

# How Much Control Do You Really Have? Psychological and Halachik Perspectives on Free Will

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## **Abstract**

There has been an ongoing debate spanning millennia regarding to what degree human beings control the choices that they make. To what extent can a person blame outside forces or circumstances for having caused them to do a certain action or commit a certain offense? The question regarding the level of free will that a person may or may not have has plagued the minds of philosophers, scientists, and Jewish theologians alike. There have been many psychological studies exploring this very question and whether or not a human being's belief in their right to choose their actions can influence their behavior. Traditional Jewish sources explore this question as well. The psychological sources, as well as the Jewish sources seem to work well together in creating a strong basis that free will does exist for humans, as long as the definition of free will is specified. Although free will seems to be limited in some circumstances, through analysis of primary sources, research studies, and ancient texts, the degree to which human beings have the ability to make conscious and deliberate choices will be studied.

There is a strongly held belief that human beings possess conscious free will.<sup>1</sup> A central part of how individuals view this belief relates to the desire to do something, the intention to do something, and then the ability to carry out that desire and intention. Ultimately, human beings believe that their intentions drive their actions.

In the early 1980s, Benjamin Libet, a neuroscientist, conducted one of the first experiments to address the question of whether or not human desires and intentions drive actions.<sup>2</sup> Libet instructed subjects to perform a simple hand movement at will while being monitored with an EEG machine. Evidence was found that brain activity initiated the hand movement hundreds of milliseconds before the subject reported their intention to move. According to the graph below, readiness potential occurred several milliseconds before the awareness of the urge to move. The experiment suggested that a conscious decision did not cause the movement, rather brain activity brought about the movement before the individual willed anything to happen. Libet's findings suggest that the conscious mind reports on what is already happening inside of the brain, instead of causing actions to occur. A major finding of this study is what Libet called "free won't," the idea that there is still room for an individual to veto an action even if the individual does not have the conscious intention to perform a hand movement.

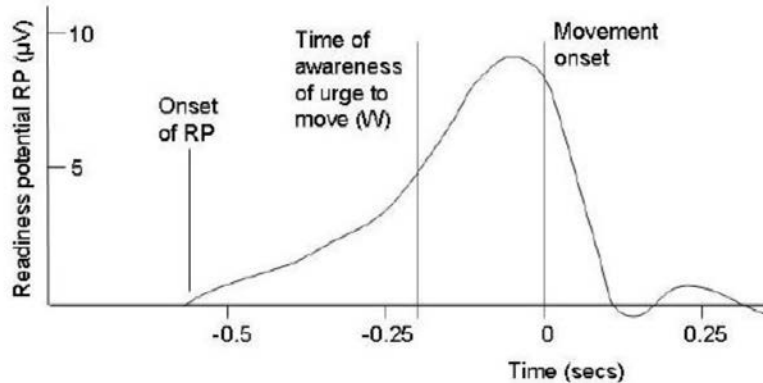
Some scientists are skeptical about whether subjects make the decision to move and question if this same process would not apply to more complex decision making. According to Libet's findings, free will never initiates actions; it can simply veto them. The implications of Libet's experiment is clear: there is a lot more occurring in the subconscious mind than scientists

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<sup>1</sup> Lavazza A. (2016). Free Will and Neuroscience: From Explaining Freedom Away to New Ways of Operationalizing and Measuring It.

<sup>2</sup> Libet, B., Gleason, C. A., Wright, E. W., & Pearl, D. K. (1983). Time of conscious intention to act in relation to onset of cerebral activity (readiness-potential).

previously thought. As such, the publication of Libet's work shifted the belief about the concept of free will, and how much agency human beings possess.



Various replications of Libet's experiments have been conducted. One such experiment measured brain activity in the time leading up to a conscious decision by placing electrodes on each subject's scalp.<sup>3</sup> The brain recordings gathered data from the left and right metacortex and the midline of the brain. The subject was instructed to watch the clock hand rotating and then at any time of the subject's choosing, when they had a conscious intent and will to, they would press either of two computer keys. The computer would then prompt the subject to type in the position of the clock hand at which the first conscious will to press the button was felt. As this was replicated over and over again, a clear pattern began to emerge: the brain builds up electrical activity in preparation for the will of an action no less than 2,000 milliseconds before the action actually occurs, confirming what Libet had already found.

This experiment shows that a person's brain begins to prepare for movement long before a person consciously decides to move. Was there real human involvement in the decision to press a key? Or was the feeling of having made a decision simply an illusion? A baseline assumption that many individuals work with every day is that human beings decide what they want to do,

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<sup>3</sup> <https://www.youtube.com/watch?v=IQ4nwTTmcgs>

and then they have the ability to control their brains to drive their bodies to make whatever it is they want to happen, happen. Libet and the studies that followed confirm that the inner workings of the mind and the processes underlying the brain are not that simple. Libet's experiments gave rise to various other social science experiments that shed light on the topic of free will and how individuals can be unaware of subliminal messages that surround them.

Libet's experiments have had a major impact on the scientific community. One such impact was on the research conducted by two social psychologists, Vohs and Schooler.<sup>4</sup> In the experiment, subjects were divided into three groups. The first group read passages emphasizing that free will does not exist. The second group read passages emphasizing that free will does exist. The third group read neutral articles which had nothing to do with free will. After each group read their assigned passages, each subject took a math test. The subjects were told that the computer program on which they would be taking the math test has glitches. If after reading a question they do not press the spacebar right away, the answer to the math prompt will show up, leading the subjects to have the ability to cheat and find out the answer to the question. In one version of the study, each subject was paid a dollar for every correct answer in order to motivate the subjects to obtain the most correct answers as they could possibly accumulate. The results of this experiment showed that the subjects who read passages with the message that free will does not exist cheated way more often than those who did not read the passages advocating for the belief that free will does not exist. The groups of subjects who read the neutral passages as well as those who read the passages advocating that free will does exist behaved the same way during the math test. This indicates that free will is a default assumption. When individuals believe they have free will, they are less likely to cheat or act in an unethical manner; however, when

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<sup>4</sup> Vohs KD, Schooler JW, The value of believing in free will: encouraging a belief in determinism increases cheating.

individuals believe that they do not possess free will, and that they cannot control nor are they responsible for their actions, individuals tend to cheat more and act in a more unethical manner.

In light of Libet's findings, Baumeister and Masicampo conducted a study on free will and prosocial behavior.<sup>5</sup> In this experiment, one group read approximately twenty-five statements to the effect of "you don't have any free will," while the other group read neutral passages. The pro-free will group was left out of the study because this group did not impact the results in the previous study. The task for this study was to then serve snacks to people who were about to enter the room. The people serving the snack were told two pieces of information before the people came into the room: the people coming in must eat everything on their plate, and that the people coming in all hate spicy food. One of the snack options was a big jar of salsa labeled "super hot." The group that read the no free will passages served way more spicy salsa to those who walked into the room than the neutral group.<sup>6</sup> A positive correlation was found between one's subjective probability or confidence that they have free will and their belief that they are morally responsible for what they do. When people believe they do not have free will they feel less responsible for the actions that they do. Implications from the study led philosophers and scientists to take a greater interest in prosocial and moral behavior and free will.

Alfred Mele, a professor and philosopher at Florida State University, explains that Libet was the one who began the discussion on the scientific investigation of free will.<sup>7</sup> Libet believed in a constrained kind of free will: free won't. Mele, however, explains the difference between a proximal and distal decision. A proximal decision is when one decides to do something right

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<sup>5</sup> Baumeister RF, Masicampo EJ, Dewall CN. Prosocial benefits of feeling free: disbelief in free will increases aggression and reduces helpfulness.

<sup>6</sup> Shariff AF, Greene JD, Karremans JC, Luguri JB, Clark CJ, Schooler JW, Baumeister RF, Vohs KD. Free will and punishment: a mechanistic view of human nature reduces retribution.

<sup>7</sup> Alfred Mele, Florida State University. Presented at the Social Trends Institute Experts Meeting on the question "Is Science Compatible with Our Desire for Freedom?"

now, whereas a distal decision is when one decides now to do something later. Libet explained that the brain subconsciously makes decisions that the brain only later becomes aware of. According to Libet, conscious free will is not generating the decision for a person to move. Once a person becomes aware of the urge or intention to flex the wrist, a person can then veto it. Evidence of this was that after the studies, subjects said they had urges to flex and decided not to do it and waited for another urge to flex. The other kind of evidence Libet offers is a veto study he conducted. The instruction was to prepare to flex the hand when a clock was at a certain point, but not to actually act on that decision to flex. Using an EEG requires a signal to give the computer an instruction to record the preceding brain activity. In the first study, it is the muscle burst that informs the computer to record the brain activity. In the veto study, the time of preparing to flex the hand was used as the signal. An EEG reading got a longer reading with a longer readiness potential. Libet recorded that petering out of the EEG graph was evidence that veto power does exist. Mele's argument is that since Libet informed the subjects to prepare to do an action but not to carry through with it, then the subjects did not ever have an intention to do an action. As a result of this, the subjects did not veto anything because they never had a real intention in the first place. Mele explains that by watching the clocks, the reaction time of the subjects is already lowered because their attention is divided. There are social psychologists who take Libet's study even further and would argue that there is not even veto power at all.

Mele also discusses that the issue with contemplating whether or not free will exists is that individuals describe the definition of free will differently. Mele concludes that individuals do possess what he calls "regular free will," in situations that would determine if someone is found guilty or not guilty in a court of law. The following criteria apply: if a person understood what they were doing, if they were sane and rational, if they had no medical conditions forcing them

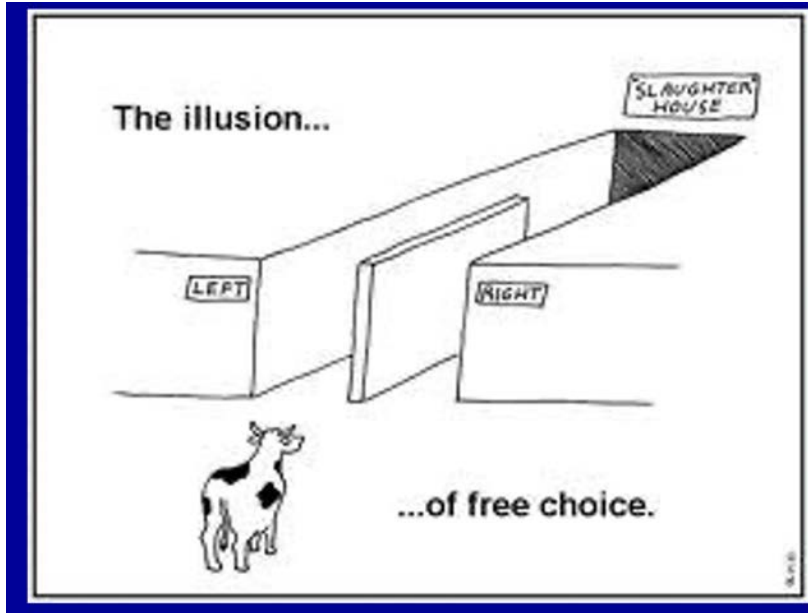
to do something different, and if no one was forcing them to do something in that moment. Mele's explanation and elaboration regarding Libet's study demonstrates that free will still does exist, at least on a conscious level. His definition of free will be utilized throughout the remainder of this paper.

It is clear from both the study regarding cheating on a math exam after reading various free will passages, as well as serving spicy food to others when it is known that they do not enjoy spicy food, that whether someone believes in free will impacts how people will behave morally. Some theorists, such as Mele, argue that the belief in free will encourages prosocial and moral behavior, while believing humans do not possess free will can discourage moral actions and prosocial behavior. Other theorists believe the opposite. One such theorist is Sam Harris who argues that free will is entirely an illusion. Furthermore, he argues that having the knowledge that this is the case actually improves society and allows individuals to understand what circumstances in their life they can control, and which they cannot. The belief that humans do not have free will, Harris argues, does not undermine morality or take away from how important it is to possess social and political freedoms. Harris argues that this belief can and should change the way we view and ponder some of life's most critical questions. Harris's most prominent belief regarding free will is essentially that science reveals that human beings are "a biochemical puppet."<sup>8</sup> He argues that every decision humans make results from a preceding cause or circumstance, so the choice is not real. Additionally, Harris argues that thoughts and emotions result from previous experiences and causes, so again, the choices that individuals think they are making are not choices at all. As the image below suggests, Sam Harris would argue that although human beings believe they have agency to make their own decisions in life, that is simply an illusion.

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<sup>8</sup> Clayton M. (2018). *The Song Remains the Same: A Review of Harris' Free Will*.





Approximately two centuries ago, the psychological community witnessed a striking situation: physical injury impacting a person's personality and disposition. This fascinating phenomenon took place in the year 1848. Phineas Gage was blasting rock in order to pave the way for a new railroad track to be built in Grafton County, New Hampshire. On September 13th of that year, Gage was using a metal rod to split the rock and the gunpowder exploded too early, sending a three foot rod through the front of Gage's head, which exited out the back of his head. In an entirely miraculous turn of events, Gage made a complete and total physical recovery, however, his spirit did not undergo the same recovery. Those who knew Phineas Gage best in his life reported that he was a changed man after his accident. A man who was once even-keeled and hard working was now irreverent, fitful, and grossly profane. As a result of his changed demeanor and personality, the railroad company that had previously employed Gage refused to reinstate his position at work once he had recovered physically. The case of Phineas Gage has become so popular over the past few centuries because of the implications regarding a person's personality and how that is linked to brain trauma. According to the *Smithsonian Magazine*, "the

University of Melbourne's Malcolm Macmillan writes that two-thirds of introductory psychology textbooks mention Gage."<sup>9</sup> This demonstrates the interest the psychological community has regarding the linkage between physical circumstances, behavioral personality fluctuations, and how much control an individual has in these matters.

Moreover, the discussion of free will is written about at length within Jewish literature and ancient texts as well. The origin of the discussion can be traced back to the Torah itself: Deuteronomy 30:19 writes, *הַעֲדֹתִי בְּכֶם הַיּוֹם אֶת־הַשְּׂמִימָה וְאֶת־הָאָרֶץ הַחַיִּים וְהַמָּוֹת נָתַתִּי לְפָנֶיךָ הַבְּרָכָה וְהַקְּלָלָה*: *וּבְחַרְתָּ בַּחַיִּים לְמַעַן תִּחְיֶה אֹתָהּ וּבְרָעָדָה*: "I call heaven and earth to witness against you this day: I have put before you life and death, blessing and curse. Choose life—if you and your offspring would live." This verse clearly demonstrates that theologically, human beings have choices in life. This verse expresses that in life, each human being has the agency to choose what kind of life they will lead. This is an extremely broad statement and various Jewish commentaries explain this verse to extend to various portions of life. What does it really mean to "choose life?" Rav Shlomo Yitzchaki (Rashi: 1040-1105), an ancient Jewish exegete, explains what this verse means using a metaphor of a father and a son. He explains that this verse can be compared to a father who tells his son to choose a good portion of real estate and then sets in front of him the best portion of real estate and instructs his son, "Choose this piece of land." According to Rav Shlomo Yitzchaki, G-d's words are essentially the same idea. He is instructing that life is before us; individuals can choose the path they follow, but at the same time, He informs and instructs regarding which path will be the best for human beings. It is clear from this verse that the Torah staunchly believes in the concept of free will and that humans have agency to choose how they live their lives.

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<https://www.smithsonianmag.com/history/phineas-gage-neurosciences-most-famous-patient-11390067/>

There is further discussion in Jewish literature regarding the notion of free will. *Ethics of our Fathers* 3:15 writes, הכל צפוי והרשות נתונה ובטוב העולם נדון והכל לפי רוב המעשה, “All is foreseen, and freedom of choice is granted. The world is judged with goodness, but in accordance with the amount of people’s positive deeds.” This clearly states that free will is a right of human beings. The only issue is, as Mele suggests, that the definition of free will is not given. The fact that there is no definition can complicate matters in terms of meshing this traditional Jewish text with psychological beliefs nowadays. *Babylonian Talmud* 33a writes, ואמר רבי חנינא: הכל בידי שמים חוץ, “And Rabbi Hanina said: Everything is in the hands of Heaven, except for fear of Heaven..” Man has free will to serve G-d or not. In a free society, it is up to each and every person to choose whether or not they want to serve G-d, and this is clear from this excerpt. Rav Shlomo Yitzchaki on that source explains, כל הבא על האדם בידי הקב"ה הוא כגון ארוך קצר עני עשיר, “חכם שוטה לבן שחור הכל בידי שמים הוא אבל צדיק ורשע אינו בא על ידי שמים את זו מסר בידו של אדם ונתן לפניו שני דרכים והוא יבחר לו יראת שמים.” This comment means that all of the traits and circumstances that a person acquires in life come from G-d, or predetermined factors that are uncontrollable. These include a person’s height, wealth of the family they are born into, intellectual ability, and race, but whether or not the person is a righteous person or a wicked person is completely in their control. Rav Shlomo Yitzchaki further emphasizes that each person has the option to choose their path, and that they should choose the path of fearing G-d, but they do not have to if that is not what they desire.

Rav Shlomo Yitzchaki explains a foundational psychological principle in his comment on a verse in Proverbs. The verse in Proverbs 22:6 reads: חנך לנער על־פי דרכו גם כִּי־יִזְקֵן לֹא־יִסוּר מִמַּנְהַג, “Train a lad in the way he ought to go; He will not swerve from it even in old age.” Rav Shlomo Yitzchaki comments on this verse: לפי מה שתלמד לנער ותחנכהו בדברים אם לטוב אם לרע: גם כי יזקין לא

יסור ממנה: “According to what you teach a child and train him in matters, either for good or bad, even when he grows old, he will not turn away from it.” This demonstrates the principle often discussed in psychology regarding habits and how difficult it is to break them as a person gets older and more steeped in their ways. As a result of this, Rav Shlomo Yitzchaki is warning educators regarding how critical it is to set a child on the right path when they are young. This way, the child can develop habits that will allow them to succeed throughout their lives. This also shows the plasticity of a child’s character and how a child is extremely vulnerable to what they are exposed to when they are younger. The kinds of actions and behaviors that a child learns when they are young will stay with them for many years to come. Seemingly, certain choices in life seem to be more “choosable” and flexible when a person is young. These choices become more solidified and inflexible, and there is less choice involved, as a result of habits and a person becoming accustomed to the ways they were taught when they were young. That is not to say that choice disappears as a result of habits formed from when a child is young, but it does make it extremely difficult to break old habits once a person is already heavily steeped in their ways.

There is another perspective on this same verse which is discussed by Rabbi Eliyahu Kramer who is commonly referred to as *Vilna Gaon*, “זוה שכתוב חנוך לנער ע"פ דרכו דרך מזלו וטבעו כן,” “תחנכהו לעשות מצוות ואז גם כשיזקין לא יסור ממנו אבל כאשר תעבירהו על מזלו עתה ישמע לך מיראתו אותך” This means that every child is born with a certain nature, and their education must be made tailor-specific for that child and their nature. This way, a child will learn in a fashion that appeals to their inborn traits and tendencies, and therefore, this education can remain with them for their entire lifetime. If a child’s education experience is not geared towards them specifically, this can lead to an educator attempting to force a child into a mold that they will not fit. In the short term, a young child will most likely listen to the instructions of their teacher because of the fear of

being punished, but when the child matures, they will become resentful. The lessons they learned when they were young will not resonate with them upon maturing. The Vilna Gaon makes it clear that children are born with certain innate tendencies and interests, and as a result of this, their education must appeal to this fact. The writing of the Vilna Gaon proves that a person does not choose their natural inclinations, but it is the responsibility of the educator and those supporting the child, to ensure that the child is taught in a way that will be long lasting and appealing to them for the rest of their life.

Maimonides, another prolific Jewish thinker and exegete writes in his magnum opus, “Yad Hachazaka” something very profound. In the chapter titled the *Laws of Repentance* 5: 1-3 he writes, רשות לכל אדם נתונה אם רצה להטות עצמו לדרך טובה ולהיות צדיק הרשות בידו, ואם רצה להטות עצמו ביד רעה ולהיות רשע הרשות בידו: “Free will is granted to all men. If one desires to turn himself to the path of good and be righteous, the choice is his. Should he desire to turn to the path of evil and be wicked, the choice is his.” This excerpt from Maimonides’ writing indicates that in general, individuals have the ability to choose their behaviors in life. Humans have the ability to choose to do good things, and they equally have the choice to do bad things. Maimonides makes a point of stating that free will is a reality in this world, and Rav Meir Simcha of Dvinsk (commonly referred to as the Meshech Chachma 1843-1926), a Jewish exegete, qualifies this idea even further in his writing. In his introduction to *Exodus*, Rav Meir Simcha of Dvinsk writes, “בהחירה אין מעלה על האדם יותר מכל הנמצאי” והטעם שהתכלית הוא הבחירה, שבלא “בחירה אין מעלה על האדם יותר מכל הנמצאי” The reason that human beings have the power of choice is that without the ability to choose, human beings are no more superior than any other creatures. This means that without the ability to choose and exercise free will, man would be no different than any other animal in the world, and it is known that this is not the case.

It is clear from the sources examined thus far that in Jewish tradition and literature, there is a strong basis for the idea of free will existing. In Jewish thought, it is a non-negotiable. This begs several questions. Firstly, how can places in the Torah be explained where it explicitly writes that a person's free will was taken away? More specifically, how could the Jewish people have been forced to accept the Torah, as the Midrash explains they were forced into doing so? Rav Meir Simcha of Dvinsk writes at length regarding the notion that the Jewish people were forced to accept the Torah. He writes, "פירוש שהראה להם כבוד" (פח, א), "מלמד שכפה עליהן הר כגיגית (שבת פח, א), פירוש שהראה להם כבוד" "ה' בהקיץ ובהתגלות נפלאה עד כי ממש בטלה בחירתם הטבעי ויצאה נשמתם מהשגת כבוד ה' when G-d held the mountain (Mount Sinai) over their heads, G-d's glory was revealed to them to such an extent that their natural urge to do evil disappeared. This shows that there are times where G-d's glory can be revealed to an extent where a human being simply does not have the ability to choose to do wrong. This is not normally how G-d reveals Himself in the world, and consequently, these miraculous events are not the main portion of the discussion when discussing the idea of free will in Jewish thought. The point of human beings having the ability to exercise free will is strengthened by the writing of Rav Yechiel Michel Epstein, a well-known Jewish codifier of law who lived from 1829 to 1908. He writes in the Aruch Hashulchan 1:1 that the angels worship G-d and they do not have any inclination to do evil; animals have an evil inclination but they do not have wisdom, and because of this, angels do not acquire reward as a result of their service to G-d, and animals do not obtain punishments as a result of them not having wisdom. This implies that since human beings have a choice to choose to do good or bad, it is fitting that human beings are also subject to rewards and punishments based on those choices and behaviors. Both the writings of Rav Meir Simcha of Dvinsk as well as Rav Yechiel Michel

Epstein strengthen the idea that human beings, under normal circumstances, have the ability to choose how they will behave in life.

Not only does Jewish law explore extensively a human's ability to choose freely, but also, the United States Supreme Court deals with questions of this nature. During the 1978 Supreme Court case of *United States v. Grayson*, a monumental decision was reached. The decision of this court case reads,

“[This] rationale rests not only on the realism of the psychological pressures on a defendant in the dock—which we can grant—but also on a deterministic view of human conduct that is inconsistent with the underlying precepts of our criminal justice system. A “universal and persistent” foundation stone in our system of law, and particularly in our approach to punishment, sentencing, and incarceration, is the “belief in freedom of the human will and a consequent ability and duty of the normal individual to choose between good and evil.”<sup>10</sup>

This exemplifies that even the Supreme Court of the United States believes in the free will of human beings. If this were not the case, then no person could ever be found guilty of committing any crime and excuses would always be able to be made under the notion that free will does not exist and therefore the person did not have the ability to control their actions.

There are certain mental or physical conditions that can cause undesirable actions. There are other conditions that remove inhibitions which then lead to unwanted behavioral patterns. The question is, is the “you” who is inebriated the “real” you that is let out, or was the “real” you the one who controls your actions? This is a difficult question to examine in a vacuum without theology. In Jewish thought, there is firm belief in the idea that every human being has a body and a soul that work together in order to accomplish exactly what that human being is supposed to accomplish in their life.

There are several times throughout the Torah that the text explicitly writes that a person did not have free will in choosing to make one decision over another. One such example is the

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<sup>10</sup> <https://www.richardcarrier.info/archives/4073>

context of the Jewish people leaving Egypt after they were enslaved for two hundred and ten years. The Torah writes that when Pharaoh wanted to let the Jewish people leave once the plagues had become too intense to endure, G-d says “והכבדתי לב פרעה”: “I will harden the heart of Pharaoh.” This poses a real challenge to the traditional notion of free will in terms of Jewish thought and philosophy. One way to reframe the way one views this occurrence would be that a person only has free will within the circumstances that they are given. Human beings can only choose in areas where they have that freedom to choose. The example with Pharaoh not being able to choose to allow the Jewish people to leave Egypt illustrates an important psychological concept: sometimes the circumstances that G-d gives to someone does not leave room for there to be free choice involved. It is important to consider this in different contexts.

There is a concept in Jewish law regarding when a husband and wife want to get a divorce. In Jewish law, there are two parts to a divorce. The first part is the couple deciding they want a divorce, and the second part is the man giving his now ex-wife a formal Jewish divorce document called a “get.” Issues arise when a man decides to divorce his wife, but refuses to give her the “get.” The Jewish law is that a “get” is not allowed to be issued without the husband saying he explicitly wants to be giving his wife this formal divorce. This concept is quoted by Maimonides who explains that the Jewish court of law must “force a man to issue a divorce document – “מכין אותו עד שאומר רוצה אני.” This means that the Jewish court of law forces the man intensively to formally divorce his wife until the man declares, “I want to be giving her this ‘get.’” The fundamental question that must be asked in this situation is how can a divorce document be issued forcibly, i.e. how does this work legally? A main tenant of legally binding documents or agreements is that they may not be issued under forced pretenses, otherwise they do not withstand in a court of law. Maimonides explains that this “forcible” issuing of a “get” by



the ex-husband does stand in a Jewish court of law because deep down in his core, this is what he wants to be doing because he knows it is the right thing. In this example, it may seem as if a man is being forced to do something that is not his will, but in reality, that is not the case at all. The Jewish court of law is forcing this man to allow his ex-wife to be in a neutral status and have the freedom to get remarried if she chooses, and not be in a painful state of marriage purgatory where she is chained to this man because he will not issue her a “get.” This example portrays how sometimes it appears as if this person does not have free will when issuing the “get” because it is under forced circumstances, but in reality this person is being convinced and being shown what they really want deep down, and that is to do the right thing.

There are other phenomena in psychology where it is unclear how much free will a person possesses. In 1965, Eckhardt Hess conducted attractiveness experiments. In these experiments, Hess concluded that “Dilation and constriction of the pupils reflect not only changes in light intensity but also ongoing mental activity. The response is a measure of interest, emotion, thought processes and attitudes.”<sup>11</sup> This exemplifies that when a person’s pupils dilate and constrict, it is not something that is necessarily controllable, and on the flip side, it is something that automatically occurs as the person hears or sees something that they like, are interested in, or agree with. Other researchers later replicated a variety of Eckhardt’s studies in order to determine if the results found by Hess were reputable and consistent. In a replication study conducted by de Winter and colleagues, conclusions were drawn which read, “Overall, our replications confirm Hess’s findings that pupils dilate in response to mental demands and stimuli of an arousing nature.”<sup>12</sup> De Winter and colleagues did not replicate Hess’s results in terms of gender differences that Hess found previously, but they did confirm that pupil dilation occurs

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<sup>11</sup> Hess E. H. (1965). Attitude and Pupil Size.

<sup>12</sup> De Winter, J. C. F., Petermeijer, S. M., Kooijman, L., & Dodou, D. (2021). Replicating five pupillometry studies of Eckhard Hess.

when someone is feeling aroused. This is a fascinating phenomenon because a person does not have control regarding pupil dilation and attractiveness. This poses threats to the traditional notion of free will and how far it extends, but according to the Jewish tradition this is not a problem at all. A person does not choose when their pupils dilate; this effect is a result of a variety of outside factors such as how excited, aroused, or scared a person is, or simply how much light their pupil is exposed to. Even though a person does not choose when and how much their pupils will dilate or constrict based on a given stimulus, a person still maintains a sense of free will in a more broad sense, in what they choose to do after pupil dilation or constriction occurs.

According to a presentation given by Professor Ari Zivotofsky of Bar Ilan University, there are many areas of life which seem as if human beings do not have free will, but in reality, humans do have free will in these areas. This type of free will is not necessarily what people typically think of when they think of the concept of free will. There are a plethora of psychological disorders that lead human beings to engage in behaviors that are unwanted or socially unacceptable. One such example is a disorder known as Frontotemporal dementia. When one has this disorder, their frontal and temporal lobes degenerate resulting in, among other things, the loss of ability to control hidden impulses.<sup>13</sup> There are numerous examples of activities this condition can lead to including but not limited to, shoplifting in front of store managers, undressing in public, and eating food scraps from public garbage bins. A study was conducted by Mendez and colleagues in order to investigate sociopathic behaviors exhibited by individuals with Frontotemporal dementia (FTD) compared to sociopathic behaviors exhibited by those

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<sup>13</sup> Mendez M.F., Chen A.K., Shapira J.S., & Miller B.L. Acquired sociopathy and frontotemporal dementia.

diagnosed with Alzheimers.<sup>14</sup> The study found that sixteen (57%) of the patients diagnosed with FTD exhibited sociopathic behavior, whereas only two (7%) of the patients diagnosed with AD exhibited sociopathic behaviors. Some of the sociopathic acts found among the FTD patients included unacceptable behaviors such as unsolicited sexual acts, traffic violations, as well as physical assaults. When interviewed, the patients with FTD with sociopathic acts were well aware of their behavior. Furthermore, they knew it was wrong, but they simply could not prevent themselves from acting impulsively. After committing the various acts, they claimed they felt remorse, but this remorse was not acted on, nor did they show any concern for the consequences.

The study conducted by Mendez and colleagues demonstrates a very clear concept: someone diagnosed with FTD has a lessened ability to control their impulses. Where does the concept of free will, specifically from a Jewish perspective, fit in with this illness? Is a person accountable for their actions the same way someone with normal impulse control would be? There are other mental and physical illnesses that fall into this same blurry category regarding free will. These include Parkinson Disease, Tourette syndrome, Homicidal sleepwalking, the “gambling tumor,” and the “pedophile tumor.”

Parkinson Disease is one example of a diagnosis where on the surface level, it appears as if a person does not have free will with regards to their behavior and actions. According to a book written by Zafar and colleagues, Parkinson Disease is estimated to impact at least 1% of the population above the age of 60 years old.<sup>15</sup> Even though the onset of this disease is slow, it is a progressive disease. In general, this disease presents itself later in life and leads to movement slowing down in the body known as bradykinesia as well as other symptoms of tremors or rigidity. According to Zafar and colleagues, “Other associated features of the disease include the

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<sup>14</sup> Ibid.

<sup>15</sup> Zafar, S., & Yaddanapudi, S. S. (2022). Parkinson Disease.

loss of smell, sleep dysfunction, mood disorders, excess salivation, constipation, and excessive periodic limb movements in sleep (REM behavior disorder).” One of the treatments for Parkinson Disease is the administering of therapeutic dopamine agonists. In this study, 11 patients with idiopathic Parkinson Disorder who recently developed pathological gambling were assessed. Dodd and colleagues explain that, “All 11 patients with Parkinson Disease and pathological gambling were taking therapeutic doses of a dopamine agonist.”<sup>16</sup> For seven of the patients, the pathological gambling had developed within the first 3 months of starting to take or escalating the dose of the agonist. For the other 4 patients with a longer latency, the gambling problem was only resolved after the medication was discontinued. One conclusion drawn from the study conducted by Dodd and colleagues was the finding that “Dopamine agonist therapy was associated with potentially reversible pathological gambling, and pramipexole was the medication predominantly implicated.” This means that the medication pramipexole almost undoubtedly led to pathological gambling. This makes it seem that a person has very little control in the realm of their disease, and even more so, they have very little control even once they begin taking medication to curb the symptoms of the disease.

There are other medical phenomena that can lead to gambling issues as well. A 2013 CNN news headline reads, “Former San Diego mayor admits misusing charity to fund \$1 billion gambling habit.”<sup>17</sup> The article explains that San Diego’s first female mayor, Maureen O’Connor, acknowledged in court her misappropriation of over \$2 million. The funds came from her late husband’s foundation which she then utilized to finance her gambling habit. Allegedly, she won and lost \$1 billion over nine years. O’Connor’s attorney reported that a brain tumor impacted Maureen O’Connor’s judgment when she would play video poker. Now, she is not only broke,

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<sup>16</sup> Dodd ML, Klos KJ, Bower JH, Geda YE, Josephs KA, Ahlskog JE. Pathological gambling caused by drugs used to treat Parkinson disease.

<sup>17</sup> <https://www.cnn.com/2013/02/15/justice/california-ex-mayor-gambling/index.html>

but she is suffering cognitive impairment following brain surgery and a stroke in 2011. O'Connor reported her winnings to the IRS, but reportedly, she lost more than she won over the years 2000 to 2009. Her attorney recounted that her overall loss amounted to over \$13 million. In the court ruling, attorney Eugene Iredale stated, "This was not, we think, a psychiatric problem or a characterological defect because there is substantial evidence that during this same time, there was a tumor growing in her brain, in the centers of the brain that affect and control, logic, reasoning and, most importantly, judgment." This almost unimaginable story portrays the stark reality of a "gambling tumor." There are tumors that actually suppress the area of sound decision making in a person's brain, and this can lead to compulsive gambling or other unwanted or detrimental behaviors.

The discussion regarding the gambling tumor leads to a much larger discussion regarding risky behaviors caused by prefrontal tumors. Since the underlying mechanism of neural decision-making is not fully understood, Wang and colleagues conducted a research experiment regarding patients with ventral prefrontal cortex tumors (VPFC) and dorsolateral prefrontal cortex tumors (DLPEC).<sup>18</sup> These two groups, as well as healthy control groups, were given a slew of neuropsychological tests. The groups then performed the Iowa Gambling Task (IGT) and the Game of Dice Task (GDT) to assess their decision-making under ambiguity and under risky situations. The results of this study indicate that the patient groups' performance was significantly worse in the areas of attention, memory, and information processing. The results of the study also show that the patients in the DLPEC group even performed worse than the VPFC and healthy control groups with regard to memory and information processing. This study indicates that not only does having a brain tumor impact the way a person can process and

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<sup>18</sup> Wang, Y., Wang, X., Wang, K., Zhao, B., & Chen, X. (2021). Decision-making impairments under ambiguous and risky situations in patients with prefrontal tumor: A neuropsychological study

remember information, but even the type of brain tumor one is diagnosed with impacts these abilities. This topic is one that is extremely nuanced, and clearly, whether or not someone has a brain tumor impacts their cognitive functioning. The question still remains, to what extent are those diagnosed with brain tumors responsible for the decisions they make as a result of their diagnoses?

There are additional brain tumors that can lead to extremely unwanted effects. This tumor is known as the “pedophile tumor.” In a case report conducted by Burns and Swerdlow, a patient with this diagnosis was studied. The patient’s diagnosis, a right orbitofrontal tumor, is associated with “poor impulse control, altered sexual behavior, and sociopathy.”<sup>19</sup> The objective of this study was to study and investigate the activity of a patient who acquired pedophilia after being diagnosed with a right orbitofrontal tumor. This patient was “unable to inhibit sexual urges despite preserved moral knowledge.” This exemplifies, again, how a person can exhibit a disease that impacts their behaviors in a way where they cannot control them as well as a healthy individual could. The researchers point out that miraculously, the pedophilia behavioral symptoms were resolved after the resection of the tumor. When a patient acquires sociopathy and paraphilia and their diagnosis is unknown, their doctor should consider orbitofrontal localization in order to help the patient heal and move past these unwanted behaviors. This case study indicates, at least with one patient, that a person's behavior can be tied directly to their diagnosis. Once that patient is treated and cured, any unwanted behaviors caused by the diseases can dissipate.

There is ample medical and research literature regarding how tumors or other diseases can impact a person's ability to make logically sound decisions. It is critical to take into account

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<sup>19</sup> Burns, Jeffrey M and Russell H. Swerdlow, Right Orbitofrontal Tumor with Pedophilia Symptom and Constructional Apraxia Sign.

how these circumstances impact how accountable a person is for their actions, and whether or not they have the same level of free will in choosing their actions and behaviors as a typical person.

Aside from brain tumors, there are other diseases that curb a person's ability to control their behavior. One such disease is Tourette syndrome. Betances and Carugno explain in a book titled *Coprolalia* that Coprolalia refers to “a tic-like occurrence that involves non-intentional obscene and socially inappropriate vocalizations.”<sup>20</sup> They further explain that in as many as a third of the reported cases involving tics, relate to Tourette syndrome. Additionally, the book explains, “There are also other vocal tic behaviors such as palilalia (involuntary repetition of words, phrases, or sentences), echolalia (repetition of another person's spoken words in a meaningless form), and klazomania (compulsive shouting) that can also be associated with coprolalia.”<sup>21</sup> This shows how the effects of having a disease such as Tourette syndrome greatly decreases a person’s ability to control various aspects of their behavior. There are many ways in which this can manifest, but some common manifestations include, shouting compulsively, repeating other people’s words, or even having involuntary body movements. The same question that was asked in regards to various brain tumors, must be asked in the context of Tourette syndrome as well: does a person with this diagnosis have the same amount of free will as a person who does not?

Another phenomenon relates to the development of Homicidal somnambulism, or homicidal sleepwalking. In this case study conducted by Broughton and colleagues, a homicide case is investigated. In this case, “homicide during presumed sleepwalking is reported in which

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<sup>20</sup> Betances, E. M., & Carugno, P. (2023). *Coprolalia*.

<sup>21</sup> *Ibid.*

somnambulism was the legal defense and led to an acquittal.”<sup>22</sup> Additionally, various evidence is reviewed and weighed regarding how probable it is that this homicide and attempted homicide occurred during a somnambulant episode. The evidence explored in this study includes a collection of both personal and family history of somnambulism as well as psychiatric and psychological assessments. This study exemplifies how even an action as drastic and heartbreaking as a homicide can be impacted by underlying psychological circumstances such as sleepwalking. How much free will a person possess, even in such compromised states, will impact a court’s ruling regarding how culpable a person is for the crimes that they committed.

One common denominator between all of the diseases and disorders discussed is that a person does not have choice in developing said disease. A person cannot control the development of a brain tumor, nor can they control if their body is biologically programmed to do so in various ways. A person who is diagnosed with Parkinson Disease, or any of the diseases discussed, should most likely listen to the diagnosis and advice of their doctor in treating the disease. Even though the medication typically used to treat or lessen the symptoms of Parkinson Disease can lead to pathological gambling, it is most probably in a person’s best interest to hearken to their doctor’s prognosis and treatment plan. It has already been established that a person cannot choose whether or not they develop a certain disease or disorder, and they do not have that much choice either regarding how they want to cope with the disease if they listen to their doctor’s instruction. What a person can choose, though, is to what extent they listen to their doctor, and what circumstance they put themselves into in order to best live with and cope with the effects of the disorder with which they have been diagnosed. For example, if a person diagnosed with Parkinson Disease is warned by their doctor that the medication they will be

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<sup>22</sup> Broughton R, Billings R, Cartwright R, Doucette D, Edmeads J, Edwardh M, Ervin F, Orchard B, Hill R, Turrell G. Sleep. Homicidal Somnambulism: a case report.



taking will most likely lead to them having very difficult struggles with continued gambling, this person might do their best to distance themselves from any temptations regarding gambling. If they live near casinos, a person might want to switch locations. At the very least, a person in this situation might want to hire a caretaker or reach out to a friend in order to ensure that they are not gambling excessively. The main point is that even though a person cannot decide or control the specific set of circumstances or cards that they are dealt in life, but they can decide how they will deal with those circumstances, essentially, how they will play their hand.

The Jewish perspective on free will aligns seamlessly with many psychological findings over the past century. Traditional Jewish Rabbinic authorities discuss at length the topic of when a person has a certain struggle in their life. In their writing, it is clear that a person who struggles in an area that is dangerous, harmful, or detrimental to society must ensure that they do not put anyone in society at risk. It is their responsibility to instate the necessary precautions in order to deter someone from committing a crime or putting another person in danger. One example of this idea in Jewish Rabbinic writings is the *Babylonian Talmud Kiddushin 56a and Gitten 44b*. The same line is quoted in both sections of Rabbinic writing, “לאו עכברא גנב אלא חורא גנב”: “If there are no buyers, a thief would not steal.” This line is not meant to be taken literally, but rather, a lesson is meant to be gleaned from this exaggeration. The Rabbinic authorities are teaching people in society that filtering one's environment from circumstances that can put someone at risk is essential. This idea largely connects to similar sentiments discussed earlier: if a person is predisposed to commit certain harmful behaviors, it is their responsibility to ensure that proper boundaries are set up between them and the people around them that they could potentially harm. Rabbinic authorities assume that free will exists, and people have certain drives and impulses that do not benefit society collectively. One must then recognize that even though this free will

exists, it is the responsibility of the person, or those who support them if the person themselves is incapable of compromise, to ensure that this person does not endanger society in any way.

Danger does not only refer to crimes such as murder, stealing, or inappropriate behaviors, but it also can refer to other situations that may be more convoluted. These could include making sure to set up necessary accommodations for someone that will not be able to control the noises they make while attending a lecture, or it could mean ensuring someone who has a bad temper does not work with young children. The Rabbinic authorities confirm that free will does exist even though certain life circumstances might be unwanted and unavoidable. The free will aspect of human beings is largely a responsibility that charges human beings to ensure that they are keeping society safe, rather than putting people at risk due to underlying circumstances or illnesses.

In an interview with Professor Ari Zivotofsky, I gleaned many insights and lessons as a result of his expertise on the topic of free will, neuroscience, and Halacha.<sup>23</sup> When asked about Libet's experiments, Professor Zivotofsky explained that there were many potential flaws in the study including the basic question: "Was Libet really measuring free will (*Bechira Chofshis*)?" Professor Zivotofsky explained that Libet's experiment was conducted in a lab setting, the subjects were forced to make a choice: they had to push the computer key at some point or another. Additionally, the subjects were told to self-report the time on the spinning clock when they decided they wanted to push the button, and with self-reports, there can oftentimes be historical inaccuracy. This sentiment is shared in a study conducted by Brass and colleagues.<sup>24</sup> In this study, there is discussion regarding the reality that the question of free will has concerned philosophers for centuries, but the empirical research regarding this question is relatively

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<sup>23</sup> Goldberg, Abigail. Interview of Professor Ari Zivotofsky conducted on 3/29/2023.

<sup>24</sup> Brass, M., Furstenberg, A., & Mele, A. R. (2019). Why neuroscience does not disprove free will.

young.<sup>25</sup> The researchers explain that Libet’s study suggested that before conscious intentions are decided, there is a specific pattern of brain activity, which suggests that “unconscious processes determine our decisions and we are only retrospectively informed about these decisions.” Brass and colleagues further discuss that the brain activity which precedes conscious decisions does not reflect the outcome of the action, but rather, it reflects the decision making process. Additionally, the researchers conclude that “the decision process is configured by conditional intentions that participants form at the beginning of the experiment.” This means that the participants knew they were going to make a decision regarding when to press the computer key, it was simply a matter of when they pressed it, and this skewed Libet’s results. As a result of this, Professor Zivotofsky and Brass and colleagues agree that “Libet-style tasks do not provide a serious challenge to our intuition of free will.”

When asked about the Jewish concept *Yiras Shamayim* (fear of Heaven), Professor Zivotofsky expressed that it is difficult to know where the free will stops and where predetermined life circumstances take over. Namely, a person has very limited free will in terms of their genetic code, where they were born, and how they look. In this discussion, Professor Zivotofsky referenced Professor Chaim Sompolinsky who writes extensively regarding the topic of neurophysics, a new field of study bridging computational neuroscience and statistical physics.<sup>26</sup> Professor Sompolinsky also concentrates on the area of how physics and neuroscience impacts volition and human agency in decision making. It was fascinating to hear about Professor Sompolinsky, who essentially created a field of scientific study in order to delve into the topic of free will, but this time from a physics standpoint.

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<sup>25</sup> Ibid.

<sup>26</sup> <https://www.mcb.harvard.edu/directory/haim-sompolinsky/>

Professor Zivotofsky expanded about the topic of the Jewish people being forced to accept the Torah. He quoted the *Babylonian Talmud Shabbos 88a* and explained, like Rav Meir Simcha of Dvinsk, that the Jewish people were overwhelmed by G-d's presence at the time of G-d's giving of the Torah, and it was as if they had no free will in this choice. Professor Zivotofsky added onto this discussion by explaining that during the holiday of Purim, the Jewish people were then given the opportunity to accept the Torah, without any outside influence or pressure, securing the Jewish peoples' commitment to the Torah and G-d.

Professor Zivotofsky also discussed the book called *Death of A Jewish American Princess* written by Shirley Frondorf. This book, Professor Zivotofsky explained, recounts a true story about a husband murdering his wife. The husband was subsequently acquitted as a result of "[The] jury's empathy for his claim to being overwhelmed by her supposedly typical behavior as a 'Jewish-American Princess.'"<sup>27</sup> Professor Zivotofsky explained that sometimes, the excuse of a person relying on outside circumstances controlling their behaviors can be taken way too far. It can have detrimental effects like this one: a person who is deserving of punishment being acquitted and let off with no repercussions.

The final topic that Professor Zivotofsky discussed in the interview was a concept that he calls the "really bad gene." Interestingly, when statistics are examined regarding violent crimes committed annually in the United States, a shocking realization is made. The ratio of people carrying a certain "really bad gene" compared to those not carrying a certain "really bad gene" is drastically different. Shockingly, Professor Zivotofsky explains that this "really bad gene" is really the y chromosome, the chromosome that biologically makes a person male. Professor Zivotofsky asked facetiously, maybe someone carrying this "really bad gene" should not be held as accountable for their crimes than someone who does not possess this "really bad gene."

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<sup>27</sup> <https://www.amazon.com/Death-Jewish-American-Princess-Victim/dp/0394568540>

Professor Zivotofsky explained how if someone were to draw this conclusion, it would be a grave mistake. Despite the fact that someone is a biological male, and statistically biological males are more likely to commit crimes such as aggravated assault, homicide, armed robbery, and sexual assault, as the chart below suggests, does not mean that they should be tried in a court of law any less harshly. Professor Zivotofsky ended the interview with the conclusion that many people also have the “really bad gene” and are biological males who do not commit these crimes. This example is a very important case of correlation not equaling causation, and this is a crucial idea to take into account when assessing how culpable a person is for certain behaviors.

Average Number of Violent Crimes Committed Annually  
in the United States

Offense	Carrying the genes	Not carrying the genes
Aggravated Assault	3,419,000	435,000
Homicide	14,196	1,468
Armed robbery	2,051,000	157,000
Sexual assault	442,000	10,000

The psychology sources and Torah sources concur that some level of free will exists for human beings, but that definition of free will varies depending on the source that is examined. Interestingly, there has been ample psychological research conducted regarding the beneficial consequences that “flow from our beliefs regarding free will.”<sup>28</sup> Individuals who believe that their actions are by their own volition tend to achieve high academic success, have improved job performance, lower stress levels, and overall, higher life satisfaction than those who do not

<sup>28</sup> Schiffman, Mordechai. “Personal and Social Responsibility.”

believe in human agency.<sup>29</sup> When individuals believe in their ability to control their own situation, this leads a person to obtain a higher degree of personal responsibility for their actions.<sup>30</sup> Hillel writes in *Ethics of Our Father 1:14*, “If I am not for me, who will be for me?” Rabbi Yosef Alashkar, comments on this verse that Hillel is teaching the importance of believing in human free will. Under normal circumstances, no force is pushing a person to choose a good or bad path; human beings have free will to choose what path they wish to embark on. Hillel’s words make it clear that in general, we are responsible for our choices. Questions arise when someone’s ability to choose their behavior is being swayed by circumstances beyond their control. In these circumstances, it is the responsibility of the person, or those who are caring for that person, to ensure that they are not a danger to society, and instead have safe opportunities to improve and contribute to society at large. Free will of human beings, then, is largely a responsibility that charges individuals with the unique goal of ensuring that society is safe, rather than putting people at risk due to underlying circumstances or illnesses a person might possess.

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<sup>29</sup> Ibid.

<sup>30</sup> Gooding et al. (2018). Using theories of change to design monitoring and evaluation of community engagement in research

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