ADDRESSING THE KAVANAH CHALLENGE DURING SHMONEI ESREI PART 1: THE SCIENCE OF MIND-WANDERING

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INTRODUCTION

American Orthodox Jewry has been in the midst of a "tefillah crisis" for quite some time. Fifty years ago, in his classic text "To Pray as a Jew," Rabbi Hayim Halevi Donin warned that "We live in an age when it is not fashionable to pray" and suggested reasons such as the spiritual arrogance of contemporary man, wavering between faith and doubt, or simply people don't know how to pray [Haim H Donin, To Pray as a Jew, New York, Basic Books Inc, 1980, 4]. Our predicament with prayer affects our synagogues and educational institutions, particularly high schools where educators point out that the current generation of teen-agers has a built-in resistance to the mindset needed to express the three essential components of prayer: praise, requests, and gratitude (thanks). Some educators are concerned that this "tefillah education" challenge threatens the inter-generational transmission of Judaism and the continuity of Orthodox Jewry in America. I have encountered these problems first-hand trying to teach several grandchildren how to achieve Kavanah after becoming bar-mitzah.

Attempts have been made to address these challenges at the national level. In 2008, the Orthodox Union's (OU) launched a "Tefilla Education Initiative" that brings scholars-in-residence to different communities to speak on the significance of prayer [Bayla Sheva Brenner https://jewishaction.com/inside-

theou/the ous tefillah education initiative the answer to your prayers/]. The OU's national director of community services, Frank Buchweitz, summarized the problem as follows: "So many of us daven by rote and have lost our perspective as to why we go to shul,...something has to be done to make prayer and shul-going a more meaningful experience." In 2017, Jewish

Action devoted its Fall issue to the theme "Exploring the Power of Prayer," thus creating a unique resource worthy of wide distribution.

In 2018, Yeshiva University's publication *Kol Hamevaser* devoted its February issue to "Prayer" including the proceedings of a symposium entitled "Addressing Contemporary Struggles with Prayer" where contributors were asked to respond to 2 questions:

- What is your assessment of Orthodoxy's ongoing struggle with enhancing prayer on a communal, institutional, or individual level?
- What means or technique to enhancing prayer do you see as the most promising at this moment, and why?

Three responses were provided, filled with precious teachings and insights [Kol Hamevaser, Volume X, Issue 2, February 2018]. I was struck by the responses of two prominent religious leaders who revealed with unprecedented candor and exemplary humility their own challenges with achieving "Kavanah" (concentration) during the Shmonei Esrei (Amidah).

Rabbi Jacob J Schacter (Professor of Jewish History and Jewish Thought and Senior Scholar at YU) started his response with: "Tefilla presents for me, the most formidable challenge I face as someone trying to be a responsible and committed Jew. The sheer repetitive nature of the required text ...often makes it hard for me to muster even a small measure of authentic feelings....How is it possible to recite the same exact words thousands of times and identify emotionally with what is being recited?" He discussed Rabbi Soloveitchik's notion of prayer as a personal encounter with G-d and concluded: "Regretfully, I do not know how to teach others to achieve this level of awareness of the immediacy of G-d's presence." Dr Deena Rabinovitch (Director of Jewish Legacy Fund Jewish Educator's Project at Stern College for Women) cited a remarkable quote from Rav Yehudah Amital (Rosh Yeshiva of Yeshivat Har Etzion and former member of the Israeli cabinet): "Rav Amital used to say that he davened three times a day in order to achieve that one meaningful tefilla a year". Similarly, Rabbi N Scherman wrote in the Tefillah Overview of the Art Scroll Siddur (2010): "The great Gaon Rabbi Shlomo Zalman Auerbach used to say self-deprecatingly, that for him a good day was a day in which he went through the entire Shemoneh Esrei without his mind wandering."

To be sure, the challenge of achieving a proper Kavanah during Shmonei Esrei is very old since it is referred to on many occasions in the Talmud (Berachot 6b). Also, Rabbi M Birnbaum¹ cites the 15th century main commentator on tefillah, the Avudraham deploring that "most of the masses .. are aimlessly going about like a blind man," and that "there are so few who know how to pray properly," and also the 19th century author of the Kitzur Shulchan Aruch, R' Shlomo Ganzfried stating that "most people mumble their prayers without understanding without understanding even the simple meaning of the words." Yet, Sections 93-101 of the Shulchan Aruch (Orach Chaim) are replete of halachot (Section 98.1) aimed at overcoming the Kavanah challenge requiring that one removes extraneous thoughts before prayer, and applies his mind to the meaning of the words which he pronounces. Knowing that prayer is "something that stands at the highest level of the universe, yet people treat it lightly," I struggled for years trying to improve own approach to prayer and achieve some degree of kavanah. At the time, kavanah simply meant concentration, and my goal was to be able to recite all of the Shmonei Esrei with sustained concentration. A breakthrough occurred when I took an academic turn and decided to investigate the mechanisms that govern sustained attention in the human brain. This led me to uncover a field of research called "the science of mind wandering." Mind wandering refers to the fact that under normal conditions, our mind is restless such that we are unable to keep our thoughts focused on one topic at will. Even when we are engaged in an important task, our attention strays away from the task at hand and starts to focus on other private thoughts and feelings. Although humans have known for millenia that their thoughts tend to wander from one topic to the other, most of the research in this field has been carried out in the last twenty years. Those research findings strongly suggest that, for many of us, our ability to achieve sustained attention during Shmonei Esrei is limited by the normal psychological phenomenon of mind wandering. This first paper presents the main characteristics of mind wandering to enable each reader to assess the relationship between Kavanah and mind wandering, and explores how this knowledge can be used to enhance the quality and depth of our Kavanah.

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¹ Rabbi Mayer Birnbaum "Pathway to Prayer" (Feldheim Publishers 4th Edition, 2002), viii.

MIND-WANDERING

Disruptive Effects

Mind wandering is a pervasive phenomenon since humans spend 30% to 50% of their waking hours engaged in thoughts that are unrelated to the here-and-now or to the goings-on around them. Research in this area has been stimulated by the knowledge that mind-wandering has detrimental effects on the performance of a variety of tasks that require intellectual functioning or sustained attention. For example, mind-wandering and its associated attention failures are highly relevant to online and classroom learning and to the multibillion-dollar testprep industry since it causes errors in reading comprehension during lectures and in test-taking (GRE, SAT). It is also relevant to several industries that involve safety critical tasks such as the construction industry (prevention of dropped swinging objects during crane operations), the petroleum industry, and aeronautics. Because of the high level of cockpit automation, airlines pilots are particularly vulnerable to mind-wandering during smooth flight segments or when they switch roles to become co-pilots. They report that in spite of their best efforts they are not always able to control mind-wandering. Mind-wandering is also relevant to the medical profession (surgery) and to performance during certain military missions. Its negative effects on driving have been particularly well documented. Drivers drive at higher speeds, maintain shorter separation distances between vehicles, and exhibit increased response times to sudden events. Studies also found that mind-wandering was the single best predictor of accident responsibility.

Specific Characteristics

The following aspects of mind-wandering have emerged:

- Mind-wandering is a brain activity that is normal, subjective, and spontaneous.
- It is considered a normal aspect of the human condition since it is found across cultures.
- Mind-wandering is characterized by Task Unrelated Thoughts or TUTs that originate spontaneously in such a way that we fail to notice their emergence.
- TUTs always have personal relevance, are wide-ranging in content, often dealing with the future but also including memories from the past.

- TUTs result in "task disengagement" since they cause unintended mind drifting during a given task.

Measurement

Since mind-wandering is by definition concealed, one may wonder how scientists measure it. They use a tool called "experience sampling" which is simply a collection of self-reports regarding a participant's ongoing experience [2]. In some studies, subjects are given a text to read and are asked periodically whether at that moment their thoughts are on or off task. These measures are enhanced by assessments of reading comprehension performance (for example, failure to identify a villain in a story).

In other studies, subjects are given a text that periodically turns to gibberish and scientists measure how quickly and accurately subjects detect when the text turned to gibberish. In certain field studies, subjects carry a personal data assistant (PDA) that periodically prompts them with questions as to whether their mind is wandering. They are also asked whether they had noticed their mind-wandering before the prompts. Mind-wandering episodes that are "self-caught" reflect what's called "meta-awareness," which is the ability to be aware of the content of our thoughts during the completion of a task. For example, in the context of Shmonei Esrei, having meta-awareness means that we have developed the ability to monitor our thoughts as we proceed from one blessing to the next. It should not be surprising that studies have found that participants were less likely to self-catch episodes of mind-wandering when they were inebriated with alcohol than when they were sober [3] (see further Halacha 99.1)

Benefits

It is important to note that mind-wandering has benefits. It may play an important role in creativity since it is related to our capacity to generate novel and creative thoughts.

Professional writers and physicists report that creative ideas occurred when they were engaged in non-work-related activities, or when they were thinking about something unrelated to their work. Because a large proportion of thoughts during mind-wandering are future oriented, one

possible function of mind-wandering may be to help us anticipate and plan personally relevant future goals. Another advantage of mind-wandering is that it helps many people deal with boring tasks by making them less unpleasant.

Reducing the costs of wind-wandering

Because mind-wandering harms reading comprehension, test taking, and online learning, many studies have investigated how we could decrease the disruption caused by TUTs. Interestingly, almost all of them focused on the notion that mindfulness might be an antidote to mind-wandering. Mindfulness has been defined simply as "the practice of using breathing techniques, similar to those in meditation, to gain focus and reduce distraction." [4]. Our natural mindfulness capacity can be estimated using a scale called the Mindful Attention Awareness Scale (MAAS) which consists of a 15-item questionnaire and can also be measured by assessing the frequency of TUTs during a mindful breathing task. Results showed that participants who completed the MAAS and had high levels of natural mindfulness reported less daydreaming in general as well as less TUTs during the breathing task. These findings opened the way to explore whether the disruptive effects of mind-wandering on task performance could be decreased using mindfulness techniques that varied from prolonged meditation to breathing exercises of a few minutes.

One study included two groups of students, one who received a 7-week training program and a second group who received no training (control group). Each week of training included a 20-min instructor-led session followed by practice sessions. The group of students who received the training exhibited lower mind-wandering and greater sustained attention in task performance.

Another study explored the impact of 2 weeks of mindfulness training with four 45 min sessions per week in a group of undergraduate students. Results showed that mindfulness training significantly reduced mind-wandering while producing improvements in reading

comprehension scores and working memory measures (working memory refers to memory-inaction, the ability to remember and use relevant information while in the middle of an activity).

A more recent study compared an 8-minute session of mindful breathing to 8 minutes of reading, or 8 minutes of passive relaxation in three groups of subjects. Subjects in the mindful breathing group were told to sit upright and focus their attention on the sensations of their breath without trying to control the rate of respiration and to return their attention to the breath anytime they became distracted. Subjects in the reading group were asked to browse a newspaper. Those in the passive rest group were told to relax without falling asleep. The study found that measures of mind-wandering were lower in the mindful breathing group than in either of the other two comparison groups, and the differences between groups were statistically significant. This finding is noteworthy because it demonstrated that reduction of mind-wandering can be achieved with a single brief mindfulness session, without requiring a long-term commitment. [5]. Follow up studies showed that mindfulness training improved one's ability to attend to a task without distraction by improving GRE reading-comprehension scores. These improvements occurred even in individuals who showed at pretesting that they were the most prone to distraction. Researchers concluded that, contrary to earlier beliefs, some cognitive skills are not immutable, and attentional focus in particular can be improved by training.

Recently, the use of mindfulness to improve focus and attention received worldwide publicity when two neuroscientists from the University of Miami found that US Special Operations Forces who went through a month-long mindfulness course improved their sustained attention and working memory. Training for elite military forces is now spreading to the British Royal Navy, the Royal Air Force, the New Zealand Defense Force, and is under consideration by NATO [4].

HOW TO IMPROVE OUR KAVANAH

Recent research on mind wandering shows that it is a natural brain phenomenon characterized by spontaneous TUTs that occur in spite of our best intentions and decrease our

productivity in various tasks that require focus. In my opinion, this research explains why mind wandering has been Kavanah-disruptive for Jews. More important than making a correct diagnosis, we should try to use this new knowledge proactively to avoid Kavanah failures following the guidance of our greatest Sages: Rav Aharon Kotler stating: "One is obligated to exert himself and use any tactic that makes concentrating easier." To this effect, a large body of science demonstrates that training in mindfulness breathing offers an avenue to increase our ability to focus (see below). Mindfulness is commonly understood as "presence of mind," or having "attentional control" which refers to restricting our attention in a single direction. A formal definition is "a receptive attention to and awareness of present events and experience." Some consider mindfulness the "antidote" of mind wandering.

And as I delved into it, I realized that, until now, my goal in the realm of kavanah had been limited mostly to one of the two dimensions of prayer taught by Rabbi Soloveichik, namely, the proper recitation of the text called "implementation of prayer" (in Hebrew ma'aseh ha-mitzvah). That was probably because I was trying to limit the damage of interruptions in concentration caused by foreign thoughts (mind wandering) during the recitation. After acquiring mindfulness skills, I realized that we can draw on the other dimension of mindfulness, "awareness of present events and experience", to tackle the other dimension of prayer, the avodah shebalev (called kiyum ha-mitzvah) to achieve awareness that we are in the presence of the Shechinah, being "lifnei Hashem," (explained in more detail in the follow up article).

Interestingly, many Jewish professionals and young rabbis reported that, without mindfulness training, the mere knowledge that mind-wandering is a normal, spontaneous and subjective phenomenon helped them become more alert to the number and duration of disruptive TUTs they were experiencing. With that awareness, they gained confidence to apply themselves to detect the emergence of TUTs as early as possible (called "meta-awareness"). But we can do much more. This article and the next illustrate how anyone with basic Hebrew proficiency can make substantial progress in the domain of tefillah if they channel their efforts by establishing their own Kavanah plan with two concrete goals, (i) blocking foreign thoughts

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² Rabbi Mayer Birnbaum, *Pathway to Prayer* (Feldheim Publishers 2002), 71.

³ K W Brown et al "Mindfulness: Theoretical Foundation and Evidence for Its Salutary Effects" Psychological Inquiry, 2007, Vol 18, No 4, 211-237.

through mindfulness training (3 months), and (ii) achieving awareness of being "Lifnei Hashem" using the Kavanah-Anchor Method (9 months).

BLOCKING FOREIGN THOUGHTS: MINDFULNESS TRAINING

Background

In our waking hours, we tend to emphasize "doing" over "being," especially now when we live in a world where multitasking is considered a skill. As long as we are in the "doing" mode of our daily activities, we find it difficult to transition into the world of prayer that requires sustained attention in a very different direction, as expected by the Kavanah halachot in sections 93 and 98.1 of the *Shulchan Aruch Orach Chaim* (abbreviated OC). These halachot require that we switch off the "doing" mindset to enable our "being" dimension, to become aware that we are in the presence of the Shechinah. That switch is made easier the more we strengthen our mindfulness capacity.

Mindfulness of Breathing

Mindfulness of breathing, also called "voluntarily regulated breathing practices" (VRBP) is a technique used in the field of "Mindfulness" to address a variety of conditions ranging from anxiety to the side effects of modern living such as stress and information overload.

Mindfulness of breathing has been used successfully to control our internal trains of thought based on the fact that the movement of our breath is available to us at any time, and it is simple for most individuals to focus on it. By bringing our attention to the movement of our breath, our breath becomes the anchor of our focus and we gradually become able to ignore the erratic thoughts that traverse our mind.

Training Session

A typical breathing exercise involves sitting⁴ in a comfortable posture, eyes closed or looking downward. We focus on our breath without trying to control the rythm of respiration. At the beginning, we may find that we are distracted away from our breath. That is normal as it reflects our mind wandering. Each time it happens, we return our attention to the breath.

⁴ With experience, one can also do brief breathing exercises while standing.

Initially, the goal is simply to become familiar with and recognize the thoughts that flow through our mind. We pay attention to them and develop a new relationship with them. We become aware of them, notice their frequency, and consider them real. When our mind wanders off, we learn to gently let go of the TUT by returning to our breath, the focus of our attention. In its normal mode, our mind ignores our current reality by producing spontaneous TUTs. To counter that, during mindfulness of breathing, we learn to ignore those TUTs and focus on our current reality.

Duration and frequency

The Mindfulness Training part of the proposed Kavanah plan is expected to last a minimum of three months. During that period, I suggest a 5-minute mindfulness breathing session at least once per week. Initially, some may find breathing exercises challenging because they feel bored or impatient. Rather than give up, they can reduce the duration to 2 or 3 minutes. Also, there are other avenues of practicing mindfulness. Some utilize the daily teeth brushing that they extend for 5 minutes. During that time, they try to remain in the moment and focus their thoughts only on the actions and sensations related to tooth brushing. Other utilize other routine daily activities (washing dishes, taking a shower). The idea is to learn to be aware of what we are doing while we do it. Note that those who stay the course in their training have a greater chance of success because of the phenomenon of neuroplasticity: studies have shown that, in adults, synaptic connections are re-created by the activity of neurons and neuronal circuits. The Kavli Prize in Neuroscience was given in 2016 "for the discovery of mechanisms that allow experience and neural activity to remodel brain function."

After three months of weekly 5-minute mindfulness breathing sessions, one can perceive an impact on the incidence of foreign thoughts during Shmonei Esrei. Whether to continue beyond three months depends on several factors such as how prone one is to disengaging during Shmonei Esrei and the degree of progress in non-distraction achieved in the first three months.

Relevant Halachot

Mindfulness training is only a tool to enhance the application of relevant halachot. According to the prototype Kavanah plan, the following halachot should be studied during the 3-month mindfulness training period.

Before Shmonei Esrei

- A regular person is required to pause before praying a short time (the time it takes to walk 2.5 feet) while the pious pause for as much as one hour (Section 93).

Pausing before starting the Shmonei Esrei allows us to transition: we leave the world of daily activities to enter the world of prayer.

- One should avoid mindsets of frivolity, lightheadedness, anger or mindsets resulting from activities that occupy one's mind (Section 93). A person "should remove all extraneous thoughts which preoccupy him until his thoughts and application remain devoted purely to his/her prayer" (Section 98.1)

One would avoid any activity that generate invasive emotions such as anger because they "hijack" our emotional memory and impact our psychological state for a while (for example, a difficult conversation with an attorney in mid-afternoon). Executing this halacha is helped by the skill of letting go of thoughts that is learned during mindfulness exercises.

During Shmonei Esrei

- When on prays the eighteen-blessing prayer, he should not hold in his hand tefillin,...This is because, if he does so, his mind will be on them to ensure that they do not drop. (Section 96.1)
- "If a foreign thought comes during the prayer, he should be silent until the thought has ceased." (Section 98.1)

When a TUT emerges during prayer, we don't just wait for it vanish: we stop praying because continuing to pray would create a disconnect between our wandering thoughts and the words we recite and this would discredit our dialogue with Hashem.

CONCLUSION

The above halachot show that we have known for centuries that maintaining sustained Kavanah during Shmonei Esrei represents a serious challenge. This article sought to utilize

recent research in the fields of mind wandering and mindfulness and translate it into practical tools as the first phase an individualized, long-term, Kavanah Plan. This phase (minimum of three-months) is dedicated to reducing the frequency and impact of spontaneous foreign thoughts based on an understanding of mind wandering and the acquisition of mindfulness skills. But there is more to sustained kavanah than blocking the trivial thoughts arising from being engrossed in our daily activities, since even thoughts of Torah are considered "foreign". To that effect, Rabbi M Birbaum's cites R' Chayim of Volozhin stating that the Heavenly messenger told R' Yosef Caro "to be careful not to think any thought during the time of prayer, even thoughts of Torah and mitzvot, except for a mental image of the word of the prayer itself, as it is written." Why would thoughts of Torah and mitzvot be considered "foreign"? Probably because we are standing before the Shechinah engaged in a dialogue with Hashem using the sacred words of the Shmonei Esrei. This connectedness is not just inspiring but transformative. Let us remember that according to Rav Soloveichik, the awareness of being "Lifnei Hashem" constitutes the "essence of prayer."

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⁵ Rabbi Mayer Birnbaum Pathway to Prayer (Feldheim Publishers 2002), 69.