



How Many Jewish Leaders Does it Take to Screw-In a Light Bulb?

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“How many Jewish leaders does it take to screw-in a light bulb?”

This line is the authentic, original, earliest known form of the “how many X does it take to screw-in a light bulb” formula. Like much of popular culture, which people mistakenly assume is modern, this paradigmatic line was invented by Jews long ago.

Jews invented much of what is so good and useful, or at least amusing, in our modern world. Examples are all around. Take a look at ... my *tallit*, for example:



See the ... bar codes? This is the code for “Chinese noodles.” While we’re at it, you have the origin of the idea of “fringe benefits.” So you see, much of what is thought to be the product of the modern world was actually invented by Jews long ago. As King Solomon said, “ואין כל־חדש תחת השמש” – Been there, done that”

(Qohelet 1:9).

In a few minutes, I will demonstrate that the line “How many Jewish leaders does it take to screw-in a light bulb” was already known in the time of Rashi, who lived during the First Crusade in Europe 900 years ago. In fact, it was so widely-known by that time, Rashi assumes his readers are already familiar with it. We can actually trace it back all the way to the Talmud. We’ll come to that presently.

First, a little background.

We read in *parashat BeHaalotekha*:

וַיְדַבֵּר ה' אֶל־מֹשֶׁה לֵאמֹר:

דַּבֵּר אֶל־אַהֲרֹן וְאָמַרְתָּ אֵלָיו בְּהֶעֱלֹתְךָ אֶת־הַנִּזְוֹת אֶל־מוֹל' פְּנֵי הַמְּנוֹרָה
יֵאִירוּ שִׁבְעַת הַנִּזְוֹת:

וַיַּעַשׂ בֶּן אַהֲרֹן אֶל־מוֹל' פְּנֵי הַמְּנוֹרָה הָעֵלְיָה נִרְתְּיָהּ כַּאֲשֶׁר צִוָּה ה'
אֶת־מֹשֶׁה:

וְזֶה מַעֲשֵׂה הַמְּנֹרָה מְקֻשָּׁה זָהָב עַד־יְרֵכָה עַד־פְּרֻחָהּ מְקֻשָּׁה הִוא
כַּמְּרֹאֶה אֲשֶׁר הִרְאָה ה' אֶת־מֹשֶׁה בֶּן עֶשְׂרֵה אֶת־הַמְּנֹרָה:

The Lord spoke to Moses, saying: Speak to Aaron and say to him, “When you mount the lamps, let the seven lamps give light at the front of the lampstand.” Aaron did so; he mounted the lamps at the front of the lampstand, as the Lord had commanded Moses.—Now this is how the lampstand was made: it was hammered work of gold, hammered from base to petal. According to the pattern that the Lord had shown Moses, so was the lampstand made. (Lev. 8:1-4, *NJPS*)

So, how many Jewish leaders does it take to screw-in a light bulb? Lighting oil lamps was a common task in ancient times. It was a normal household function as banal as flipping a light switch, if only slightly more toilsome.

Why then did this common task require Divine step-by-step instructions?

I was once traveling in Africa and saw a box of Kellogg's Corn Flakes in a grocery store. Those Golden Flakes of Corn™ were manufactured in South Africa. On the back of the box I found not the latest promotion with some cartoon or sports figure, but rather

instructions for use: In verb and image, a step-by-step guide to eating Corn Flakes. How to open the box, how to pour them, and how much milk to add.

For Africans, who live in a primitive society where they eat home-grown fresh fruits and vegetables with freshly-ground meal for breakfast, unaccustomed to eating dry processed cereals laden with sugar, salt and preservatives out of a box, as is done in advanced civilizations, it was deemed necessary to provide instructions.

How about Moshe and Aharon?

Moshe grew up as a “Prince of Egypt.” Perhaps he never had to perform menial tasks such as turning on the lights. Do you think Prince Charles pumps his own gas?

And perhaps Aharon, his slave brother, was too impoverished to have a personal supply of oil for the luxury of artificial lighting. To this day, a quarter of the world’s population does not have artificial lighting. When the sun goes down, it gets dark.

On the other hand, maybe lighting a lamp was such a common act that everyone knew how to do it. Even if Prince Charles never flips a light switch or ties his own shoe laces, he probably knows how to do it. It is a simple, and common, act.

Why, then, does the Almighty have to *show* Moshe just what Aharon is supposed to do?

This is one among many references in the written Torah to the transmission of a non-written, multi-media teaching that accompanied the written text, called the *תורה שבעל-פה* *oral Torah* by our sages. This implies that it is not enough to read the words on the page;

to understand the Torah of Moshe, we have to learn the accompanying teaching transmitted by our sages, some of which is recorded in works like the Mishna and Talmud.

But why does something so simple and mundane need to be transmitted by PowerPoint™ Presentation? Why does it require any explanation at all?

Even a “mundane” act such as turning on a light may have “spiritual,” “symbolic” or material importance that is not immediately apparent. An oft-cited illustration of this principle is the realm of Jewish eating. While there are many contemporary books on Jewish *cooking*, the fundamental concern of our ancestors was on *eating*. Eating can be a common, animalistic, physical act, as done by a dog or cow. Or, it can be elevated into a sacred activity, such as when it is accompanied by *berakhot* (blessings) and words of Torah, or when it is Kosher Chinese.

Our values and system of symbols, our system of *mitzvot* (religious imperatives, or “Divine Commandments” if you will), oblige us to do things *a particular way*. That way is called *halakha*, literally, “The Way.” There is a Jewish way to eat. There is a Jewish way to tie shoelaces. And there is a Jewish way to screw-in a light bulb.

In our day, there are specific *halakhic* considerations, or requirements, certain values, that demand that we conduct ourselves according specific guidelines, even in the realm of lighting lamps or turning on lights.

The specifics are not based on a demonstration at Sinai, but rather derive from a set of more general *mitzvot*. These mitzvot include the prohibition against endangering ourselves or others; the prohibition against causing economic harm to others, even by polluting their environs. Most centrally, the specifics revolve around the *mitzva* of *bal tashhit*, the prohibition against wasteful environmental degradation.

On another occasion, I intend to speak at length on the origins and development of *bal tashhit*. Today, however, I wish to focus your attention on one area of application for this *mitzva*.

We are facing somewhat of an energy crisis, and few places worse in this country than Connecticut. The demands placed on our electric grid sometimes exceed its capacity, causing power blackouts. The construction of newer, higher-voltage power lines entails great expense and environmental disruption, and may pose a risk to public health. The vast amounts of fossil fuels consumed give us city air that is among the dirtiest and worst in this country. A significant portion of that comes from electric generation.

The political cost of our reliance on imported fossil fuels is enormous. Whatever your political orientation, you might agree that the foreign and military policy of the United States would be “better,” and the position of Israel in the world would be “better,” if the United States (and Europe) were not so reliant on imported oil.

If that is not bad enough, we now know that burning fossil fuels contributes to global warming, possibly posing a massive threat to our civilization, such as it is. True, the rising sea levels may mean that in seventy years BEKI might be located on valuable ocean-front property, but overall it is not a good future.

So *how* we turn the lights on makes a difference.

You may be aware of [Tsvi's project to install a photovoltaic array](#) on BEKI's roof. That will provide about 10% of our electric need. We expect to install the system at the beginning of August. It means that much less drawn from the grid. During the next couple years, I expect that at least one or two BEKI households will install smaller rooftop systems at home. This solar electricity is functionally equivalent to the *oil* in the Temple lamps. Photovoltaic energy is the purest form of oil.

You may also have heard that BEKI has received a grant from the [Legacy Heritage Fund](#) to promote the use of solar panels, energy conservation, and the *mitzva* of *bal tashhit* more broadly, through family education models that link the synagogue and the home.

This is a wonderful and exciting boost to our congregation. This is something we wanted to do, and now we have the resources to begin. The Legacy Heritage Fund is giving us wonderful money and expert guidance. We also believe that the process of implementing this project can itself lead to lasting improvements in the way we work as a synagogue. I hope everyone will be as excited as we are as this project develops.

At BEKI, we spend over \$20,000 a year on electricity. That's a lot of juice! The power company is talking about raising our rates over 25% beginning next January. Same amount of juice, a lot more dough. Were we to more closely comply with the *mitzva* of *bal tashhit*, we could cut that in half. We are not even suggesting turning off the air conditioner or the lights; we are just considering using more efficient appliances and usage.

How much does electricity cost us? Electric rates are rather complex. To simplify, we can say that operating a 100 watt bulb all year costs about \$130/yr.

You may notice something different in the sanctuary today. The formerly green exit signs are now red. We replaced the bulbs – two 7.5-watt bulbs – in a dozen exit signs with two 2.7-watt LED bulbs, for a savings of \$150 a year in electricity. That is more than the cost of the bulbs. The labor costs will be even greater, as we no longer have to pay our staff to continually replace the old bulbs as they burn out – the new ones will last ten times longer. It's what is called a “no-brainer.”

Most of us use “old style” incandescent light bulbs in our homes. About 80% of the electricity used by those bulbs comes out as heat; about 20% as visible light. New compact florescent (CF) bulbs – those little curly or tube-shaped bulbs – have the inverse proportion, which means that for the same amount of light output, they use $\frac{1}{4}$ the electricity. In the summer time, for every 100 watts of “old style” lights you have one, you are using an additional 80 watts using your air conditioner to remove the waste heat they generate, or else you are suffering from their excessive heat.

If you tried the CF bulbs a few years ago and didn't like the color or the buzz or the slow start-up, then try again. The new ones are much better. They are smaller in size, deliver more light, and come in a range of “colors” – warm yellowish, sun-bright white, whatever

you want – they last ten times as long as the “old style” bulbs, they produce less waste heat, and they are much cheaper to operate. There is no good reason to use the “old style” light bulbs anymore, except for specialized uses such as a fish tank heater.

Photovoltaic cells are one part of the energy picture. Lighting is a big part. Refrigeration and heating and cooling are also big parts. We will review each of these areas in the coming months.

So, How many Jewish leaders does it take to screw-in a light bulb?

Our sages noted the unusual wording in our text from the parasha. God tells Moshe to tell Aharon, “בְּהַעֲלֹתְךָ אֶת־הַנֵּרוֹת” when you *mount* the lamps.” There are several verbs that could have been used to indicate just what is to be done; “mount” or “set up” is somewhat of an unusual choice. As it turns out, Aharon is not actually supposed to *light* the lamps; he is just supposed to set them up, or “*mount*” them.

Rashi comments (s.v.):

ועוד דרשו רבותינו: מכאן שמעלה היתה לפני המנורה שעליה הכהן עומד ומטיב
[את הנרות]¹.

And our sages explained: From this we learn that there was a platform before the lamp on which the Kohen stood and set up [the lights].

Commentators² have noted that Rashi was precise in his language, saying “set up” the lights, instead of “lighted” the lights, because it was well-known that *any* Jewish person³ could light the lamps. Already by the time of the Talmud, it was stated that any Jewish person can light the menorah in the *Beit Miqdash*.

So, as Rashi knew well, “How many Kohanim [or, Jewish leaders] does it take to screw-in a light bulb?” None! Anyone can do it! Anyone can do it!

For your own home, or your own synagogue, you don't need an electrician to put in special fixtures or bulbs. *Anyone* can screw-in a compact florescent bulb. *Anyone* can comply with the rule of *bal tashhit*, anyone can use lighting in accordance with Jewish law and ethics.

What of the leader? The leader's job is to do the "set-up," so that others can comply with the law. Of course, at BEKI, as in the rest of the Jewish world, *everyone* is a leader. "Would that all My people were Kohanim." By virtue of hearing these words of Torah today, you are a leader of the people, and you can help others – at your home, school, workplace, or synagogue – use lighting compliant with *halakha*.

How many Jewish leaders does it take to screw-in a light bulb? None. Anyone can do it.

¹ Bracketed phrase appears in Rashi's first edition.

² E.g. Rabbi Avraham Mordekhai of Gur, s.v.: "ועל ידי זה מובן הדיוק של רש"י "שעליה הכהן עומד" מדוע... א.י. גרינברג עיטורי תורה, לא נאמר עומד ומדליק? לפי שהדלקת המנורה היתה כשרה בזר..."

³ Male Jewish person, at least. Or any male Kohen or Levi. That was the equivalent, in that day, of saying "anyone."