

San Rafael Meditation Group

May 31, 2017

## Impact of Digital Technology on Concentration

The focus of tonight's dharma talk is wise concentration - one of eight steps of 8-fold path in the Buddhist tradition.

I use that focus as an entrée into the impact of the revolution of our digital technology on our capacities for concentration in ways the Buddha could never have foreseen. Even though I have a Buddha with a laptop on my desk, I want to raise some serious questions about the changes we're experiencing from our over-use of computers, ipads, smart phones, for emailing, texting, facebooking, apps and games.

There's benefit, no question, in terms of information and connection.

We can text to schedule a meeting while we're walking down the hall, we can stay in touch with family and friends when we or they are far away, we can send vacation photos or birthday photos or adopting a new puppy photos in the real time of those precious moments, we can find a restaurant or gas station or hotel or hospital while we're driving to it, we can google statistics on the use of our devices or look up journal articles or download a meditation podcast or app in a matter of seconds.

But there is a downside to our dependence on digital technology that researchers are beginning to pay attention to, collect data about, analyze the implications of, and communicate those implications and raise questions for our larger society in books, magazines, journal articles. It may be essential now to pay attention to our capacities to focus attention, to concentrate before we lose those capacities.

When I was a young girl, if I behaved myself while sitting in the dentist's chair, I would get a lollipop. This was before researchers discovered the causal link between sugar-plaque-tooth decay. It used to be so cool to smoke cigarettes, before researchers discovered the causal links between smoking-lung cancer and teeth falling out of the mouth.

The digital revolution has happened so fast, and using our devices is so ubiquitous, that all the meditation teachers and behavioral science researchers - psychologists and sociologists - neuroscientists are having a hard time keeping up with the sweeping changes of those devices on our brains, on our relationships, on our sense of self.

I want to suggest 5 key areas of inquiry: time, attention, relationships, emotions and empathy, and self-awareness, share some findings and some concerns, and open this up for discussion.

## **Time**

\* American adults spend 33 hours/week on devices - that does include computers for work - 30% of their waking time. They check their cell phones on average every 6.5 minutes

\* Teenagers, now called screenagers, spend 7.5 hours a day in front of a screen, almost 50% of the time they are awake, more time than on any other activity except sleeping. One quarter of American teenagers are on a device within 5 minutes of waking up.

\* Children 2-6 years of age spend 2-4 hours/day on screens.

That's probably not going to go away. And that's not all bad. But from a spiritual practice point of view, while we are doing all of this connecting and communicating, what are we NOT doing? Young children not playing with other kids on the playground, or riding bikes or playing ball or playing dress-up or playing peekaboo. Older children not playing sports or camping or dancing or reading a book. (We retain more of what we read when we read a physical book that has weight and heft and real pages to turn, using our kinesthetic learning as well as cognitive. Students retain more when they take notes by long-hand than when they take notes on a laptop.)

Adults not playing with their children or playing with each other, not daydreaming, not soul searching, or working on projects that demand depth or concentration, not having the meaningful conversations that also require depth and concentration.

It's true that word processing on a computer or researching on the internet can save us a lot of time but we also have to ask ourselves and our clients, what else are we/they using our/their precious time for?

[The wise comprehension or wise view of our practice may give us some ideas about what we can use our time for.]

## **Attention**

\* In 2016, texting while driving cause 1.6 million car accidents (1 out of 4); 330,000 injuries, 11 teens/day die while texting/driving. Text - 5 seconds, 55mph football field. 6 times more likely to cause accident than drunk driving.

The impact of what can be described as an addiction to the ping of connection is to decrease our capacities to focus our attention for any length of time.

Cal Newport, professor of computer science Georgetown University, book Deep Work. Brain not wired for rapid and repeated shifting of attention. Takes metabolic energy to shift, every shift, email text tweet back to a work project or answer question from our kid as you respond to a co-workers' email. After 60-90 minutes of that, brain goes into fatigue, brain fog. Can't think clearly or creatively any more. With each shift in multi-task mode, there's decreased performance and an increase in errors. Can't focus for 3-4 hours on a project. Adults 7 seconds, goldfish 8. Lose capacity to distinguish irrelevant from relevant. Reduction in capacity to concentrate can be permanent.

[training in mindfulness, focused attention, could literally be the best counter-point to loss of attention and concentration.]

## **Resonant Connections - Resonant Relationships**

Yes, Facebook, Face time skype allow us to stay in touch with people far away or rediscover people we knew long ago. People can feel much more connected, communicate more easily, more efficiently, with a text or a tweet.

But Sherry Turkle, professor of psychology at MIT and early observer of the impact of digital technology on relationships, finds that the style of relating to people now is much more superficial, what she calls pancake style, rather than cathedral style of perhaps fewer but deeper conversations with people. Illusions of companionship without demands of friendship. We all

have our preferences for how we want to connect and communicate with others, but the shortcut handle of 1,000 friends on Facebook, but no real close friends is really becoming truer and truer for more and more people. [Scientific American Mind, 50% of American adults report having zero close friends, down from 2 just 5 years ago.]

This is particularly disturbing among young people who spend 7 hours every day texting and tweeting but who feel more lonely and isolated than before or even feel badly about themselves when they compare themselves to other people's posts on Facebook, all very carefully crafted and polished for public consumption. Young people don't see the doubts and angst of other people like them; it all looks like MTV. Cyber-bullying is a tragic extension of that.

### **Decreased Empathy**

This can lead to what Sherry Turkle and other researchers have noted, less capacity for empathy, less capacity to tolerate messy emotions, less interest in other people's feelings, less compassion for other people's feelings. People choosing protective distance over vulnerable closeness. Too much time on devices, people lose this capacity, young people may not even know it's a capacity that's missing.

[positive pro-social emotions may be best counter-point to growing reluctance/capacity to be with and work with messy emotions, ours or other people's.]

### **S-17            Less self-awareness**

Unfortunately, the ability to even be aware of what capacities might be diminishing is also diminishing. People are becoming less comfortable with solitude, less tolerant of boredom, less able to simply reflect, introspect, daydream. More superficial in relationship to others but also to self. So much stimulation every nanosecond, hardly any time left for brain to consolidate all the learning of the day into long-term memory. We hope meditation is a sanctuary where this kind of self-inquiry and self-awareness is prized and protected. But I'm curious to hear what you experience in your own session in this regard.

[Mindfulness training, open spacious awareness, may increase skill, interest, and capacity to be in default mode network of brain.]

## Assessment of Addiction

I used to say maybe; research is saying yes. Dopamine is common neurobiological pathway for all addictions, substance or behavioral.

The brain does release dopamine, the neurotransmitter of both anticipation and pleasure and reward, whenever it hears the ping of email or phone call or text. There is a rush of pleasure, “I’m connected! I’m wanted! I’m loved!” That’s not just psychological; that’s neurological. You can see the compulsion to answer, to find out, and get that instant gratification.

And certainly computer scientists do know that video games and social media and apps are *designed* to be addicting. Attention engineers spend billions of dollar every year, changing the algorithms of these apps, colors, fonts, speed, wording, every few seconds to deliberately keep us wanting more. To reward the user’s attention while providing more and more stimulation and novelty to keep the user’s brain hooked. This is not benign.

And of course, as with any addiction, the substance or activity helps us avoid some other pain - loneliness, social awkwardness, boredom. As people spend more time communication through emojis and less time connecting with people’s emotions in satisfying, nourishing ways we actually lose our capacities to find that nourishment in deep connection and have the willingness to hang in there through the messy emotions and painful ruptures to get to the repair and the resonance again.

**Discussion:** Groups of three; 3 minutes each; what are you noticing? What you are concerned about? How can your practices of mindfulness and concentration help strengthen your capacities to focus, pay attention, concentrate for long stretches of time?

Large group discussion and Q&A

Closing meditation