

HALACHIC AND HASHKAFIC ISSUES IN CONTEMPORARY SOCIETY

78 - SELF-DRIVING CARS **OU ISRAEL CENTER - WINTER 2017/2018**

A] DRIVERLESS CARS

A1] THE SHAPE OF THINGS TO COME?

1. Consider this hypothetical: It's a bright, sunny day and you're alone in your spanking new self-driving vehicle, sprinting along the two-lane Tunnel of Trees on M-119 high above Lake Michigan north of Harbor Springs. You're sitting back, enjoying the view. You're looking out through the trees, trying to get a glimpse of the crystal blue water below you, moving along at the 45-m.p.h. speed limit.

As you approach a rise in the road, heading south, a school bus appears, driving north, one driven by a human, and it veers sharply toward you. There is no time to stop safely, and no time for you to take control of the car. Does the car:

- A. Swerve sharply into the trees, possibly killing you but possibly saving the bus and its occupants?
- B. Perform a sharp evasive maneuver around the bus and into the oncoming lane, possibly saving you, but sending the bus and its driver swerving into the trees, killing her and some of the children on board?
- C. Hit the bus, possibly killing you as well as the driver and kids on the bus?

In everyday driving, such no-win choices are may be exceedingly rare but, when they happen, what should a self-driving car – programmed in advance – do? Or in any situation – even a less dire one – where a moral snap judgment must be made?

It's not just a theoretical question anymore, with predictions that in a few years, tens of thousands of semi-autonomous vehicles may be on the roads. About \$80 billion has been invested in the field. Tech companies are working feverishly on them There's every reason for excitement: Self-driving vehicles will ease commutes, returning lost time to workers; enhance mobility for seniors and those with physical challenges, and sharply reduce the more than 35,000 deaths on U.S. highways each year.

But there are also a host of nagging questions to be sorted out as well, from what happens to cab drivers to whether such vehicles will create sprawl. And there is an existential question: Who dies when the car is forced into a no-win situation?

"There will be crashes," said Van Lindberg, an attorney in the Dykema law firm's San Antonio office who specializes in autonomous vehicle issues. "Unusual things will happen. Trees will fall. Animals, kids will dart out." Even as self-driving cars save thousands of lives, he said, "anyone who gets the short end of that stick is going to be pretty unhappy about it."

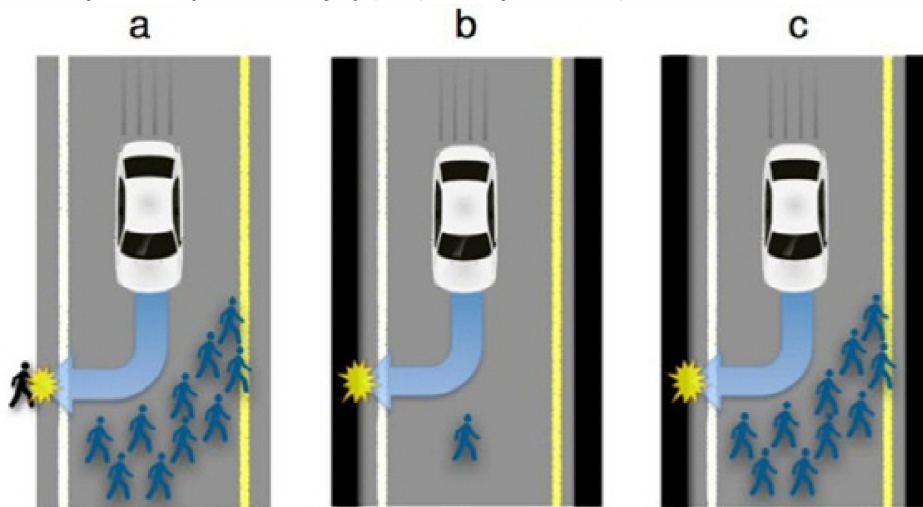
Few people seem to be in a hurry to take on these questions, at least publicly. It's unaddressed, for example, in legislation moving through Congress that could result in tens of thousands of autonomous vehicles being put on the roads. In new guidance for automakers by the U.S. Department of Transportation, it is consigned to a footnote that says only that ethical considerations are "important" and links to a brief acknowledgement that "no consensus around acceptable ethical decision-making" has been reached.

Morality, ethics of a self-driving car: Who decides who lives, dies? Todd Spangler, Detroit Free Press Nov. 21, 2017

A2] MORAL DILEMMAS

We already face critical moral decisions every time we get behind the wheel¹, although it's rare that we actually consider them in detail. In the event of a serious accident c'v usually react instinctive and without training. However, the creation of a new form of technology puts those decisions fully into the hands of the manufacturers. They will build 'moral algorithms' to enable the on-board computer to make choices in micro-seconds. Will you check the algorithms before you buy the car!?²

- In unavoidable crashes, how do you judge between those around you in the event of a split-second decision? How do you rate the safety and survival of the driver or occupants against those outside the car?
- What if the person with you in the car is your child? Or someone else's child?
- If a child runs out in front of you, do you hit the child or swerve into a fixed barrier putting yourself at risk?
- If a child runs into the road in front of your car, do you swerve to avoid her and hit an oncoming van head on?
- How do those decisions vary when considering the identity of the pedestrian – a child, an adult, a frail or elderly person? Do you take their future life value into account, their likelihood of survival and their level of suffering, compared with a nominal 'average' person?
- Would it make a difference if you knew the people involved? What if one was a mass-murderer, or a brain surgeon? Would it be ethical to prioritize one over the other?
- If a motorcyclist chooses to travel in a way that offers less physical protection than a car, do they deserve a higher level of priority as there would be more impact in the case of a collision?
- What if your driverless car fails to register a group of 10 people crossing the road in front of you. Do you override it and swerve the car into a wall, putting yourself and your family at risk of injury (but probably not death).



At the Toulouse School of Economics, they are using the new science of experimental ethics to ask the public how they respond to this dilemma, using a range of circumstances. For example, 76% of people thought that it would be more moral for autonomous vehicles to sacrifice one passenger rather than kill 10 pedestrians. This dropped to 23% when the passenger was sacrificed for only one pedestrian. They also discovered that people like the idea of a utilitarian car which would act to kill the fewest number of people, as long as they weren't the ones driving it!

Another experiment in Sweden studied the relative values of saving different groups of people and found that people thought that a 10-year old pedestrian was 'worth' 4.6 70-year old car drivers!

1. I am grateful to my sister-in-law, Naomi Cohen, who prepared an excellent presentation on this for the LSJS Susi Bradfield course in London. The graphics in this sheet and much of the commentary in this Section A is taken from her shiur.
2. A parallel debate centers around robot soldiers who may in the future be sent into battle and will need to be programmed to make choices concerning killing civilians, saving personnel etc.

B] THE PLANE CRASH DILEMMAS**B1] THE OUT-OF-CONTROL PLANE**

A plane is out of control and will inevitably crash into a densely populated area. Should the pilot divert the plane to crash into a lesser populated area and thereby kill other (although fewer) innocent people.

B2] THE HIJACKED PLANE

A plane has been hijacked³ and will intentionally crash in a heavily populated area. Should the plane be shot down over open land, killing the individuals on board, but saving the people on the ground?⁴

C] CONFLICTING MITZVOT

2. (טז) לא תלך רכיל בעמיקך לא תעמוד על דם רעך אני ה'

ויקרא יט

There is a Torah mitzvah of Lo Ta'amod Al Dam Re'echa - not to stand by when you could save someone else.

3. יד כל היכול להציל ולא הציל עובר על לא תעמוד על דם רעך. וכן הרואה את חבירו טובע בים או ליסטים באים עליו או חיה רעה באה עליו ויכול להצילו ... וכל כיוצא בדברים אלו, העושה אותם עובר על לא תעמוד על דם רעך. טו הרואה רודף אחר חבירו להרגו או אחר ערוה לבועלה ויכול להציל ולא הציל, הרי זה ביטל מצות עשה שהיא וקצותה את כפה ועבר על שני לאוין - על לא תחוס עינך ועל לא תעמוד על דם רעך.

רמב"ם רוצח ושמירת הנפש פרק א הלכה יד

The Rambam rules that this includes the case of "rodef" - where someone is being pursued by another person who threatens their life. A Jew has multiple Torah mitzvot to intervene and save the person.

4. לפיכך נברא אדם יחידי ללמדך שכל המאבד נפש אחד מישראל מעלה עליו הכתוב כאילו איבד עולם מלא. וכל המקיים נפש אחת מישראל מעלה עליו הכתוב כאילו קיים עולם מלא ...

משנה סנהדרין פרק ז משנה ה

The Mishna stresses the critical importance of life. Saving or taking even one life is tantamount to saving or destroying the entire world.

On that basis, is saving two lives better than saving one life?

D] HALACHIC PRIORITIES IN SAVING LIFE**D1] ONE LIFE vs ANOTHER LIFE**

5. האשה שהיא מקשה לילד מחתכין את הולד במעיה ומוציאין אותו אברים אברים מפני שחייה קודמין לחייו. יצא רובו אין נוגעין בו שאין דוחין נפש מפני נפש

משנה אהלות פרק ז משנה ו

Chazal rule in the Mishna that one life may not be set off against another.

3. An article on this can be found in Headlines Vol 1 by Dovid Lichtenstein at p. 75 and can be downloaded from the OU website at <https://www.ou.org/oupress/excerpts/headlines-shooting-hijacked-plane-killing-save-lives-many/>

4. Tragically, this was a real scenario on Sept 11 2001. After 3 hijacked planes had already crashed into the Twin Towers and the Pentagon, Dick Cheney - the Vice President - instructed the US military to scramble two F-16s with orders to shoot down other hijacked passenger jets which posed a threat. At that time, President Bush was in Florida and Cheney was in D.C. Although Cheney and Bush spoke during the attacks, it was never clear whether Bush had given the order or Cheney gave the order without Presidential authority, against protocol. In the end, no planes were shot down. The 4th hijacked plane was downed in Pennsylvania, apparently by passengers who overcame the hijackers.

6. אמר רבי יוחנן משום רבי שמעון בן יהוּצדק: נימנו וגמרו בעלית בית נתזה בלוד: כל עבירות שבתורה אם אומרין לאדם עבור ואל תהרג - יעבור ואל יהרג, חוץ מעבודה זרה וגילוי עריות ושפיכות דמים

סנהדרין עד.

This includes saving one's own life. All mitzvot in the Torah may be breached to save one's own life other than idolatry, immorality and murder.

7. שפיכות דמים גופיה מנלן? סברא הוא - כי ההוא דאתא לקמיה דרבא. אמר ליה - מרי דוראי אמר לי זיל קטליה לפלניא ואי לא, קטלינא לך. אמר ליה: ליקטלך ולא תיקטול. מאי חזית דדמא דידך סומק טפי? דילמא דמא דההוא גברא סומק טפי?

פסחים כה:

Famously, the prohibition on killing to save another (or oneself) is based on the s'vara of 'mei chazit' - who says that the blood of one person is redder than that of another!? How can one life be valued against another?

D2] ONE LIFE vs MULTIPLE LIVES

8. וכן נשים שאמרו להם עובדי כוכבים: תנו אחת מכם ונטמא ואם לאו הרי אנו מטמאים את כולכם, יטמאו את כולן ואל ימסרו להם נפש אחת מישראל

משנה תרומות פרק ח משנה יב

The Mishna discusses a scenario where rapists demand that one woman be handed over to be raped or all the women in the group will be raped. The halacha is that NO woman may be handed over, even if the entire group is then raped.

9. (טו) ויבאו ויצרו עליו באבלה בית המעקה וישפכו סללה אל העיר ותעמד בחל וכל העם אשר את יואב משחיתם להפיל החומה: (טז) ותקרא אשה חכמה מן העיר שמעו שמעו אמרו נא אל יואב קרב עד הנה ואדברה אליך: (יז) ויקרב אליה ותאמר האשה האתה יואב ותאמר אני ותאמר לו שמע דברי אמתך ותאמר שמע אנכי: (יח) ותאמר לאמר דבר ידברו בראשונה לאמר שאל ישאלו באבל וכן התמו: (יט) אנכי שלמי אמוני ישראל אתה מבקש להמית עיר ואם ישראל למה תבלע נחלת ה': פ (כ) ויען יואב ויאמר חלילה חלילה לי אם אבליע ואם אשחית: (כא) לא יכר הדבר כי איש מהר אפרים שבע בן בכרי שמו נשא ידו במלך בודד תנו אתנו לבדו ואלכה מעל העיר ותאמר האשה אל יואב הנה ראשו משלף אלך בעד החומה: (כב) ותבוא האשה אל כל העם בחכמתה ויכרתו את ראש שבע בן בכרי וישלכו אל יואב ויתקע בשופר ויפצו מעל העיר איש לאהלו ויואב שב ירושלם אל המלך: ס

שמואל ב כ

10. סיעה של בני אדם שאמרו להם גוים תנו לנו אחד מכם ונהרגו ואם לאו הרי אנו הורגין את כולכם - יהרגו כולן ואל ימסרו להן נפש אחת מישראל. אבל אם ייחדו להם כגון שייחדו לשבע בן בכרי יתנו להן ואל יהרגו כולן. אמר ר' יהודה במי דברים אמורים? בזמן שהוא מבפנים והן מבחוץ. אבל בזמן שהוא מבפנים והן מבפנים הואיל והוא נהרג והן נהרגין יתנוהו להן ואל יהרגו כולן. וכן הוא אומר ותבא האשה אל כל העם בחכמתה וגו' אמרה להן הואיל והוא נהרג ואתם נהרגין תנוהו להם ואל תהרגו כולכם. ר' שמעון אומר - כך אמרה להם כל המורד במלכות בית דוד חייב מיתה

תוספתא תרומות פרק ז הלכה כ

The Tosefta deals with the dilemma of taking one life to save many. It gives three positions:

(i) *The Tana Kama rules that an individual may NOT be handed over to die EVEN to save many lives. However, if the individual is specified, as in the case of Sheva ben Bichri, that person may be given over to save the life of many others.*

(ii) *Rabbi Yehuda rules that the individual may be handed over if s/he is going to die anyway.*

(iii) *Rabbi Shimon rules that the individual may be handed over if s/he is liable for the death penalty in the same way as Sheva ben Bichri.*

What are Rabbi Yehuda and Rabbi Shimon adding? Are they stricter than the Tana Kama - ie EVEN if someone is specified, maybe you can only hand them over ONLY if they additionally satisfy other criteria - that they will die anyway, or that they are liable to capital punishment. Or, maybe R. Yehuda and R. Shimon are being lenient. Are they qualifying the first case of the Tana Kama - where the person was not specified. Maybe R. Yehuda and R. Shimon would allow handing over a random unspecified person if they were going to die anyway, or were independantly liable to the death penalty.

11. ואין דוחין נפש מפני נפש. ואם תאמר מעשה דשצט בן זכרי (שמואל ב' ס') הנה ראשו משלק אלוקה דדחו נפש מפני נפש! התם משום דאפילו לא מסרוהו לו היה נהרג צעיר כשיתפשנה יואצ והן נהרגין עמו. אבל אם היה הוא ניגול אף על פי שכן נהרגין לא היו רשאין למסרו כדי להגיל עצמן. אי נמי: משום דמורד במלכות הוה, וככי מפרש לה בתוספתא דתרומות פ"ז.

רש"י סנהדרין עב:

Rashi⁵ brings different opinions. He first explain, like R. Yehuda in the Tosefta, that Sheva ben Bichri could be handed over since he was (i) specified and (ii) would die anyway. He then explains like R. Shimon - that Sheva ben Bichri could only be handed over since he was guilty of rebellion.

12. תני - סיעות בני אדם שהיו מהלכין בדרך פגעו להן גוים ואמרו תנו לנו אחד מכם ונהרוג אותו ואם לאו הרי אנו הורגים את כולכם, אפי' כולן נהרגים לא ימסרו נפש אחת מישראל. ייחדו להן אחד כגון שבע בן בכרי ימסרו אותו ואל ייהרגו. א"ר שמעון בן לקיש והוא שיהא חייב מיתה כשבע בן בכרי. ורבי יוחנן אמר אף על פי שאינו חייב מיתה כשבע בן בכרי

תלמוד ירושלמי (וילנא) מסכת תרומות פרק ח

This issue is not raised in the Bavli but it is discussed in the Yerushalmi. There, it is clear that the ONLY case in which someone can be handed over is where they are specified. Reish Lakish and R' Yochanan disagree on whether there is an additional requirement that they must be guilty like Sheva ben Bichri.

According to Reish Lakish, even if the individual is specified and even if he will die anyway, he cannot be handed over. Why?⁶

Apparently, this machloket would pertain to the hijacked plane case. According to R' Yochanan, since the passengers on the plane are 'specified' and will die anyway, they could be 'handed over' to save the others. According to Reish Lakish, they could not be 'handed over' since they are innocent. One obvious question on all of this is whether shooting down the plane is equivalent to 'handing over' people to a murderer, or is direct killing (see below).

We saw above that the justification for not killing to save another is based on the s'vara of 'mei chazit' - who say that the blood of one is redder than that of the other? On that basis, what if the person being handed over was objectively less 'alive' - eg a treifa or a fetus⁷. Can one then say that one person's blood really IS redder than the other?⁸

The Hagaot HaRemach⁹ explains that where one person is to be handed over in order to save the rest, and that person will die in any event, his blood IS 'less red' than that of the others. This is because he will definitely die, whereas the other may live. This is even more true if the individual is also liable to the death penalty in any event. In that case he is, as it were, triple dead - he will be executed for a capital crime, or will be killed to save the lives of the others, or will be killed in the general massacre of everyone.

Another approach focuses on the Mishna in Terumot which deals not with murder but with rape. In that case, where there is clearly no issue of 'mei chazit', nevertheless one woman may not be handed over to save the others. As such, perhaps the source of the halacha is an independent prohibition to hand people over to assist the enemy.¹⁰ If so, it may be permitted to shoot down the plane since this does not assist our enemies. It will then revert to the question of whether one should save the many by sacrificing the few.

5. This is dealing with the halacha that a fetus may be killed to save the life of the mother. However, where the majority of the a baby has emerged during birth, it may NOT be killed, even to save the life of the the mother.
6. There are number of ways to understand the machloket between R. Yochanan and Reish Lakish. (i) Does R. Yochanan take a more utilitarian and consequentialist approach which looks practically at the greater good and Reish Lakish take a more deontological and categorical approach, which see the rule prohibiting murder as absolute? (ii) The Maharam Chaviv suggests that the Reish Lakish is concerned for the unlikely possibility that the person handed over would not die anyway (ie the aggressors may change their mind and not kill). R. Yochanan assumes the much more likely scenario that the person will inevitably die. (iii) Maybe Reish Lakish rules that the issue does not directly flow from the question of 'whose blood is redder', but from a separate prohibition on assisting the enemies of klal Yisrael - see below; (iv) maybe the machloket is about 'chayei sha'ah' - temporary life. R. Yochanan is not as concerned for chayei sha'ah but Reish Lakish is more concerned - see below. See also a shiur by R. Aryeh Leibowitz: *Self-Driving Cars - A Halachic and Philosophical Dilemma*, available at <https://www.yutorah.org/sidebar/lecture.cfm/890155/rabbi-aryeh-leibowitz/self-driving-cars-the-philosophic-trolley-dilemma-what-does-halacha-say/>
7. Eg if one was given a choice of killing a fetus or being killed. In WWI, a halachic question was brought in the case of a German officer who raped a Jewish girl, who became pregnant. He took her to a doctor and demanded that the doctor abort the baby. When the doctor refused, he took out a gun and threatened to kill the doctor if he did not proceed with the abortion. Does the doctor have to give up his life rather than perform the abortion?
8. This is the subject of debate. The Meiri rules that a treifa may be handed over to save the lives of others, even where not specified. The Minchat Chinuch (295-296:24) rules that one may kill a fetus to save a life. However, the Nodeh Beyehuda (Tanina C.M. 59) rules that one may not kill either a treifa or a fetus to save a life (other than the life of the mother).
9. Quoted in the Kesef Mishne on Yesodei HaTorah 5:5.
10. Perhaps with the same underlying logic as the prohibition to pay large ransoms, since this will only encourage future kidnappings and strengthen our enemies. Also in times of shmad, one may be required to die rather than breach even a minor prohibition.

13. ... ושנו עליה בתלמוד המערב סיעת בני אדם מהלכין בדרך ופגעו בהם גוים ואמרו תנו לנו אחד מכם ונהרגוהו ואם לאו הרי אנו הורגין את כלכם יהרגו כלם ואל ימסרו נפש אחת מישראל. למדת שאף בהצלת עצמו ואף יחיד בהצלת רבים אין דוחין נפש מפני נפש ואפי' קטן מפני גדול כמו שביארנו. מ"מ אמרו שם שאם ייחדוהו להם כשבע בן בכרי כלומר תנו לנו את פלוני ונהרגוהו ואם לאו נהרג את כלכם, ימסרוהו להם כל שיש בו הצלת שנים בשביל אחד. אלא שאמרו שם אמר ריש לקיש והוא שנתחייב מיתה כשבע בן בכרי ור' יוחנן אמר אף על פי שלא נתחייב מיתה. ויראה כר' יוחנן שהרי כל שנחלקו שניהם הלכה כמותו וכ"ש בתלמוד שלו. ... הא כל להצלת רבים אפילו לא נתחייב מיתה או שנתחייב ולא בדינו הואיל וייחדוהו מותר.

בית הבחירה (מאירי) מסכת סנהדרין דף עב עמוד ב

The Meiri rules like R. Yochanan¹¹. As such a specified individual may be handed over, even if innocent.

14. וכן אם אמרו להם עובדי כוכבים תנו לנו אחד מכם ונהרגנו ואם לאו נהרגו כולכם, יהרגו כולם ואל ימסרו להם נפש אחת מישראל, ואם יחדוהו להם ואמרו תנו לנו פלוני או נהרוג את כולכם, ו אם היה מחוייב מיתה כשבע בן בכרי יתנו אותו להם, ואין מורין להם כן לכתחלה, ואם אינו חייב מיתה יהרגו כולך ואל ימסרו להם נפש אחת מישראל.

רמב"ם יסודי התורה פרק ה הלכה ה

However, the Rambam rules like Reish Lakish!¹²

15. תנו לנו אחד מכם ונהרגנו – לא יתנו להם אחד מכם אלא ח"כ יחדוהו ואמרו: תנו לנו פלוני. ויש אומרים דאפילו זכה"ג אין למסרו ח"כ חייב מיתה כשבע בן בכרי.

רמ"א שולחן ערוך יורה דעה סימן קנז

The Rema in Shulchan Aruch brings both opinions.¹³

16. ... ואפשר לומר דס"ל לר"ל שמי"ש דש"ד סברא הוא אינו עיקר בטעם דקבלה היתה צידם דש"ד יכרג ואל יעבור אלא שנתנו טעם מסברא להיכא דשייך אצל אין ח"כ דאפילו היכא דלא שייך האי טעמא הוי דינא הכי דיהרג ואל יעבור.

כסף משנה הלכות יסודי התורה פרק ה הלכה ה

The Kesef Mishne explain, at least according to Reish Lakish, that the prohibition of killing to save another is NOT based on the s'vara of mei chazit but is a tradition from Sinai which applies independently of the whether mei chazit is relevant.

17. ... ומ"מ יראה שלא הותר אלא למסרו לו שמא יקח ממנו כפר או יתחרט עליו אבל להרגו בידיים לא

בית הבחירה (מאירי) מסכת סנהדרין דף עב עמוד ב

However, all of this analysis deals with the issue of handing over someone to be killed. There is always a chance that the aggressors will change their minds! To kill a person directly will be a totally different case. Would this ever be allowed? In our case of the car accident, would veering into another person be tantamount to killing them directly?

D3] THE RODEF FACTOR

The Chazon Ish¹⁴ understands that the justification to hand over a specified individual is based on the concept of Rodef - that they are now responsible for the impending deaths of the others. The halacha of rodef applies EVEN if the rodef is innocent!¹⁵

Although a baby which has already majority emerged during birth may NOT be killed to save the mother, the Panim Meiroi (3:8) rules that if the baby will die in any event, it may be permitted to kill it in order to save the mother. This may be based on the concept of Rodef.¹⁶

So too, it may be justified to shoot down the plane on the basis that the individuals in it have a status of Rodef, even though they are innocent.¹⁷

11. Which is normal in a machloket between R. Yochanan and Reish Lakish (according to the Meiri, especially in the Yerushalmi, which was edited and compiled by R. Yochanan).

12. The Beit Yosef (YD 157) questions why the Rambam would rule like Reish Lakish over R. Yochanan.

13. The Acharonim differ as to which side the Rema leans towards. The Bach understands that he inclines to the Rambam but the Chazon Ish disagrees.

14. Sanhedrin 27, s.v. Yerushalmi Terumot.

15. Consider the case of the unborn child endangering the life of the mother, or the scenario of a game hunter accidentally aiming his gun at a child! The fetus may be halachically classified as a Rodef which will justify killing it to save the life of the mother. See my shiurim in this series on abortion and terrorists - available for download at <http://www.rabbimanning.com/index.php/audio-shiurim/cji/> - which examine the issue of Rodef in more detail. In the case of abortion, matters are further complicated by the fact that the birthing process is 'natural'.

16. See Dovid Lichtenstein's article ob cit at p80 for a fuller discussion of this and whether the Panim Meiroi is following R. Yochanan or Reish Lakish.

17. Even Reish Lakish could agree that these people are a Rodef, although innocent, since they are not randomly selected.

D4] ACTS OF RESCUE vs ACTS OF CRUELTY

18.

יש לעי' צאחד רוחה חן הולך להרוג אנשים רבים ויכול להעוות
לד אחר ויברג רק אחד שצד אחר, ואנו שצד זה ינוגו,
ואס לא יעשה כלום יברגו הרבים והאחד ישאר בחיים, ואפשר
דלא דמי למוסרים אחד להריגה דכחם המסירה היא פעולה האכזרית
שג הריגת גפס וצפעולת זה לוכה הלגת אחרים צטבע שי הפעולה
אלה המקרה גרם עכשו הלגה לאחרים גם הלגת האחרים קשור
במה שמוסרין להריגה גפס מישראל, אבל הטיית החץ מלד זה
לד אחר היא צעיקרה פעולת הלגה, ואינה קשורה כנג צעיקת
היחיד שצד אחר, רק עכשו צמקרה נמלא צד אחר גפס מישראל
ואחרי שצד זה יברגו גפשות רבות, וצזה אחד, אפשר דיש לנו
להשחלד למעט אצדת ישראל צכנ מאי דאפשר, והנא גוליגום ופפום
נהרגו צשציל להציל את ישראל כמש"כ רש"י חעניית י"ח צ' ד"ה
צלודקין, ואמרו שאין כל צרי' יכולה לעמוד צמהילתן, מיכו הכא
גרע דהורג צידיס, ולא מלינו אלא דמוסרין אכל להרוג צידיס אפשר
דאין הורגין והא דהרגו שצ"צ דמורד צמלכות היה ומיכו ל"ע צחום.

The Chazon Ish raised the case of a missile heading for a heavily populated area which we are able to redirect to a lesser populated area.¹⁸ Is it permissible to cause the deaths of a smaller number of innocent people to save a larger number? Her suggests that this case is different to that of handing someone over to the enemy. In that case the act itself is inherently an act of cruelty, whereas diverting the missile is an act of 'hatzala' - rescue. On the other hand, he raises the possibility that diverting the missile could be worse since it directly targets innocent people, whereas handing over individuals to the enemy is not an act of killing at all. The killing is done by an independent morally responsible third party (who could always change their mind and chose not to kill).

How would this relate to the hijacked plane scenario? Is diverting the missile (which was fired by an enemy) the same as directly shooting down a plane which has been hijacked by the enemy?

19. ולכן נלענ"ד דבכל כגון דא של חקירת החזו"א ז"ל קובע יותר השב ואל תעשה עדיף כי הרי ישנה טענה של מאי חזית דדמו של זה סומק מדמו של חברו. ובהריגה ודאית אין חילוק בין יחיד לרבים ולא אמרין דרבים עדיפא ... ומצאתי ראייה חותכת להנחתי האמורה בדברי אחד מגדולי הראשונים, והוא הרבינו יונה ז"ל בחידושי למס' ע"ז ... הרי לנו שהרבינו יונה ז"ל הניח לנו כלל גדול בזה, שהקו-המנחה שהתוו לנו חז"ל על כגון דא של שאלת נפשות הוא לבחור להיות בזה במצב של שב ואל תעשה. ולאיה צד היוצא השב ואל תעשה כאותו צד צריך להתנהג ... ואם כן איפוא גם בנידון חקירתו של החזו"א ז"ל יש לנו ג"כ לפסוק בהחלטיות בכזאת, להיות בשב ואל תעשה ולא להטות בקום ועשה את החץ לצד אחר ... וזאת לדעת כי חקירת החזו"א ז"ל הנ"ל היא לא רק תיאורטית בתיאור ציור דמיוני של ראית חץ הולך להרוג והיכא שיש אפשרות להטותו, כפי שמצייר החזו"א. אלא שאלה מעשית ממשית היא ויש לה השלכות על בדומה לזה. כגון על כלי רכב כשנסועים בדומה למשל ונקלעים פתאומית לפני אנשים רבים שחוצצים אז הכביש ויש לעשות עצירה פתאומית ע"י נסיגה אחורנית כדי שרבים מהעוברים לא יהרגו. אבל באחורה נמצא שם יחיד עומד באופן שברור שיהרג ע"כ, וכן בכל הדומה לזה. והשאלה נשאלת בכאמור במה יש לו לבחור יותר לנהוג במצב כזה, אם לישאר במצב של שב ואל תעשה וע"כ יהרגו אחדים שלפניו או לסגת אחורה בקום ועשה וע"ז יהרג היחיד? וכאמור לדעתנו יש להיות בזה בשב ואל תעשה כאשר מוכח בכזאת מדברי הרבינו יונה שהבאתי, ולא לעשות שום פעולה המתבטאת במעשה של קום ועשה. ולא משנה הדבר מה שהוא כוונתו בזה לשם פעולת הצלה בהיות ולמעשה הוא יהרוג ע"כ בודאות את היחיד. וכאן עוד חמור ביותר אפילו מהטיית חץ לצד אחר כי כאן בפעולת נסיעה אחורנית, הרי זאת פעולה של כחו ממש ובכח ובפועל שלו יהרוג את היחיד ולכן לא דמי זה ...

שו"ת ציץ אליעזר חלק טו סימן ע

The Tzitz Eliezer¹⁹ disagrees with the Chazon Ish and rules that the correct halachic choice is non-intervention - 'shev v'al ta'aseh'. As such, in the case of the out-of-control car, it would be better for the car to continue on its path and kill the larger group than to intentionally steer it into an individual.

18. This discussion of the Chazon Ish resulted from an actual she'elah asked to him by a taxi driver from Haifa who was driving down a hill when his brakes failed. His car was heading into a group of people and he steered it instead into a single individual who was killed. He wanted to know if he did the right thing. This is reported in a sefer of one of the talmidim of the Chazon Ish - Zachor LeDavid - who was there when the question was posed to the Chazon Ish. See the audio shiur by Rabbi Leibowitz ob cit at 49:53.

19. The Lubavitcher Rebbe wrote that each Jewish soul is part of the Infinite God, so two souls are no more an expression of God than one - see Reshima #123.

D5] GIVING UP ONE'S LIFE VOLUNTARILY TO SAVE THE MANY

In his analysis the Chazon Ish also raised the case of Lulinus and Papus:

20. כשבקש טוריינוס להרוג את לולינוס ופפוס אחיו בלודקיא אמר להם: אם מעמו של חנניה מישאל ועזריה אתם - יבא אלהיכם ויציל אתכם מידי כדרך שהציל את חנניה מישאל ועזריה מיד נבוכדנצר. אמרו לו: חנניה מישאל ועזריה צדיקים גמורין היו וראויין היו ליעשות להם נס. ונבוכדנצר מלך הגוון היה וראוי לעשות נס על ידו. ואותו רשע הדיוט הוא, ואינו ראוי לעשות נס על ידו. ואנו נתחייבנו כליה למקום, ואם אין אתה הורגנו - הרבה הורגים יש לו למקום, והרבה דובין ואריות יש לו למקום בעולמו שפוגעין בנו והורגין אותנו. אלא לא מסרנו הקדוש ברוך הוא בידך אלא שעתיד לפרע דמינו מידך. אף על פי כן הרגן מיד. אמרו: לא זזו משם עד שבאו דיפלתי מרומי ופצעו את מוחו בגיזרין.

תענית יח:

21. בלודקיא - היא לוד, והיינו דאמרינן בכל דוכתא (בבא בתרא י:) 'כרוגי לוד אין כל צריה יכולה לעמוד במחילתן בגן עדן'. ויש אומרינן שנהרגו על צחו של מלך שנמלאת כרוגה. ואמרו היחודים כרוגה וגזרו גזרה על שוגאיהן של ישראל. ועמדו חלו ופדו את ישראל ואמרו 'אנו כרוגה'. והרג המלך לחלו בלבד.

רש"י שם

Lulinus and Papus confessed to a murder they did not commit in order to save a large group of Jews. They were highly praised for this.

Does this mean that a driverless car should be programmed to kill the driver to save others. Would it matter who those others were - Jews or non-Jews? Could this be a requirement in programming cars or just an optional 'mehadrin' extra feature? Would it matter if there were other people in the car?

Could this be a precedent for diverting the car to kill the few in order to save the many? The probable answer is no. Lulinus and Papus were going to die anyway in the massacre. Diverting a car involves hitting someone who would NOT have died anyway!

D6] CHAYEI SHA'AH

A further issue is whether **חיי שעה** - a very short-term life expectancy - has the same value as long term survival. Would we classify the lives of the people on the plane as chaye sha'ah? In all likelihood they will inevitably die very soon so maybe one can shoot the plane down in order to save the much longer lives of people on the ground?

22. כל מכה וחולי שיש בהם סכנה שמחללים עליהם שבת אין מתרפאים מעובד כוכבים שאינו מומחה לרבים ... דחיישינן לשפיכת דמים. ואפילו הוא ספק חי ספק מת אין מתרפאים ממנו. אבל אם הוא ודאי מת מתרפאים ממנו דלחיי שעה לא חיישינן בה

שולחן ערוך יורה דעה סימן קנה סעיף א

The Shulchan Aruch (based on a Gemara in Avoda Zara 27b) rules that one may not seek medical treatment from someone who is suspected to be a possible murderer. This is true even if the illness is serious. However, if the person is known to have a terminal illness which will surely lead to death soon, they may risk the dangerous doctor on the basis that 'chayei sha'ah' is less of a concern than long-term life.²⁰

On the other hand, this can only be taken so far. How short is chaye sha'ah? All life is short! Surely the life of a healthy elderly person, although likely to be much shorter than that of a child, would not be classified as chaye sha'ah so as to prioritize saving the child.

And what level of intervention is justified by the 'lesser status' of chaye sha'ah? Again, it would be considered murder to kill a healthy elderly person in order to take their organs and save the lives of 5 young people. So too, according to those views that brain-death is NOT considered halachic death²¹, it would be considered murder to kill that person to remove their organs, even to save the lives of many others.²²

20. The Shevut Yaakov (3:75) ruled this way on the issue of a terminally ill patient with only days to live who had the option to undergo a very dangerous operation which could save their life, but could kill them immediately. He drew proof from this concept that chaye sha'ah was less of a concern.

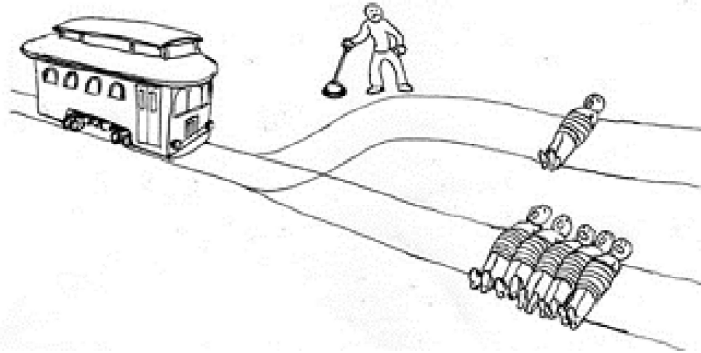
21. This is a major contemporary halachic debate. According to many other poskim, brain death IS considered halachic death and justifies removal of organs. See my shiur on this at <http://www.rabbimanning.com/index.php/audio-shiurim/cji/>

22. Consider the famous case of R. v Dudley and Stephens (1884) 14 QBD 273 DC which established a precedent throughout the common law world that necessity is not a defence to a charge of murder. It concerned survival cannibalism following a shipwreck. Dudley and Stephens were shipwrecked along with two other men and went without food or drink for many days. When one of them, the cabin boy Richard Parker, fell into a coma having chosen to drink sea-water, Dudley and Stephens decided to kill him and eat him to survive. After

E] THE TROLLEY PROBLEM

E1] THE ORIGINAL PROBLEM

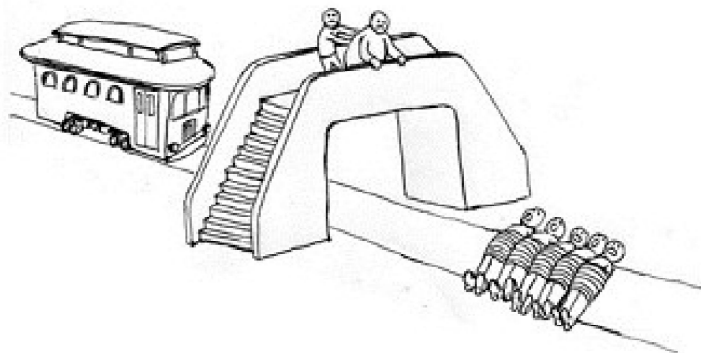
In 1967²³, a British philosopher called Philippa Foot²⁴ devised the Trolley Problem. This is a thought experiment, designed to explore the potential consequences of a hypothetical situation or principle.²⁵ There is a runaway trolley or tram zooming down the tracks. In the near distance are 5 people, either tied to the track, or simply oblivious of its approach, and their impending doom. If you do nothing, these people will certainly be killed by the trolley. You are standing next to a control lever that would switch the trolley to another track where only 1 person is in its path. If you take action, and 'flip the switch' you will save 5 lives at the cost of 1 life. This study became known as Trolleyology.²⁶



- A utilitarian or 'consequentialist' view - the greatest happiness for the greatest number - would permit, and possibly require, the death of the 1 to save the 5.
- A deontological or 'categorical' view may regard human life as incommensurable. Thus there are absolute rules against murder and 5 lives are not worth more than 1.
- A third view would favor non-participation. Since the disaster is already in motion, any intervention can only make the participant jointly responsible. On the other hand, is non-participation also an effective choice, and thus de facto involvement?

E2] THE FAT MAN VARIATION

One of the first (or many!) modifications to the Trolley problem was devised by Judith Jarvis Thomson in 1976, called the Fat Man. The trolley is still hurtling down the track towards 5 innocent people. You are now standing on a footbridge over the track, next to a fat man (sometimes known more politically correctly as 'the man with a backpack'). You can push him off the footbridge and onto the track where he will stop the tram from hitting the 5 people. Do you give him a shove?



a highly publicized trial they were convicted of murder and sentenced to death with a recommendation for clemency. Their sentence was commuted to six months in prison. Jewish 'lifeboat ethics' are discussed in the Gemara in the famous case of two people lost in the desert with one bottle of water (Bava Metzia 62a). For a discussion of this see Lifeboat Ethics: Rabbi Akiva vs Ben Petura by Rav Eliyakim Krumbein of Yeshivat Har Etzion, available at <http://etzion.org.il/en/download/file/fid/3990>

23. The problem was also raised in earlier discussions - in Wisconsin in 1905 and by German legal scholar Hans Welzel in 1951.

24. From Somerville College, Oxford. *The Problem of Abortion and the Doctrine of the Double Effect in Virtues and Vices* (Oxford: Basil Blackwell, 1978).

25. Professor Michael Sandel of Harvard has a number of lectures on line dealing with the trolley case and related scenarios - see <https://www.youtube.com/watch?v=kBdfcR-8hEY>

26. See also an article by Israel Belfer, PhD of Bar-Ilan University - *The Trolley Problem at a Crossroads: Halacha and NeuroEthics*, Jewish Medical Ethics and Halacha Vol VIII No. 2 p61, available at

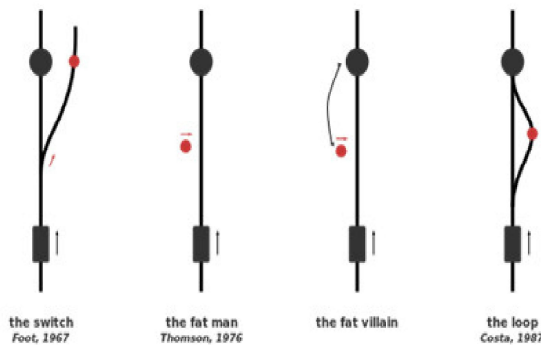
https://www.researchgate.net/profile/Israel_Belfer/publication/312057143_The_Trolley_Problem_at_a_Crossroads_Halacha_and_NeuroEthics_JME_Vol_VIII_no_2_October_2016_pp_61-70/links/586d55cd08ae8fce491b5b51/The-Trolley-Problem-at-a-Crossroads-Halacha-and-NeuroEthics-JME-Vol-VIII-no-2-October-2016-pp-61-70.pdf

Over the years, researchers have found that around 89% of people would take action in the first case and divert the trolley. But only 11% would push the fat man, possibly because it feels more direct, personal and emotional than simply pulling a lever. Distinctions include: (i) in the fat man case direct harm is caused but in the redirection case the harm is a side effect; (ii) some suggest that in the fat man case the harm is intentional but in the redirection case it is not.

E3] THE FAT VILLAIN VARIATION

Would the fat man case be different if the fat man was the very person who directed the trolley to the 5 men in the first place!?

E4] THE LOOP VARIATION



In this variation, as in the standard case, the trolley is hurtling towards 5 innocent people and there is an option to divert it onto a side track which has 1 person on it. But in this case, there is a loop in the track which takes the trolley back to the original route. There is also a probability that, if you pull the lever, the trolley may actually stop on the side track and kill no one! But, alternatively, it may NOT stop, but will loop around and head back down the original track again towards the 5 people! So by pulling the lever, there is a chance (which could be 50/50 or other probabilities) that no one will die, or that the one person will die and the train will return, requiring you to decide whether to pull the level again! This could repeat many times (although the chances of it doing so decrease) such that, although the choice each time is to kill 1 to save 5, ultimately you may end up killing MORE than 5 to save the 5!

F] BACK TO DRIVERLESS CARS

MIT have set up a website - Moral Machine (<http://moralmachine.mit.edu/>) - to discuss the reaction of the public to various scenarios similar to the Trolley Problem. The website invites visitors to judge between difficult ethic options in variations of the trolley case, and then analyses the results.