching technology. As my students’ fingers move unconsciously across desktops, miming the

texting or typing they desperately want to be doing, we talk about how technology has consumed us. The students write papers on internet addiction, the consequences of smartphone use, and yet they actively demonstrate everything we discuss. One of my students acknowledged that she can't avoid surfing the web if she uses her laptop in class, yet she doesn't opt for paper and pencil. (9)

I require them to conduct surveys, and many probe technology addiction among their peers. The results often indicate that students won't admit to being 'addicted', but will confess to using their phones and computers for 12 hours a day. When we talk about technological unemployment, they vehemently insist that humans are better than machines, yet they worry about getting jobs. They recoil at the suggestion that humans might merge with machines. All your cellphones could be implanted into your bodies, I tell them. No more forgetting it or losing it – it's right there, all the time. Most of them look skeptically upon Juan Enriquez's idea about *Homo Evolutis*, our next iteration, a species that can control its own evolution. But when I ask them to articulate humans' uniqueness, or why technology shouldn't become the Darwinian force of our development, they struggle to come up with reasons. Perhaps change scares them as much as it does everyone else, despite their age and relationship to technology. Whatever the reason, I want them to steer us away from the technopocalypse, not straight into it, although that's a lot more complicated than reverting to snail mail or using an actual library with physical books. As the cyborg anthropologist Amber Case argues, technology evolves us just as we evolve it; we are cyborgs already. While the term 'cyborg' conjures up science-fiction characters such as

RoboCop and Iron Man, Case argues that devices don't need to be implanted into our bodies for us to be connected to and unable to function without them. There's no better example than the classroom, although a glimpse around the subway, a restaurant or a sidewalk indicates that it's not just students who have effectively become cyborgs. (10)

I try to teach students to make connections between ideas and to pull in unexpected sources, such as Plato's Allegory of the Cave. Prisoners in a cave are chained facing a wall upon which they see only the shadows of what happens around them. They never see anything directly, as they cannot turn their heads; language is a blur of background noise. Their whole world is the cave wall. One of the prisoners gets released and discovers the outside world; it's incredible, full of wonders never imagined. He returns to his cave to share his discovery, but the other prisoners cannot recognise or understand him. Enlightened by knowledge incomprehensible to the others, the liberated prisoner exists now in a separate reality. I ask my students how this allegory might apply to what we've learned about technology. Hands shoot into the air. 'The people inside the cave represent people who don't have technology, people who are stuck in the dark ages. The freed prisoner represents the way technology opens up another world,' one student says, and the others nod. While that's a perfectly valid interpretation, I prod them to think of the allegory in the reverse. They stare at me blankly. Finally, a quiet, thoughtful student who sits by herself raises her hand. 'Well…' she starts uncertainly, 'you could say that the people in the cave are those obsessed with technology. The ones who play video games all day long, who send 100 text messages a day,

whose virtual lives are more real than their actual ones. Perhaps they're the ones in the dark, while the people who can put down their devices and walk into the sun are the enlightened ones.' I want to applaud, to sob with relief, and to thank her for having the audacity to suggest that sometimes, we learn more when we power down our technology and look up. I glance around to gauge the others' reactions, but most of the students are staring absently into space or clicking away on their keyboards, their inscrutable faces bearing no mark of change. (11)

Adapted from Aeon.

Exercise III.

Find paragraphs, dealing with the following:

freed, virtual, to sob with relief, to gauge, peers, confess, vehemently, recoil, merge, implanted

Exercise IV.

Fill in the gaps according to the text.

1. A University of …… study indicates that 80 per cent of college students send text messages during class.
2. A University of Waterloo professor who put a postgraduate at the back of his lecture hall to observe his students learned that …….. per cent of them did something unrelated to class on their laptops; a Cornell University study confirms that most students engage in 'high-tech "doodling"' and communication during class.
3. One might think that the whopping …….. cost of attending Boston University for a year would provide ample reason to maintain focus during class, but one would be wrong.

4. A study from ……..University shows that we process information better when taking notes by hand because writing is slower than typing (an argument often spun in favour of laptops), which helps students learn and retain the material.

5. In a study from the University of Stavanger in……. , readers on Kindle struggled to remember plot details in comparison with those who read printed books, perhaps because the physical act of turning the pages helps our memories encode the words.

6. Another study revealed comprehension loss for subjects reading ……versions of texts.

7. A study from the ……..State University found that walking while texting has caused a significant rise in injuries.

8. In ……. sidewalks contain a special lane for people who can't be bothered to look up from their phones.

9. And in the …….. there are traffic signals on the ground for people who would otherwise endanger themselves by failing to notice red lights.

10. A …….. State University study monitored middle-, high-school and college students who had been instructed to research something important for 15 minutes.

Exercise V.

Make up sentences of your own with the following word combinations: to turn off (1), to shut off one's phones (1), to take classes on (1), to stash (1), to send text messages (1), internet addiction(6), television addiction (6), exhibit (6), excessive internet use (6), to power down (11)

Exercise VI.

Determine whether the statements are true or false. Correct the false statements:

1. A University of Nebraska-Lincoln study indicates that 10 per cent of college students send text messages during class.
2. Students rarely even talk to each other anymore.
3. A University of Waterloo professor who put a postgraduate at the back of his lecture hall to observe his students learned that 15 per cent of them did something unrelated to class on their laptops; a Cornell University study confirms that most students engage in 'high-tech "doodling"' and communication during class.
4. One might think that the whopping $ 5,000 cost of attending Boston University for a year would provide ample reason to maintain focus during class, but one would be wrong.
5. A study from Princeton University shows that we process information worse when taking notes by hand because writing is slower than typing (an argument often spun in favour of laptops), which helps students learn and retain the material.
6. Similarly, people worse comprehend what they're reading if it's on paper rather than on the screen.
7. In a study from the University of Stavanger in Germany, readers on Kindle struggled to remember plot details in comparison with those who read printed books, perhaps because the physical act of turning the pages helps our memories encode the words.
8. Another study revealed comprehension loss for subjects reading PDF versions of texts.
9. If students see a few classmates with laptops, they inevitably start using theirs too.
10. When reading on screens, students annotate and reread.

Exercise VII .

Match the words to the definitions in the column on the right:

middle-school	used to emphasize that something is not large or important
internet	a state of untidiness or lack of organization
excessive	a result of a particular action or situation, often one that is bad or not convenient
shape	the need or strong desire to do or to have something, or a very strong liking for something
college	too much
mere	the large system of connected computers around the world thatallows people to share information and co mmunicate with each other
disorder	a university where you can study for an undergraduate (= first) degree
consequence	a school in the US for older children, usuallychildren from grades 9-12, or aged approximately 14-18
addiction	in parts of the UK, a school for children between the ages of about nine and 14
High-school	the particular physical form or appearance of something

Exercise VIII .

Summarize the article “And their eyes glazed over.”

Part 2

Exercise I.

Identify the part of speech the words belong to.

addiction, actual, disorder, consequence, boredom, unhappiness, television, official, excessive, similarly.

Exercise II .

Form nouns from the following words:
addicted, directly, to discover, to exist, to separate, to apply, to represent, obsessed, real, dark

Exercise III.

Find synonyms to the following words. Translate them into Russian: mere (1), shape (1), addiction (6), disorder (6), consequence (6), boredom (6), unhappiness (6), similarly (6), official (6), excessive (6)

Exercise IV .

Find antonyms to the following words. Translate them into Russian: resist (1), disorder (6), consequence (6), boredom (6), similarly (6), official (6), excessive (6), unconsciously (9), complicated (10), dark (11)

Exercise V.

Match the words to make word combinations:

internet	habits
plot	pages
lecture	term
mere	addiction
printed	messages
contents	shape
high-school	details

official	students
text	books
online	hall

Exercise VI .

QUIZ (Computers Don't Byte!)

1) Which British mathematician and inventor, known as the 'Father of the Computer', designed a mechanical computer called the Analytical Engine which was an early forerunner of the computer we know today?

A. John Logie Baird

B. Charles Babbage

C. Michael Faraday

D. Alexander Graham Bell

2) In 1987, Cambridge-based company Acorn Computers launched their first RISC-based home computer, which was named after which ancient Greek mathematician?

A. Nicomedes

B. Pythagoras

C. Archimedes

D. Euclid

3) With which computer-related device would you associate the terms dot matrix and daisy wheel?

A. modem

B. printer

C. keyboard

D. sound card

4) What is meant by the Internet slang acronym 'ROFL'?

5) What type of computer software is Microsoft Excel?

A. word processing

B. spreadsheet application

C. presentation program

D. database management

6) We are used to the food-related computing terms of 'cookie', 'chip', 'Spam' and - taking literary licence - there are also the terms 'phish' and 'phishing'. Another food-related term related to computing is 'breadcrumb trail'. What does this odd term mean?

A. an essential part of your anti-virus program which guards against malware

B. a software program that facilitates writing music on your computer

C. a list of the domain names of news agencies across the world

D. a line of text links across the top of a web page to aid navigation of the site

3. Poison People

Part 1

Exercise I.

Say what Russian words help to guess the meaning of the following words: negativity, toxic, athlete, global, sports, boss, dictator, remarks, business, unreasonable

Exercise II.

Make sure you know the following words and word combinations.

character disorders, to have a negative impact, to be out of proportion, to inflict a personal hurt, to say nothing of, to make people sick, personality traits, at the opposite extreme, to be under a lot of stress, to take the blame, to demean, to deflate, noxious, frustration, benchmark, ill at ease, dismissive, pernicious, unfettered, expertise, hostility, to take its toll.

Poison People

They spew negativity to demean and deflate you. And they think you're the problem. It's happening more and more. Herewith, a guide for surviving toxic times.

Christine Porat was an accomplished athlete when she landed her dream job—helping a global athletic brand launch a sports academy. But the dream quickly faded. Her boss was, by her description, a self-absorbed dictator whose rudeness was matched by his bullying and other noxious actions. Soon enough, the dysfunction trickled down through the staff. "Many took out their frustrations on others, barking orders at

colleagues, making snide remarks to customers, and failing to pitch in the way good teammates do," she recalls. Within months, Porat felt depleted by the nastiness of the environment. "We quickly became husks of ourformer selves," she says. She eventually left to work for a competitor, but the experience left an indelible mark. After getting a Ph.D. in organizational management, she has devoted the last two decades to studying bad behavior in the workplace. As an associate professor at Georgetown University's business school, she continues to catalogue the acts that can poison the atmosphere in or out of an office, the high costs of toxic behavior to people and organizations, and what it takes to create cultures where everyone can thrive. (1)

Toxic behavior is common in the workplace. In part, it grows from selfishness and callousness that can derive in extreme form from certain character disorders that don't magically recede after hours and are particularly destructive in close interpersonal relationships. But toxic behavior is also the product of certain kinds of environments, notably those where productivity is the only benchmark of success or where mistrust or uncertainty permeates the atmosphere or, especially in close relationships, where insecurity or anxiety runs high. Whether it turns up in the conference room or the living room, toxic behavior is identifiable by its jolt. It's destabilizing and has a negative emotional impact out of proportion to any immediately identifiable cause. It delivers confusion, then the feeling of being deeply discounted and deflated. It steals your energy. Its signature is repeatedly—and repeatedly is important, because anybody can have a bad day—making its targets feel ill at ease without their being able to pinpoint why. Toxic behavior doesn't just inflict a personal hurt. It is deeply disturbing because, it prompts us to believe,

even for a moment, that it reflects how all others see us. Just being around toxic behavior, to say nothing of being its target, makes people sick, says Porat. Chronic stress is linked to insomnia, depressed immunity, and overeating. Toxic people not only harm others emotionally, they're a threat to health. And when toxic behavior takes hold in an environment, it turns everyone cynical. The trouble is, it tends to be catching. Like all negative phenomena, it makes an outsize impact on the brain even if only witnessed. No sooner does one worker see a boss berating an underling than that employee finds herself replicating the behavior. Porat disclosed that nearly half of workers she polled in 1998 reported they were treated rudely at least once a month. By 2016, the number had climbed to 62 percent.However much we find ourselves living in toxic times, it falls to each of us to know how to recognize nastiness and how to deflect it. Handling toxic people may not be easy, but it is vital to your welfare and to the greater good. (2)

The boss who gives by taking: "I'd like you to run that big meeting for me. It will give you a chance to show off everything I've taught you." Or the one who starts scrolling through his Twitter feed the moment you begin talking. The spouse who parades your faults in front of others only to chide you for being too sensitive when you say it's demeaning. Or the parent whose dismissiveness makes a child feel invisible and therefore worthless. One thing for sure about toxic people: Whatever insult, injury, or confusion they've just inflicted is either your fault or a molehill you're making a mountain out of. They never take responsibility for their actions. These encounters so surreptitiously disable self-worth, however, that you start looking for ways to avoid such brushes with badness —if only you could; too often, they are

fixtures in the realms you inhabit. Intimidation in any form hurts in the moment but carries fear into the future. Subtler acts also qualify as toxic, especially when regularly deployed. Rumor-mongering is especially pernicious:you never know what falsehoods are being spread about you and to whom, or who's operating on that false knowledge. Another relatively subtle act, shifting blame to others, wounds targets as it puts them in a morally untenable spot. And then there are the sins of omission: excluding teammates from networks or a family member from a gathering. Ignoring a person altogether—in a meeting or social event—can be a toxic way of putting someone down while depriving him or her of important information. Toxic people prioritize their self-interest above everyone else's. They refuse—or are unable—to consider another person's perspective or emotional state. Not caring to acknowledge how their behavior affects others, they disregard personal boundaries, avoid admitting it when they've done wrong, and are unwilling to change. (3)

In researching the impact of toxic individuals in the workplace, Veldsman focuses on toxic leaders. He finds that in many ways they are excellent psychologists. They have sharp eyes not only for their own interests but also for others' insecurities. Veldsman believes that the number of toxic leaders is growing due to unfettered individualism; they get a further boost when organizations define competence as technical skills and exclude human values. Much toxic behavior is situational. Yes, say the experts, there are those who have personality traits that incline them to assault others with various forms of negativity. And there are some people at the opposite extreme, who know only kindness and compassion. But the vast majority of people are in the middle, subject to influence by their surroundings. For them, toxic

behavior is not automatic; it is something they engage in if the situation encourages it. In 2017, work has a way of bringing out the toxicity in people. Over the past two decades, the nature of work has undergone a transformation. Where once people functioned individually, today teams are the norm. As a result, toxic colleagues have more opportunity to create havoc. And the damage is often measurable—on morale, say, or productivity—which is why research on toxic behavior tends to focus on the work domain. But toxic behavior is much the same wherever it occurs; what happens in the work realm, and why, is applicable to other areas of life. Porat finds that toxic behavior arises from the high load of stress many people carry. She attributes much stress to the generalized rise in global competition forcing companies to operate tightly, a decline in free time, and what she considers an over-reliance on technology, which enables work to bleed into downtime. Technology feeds toxic behavior, too, by creating ample opportunities for misunderstanding and meanness in written communication, she notes: "Put-downs are easier when not delivered face to face." Further, catching up on email correspondence during a one-on-one conversation or a group meeting, or any form of multitasking, can leave employees (to say nothing of spouses and children) feeling unheard, undervalued, and wanting to strike back. Yet toxic people often thrive in organizations if they have great expertise in a specific area. In fact, those with significant skills tend to be overconfident and feel immune to punishment for bad behavior; in the studies, overconfidence, along with valuing oneself above others, predicts toxicity. (4)

The thing about toxic behavior in the workplace is that the effects aren't confined to the target; everyone suffers. Porat distinguishes

between difficult employees and toxic ones. Both cause harm—but the behavior of the toxic person spreads to others. People can catch it without even realizing it. Whether it's initiated by categorically toxic individuals or those whose unpleasant acts are more situationally driven, toxic behavior can quickly become a fixed way of operating. In environments where people observe or regularly serve as the targets of hostility, rudeness or other forms of noxiousness, they learn to survive by engaging in the same behavior. They either infer that that is how to get ahead, or they get the message that such a way of relating to others is the company (or family) norm. In a poll Porat conducted, reported in the Harvard Business Review, 80 percent of nearly 800 workers said they lost work time worrying about an instance of workplace hostility, while 63 percent lost time trying to avoid the offender. "The emotional impact on others in an organization was so outsized that productivity—not to mention employee satisfaction and well-being—was disrupted." Toxic behavior takes a cognitive toll, too: "People don't remember as well," reports Porat. "They're not as attentive to information. It decreases creativity and innovation." As a result, job satisfaction declines, morale evaporates, and engagement in work diminishes. Because their behavior is so awful to be around, toxic workers often induce other employees—sometimes a firm's best ones—to leave. (5)

At work, the goal is often to get away from toxic people. But in our private lives, we're more apt to invite them in. That's most likely to happen in the search for love. Toxic people often have appealing traits, like confidence. Most of them never reveal their true nature right away; they are likely, instead, to win the admiration and trust of a prospective partner, conducting a campaign of attention and flattery

along with public displays of affection. By the time they start exhibiting questionable behavior, like making unreasonable demands, we've grown emotionally attached to them and now we see them through a distorting lens. We react to their transgressions— blaming us for their problems, ignoring our needs and requests—by trying to accommodate or justify their bad behavior: "He's under a lot of stress," or "She's really a good person." We may even take the blame on ourselves: "She's right; I'm lucky to be in a relationship with her. Who else would put up with me?" The closer we get to a toxic individual—the more they know about us, the more emotionally attached we grow to them, the more we let them into our lives—the more damage they can do to us. They simply have more information with which to manipulate. Too, once we've bonded to a person, we go to great lengths to avoid the painful feelings of loss associated with detaching. One of the most notorious forms of romantic manipulation is love bombing, a dark variant of killing with kindness. Love bombing is an intense, attention-filled courtship that suddenly gives way to extreme demands. Bombers—some because of their own insecurities, others due to their exploitative nature—seek to keep their partner to themselves, isolated from friends and family and totally dependent, making themselves the only focus of attention. When the target eventually objects, devaluation begins. For the bomber, the target is always to blame. Those who lack confidence, are uncertain who they are or where they're going in life may be especially vulnerable to masquerades of love. And just as bullies specialize in singling out those who never stand up for themselves, bombers can be especially adept at sniffing out self-doubters. The most insidious form of manipulation may

be gaslighting. It is the systematic attempt by one person to erode another's reality—by telling them that what they are experiencing isn't so —and the gradual giving up on the part of the other person Those whose partners twist reality for their own goals — insisting "You're too sensitive" or "You don't have access to the kind of information I have"— come to doubt their own beliefs and perceptions and to see themselves as a bad spouse for even daring to question the partner's wisdom. To compound the damage, gaslighters—or the effects of their behavior— tend to isolate a partner from people who could help detect the cruelty or fact-check all the warped claims. (6)

It is unclear whether toxic people are truly aware of what they are doing. Most often, they see other people as the problem. The surest way to shield yourself from toxic behavior is to severely limit or cut off entirely contact with people who regularly spew it. But that is hardly ever possible or practical. Better to arm yourself with a few basic skills. ***1) Control your exposure.*** The single most important thing you can do is minimize contact. If you work near a toxic person, ask for a rearrangement of desks. If you work on a team with a toxic person, ask for reassignment to another project. If that’s not possible, ask your boss to consider having the toxic teammate work more often from home, or to at least require fewer group meetings. If nothing at all can be done, start looking for another job. If that’s not an option, request to be paired with a different supervisor. ***2) Manage your reactivity.*** Most essentially, set firm boundaries. Assertively say no to demands that feel unreasonable. Strengthen ties with friends and others you trust. Especially if the toxic person is a spouse, relationships with people who treat you with respect can buffer you from stress and help balance your perspective. Having

your point of view validated can also boost your self-esteem and counteract isolation. Find activities that take you away from the toxic person or environment. You'll also gain a better a sense of who you are in relation to the world. ***3) Don't explain.*** Avoid even trying to explain yourself; by definition a toxic person is one who refuses to hear your perspective. ***4) Immunize yourself.*** Spot those with toxic potential and avoid them before there are any outbursts. Recognize the personality traits that feed toxicity. The drama queens. Those who are suspicious or aggressive. And those who consistently display little regard for the feelings of others. (7)

Adapted from Psychology Today.

Exercise III.

Find paragraphs, dealing with the following: to bring out, character disorders, to inflict, parade, demean, fade, dictator, indelible, associate professor, to thrive

Exercise IV.

Fill in the gaps according to the text.

1. …… was an accomplished athlete when she landed her dream job—helping a global athletic brand launch a sports academy.
2. Porat disclosed that nearly half of workers she polled in 1998 reported they were treated rudely at least once a ……...
3. …….. is especially pernicious:you never know what falsehoods are being spread about you and to whom, or who's operating on that false knowledge.
4. ……..people prioritize their self-interest above everyone else's.

5. In researching the impact of toxic individuals in the workplace, …….. focuses on toxic leaders.
6. Veldsman believes that the number of toxic …… is growing due to unfettered individualism; they get a further boost when organizations define competence as technical skills and exclude human values.
7. Much toxic behavior is…….
8. In …… , work has a way of bringing out the toxicity in people.
9. Where once people functioned individually, today …….. are the norm.
10. Porat finds that toxic behavior arises from the high load of …….. many people carry.

Exercise V .

Make up sentences of your own with the following word combinations:

have a negative impact (2), out of proportion (2), to say nothing of (2) to make people sick (2), to makes an outsize impact (2), personality traits (4), at the opposite extreme (4), bring out (4), to be under a lot of stress (6) ,to take the blame on (6)

Exercise VI.

Determine whether the statements are true or false. Correct the false statements:

1. Toxic behavior is common in the workplace.
2. Chronic stress is linked to insomnia, depressed immunity, and overeating.
3. Toxic people not only harm others emotionally, they're a threat to health.
4. Like all negative phenomena, it makes an outsize impact on the brain even if only witnessed.

5. Porat disclosed that nearly half of workers she polled in 1998 reported they were treated rudely at least once a week.
6. Rumor-mongering is especially pernicious: you never know what falsehoods are being spread about you and to whom, or who's operating on that false knowledge.
7. Toxic people prioritize their self-interest above everyone else's.
8. In researching the impact of toxic individuals in the workplace, Veldsman focuses on toxic leaders.
9. In 2015, work has a way of bringing out the toxicity in people.
10. Over the past four decades, the nature of work has undergone a transformation.

Exercise VII .

Match the words to the definitions in the column on the right:

associate professor	to grow, develop, or be successful
rudeness	to (cause to) lose colour, brightness, or strength gradually
self-absorbed	a teacher of high rank in a college or university who has a lower rankthan a professor
dictator	the feeling of being annoyed or less confident because you cannot achieve what you want, or something that makes you feel like this
toxic	harmful and unpleasant
demean	not polite; offensive or embarrassing
fade	a person who

	gives orders and behaves as if they have complete power
noxious	only interested in yourself and your own activities
frustration	poisonous
thrive	to cause someone to become less respected

Exercise VIII.

Summarize the article "Poison People."

Part 2

Exercise I.

Identify the part of speech the words belong to.

dictator (1), rudeness (1), noxious (1), frustration (1), nastiness (1), indelible (1), selfishness (2), callousness (2), extreme (2).

Exercise II .

Form nouns from the following words:

organizational (1), devoted (1), continues (1), magically (1), emotional (2), important(2), sick (2), consider (3), toxic (4), define (4)

Exercise III.

Find synonyms to the following words. Translate them into Russian: demean (1), fade (1), dictator (1), rudeness (1), noxious (1), frustration (1), nastiness (1), indelible (1), thrive (1), selfishness (2)

Exercise IV .

Find antonyms to the following words. Translate them into Russian: demean (1), fade (1), rudeness (1), noxious (1), frustration (1), nastiness (1), indelible (1), thrive (1), selfishness (2), extreme (2)

Exercise V.

Match the words to make word combinations:

extreme	impact
personality	phenomena
business	disorders
opposite	room
indelible	traits
character	professor
negative	mark
outsize	extreme
associate	form
conference	school

Exercise VI .

QUIZ (Computer Acronyms)

1) What does ICMP stand for?
A. Internet Control Message Protocol

B. Internal Conflict Management Program

C. Internet Connection Modem Protocol

D. Intranet Control Message Program

2) What does SSL stand for?

A. Secure System Login

B. Superuser System Login

C. Secure Socket Layer

D. System Socket Layer

3) What is LCP?

A. Lost Connection Problem

B. Local Connection Protocol

C. Laggy Connection Problem

D. Link Control Protocol

4) What does PPTP stand for?

A. Point to Point Transfer Protocol

B. Point to Point Transmission Protocol

C. Point to Point Traffic Protocol

D. Point to Point Tunneling Protocol

5) What is a MAC?

A. A Computer made by Apple

B. Memory Address Corruption

C. Mediocre Apple Computer

D. Media Access Control

6) What is a NIC?

A. No Internet Connection

B. Network Interface Card

C. Network Interference Control

D. Netware Intranet Controller

7) What is NAT?
A. Novell Address Transfer
B. Newly Added Technology

C. Network Administration Tool

D. Network Address Translation

8) What is VCM?
A. Voice Communications Module
B. Virtual Connection Manager

C. Virtual Channel Memory

D. Voice Controlled Modem

9) What does DOCSIS stand for?
A. Data Over Cable Service Internet Standard
B. Data Over Cable Secure International Standards

C. Data Over Cable Service Interface Specification

D. Data Over Cable Security Internet Standard

10) What is a GPU?
A. Grouped Processing Unit
B. Graphics Processing Unit

C. Graphical Performance Utility

D. Graphical Portable Unit

4. User behaviour

Part 1

Exercise I.

Say what Russian words help to guess the meaning of the following words: casinos, consensus, to diagnose, critics, system, global, personal, corporations, prevalence.

Exercise II

Make sure you know the following words and word combinations.

basic tools, to be reserved for, slot machines, there's no consensus about, obvious utility, to disentangle, online gambling, to entangle, compulsive, to prompt, obnoxious, revenue, straightforward, proponent, to induce

User behaviour

Should the net be regulated like drugs or casinos?

It's a platitude to describe the internet as distracting. We casually talk about digital life in terms of addiction. In conversation, we describe basic tools and apps – Facebook, email, Twitter – using terms otherwise reserved for drugs and slot machines. Psychologists have been discussing the possibility of internet addiction since 1996, just three years after the release of the first mainstream web browser. But there's no consensus about how to diagnose internet addiction, or whether it's

even a real thing. Estimates of its prevalence vary wildly. Unlike heroin, the internet doesn't kill people, and has obvious utility. Plus, it can be difficult to disentangle the medium (the internet) from the addictive experience (for example, online gambling). Yet, for millions of people, the internet is often understood in terms of addiction. Critics blame the internet itself for this state of affairs, or they blame individual users. Neither makes much sense. The internet is not a predetermined experience. It's a system of connections and protocols. There's nothing about a global computer network that necessitates addiction-like behaviours. So should individuals be blamed for having poor self-control? To a point, yes. Personal responsibility matters. But it's important to realise that many websites and other digital tools have been engineered specifically to elicit compulsive behaviour. A handful of corporations determine the basic shape of the web that most of us use every day. Many of those companies make money by capturing users' attention, and turning it into pageviews and clicks. They've staked their futures on methods to cultivate habits in users, in order to win as much of that attention as possible. Successful companies build specialised teams and collect reams of personalised data, all intended to hook users on their products. 'Much as a user might need to exercise willpower, responsibility and self-control, and that's great, we also have to acknowledge the other side of the street,' said Tristan Harris, who works at Google. (He spoke outside his role at the search giant.) Major tech companies, Harris told me, 'have 100 of the smartest statisticians and computer scientists, who went to top schools, whose job it is to break your willpower.' In short, it's not exactly a fair fight. (1)

Nir Eyal's book *Hooked* teaches web designers to 'create a

craving' in their users. As a consultant to Silicon Valley startups, Eyal helps his clients mimic what he calls the 'narcotic-like properties' of sites such as Facebook. His goal, Eyal told *Business Insider*, is to get users 'continuing through the same basic cycle. Forever and ever.' In *Hooked*, he sets out to answer a simple question: 'How is it that these companies, producing little more than bits of code displayed on a screen, can seemingly control users' minds?' The answer, he argues, is a simple four-step design model. Think of Facebook's news feed. The first two steps are straightforward – you encounter a *trigger* (whatever prompts you to scroll down on the feed) and an opportunity for *action* (you actually scroll down). Critically, the outcome of this action shouldn't be predictable – instead, it should offer a *variable reward*, such that the user is never quite sure what she's going to get. On Facebook, that might be a rewarding cat video, or an obnoxious post from an acquaintance. Finally, the process should give you a chance to make some kind of investment – clicking the *Like* button, for example, or leaving a comment. The investment should gradually ramp up, until the user feels more and more invested in the cycle of trigger, action and reward.Then you're hooked. Uncertain reward can lead to obsessive behaviour. The gambling industry has been using these techniques for years, too: the classic variable-reward device is the slot machine. (2)

Natasha Scull is an anthropologist at New York University who studies human-machine interactions. People expect gambling addicts to care about winning. But according to Schüll, compulsive gamblers pursue a kind of trance-like focus, which she calls 'the machine zone'. In this zone, Scull writes, 'time, space and social identity are suspended in the mechanical rhythm of a repeating process'. There

are differences between a slot machine and a website, of course. With the former, the longer you're engaged by variable rewards, the more money you lose. For a tech company in the attention economy, the longer you're engaged by variable rewards, the more time you spend online, and the more money they make through ad revenue. While we tend to describe the internet in terms of distraction, what's being developed, when you check email or get sucked into Facebook, is actually a particular kind of focus, one that prioritises digital motion and reward. In the gambling world, people tend to blame the addicts. Overwhelmingly, the academic literature on gambling has focused on the minds and behaviours of addicts themselves. What Scull argues is that there's something in between the gambler and the game – a particular human-machine interaction, the terms of which have been deliberately engineered. Yet we keep blaming people. As Scull puts it: 'It just seems very duplicitous to design with the goal of capturing attention, and then to put the whole burden onto the individual.'But the fact is, you can't sell something to people if they don't want that thing. (3)

There's a difference between what we *want* and what we *get*. We go online looking for entertainment, connection, information. Often we do want to be distracted. Companies seem to be very good at amplifying that outcome – taking what we want and giving us something that's a few notches *more*. It's the difference between wanting to go on Facebook for 10 minutes and ending up there for 30. Finding a term for this amplification can be difficult. At worst, it smacks of coercion. At best, it represents an imbalance of power between ordinary consumers and the engineers trying to circumvent their willpower. Either way,

gambling is instructive, in that it offers a frightening lesson: well-designed machines can bring people into zones of profitable compulsion. And as people have applied persuasive and hook-forming design principles to the internet, a moral queasiness has been there from the start. These appeals to moderation, though, are fundamentally out of sync with the basic profit model of Silicon Valley. (4)

Imagine the internet as a nearly infinite library. Each article, widget, slide, game level and page forms a room in the library. Every time you use a link to go to a new page, you pass through a door. At first, if you want to make money, you sell whatever is in the room. Maybe it's excellent journalism. Maybe it's a game or a recipe. Maybe it's an item that will get shipped to someone's house. In this model, the internet offers a straightforward transactional experience in digital space. Over time, instead of making money from whatever is in each room, companies begin to monetise the doors. They equip them with sensors. Each time you go through one, someone gets paid. Immediately, some people will start adding a *lot* of new doors. Other people will build rooms that are largely empty, but that function as waystations, designed to get as many people as possible to enter and leave. When you open an article on, say, Slate.com, you enter an article room. Slate makes money because it sells a certain number of doors in each of these digital spaces. We call these doors 'advertisements'. This architecture creates a rather strange effect, because while the ostensible goal of Slate is to get people into its rooms to read fine journalism, it actually gets paid by attracting people and then quickly sending them out – either to an advertiser's website, or to another article. And, in fact, this is how Slate functions.

The tech writer Farhad Manjoo partnered with Chartbeat to track how long Slate readers actually stayed on a given article. They found that 38 per cent opened the article and didn't read it at all. Of those who began reading, fewer than 25 per cent made it to the end, and 5 per cent seemingly looked at the headline and then left. Manjoo locates this twitchiness in some vague cultural moment, suggesting that 'we live in the age of skimming'. But this pattern shouldn't surprise us. It's simply a profit model working as designed. At some point, you no longer make money by building excellent rooms. You make money by figuring out how to get people to pass through as many doors as possible – to have them scanning across the web, in a state of constant motion, clicking away. (5)

Tristan Harris is a vocal proponent of ethical design, and a leader of a small community working on a concept called Time Well Spent. In an ideal Time Well Spent digi-verse, websites would ask users what they *really* want. To achieve this, Harris imagines a much more flexible web. If you want to spend 15 minutes on Facebook, looking at pictures of old friends, Facebook will help you do that, and gently nudge you off when your time is up. If you want to work quietly on your computer for two hours, without receiving any emails, your server will hold non-urgent messages for you, and deliver them at the end of the rest period. And if you want to play Angry Birds until your eyeballs fall out, you can do that, too. Certain technologies already help people exercise this kind of control. One app, Freedom, allows users to shut down access to certain sites. Saent, a new productivity tool, helps users track and share their online behaviour to reduce distraction. 'We have to change from just competing for raw attention to competing for whether or not

there's a net positive contribution to people's lives,' Harris told me. That's a nice idea; the question is how to get there. Making 'a net positive contribution to people's lives' doesn't necessarily satisfy investors. Tools such as Freedom seem to cater to a narrow, tech-savvy professional class. Two-thirds of Saent's early adopters are software developers. When you read enough articles about internet compulsion and distraction, you start to notice a strange pattern. Writers work themselves into a righteous fury about prevalence of addict-like behaviours. They compare tech companies to casino owners and tobacco companies. And then, at the peak of their rage, they suggest it's the users – not the designers – who should change. It's absurd. They are missing the obvious point. If you aren't naïve enough to believe that industries would regulate themselves, then you basically have one option: you regulate them. It's understandable that we're hesitant to talk about regulating distraction-inducing technologies. For one thing, we typically think of compulsive behaviour as the fault of machines or individuals, rather than as a designed experience, angled toward strategic ends. For another, we tend to associate regulation with limited users' choices. In this case, though, it's possible to imagine regulation that actually *expands* users' choices. It would be designed to give users more control over their experiences online. (6)

That task would not be easy. The designer drug market provides a helpful analogy here. Every time governments ban these substances – which include Spice – designers simply come out with a new, slightly different version that slips through the strictures of the law. Similarly, with something as slippery as distraction, it's easy to imagine

companies finding ways to tweak their designs and find new ways to hook users. Still, regulation can target some of the most common tools that designers use to draw users into a digital machine zone. Here are three things we could do. First, we could require major social media and gaming sites, email providers and smartphone makers to offer distraction dashboards, so users could control certain elements of their experiences. Facebook already allows users to turn off some (but not all) notifications. These dashboards would give users a new level of control over when, how and how often they receive notifications. We could require companies to let the *users* decide how many deliveries of email they receive per day, or how often a social network can update their feeds. Dashboards could also allow users to shape certain features of page layout, such as the amount of new content they see on a single page. It might be better to ban certain features of compulsive design outright. The most obvious target here is continuous or infinite scroll. Right now, sites such as Facebook and Twitter automatically and continuously refresh the page; it's impossible to get to the bottom of the feed. YouTube and similar sites automatically load the next video or show. These tools let websites constantly reset the trigger. For the company, the advantage is clear: they keep you on the site longer. But infinite scroll has no clear benefit for users. It exists almost entirely to circumvent self-control. Giving users a chance to pause and make a choice at the end of each page or session tips the balance of power back in the individual's direction. It allows people more control over their own hook cycles. As a second area for regulation, sites should be required to flag users who display especially compulsive behaviours. A

third option would be a gentler form of feedback. In this model, certain sites or browsers would be required to include tools that let users monitor themselves – how long they've been on a site, how many times they've visited in a day, and other metrics. Sites could even let users set their own cut-off points: *If I've been on Twitter for more than an hour today, please lock me out.* Will this work? Probably not. At least in the United States, we've been notoriously hesitant to regulate tech companies. But sometimes it's important to at least discuss regulation, in order to reframe the basic terms of the conversation. Digital tools offer a lot of wonderful services to users. They do so not because users and producers have identical incentives, but because users trade our attention and privacy. In return, we receive services. As in any contract, there's a balance of power. If the architecture of today's web is any indication, that balance is skewed toward the designers. It's worth paying a little more attention to those whom our attention pays. (7)

Adapted from Aeon.

Exercise III.

Find paragraphs, dealing with the following:

slot, consensus, utility, prevalence, to disentangle, to blame , predetermined, protocols, dashboards , trigger

Exercise IV.

Fill in the gaps according to the text.

1. Psychologists have been discussing the possibility of internet addiction since…….. , just three years after the release of the first mainstream web browser.
2. 'Much as a user might need to exercise willpower, responsibility

and self-control, and that's great, we also have to acknowledge the other side of the street,' said Tristan Harris, who works at…….

3. Nir Eyal's book ……..... teaches web designers to 'create a craving' in their users.
4. As a consultant to Silicon Valley startups, …….. helps his clients mimic what he calls the 'narcotic-like properties' of sites such as Facebook.
5. His goal, …… told *Business Insider*, is to get users 'continuing through the same basic cycle.
6. Natasha Scull is an …….. at New York University who studies human-machine interactions.
7. While we tend to describe the internet in terms of distraction, what's being developed, when you check email or get sucked into……., is actually a particular kind of focus, one that prioritises digital motion and reward. In the gambling world, people tend to blame the addicts.
8. What ……. argues is that there's something in between the gambler and the game – a particular human-machine interaction, the terms of which have been deliberately engineered.
9. ……. is a vocal proponent of ethical design, and a leader of a small community working on a concept called Time Well Spent.
10. In an ideal ……. digi-verse, websites would ask users what they really want.

Exercise V .

Make up sentences of your own with the following word combinations:

basic tools, to be reserved for, slot machines, there's no consensus about, obvious utility, prevalence, to disentangle, online gambling,to blame.

Exercise VI.

Determine whether the statements are true or false. Correct the false statements:

1. Psychologists have been discussing the possibility of internet addiction since 1996, just five years after the release of the first mainstream web browser.
2. But there's no consensus about how to diagnose internet addiction, or whether it's even a real thing.
3. Unlike heroin, the internet kill people, and has obvious utility.
4. Yet, for millions of people, the internet is often understood in terms of addiction.
5. Critics blame the internet itself for this state of affairs, or they blame individual users.
6. There's nothing about a global computer network that necessitates addiction-like behaviours.
7. But it's important to realise that many websites and other digital tools have been engineered specifically to elicit compulsive behaviour.
8. Successful companies build specialised teams and collect reams of personalised data, all intended to hook users on their products.
9. Natasha Scull is an anthropologist at London University who studies human-machine interactions.
10. With the former, the longer you're engaged by variable rewards, the less money you lose.

Exercise VII .

Match the words to the definitions in the column on the right:

estimate	to separate things that have become joined or confused
blame	a guess of what the size, value, amount, cost,

	etc. of something might be
utility	easy to see, recognize, or understand
gambling	a generally accepted opinion or decision among a group ofpeople
web browser	a machine that you try to win money from by putting coins into it andoperating it, often by pressing a button or pulling a handle
prevalence	a computer program that makes it possible for you to read information on the internet
obvious	the usefulness of something, especially in a practical way
consensus	to say or think that someone or something did something wrongor is responsible for something bad happening
disentangle	the fact of something existing or happening often
slot machines	the activity of betting money, for example in a game or on a horse race

Exercise VIII.

Summarize the article “User behaviour.”

Part 2

Exercise I.

Identify the part of speech the words belong to.

basic (1), browser (1), consensus (1), obvious (1), utility (1), prevalence (1), individual (7), user (7), connection (7), global (7)

Exercise II .

Form adjectives from the following words:

casually (1), responsibility (1), exactly (1), create (2), finally (2), gradually (2), differences (3), attention (3), economy (3), distraction(3)

Exercise III.

Find synonyms to the following words. Translate them into Russian: basic, consensus, obvious, utility, prevalence, to disentangle, to blame, individual, predetermined, connection.

Exercise IV .

Find antonyms to the following words. Translate them into Russian: consensus, obvious, blame, individual, global, poor, personal, important, handful.

Exercise V.

Match the words to make word combinations:

cut-off	experience
global	browser
addiction-like	points
slot	tools
obvious	user
web	behaviour
online	machines
predetermined	utility
individual	gambling

basic	computer

Exercise VI .

QUIZ (Computer Memory)

1) The moment you turn on your computer, it begins to access its memory. BIOS, the software that boots up your computer, is located in which type of memory?

A. RAM

B. ROM

C. Cache

D. Virtual memory

2) When looking at your computer's memory, you will come across the storage hierarchy, which separates storage into primary, secondary, and tertiary. Primary storage refers to memory that is directly accessible to the CPU. What is another name for primary storage?

A. Main memory

B. External memory

C. Off-line storage

D. Flash memory

3) Computer memory can be referred to as either permanent or temporary. Of the following, which one is NOT a temporary storage area?

A. Virtual memory

B. Cache

C. Hard drive

D. RAM

4) A computer's cache will hold data that is used most often to make it faster to access. There are various levels of cache, the first of which is a small amount of memory found inside the... what?

A. Central processing unit (CPU)

B. Hard drive

C. BIOS

D. Flash drive

5) RAM stands for random access memory and it can be static (SRAM) or dynamic (DRAM). SRAM stores a bit of data using which type of circuit?

A. Short circuit

B. Flip-flop

C. Transistor and capacitor

D. LC circuit

6) The memory stored in the capacitor in a DRAM circuit has to be constantly refreshed, and this happens several times in a second. Why does it have to refresh so many times?

A. It keeps the memory from getting too full.

B. It prevents it from short circuiting.

C. The transistor leaks.

D. The capacitor leaks.

7) Flash memory is a type of permanent storage that is very convenient if you need to backup files or as a type of portable storage. Flash memory is used in...

A. Memory cards

B. CPU

C. Floppy disks

D. Virtual memory

8) Virtual memory acts like RAM, but it is actually a process or program that creates a paging file to move items from RAM into that file. Where does it create the paging file?

A. USB drive

B. Memory stick

C. Floppy disk

D. Hard disk

9) Secondary storage, like the hard drive, isn't directly accessible to the CPU like primary storage. What is another name for secondary storage?

A. Main memory

B. Auxiliary storage

C. Virtual memory

D. Internal storage

10) Data can come from information stored in the computer's permanent storage, or it can come from peripheral devices, such as keyboards. Regardless of whether it is input through a peripheral device or taken from storage, which type of memory does most data go through first?

A. ROM

B. Virtual memory

C. Flash memory

D. RAM

Supplementary reading

Are You a Self-Interrupter?

Distraction in the technology age

Our technology-rich world has proven to be both a blessing and a curse. While on the one hand we have access to information or people anywhere at any time, on the other hand we find our attention constantly drawn by the technological environments. Media multitasking—which is accomplished by your brain not performing two tasks simultaneously but instead by rapidly switching from one task to another—occurs in every sphere of our world including home, school, workplace, and our leisure life. And this is not just limited to the younger generation. A recent study followed a group of young adults and a group of older adults who wore biometric belts with embedded cameras for more than 300 hours of leisure time. While the younger adults switched from task to task 27 times per hour—once every two minutes—the older adults were not all that great at maintaining their attention either, switching tasks 17 times per hour, or once every three to four minutes. Former Microsoft executive Linda Stone dubbed this constant multitasking "continuous partial attention." Frequent task switching is something we all do, and the more often we switch, the more detrimental it is to our real-world performance. Unless you monitor someone's computer as well as his or her smartphone and all his or her other devices, it is difficult to know how much task switching is truly occurring. However, several studies have used different research tools to try to assess real-

world task switching. For example, in a recent study the Rosen's lab observed students—ranging from middle school to college age—studying for 15 minutes in an area where they normally study. Shockingly, students could not focus for more than three to five minutes even when they were told to study something very important. This study replicated work by Gloria Mark and her colleagues at the University of California, who observed that IT workers were similarly easily and frequently interrupted. Other researchers have asked people to keep detailed diaries of their daily media and technology use; one particular study of 3,048 13- to 65-year-old teens and adults found that people of all ages multitasked at least a quarter of the time—with teens dual tasking 31 percent of their day—although their most common combinations were different. While 13- to 16-year-olds preferred to combine listening to music with being online, engaging in social media, or viewing online videos, young adults (25 to 29) preferred combining email, watching television, and visiting websites, and older people (50 to 65) preferred combining more traditional media activities such as email and radio, television, and visiting websites. Other studies have validated and extended these results; research from Rosen's lab showed that, when asked how easy or difficult it was to pair a variety of tasks together, members of younger generations reported that they felt that it was rather easy to pair most tasks, while those of older generations felt that only more well-practiced tasks could be easily combined.

One interesting aspect of this penchant for combining tasks is that we seem to have lost the ability to single task. Glance around a restaurant, look at people walking on a city street, pay attention to

people waiting in line for a movie or the theater, and you will see busily tapping fingers. We act as though we are no longer interested in or able to stay idle and simply do nothing. We appear to care more about the people who are available through our devices than those who are right in front of our faces. And perhaps more critically, we appear to have lost the ability to simply be alone with our thoughts. Rosen's lab has been studying this phenomenon for the past decade and has seen a constant increase across generations in how often people check in with their devices. The vast majority of young people check their smartphones every 15 minutes or less, and 3 out of 4 young adults sleep with their phones nearby with the ringer on so as not to miss a nighttime alert. While the typical college student owns an average of seven tech devices, older adults are not far behind. Where we used to read, we now skim. Where we used to write, we now use shortened fragments to convey our thoughts. When Twitter first appeared we used to shake our head at the impossibility of putting our thoughts into "only" 140 characters. Now this appears normal and fits our task-switching lifestyle. When was the last time you read a book, a long article, or literally anything more than a page or two without taking a quick peek at your phone or web browser or without the television on in the background? Eye-tracking studies show that when we read a webpage or any text on a screen we don't read it the same way that we read a book. Rather than our eyes passing from word to word along each successive line of text, we tend to read in an "F" pattern, where we read the top and left sides of the page, with a brief foray into the text somewhere in the middle, rather than the complete page line by line. Add in hyperlinks, ads, multimedia videos, scroll bars,

and all of the other enticing distractions on a webpage, and it is not surprising that we have difficulty attending to anything for more than a few minutes. We are most certainly impatient, which you can verify by watching a group of people all checking their phones every three to five minutes regardless of what they are doing at the time or who they are with. A recent study from University of Massachusetts demonstrated our collective impatience by collecting data from 23 million online video views; the data showed that average viewers begin to abandon a video if it takes more than two seconds to buffer, and 6 percent more viewers click on something else every additional second of buffering. By these data, even a brief 10-second delay in starting a video provokes nearly two-thirds of viewers to leave that screen for another source of information. These quantitative data, collected without the knowledge of the viewers, corroborate survey and experimental data highlighting what was originally dubbed the "four-second rule," referring to the time that an average online shopper is likely to leave a website for another if it does not download. More recent work has even suggested that the four-second rule may actually be closer to a "two-second rule" or even a "400 millisecond rule" (less than half a second), indicating that we are all quite impatient and prone to diverting our attention rapidly from one screen to the next if our needs are not being met instantly.

In the next few sections, we take a brief look at research performed in a variety of typical situations where we are prone to interference. For those of us who work with technology and are surrounded by other employees working with their technologies, interference has become the norm. We are constantly interrupted by others dropping by our desk to chat or attempting to connect with us through a variety of technological

communication modalities, including the most popular workplace tool—email. A study by Judy Wajcman, a sociology professor at the London School of Economics, highlighted this phenomenon by shadowing 18 employees of an Australian telecommunications company during their entire workday. Wajcman selected this company because it was designed to facilitate interactions between workers with open-plan offices and other external distractors, including many large television screens mounted around the office. The employees in this study spent only half their workday on actual "work episodes," which included any work-related activities. Strikingly, most of these work episodes lasted 10 minutes or less, with an average of just three minutes per work episode. And even more interesting, nearly two-thirds of the work episode interruptions were self-generated, and most of those involved some form of mediated communication using a technological device. In fact, of the approximately 86 daily changes in an employee's work activity, the workers themselves generated 65 of them internally, with the vast majority involving "checking in" with no obvious external alert or notification. Even without the "You've Got Mail" notification, these workers checked their email anyway and continued to check other sources of electronic communication and information without being externally directed to do so. Whether directed externally via an alert or notification or internally by an unseen process, it appears that in the work environment email and other communication modalities bear a major responsibility for interruptions. One field study that followed workers for two weeks discovered that they were interrupted 4.28 times per hour by email and an additional 3.21 times by instant message

communications. And these communications appeared to have a strong draw for the employees, since 41 percent of them responded to the email immediately and 71 percent responded to an instant message immediately. On average, the workers spent 10 minutes dealing with the alerts and then took an additional 10 to 15 minutes to return to their appointed task, often visiting several other applications in the interim. Another study by the research group indicated that more than half of the 250 workers they queried spent over two hours a day reading and responding to email. A study of Loughborough University in England found that after dealing with an email, which itself took an average of just under two minutes, it took the studied workers an average of 68 seconds—more than half of the time required to read and respond to that email—to return to their work and remember what they were doing. This study also found that people are responding like Pavlov's dogs to incoming email communication, waiting only an average of one minute and 44 seconds to open that message. Strikingly, 70 percent of those alerts were attended to within six seconds, which is about the time it takes a phone to ring three times. And yet another study found that even without an alert, while 1 in 3 people claimed to check their email every 15 minutes, they actually checked it about every five minutes. We are self-interrupting and not even aware of how often we are diverting our attention from our main task—in this case, our job—to another task that may be completely unrelated to work.

Many studies have examined technology use related to education both in and out of the classroom and its impact on the Distracted Mind. Today's college students own an average of seven high-tech devices, and

most students have at least three—smartphone, laptop, and tablet—in the classroom. These devices themselves tend to be used as multitasking tools. Only 1 in 5 apps on college students' smartphones were categorized as "productivity" apps. In the classroom, these devices provide a ready source of interruption that has been validated in many studies. For example, one study found that 9 in 10 students used their laptop computers for nonacademic reasons during class time, while another study found that 91 percent of students reported texting during class. Other studies have addressed how students use technology while they are studying outside the classroom. Terry Judd, a professor at the University of Melbourne, monitored more than 3,300 computer session logs from 1,229 students studying in the computer lab and found that the average time on task was only 2.3 minutes; multitasking was the name of the game, with less than 10 percent of the sessions being devoid of task switching to something other than studying, which turned out to be checking email, texting, and social media. In a laboratory study, a researcher from Virginia Commonwealth University observed college students during a three-hour study session using video cameras and eye trackers and found that on average, students spent more than an hour listening to music and showed 35 interruptions of six seconds or longer, totaling 26 disrupted minutes in just three hours. The biggest cause of interruptions was the smartphone, which students checked close to nine times in the three-hour study session. Other major interrupting culprits included checking the Internet for information not related to the material being studied and checking email.

Another report on the studying activities of students found that the reason behind the constant task switching is a desire to feed emotional

needs—often by switching from school work to entertainment or social communication—rather than cognitive or intellectual needs. According to the study's authors, "This is worrisome because students begin to feel like they need to have the TV on or they need to continually check their text messages or computer while they do their homework. It's not helping them, but they get an emotional reward that keeps them doing it."More work has been done to document the impact of technology on student behavior than any other population, as technology is more readily available to these individuals and they are the first to have grown up immersed in a technology-rich environment with ever-increasing opportunities for interference. In one study, middle school, high school, and university students were observed while they were instructed to study something important for a short period of time (only 15 minutes). Regardless of age, students were able to stay focused and attend to that important work only for a short period of time—three to five minutes—before most students self-interrupted their studying to switch to another task. During the 15-minute study period, students were able to actually study for only nine minutes. The major culprits that spurred the constant interruptions had two sources: social media and texting. Both of these were apparently offering such important information that the studying student's attention was transferred from the task at hand to another source of information through the two most popular communication modalities among the younger generations.

There are two approaches by which we can diminish the negative impact of interference on our lives: changing our brains and changing our behavior. Note that these approaches are not mutually exclusive; they are complementary, and you will likely achieve the most

beneficial outcomes if you pursue them concurrently. In terms of changing our brains, laboratories and companies around the world are now engaged in large-scale development and research efforts directed at understanding how we can enhance our brain's functioning to improve cognitive control and thus reduce the negative impact of goal interference. Approaches include traditional education, meditation, cognitive training, exposure to nature, physical exercise and brain stimulation. Interestingly, many of them use modern technology to harness neuroplasticity and induce brain changes. We are at the threshold of fascinating times, as the technology that has aggravated the Distracted Mind is now being formulated to offer remediation. When we have no choice but to engage in a high-interference environment, we can work to ensure we are as optimized as possible to diminish the detrimental effects of distractions and interruptions.

Adapted from Nautilus.