Don’t Judge a Book? 
Surgical Changes to Anatomical Features in Traditional and Modern Thought¹

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BACKGROUND

The methodology of halakhic decision-making involves the application of traditional values or laws to modern dilemmas. These issues may either be scenarios that by chance simply never arose or situations that could never have occurred due to social, political, or scientific developments. We have witnessed advances over the last half-century in the realm of the medical sciences that have, with no exaggeration, completely undermined and altered the “classical” assumptions, methodology, and practice of medicine. Contemporary rabbinic figures, therefore, must grapple with medical technologies for which there is no real halakhic precedent because they would have been unfathomable even a few decades ago.²

² For a contemporary analysis of situations of changing halakhic decisions in light of changing medical data, see Dr. Edward Reichman, “Don’t Pull the Plug on Brain Death Just Yet,” *Tradition* 38, no. 4 (2004): 63–64, where he eloquently states: “In the field of contemporary medical halacha, it is not only preferable, but mandatory, to reevaluate the state of medical science when practically applying any legal decisions of the past. Medicine is an evolving science, and our under-

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This tension is acutely felt regarding issue of halakhic medical definitions. It is often unclear whether halakhic medical classifications are the result of the most advanced scientific data available at the time, or strict guidelines for halakhically defining the issue at hand independent of scientific nomenclature. The topic of this paper, the halakhic definition of gender, provides an excellent case study for this issue.

The Rambam (Ishut 2:24–25) states:

One who has male organs and female organs is called an androgynous and is safek if it is male or female, and there is no sign by which it would be known conclusively if it is male or female forever. And one who is lacking both male and female signs, rather [its organs are] covered, is called a tumtum and it is too a safek, but if the tumtum is torn and found to be male, he is considered male, and if found to be female is considered a female.

The Rambam is generally understood to mean that gender is defined by the external anatomical features of the individual in question. As such, if both male and female organs are present, the designation of androgynous is made. If the reproductive organs are covered, i.e., a tumtum, then simply uncovering and revealing the organs is enough to designate the gender of the individual, for that will reveal de facto which anatomical features are truly present. Assuming that the standing of the human body is continually expanding. . . Had the authorities . . . been presented with the current medical literature, [they would] have decided differently.”

3 Shu’ot Tzitz Eliezer 11:78 (1); Edan Ben-Ephraim, Sefer Dor Tahapuchot, pp.112–115, where a number of responsa on the issue are quoted: Mishana Halachot (R. Menashe Klein) 6:47; She’elat Shaul (R. Shaul Breish) E.H. 9. See also the responsa of R. Asher Weiss in the same book, pp. 280–282. This is also the opinion of R. Bleich, Judaism and Healing, p. 83, Dr. Abraham Steinberg, “Hermaphrodite” (Description of Hermaphrodites and Their Status in Jewish Law), Encyclopedia of Jewish Medical Ethics (New York: Feldheim), p. 465, and R. Abraham Abraham in Nishmat Avraham, Yoreh Deah 262:11.
Rambam’s definition of gender is solely based on external anatomy, our primary query must be addressed. Was the Rambam simply utilizing the best of the scientific knowledge that was available to him at that time, in which the only reliable markers of gender were the anatomical landmarks, but if more accurate indicators ever became available, such as DNA typing, then would they have been acceptable if not preferred? Or was he issuing a strict halakhic decision, describing precise halakhic criteria for determining gender that are independent of the time, place, or historical context in which they were produced? The former will be referred to as the “flexible read” approach, and the latter as the literalist approach.

This issue is of great significance in contemporary times because a great number of diagnostic modalities exist today which did not in the Rambam’s day. The arguments for the utilization of such tools, as well as those prohibiting their usage, particularly regarding DNA testing, have been discussed at length in other contexts.4

Proper gender assignment is of great importance for two reasons.5 First, it is necessary to appropriately classify individuals as male, female, or hermaphrodite (androgynous/tumtum), due to the myriad of halakhic ramifications thereof. Further, in intersex children, a proper

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4 See Techumim (no. 21, p. 121), where R. Vozhner (along with R. Karelitz and R. Moshe Klein) designates the areas where DNA evidence is acceptable. His position is that, generally speaking, DNA evidence is acceptable in situations where there is no counter-pressure to its ability to conclusively prove certain facts. For example, whereas it is accepted for aveilut and kevurah, and in certain situations for yerusha and even to free agunot, it is not in mamzeirut (because we try not to assign the status of mamzeirut in general) or harsha’a (because there is a specific requirement to have two individuals as witnesses). Regarding the utility of DNA testing for paternity, see Avraham Steinberg, “Paternity,” Journal of Halacha and Contemporary Society no.38 (Spring 1994): 69–84; R. Mordechai Haperin, “Kevi’at Avahut B’emtzaut Ma’arechet Te’um Harekamot Hamerkazit (HLA),” Techumim, no. 4 and Assiah, October 1982, pp. 6–19. For more on inheritance, see R. Tzvi Yehudah Ben Yaakov, “Kvit Yoresh al smach bedikat DNA,”Techumim, no. 22, pp. 412–426.

5 For a more complete discussion of the topic, see Wiesen and Kulak, “Male and Female He Created Them” (n. 1 above).
understanding of the individual’s gender and the pathophysiology of its condition are crucial for selecting a fitting treatment plan.

THE FLEXIBLE READ APPROACH

As mentioned above, a close analysis of the Rambam provides ample room for one to claim that his criteria were based on the scientific data that were available to him at the time, but would not preclude other diagnostic methods. Were he aware of the highly sensitive testing modalities commonly utilized today, such as DNA testing, then he would certainly have allowed them to be implemented for gender determination. For one, he does not mention any explicit Biblical verse or traditional ruling to this effect, nor does one exist in the rabbinic literature, at least not to the author’s knowledge. The Rambam does not reference a specific source to buttress his opinion. Further, the Rambam was a talented and progressive physician who often incorporated cutting-edge scientific knowledge into his halakhic positions. An issue like gender determination, which at face value is a description of a scientific reality, would likely be defined by him scientifically. Finally, a close read of the Rambam shows that he never explicitly states that gender is only to be determined anatomically. While he accepts as a given the diagnostic usage of external anatomy, that is likely because there was no other option available. In the absence of a specific statement defining gender only in terms of the external anatomy, one could conclude that as other means for determining gender become accepted as the scientific standard, as DNA and chromosomal testing have today, that those tools would also be taken as a given as a means of establishing gender.

A number of authorities accept DNA testing in gender determination, both as primary and secondary (l’chatchila and b’dieved) means. R. Moshe Tendler believes that gender identification is best achieved by DNA testing, in conjunction with a complete physical, radiological, and systemic assessment. R. Asher Weiss believes

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6 Email communication on November 5, 2006.
that DNA testing can be utilized as a confirmatory test in gender as-
ignment, but not as the primary modality.\textsuperscript{7} Both of these opinions 
allow usage of DNA testing in some capacity, presumably believing 
that the Rambam would not contend against today’s diagnostic ca-
pabilities, which are clearly more accurate than what was available 
to him.

**THE LITERALIST APPROACH**

A more conservative reading of the Rambam would maintain that 
*only* external anatomical features could be used in determining the 
gender of the individual in question.\textsuperscript{8} This would preclude the use of 
any modern imaging, such as ultrasound or computed tomography 
(CT), DNA or genetic tests, or hormone or enzyme assays. This 
could be for one of three reasons:

1. The Rambam, in essence, issued a strict halakhic ruling that 
only external anatomical features are recognized by halakha to 
determine gender.

2. Even if the Rambam himself might have allowed these other 
testing methods had he been aware of them, we do not have 
the ability to “put words into his mouth.” All we are left with, 
then, is what he assumed, that gender classification is done via 
anatomical features.

3. The Rambam might have allowed other tests, but *these* par-
ticular tests are all invalid for other reasons (e.g., DNA testing 
is never recognized by halakha).

R. Eliezer Waldenberg maintains one of the most extreme posi-
tions.\textsuperscript{9} He was asked what the status was of a child who had the 
external appearance of a female, but was found to have an unde-

\textsuperscript{7} Responsum of R. Asher Weiss in *Sefer Dor Tahapuchot*, pp. 280–282.
\textsuperscript{8} See n. 3.
\textsuperscript{9} *Shu”t Tzitz Eliezer* 11:78 (1).
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scended testicle and to be genetically male. He responded that because the external characteristics of the child were female, and the Rambam’s position is that gender is determined exclusively by the superficial appearance, the child was completely female—not even a hermaphrodite. Individuals need not resort to “special investigations,” such as DNA and imaging, if the gender of the individual is obvious to the naked eye. Further, because the child is considered undoubtedly female, the internal testicle could be removed without any concern for castration.

R. Waldenberg goes further and states that, because the gender is determined only by the external features, then were a surgeon to decide that the best course of action would be to reconstruct the child as a male, then the child would postoperatively be considered undoubtedly male by virtue of its external appearance! This is an extremely literal interpretation of the Rambam’s rule, applied in a monumental and progressive fashion. Because the child’s gender is determined exclusively by anatomical features, were the reproductive organs to change, the child’s gender would change as well, and the child would have the complete halakhic status of its new state.

The Tzitz Eliezer’s novel application of the Rambam’s law, allowing surgical procedures to change the gender of the child in question, is discussed regarding sex-change operations in adults as well. If a child’s gender could be altered surgically, perhaps R. Waldenberg would concede that even an adult who undergoes a gender transformation would also be considered to have a new halakhic gender. Dr. Avraham Steinberg maintains that according to R. Waldenberg, any surgery performed on an individual has the capacity to change the gender of a person, including trans-gender operations, as the only determination of a person’s gender is his or her ultimate anatomy.10 Thus, a man who undergoes a sex-change operation would then be exempt from all commandments that women are not obligated in. R. Yosef Shapran, however, does not believe that R. Waldenberg’s

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responsa would accommodate such an extension, as he was dealing only with the particular case of an intersex baby who had dual or ambiguous genitalia.\textsuperscript{11} In the case of an adult who undergoes a surgical procedure, there is no evidence that R. Waldenberg would agree that his or her halachic gender could be changed.

CONCLUSION

In the context of this small topic, we have analyzed a fundamental question regarding halakhic decision-making in situations where a particular precedent has been set, but is challenged by modern technological advances that may undermine the traditional criteria. Namely, gender has always been determined anatomically, either because it was the best scientific information available or because the true halakhic definition of gender is the external appearance. While some accept modern diagnostic modalities as a means of precisely clarifying gender, others maintain strict adherence to the classical teachings, though often with novel applications, such as the \textit{Tzitz Eliezer}.

This is only one of many issues that have arisen in the last half-century in the domain of medical halakha, where traditional definitions and rulings have been challenged by the ever-advancing medical technology we are privy to. Here the famous comment of the \textit{Tiferet Yisrael} is applicable, that “Anything for which there is no reason to forbid is permissible with no need for justification, because the Torah has not enumerated all permissible things, rather forbidden ones.”\textsuperscript{12} In other words, in the absence of a specific prohibition that would be violated, Judaism should welcome scientific advances and work to incorporate them into our lives. In this issue, as in all others, the challenge before us is to integrate the traditional methodologies with the modern diagnostic and therapeutic alternatives available in a halakhically acceptable manner.

\textsuperscript{11} R. Y. Shapran, “\textit{Nituach l’hachlafat hamin},” \textit{Techumim} no. 21.
\textsuperscript{12} Yadayim 4:3.
Father of modern anatomy - Physician who performed dissections on cadavers (now called autopsies) - Provided meticulous drawings of anatomy - Used illustrations to create permanent records and change approach to anatomical studies. Louis Pasteur 1850. - Father of Microbiology, virology, immunology - Proved germ theory of disease using swan neck flasks. Joseph Lister 1850. - Father of modern surgery because of work with aseptic surgical technique. William Halstead 1850. - Physician that taught and developed meticulous principles of wound closer, hemostasis, and tissue handling. Harvey Williams Cushing

The first part of the book examines Kierkegaard’s existentialism and Marx’s materialism, which present two defining poles of subsequent Hegelian and anti-Hegelian movements. The second part looks at the contrasting critiques of Hegel by Lukacs and Heidegger, which set the stage for the appropriation of Hegelian themes in German critical theory and the anti-Hegelian turn in French poststructuralism. Understanding Phenomenology provides a concise and accessible guide to one of the most important schools of thought in modern philosophy. Everyone knows that language changes. It's easy to pick out words that have only been recently introduced (bromance, YOLO, derp) or sentence constructions that have gone out of style (How do you do? Have you a moment?), but we are constantly in the middle of language change that may not be noticeable for decades or even centuries. Some of the biggest and most lasting changes to language happen slowly and imperceptibly. The Great Vowel Shift, for example, was a series of pronunciation changes occurring over 350 years, and not really noticed for over 100 years after that. It resulted in an