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## HUMAN IDENTITY: HALAKHIC ISSUES

### INTRODUCTION

In a series of papers which appeared between 1966 and 1972, I raised a number of halakhic questions regarding some basic problems of human identity and heredity.

1. Who or what is halakhically human? It is accepted that a child born to human parents is regarded as human even if it does not have human form or human intelligence. Consider, however, the converse: is an intelligent entity regarded as human if it lacks human form or parentage such as, an intelligent animal, an artificial man (*golem*), or even a computer?<sup>1</sup>
2. In what part of the body does the human identity reside? If we determine that it resides in the brain, then if A's brain is transplanted into B's body, do we regard the result as A or B? If it is A, does A's status change in matters related to sex and heredity, e.g., if A is a man and B a woman, or A is a *kohen* and B an Israelite?<sup>2</sup>
3. How is human heredity halakhically defined? If an infant, conceived by one woman, is transplanted into another woman's womb, and later born from it, who is the child's mother?<sup>3</sup> And what if one woman's ovaries are transplanted into another, and she conceives — who is the child's mother? Are parenthood relationships affected if genetic engineering has been performed on the child (or on the germ cells before conception)?<sup>4</sup>

The essay will present additional source material on some of these questions and discuss a number of related questions on human identity and heredity.

### I

Before proceeding, a review of few of the basic sources on who is regarded as halakhically human is necessary. The child of human parents is considered human even if it does not have

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human form; killing such a child is regarded as murder.<sup>5</sup> Similarly, it is murder to kill a deaf-mute or idiot;<sup>6</sup> thus even a person lacking human intelligence is regarded as human. On the other hand, there are sources raising the possibility that an artificial creature such as a *golem* might be halakhically human, particularly if it were intelligent. The Talmud (*Sanhedrin* 65b) relates that Rava made a man and sent him to R. Zeira, who spoke to the man, but he did not answer; upon which R. Zeira exclaimed "You are artificial — return to your dust!" This certainly implies that Rava's "man," or *golem*, was not halakhically human, since it was permissible to destroy it. This point is made by the *Hakham Zevi*,<sup>7</sup> who concludes that a *golem* such as Rava's could not be counted as part of a *minyan*. Many other authorities also discuss this question and give additional reasons for not counting a *golem* toward a *minyan* (see the references cited in Note 1\*); but none of them suggests that this is because a *golem* is not of human parentage. (Perhaps human manufacture is an acceptable substitute for human parentage; see *Hakham Zevi*, *loc. cit.*) For example, R. Yaakov Emden<sup>8</sup> states that Rava's *golem* cannot be counted because it has no intelligence and is like an animal in human shape. This seems to imply that an intelligent *golem* could be counted toward a *minyan*, which would seem to make it halakhically human.

Other questions concerning the halakhic status of a *golem* were raised during the past century. For example, the *Darkhei Teshuvah*<sup>9</sup> discusses whether an animal slaughtered by a *golem* with others standing by is *kosher*? Initially, he notes that since the authorities discuss whether we can count such a man toward a *minyan*,

we see that he is not completely excluded from the category of "man"; thus in connection with slaughtering, he would be no worse than a deaf mute, about whom we know that if he slaughtered with others standing by, his slaughtering is *kosher*.

He notes, however, that according to the *Shelah* on *par-*

\*Additional responsa on this question are cited in the *Otzar ha-She'elot v'ha-Teshuvot* on *Orah Hayyim*, published by Machon Maharshal, Jerusalem, 1970, pp. 143 and 214.

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*shat Vayeshev*, it appears that such a man is not in the category of "man" at all and is worse than a deaf mute. The *Shelah* states that

When Joseph told his father that [his brothers] were suspected of fornication, it was because [the brothers] had created a female by means of the Book of Creation, and were playing with her; and Joseph did not know about this, and thought she was a female born of man and woman . . . Now if we say that a man created by means of the Book of Creation is, at worst, in the same category as a deaf mute, then we cannot reconcile the fact that [the brothers] were playing with her. Thus we are forced to say that [such a man] is not in the category of "man" in any respect, and for this reason they were not concerned about [playing with] her.

The *Darkhei Teshuvah* also quotes the Maharsha on *Sanhedrin* 65b, who states that Rava's *golem* was destroyed by R. Zeira because "it lacked the spiritual power, i.e., speech, and had only animal vitality." This surely implies that its slaughtering would be invalid, since it has only animal abilities, but not human abilities, and it is worse than a deaf mute.

From this discussion we see that halakhic opinion is divided concerning an unintelligent *golem*; some say that it is basically human, others that it is not. Note, however, that in the case of an intelligent *golem*, i.e., one which did have the power of speech, even the Maharsha might agree that it could be regarded as human.

Another halakhic question about the status of a *golem* is raised in the *Sidrei Taharot*.<sup>10</sup> Does a *golem* who dies have the impurity of a corpse? The author initially suggests that the corpse should be impure, since the creations of the righteous are called "man;" but he raises the objection that if this is true, how was it permissible for R. Zeira to destroy Rava's *golem*? Indeed, how did R. Zeira know that it was a *golem* and not a deaf mute?

The *Sidrei Taharot* resolves these difficulties by citing the preceding statement of Rava in *Sanhedrin* 65b: "If the righteous wished, they could create a world." Rashi comments "If the righteous wished to be free of all sin, they could create a world." Rashi continues:

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. . . That is, [they could create] a true, complete man, not distinguishable from the man that God created. And this is [why] . . . when R. Zeira saw that it didn't answer him, he said "You are artificial" — i.e., that Rava's creation of you was not on a higher level than the creations of other magicians; for even Rava had not yet reached the perfection of being free of all sin, so that the statement "If the righteous wished, they could create a world" does not apply to this case.

[Moreover], even though among true men there are deaf mutes who cannot speak, this is only because their mouths are [incapable], but they do have the [basic] power of speech. But as for this [*golem*]; R. Zeira saw that it lacked the power of speech entirely. And this [power] is the basis of mankind's completeness relative to all [other] creatures, as it says "And the man became a living soul," which we translate "And it became, in the man, a speaking spirit."\* Therefore he said to it "You are artificial — return to your dust;" for since it is not a complete man, it is regarded merely as an animal in human form, and it is permissible to kill it. This seems to be the correct explanation of the incident . . . But truly, if the righteous wished [to do so], and they created a [man], he *would* have the legal status of true man, as regards impurity and everything else, and even as regards counting toward a *minyan* . . . and it would be the same as though the Holy One, Blessed be He, had created him.

The *Sidrei Taharot* concludes by citing support for this view from the Midrash *Sefer Ha-Bahir* (No. 196):

Rava said, "If the righteous wished, they could create a world." What is the obstacle? It is your sins, as it is written (Isaiah 59:2) "But your sins separated you from your God" — i.e., if not for your sins, there would be no distinction between you and Him. For Rava created a man and sent it to R. Zeira; he spoke to it and it did not answer — and if not for "your sins," it would have answered . . .

These sources imply that it is theoretically possible to create an intelligent *golem*. True, they state that this can be done only by one who is free of sin; but this limitation presumably applies only to the creation of a *golem* by supernatural means (the "Book of Creation"), and not to artificial men (or machines) developed by the application of advanced technology. In any event, virtually all the authorities agree that an intelligent *golem*, if it could be created, would be halakhically human in all

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\*See Onkelos and Ramban on *Bereshit* 2:7.

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respects:

Incidentally, the *Zafenat Paneah*<sup>11</sup> suggests that a *golem* is not halakhically human *because* its creation is by supernatural means.

Question: A *golem* that was created by means of the Book of Creation — what about counting it toward a *minyan* of ten?

Answer: . . . I explained to you that it is not in the category of reality, and the laws of the commandments do not apply to it, and it is not a "son of the covenant," and does not qualify at all to count for anything; for it is only in the category of something brought about by means of the Book of Creation . . . Although he made it by combining the sacred Names, nevertheless it is not in the category of a harmonious construct (*harkavah mizgit*), and it is classed neither as man nor as animal . . . Thus when something is created by means of the Book of Creation, it is not legally in any existing category of forms; and this is why it says in *Sanhedrin* "return to your dust!"

This discussion would not apply to a *golem* created by natural means; thus even according to this view, it is possible that such a *golem* could be halakhically human, which confirms the conclusions suggested earlier.

However, if intelligent *golems* could be created in the laboratory, it should not matter whether they are biological ("androids") or mechanical ("robots"); note that the *golems* discussed in the halakhic literature are assumed to be made from "dust." Moreover, it should not even matter whether these *golems* have human form, for a child of human parents is human even if it lacks human form. The same rule might well be applied to *golems*, if we regard human manufacture as a substitute for human parentage. Thus it is conceivable that even an intelligent computer could be halakhically human.

The foregoing applies only to *man-made* intelligent entities; what if intelligent natural creatures (dolphins, Martians) were discovered? Perhaps the concluding remarks of the *Sidrei Taharot* are relevant here. He contrasts man-made "men" with the man created by God and states that if we were able to make an intelligent "man," it would be as though God had created him. But human form, as just pointed out, should not be necessary in a man-made "man," provided he has intelligence. Perhaps

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the same rule holds for God's creatures: if they have intelligence, they may be halakhically human, even if they do not have human form.

We have not attempted here, for obvious reasons, to give a precise definition of "intelligence." Clearly it is related to the power of speech (or verbal communication). But to what *degree* must one possess this power in order to be regarded as intelligent? Presumably the chimpanzees who have learned to communicate in simple sentences, using sign language or other methods, are not intelligent. Where do we draw the line? As mankind pursues the search for extraterrestrial intelligence and designs increasingly intelligent computers, let us hope that the questions raised here begin to receive serious attention.

## II

Turning to the question of how human identity is determined, in which part of the body does the identity reside? There are many Biblical and Talmudic passages which seem to imply that it resides in the heart; but a case can be made for the view that it resides in the head, i.e., in the brain.<sup>11a</sup> This is suggested by the discussions as to whether a man with two heads is one or two people;<sup>11b</sup> note that no such questions were ever raised about a man with two hearts.

In recent years, there has been much debate over the halakhic permissibility of heart transplants, on the grounds that we are killing the donor if we take out his heart before he is entirely dead; but if the seat of the identity is the heart, we are saving the donor, not killing him — it is the recipient who is being killed when we replace his heart by the donor's.

If the identity does reside in the brain, then if A's brain is transplanted into B's body, the resulting person is A, not B. On the other hand, in some respects A's status may change to match the condition of his new body. In particular, if A and B are of opposite sexes, we would certainly have to say that A's sex has changed; it would be insupportable to regard a male body as halakhically female, or vice versa. The same would be true if a functional sex change operation were performed on

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A — we would surely have to recognize its validity halakhically.<sup>12</sup> Presumably such an operation would be halakhically forbidden, as would a brain transplant between the sexes. Once performed, however, their effects could not be ignored.

What is the ruling if instead of transplanting A's brain into a new body, we keep it alive by mechanical means? If it can communicate (using nerve impulses to control communication devices, say), A must certainly be regarded as still alive. (He is now a "cyborg" — a cybernetic organism part human, part machine.) His new "body," being mechanical, no longer has any sex; however, we might regard him as still being of his original sex, but "castrated." A more difficult question arises with regard to defining the sex of an artificial person such as a *golem*. In our earlier discussion of the subject, we encountered a female *golem* (made by Joseph's brothers, and to whom the laws of fornication might have applied had she been human), and we also dealt with male *golems* (who were under consideration for counting toward a *minyan*, which implies that they were male). But what of a *golem* that is, say, mechanical, and has no sex? Perhaps we would have to regard it as a person of "unknown" sex (a *tumtum*); or it might be necessary to define a new category of halakhically sexless individuals.

Is A regarded as still alive if his brain has been transplanted into an animal's body? And conversely, if we put an animal's brain into a human body, is the result not human? In this connection it is of interest to note the Talmud's comments on children with animal features, or animals with human features (*Niddah* 23a-b; *Yerushalmi Niddah* 3:2) — especially the following passage in the *Yerushalmi*:

R. Yasa said in the name of R. Yohanan, "If it is entirely manlike but its face is animal, it is not a child; if it is entirely animal but its face is manlike, it is a child." Yet suppose it is entirely manlike but its face is animal, and it is reading from the Torah, and they say to it "Come and be slaughtered;" or it is entirely animal and its face is manlike, and it is plowing in the field, and they say to it "Come and perform *halitzah* or levirate marriage!"

In other words, it would be absurd to rule an animal human because it had a human face, or vice versa. In our situation

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too, it would be absurd to rule an animal [brain] human just because it was occupying a human body, or vice versa.

Another problem area associated with brain transplants involves questions of blood relationship and heredity. If A's brain is transplanted into B's body, can the resulting person marry B's relatives? And if the person later has a child, is that child related to A or to B? Analogous questions arise if B's sex organs are transplanted into A's body, since in either case, the genetic characteristics are those of B, not of A, even though the person is legally A. Incidentally, ovary transplants have already been successfully performed in humans, and the recipients appear to be fertile, according to news reports several years ago. Thus these questions are no longer in the realm of theoretical speculation; they are potentially *halakhah le-maaseh*.

Earlier I cited a group of responsa, dating from 1908, which discussed a supposed case of a "womb transplant." By an interesting coincidence, in the very same issue of *TRADITION*, Rabbi J. David Bleich's column "Survey of Recent Halakhic Periodical Literature" cited some 1930's sources on the ovary transplant problem. Both sets of sources conclude for very similar reasons<sup>12a</sup> that we ignore the source of the reproductive organs completely. If B's ovaries are implanted in A, a relative of B can marry A (and it also does not matter if B is a married woman); and if a child is later born to A, we do not regard it as related to B. On the other hand, if a child is conceived by B, and is then implanted in A's womb (so that A serves as its host mother), we can still regard the child as B's rather than A's, since the child's identity begins at conception, and it is already B's child before it is put into A's body. Thus if A's brain is put into B's body we would follow the identity of the person, and not the source of the body, as regards matters of heredity.

Similar conclusions should hold in cases of gene surgery or gene transplants. Even if A's sperm or ovum is genetically altered, the resulting child is still halakhically A's; gene transplants cannot be more effective than complete ovary (or testicle) transplants. But these rulings could lead to paradoxical results. To give an extreme example, if we transplanted animal ovaries (or genes) into a human, or vice versa, would the offspring be



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genetically animal but halakhically human, or the reverse? (Incidentally, human-animal hybrids could be created by gene transplantation; this would pose another difficult set of halakhic problems.)

In the source referred to by Rabbi Bleich,<sup>13</sup> evidence from genetic experiments is cited to prove that the child belongs to the donor of the ovaries, rather than to the recipient:

According to the experiments done by Wiesner with creeping things [*sheratzim*: mice?], it was established that [the offspring] were born with the skin color of the owner [i.e., donor] of the ovaries; and he argued from this, that the donor is significant [in relationship to the offspring], but not the one who conceived and gave birth.

However, Rabbi Kamelhar rejects this argument:

As to what they established by experimenting with creeping things, which were born with the skin color of the donor of the ovaries, and they concluded from this that the donor of the ovaries is the mother: In my opinion . . . the color is not a significant sign; for sometimes the child acquires another color, neither from the father nor from the mother, by the power of imagination [i.e., by prenatal influences; see the sources cited in footnote 4]. In any case, one cannot bring definitive proof from creeping things as regards human [heredity]; in humans, the significant thing is certainly the seed of the father and of the mother who conceived and gave birth.

Today we have much more evidence about genetic factors in human heredity; perhaps this could provide grounds for contemporary rabbinical authorities to reverse the rulings given in the responsa cited above, at least as regards the heredity of the child. One might, in particular, regard the child as related to the donor of the ovaries (or genes) for purposes of halakhic stringency — i.e., the child would be forbidden to marry the donor's relatives, as well as the recipient's relatives. Since ovary transplants are now an actuality, an up-to-date review of their halakhic status would be most desirable.

There is another basic question: in which *part* of the brain does the identity of a person reside? This is a difficult question to answer, since many of the brain's functions do not seem to be highly localized. However, certain general areas of the brain

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have been identified as being associated with specific capabilities — the “speech centers,” for example, which are normally in the left hemisphere of the brain. In view of the relationship of intelligence with the ability to communicate verbally, one might speculate that the speech centers are the seat of the personality, or at least that it resides somewhere in the speaking half of the brain.

These questions take on special significance in the light of a remarkable body of recent evidence on the results of “split-brain operations” in humans.<sup>14</sup> In recent years, the practice has arisen of cutting the principal connections between the two brain hemispheres in order to prevent the spread of seizures from one side of the brain to the other in epileptic patients. After this operation, the patients behave quite normally; but under special testing conditions, peculiar phenomena are revealed.

When a picture is shown to such a patient on the left side of his visual field, the information is transmitted to the right side of his brain (and vice versa). In such a case, the patient is unable to describe the picture verbally, since the speech centers are in the left half of the brain which saw nothing. On the other hand, his left hand (which is controlled by the right half of the brain) can respond by picking up the object whose picture was shown; but even after doing so, the patient will still verbally deny knowing why he picked up that particular object. Conversely, if an object is put in his left hand, and he cannot see it, he will not be able to say what it is; but if he is later shown a set of pictures of objects, he will be able to point to the correct one with his left hand.

Experiments of this sort suggest that in a split-brain patient, it is possible to teach the two halves of the brain different things, without either half acquiring the information from the other. (In general, the left half of the brain seems to be better at analytical and symbolic tasks, while the right half is better at geometrical tasks and at visualization.) Carried to an extreme, this could lead to a situation where the two halves have had radically different experiences — which, one might conjecture, could cause them to develop different “personalities.” In fact, many scientists believe that a split-brain patient *is*, to all intents

and purposes, two separate individuals, each operating without much awareness of the other.

Are both of these individuals halakhically human? If so, we have a situation in which two different people occupy the same body. (Query: Would they count as two people toward a *min-yan*?) If we say that only the speaking side of the brain is human, could the halakhah recognize a schizophrenic, if both personalities can speak, as a case of two people who have the same body? In this connection consider the many accounts of "possession" by a demon or a *dybbuk*. Certainly these and similar questions open up major areas for investigation as regards the halakhic definition of human identity.

### III

Another important class of problems involving identity is the halakhic status of "copies" of a person. Under this heading, consider three possible "duplication" processes:

- a. *Parthenogenesis*, in which an ovum is fertilized without a sperm being involved, so that the resulting child's heredity comes entirely from its mother.
- b. *Cloning*, in which the nucleus of the ovum is replaced by a nucleus taken from some cell of a person's body, so that the resulting child is genetically identical to that person.
- c. *Duplication*, in which a person is scanned electronically, and information sufficient to reconstruct his body "exactly" is recorded; copies of the person can then be made from this recording.

The first of these processes has already been carried out successfully on mammals, though not yet on humans (as far as I know). The second has not yet been done on mammals, but it has been done on lower animals such as frogs. The third is still in the realm of science fiction (as was television at the beginning of this century); but it is included here because if it were ever to become an actuality, it would give rise to an especially complex set of halakhic problems.

In parthenogenesis (which literally means "virgin origin"),

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an ovum is fertilized by applying some sort of shock stimulus (chemical, electrical, or mechanical) to it; no sperm is involved. The resulting child is "haploid": it has only half the normal number of genes, since its genes come only from the ovum, and it gets none from a sperm. However, this should make little difference as regards the child's development, since genes come in pairs, and one gene from each pair is sufficient to control the developmental process. Such a child will always be female, since males result from the presence of a so-called "Y" chromosome, which occurs only in (some) sperms. More important, the child's hereditary characteristics are derived entirely from its mother, since it has no father.

It is of interest to point out that animal parthenogenesis is mentioned by Rashi<sup>15</sup> in connection with Jacob's use of pre-natal influences to insure that his sheep would bear spotted and striped offspring:

R. Hoshaia said, "The water became seed inside them, and they had no need of a male."

If parthenogenesis techniques for humans were perfected, they would provide a possible substitute for donor artificial insemination (which may be halakhically objectionable); the mother could conceive without a man's seed being involved at all. Certainly this would avoid the many problems that arise, in the case of donor insemination, because of the child's father being unknown; with parthenogenesis, there is no father. A rabbinical ruling whether human parthenogenesis is permissible will probably be necessary in the not too distant future. As regards the status of the child, it is evidently legitimate, since no forbidden sex act was involved; and it has relatives only on its mother's side. (As to her husband, it is a stepchild.)

A child produced by parthenogenesis is not a genetic duplicate of its mother, for it carries only half of its mother's genes. In cloning, on the other hand, the result is a genetic carbon copy — in effect, an identical twin — of the person donating the cell nucleus. The child has exactly the same genes as the donor and, in particular, it is of the same sex.

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What is the halakhic parentage of a child who is produced by cloning? There are three possibilities:

- a. If the ovum containing the donor's nucleus is implanted in a host mother, who later gives birth to it, she might be the child's legal mother. This possibility becomes even stronger in cases where the ovum is fertilized (by a shock stimulus) after it is placed in the host mother's body, since she has then conceived the child as well as bearing it.
- b. The donor of the nucleus might be the child's legal parent, since he (or she) provided the genetic material that determined the child's development. If the donor is a man such a child has no legal mother (if we ignore the host mother).
- c. The child might be regarded as an identical twin of the donor; we might consider cloning to be a sort of delayed twinship, in which the splitting into two individuals takes place long after the donor's birth, rather than shortly after his conception. (One could easily imagine taking one of two twin embryos, shortly after they have split apart, and implanting it in a host mother; here, too, the donor has "split himself," and his twin has been implanted in a host mother.) From this standpoint, the child is a sibling of the donor, and the donor's parents are the child's legal parents.

This last possibility raises some interesting questions, since parents could acquire additional children after they have died (and after their estate has been divided), if one of their surviving children cloned himself. Would their estate then have to be shared with the new child? Could the prospective donor be enjoined from cloning himself by his siblings? (They certainly could not have enjoined their father from having additional children while he was alive; but that was before the estate came into their possession.) Still other problems arise in connection with levirate marriage (*yibum*), for example.

It is certainly essential to determine a cloned child's halakhic parentage in order to define his status as regards incest, inheritance, and the like. If techniques for cloning humans are developed there will undoubtedly be great pressure to use them. It is not unlikely that women might want to be host mothers of children who are "twins" of famous people. Thus it will eventually be necessary to resolve the knotty halakhic problems raised by this concept of delayed twinship.

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A child produced by cloning is genetically identical to the donor of the nucleus, but the child is certainly not legally the same person as the donor; as we have seen, its status should be that of the donor's twin, or perhaps of the donor's offspring. Suppose, however, that one could physically create *exact duplicates* of a person (call him "A"), perhaps by some sort of electronic scanning, recording, and playback. Such a duplicate would have memories identical to those of A, up to the moment that A was scanned. Thus the duplicate would think that he himself was A. But it seems unlikely that we could regard him as legally identical to A. True, we could make him and A joint owners in A's property; but what would we do about A's spouse, for example?

A more acceptable approach would be to regard the copies of A as new individuals, who have legal rights similar to those of newborn children. We could record them as either offspring or "twins" of A, so that either A is their parent, or A's parents are their parents, as suggested in the case of cloning. But each copy of A would have its own legal identity, distinct from that of A.

If the original A gets mixed up with a copy of A it may be impossible to prove which of them is A. Should this occur it would not give the copy any legal right to A's identity. We would simply be dealing with a situation in which one identical twin is (involuntarily!) impersonating the other.

If A is destroyed in the process of being recorded, we should say that he has been murdered, even though a copy identical to A is immediately created; the copy is legally a new individual, and A is now dead. If A has been recorded, and then dies, he should be regarded as legally dead even though a recording exists from which an identical person can be reconstructed, since the reconstructed person is not A, but a new individual. This situation is more difficult than the case where A has been deep-frozen, but is revivable; in the latter case we might not regard A as legally dead.<sup>16</sup> The recording itself, of course, is not A; it is only a "blueprint" from which a copy of A can be reconstructed. Analogously, the genetic material in the nucleus of one of A's cells is a blueprint from which a child genetically identical to A can be grown.

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These remarks about the legal status of recordings and copies of a person have some interesting implications as regards artificial men and, in particular, intelligent computers. If we construct (or grow) a large number of genetically identical artificial men,<sup>17</sup> using the same set of "blueprints," they should all be legally distinct individuals. Similarly, if we load the same program into several identical computers, thus creating several artificial intelligences, they too should be regarded as distinct. If we turn off such a computer, one could say that we have "killed" it even though a perfect recording of its program still exists; the situation is analogous to that in which A has died, but a recording of A still exists. Note that the criteria for determining when legal death has occurred will be very different for computers (and perhaps for other types of artificial men) than for natural humans; clearly, criteria based on cessation of respiration or heartbeat could hardly be relevant in the case of a computer.

It is doubtful that the ability to create exact duplicates of people will be achieved in the near future. But if it ever is achieved, it is likely to be used extensively; many people will want to keep up-to-date recordings of themselves in a safe place, so that a copy can be made if the original person dies in an accident. (Query: Could the person make a will in favor of this copy?) If duplication of people ever becomes technologically feasible, the legal issues concerning the replicas' rights will inevitably arise.

In His wisdom, God made men distinguishable from one another, for otherwise the foundations of society would be undermined:<sup>18</sup>

Man was created as a single individual . . . to show the greatness of the Holy One, Blessed be He. For a man stamps out many coins with the same stamp, and they are all alike; but the King of Kings, the Holy One, Blessed be He, stamps out each man with the stamp of Adam, and no one of them is like his fellow . . . And why are their faces not alike? So that a man should not see a beautiful house or a beautiful woman and say "It is mine." . . .

R. Meir used to say, "A man is distinguished from his fellow[s] in three things: voice, appearance, and mind. In voice and appearance, because of fornication,<sup>19</sup> in mind, because of robbers and extortionists.<sup>20</sup>

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Indeed, one who sees a large group of people should recite the blessing<sup>21</sup>

Blessed are You . . . Who knows the secrets;<sup>22</sup> for their minds are not alike, and their faces are not alike.

Certainly, duplication of people is not something that should be undertaken lightly.

The inexorable march of technology may some day make it possible to produce fatherless children, human replicas, artificial men, and a host of other unprecedented creations. As that day draws nearer, let us not forget the words of the Mishnah<sup>23</sup>:

Man was created as a single individual to teach [us] that anyone who destroys a single [human] soul is regarded by Scripture as though he had destroyed an entire world; whereas anyone who preserves a single [human] soul is regarded by Scripture as though he had preserved an entire world. And also for the sake of peace among [men]: in order that no man should say to his fellow "My ancestor was greater than your ancestor."

Even if we achieve the power to fill the world with duplicates of a single individual, or to produce "men" who are not of human ancestry, we must still remember that our powers of creation are negligible compared to those of our own Creator. Our creative efforts should be motivated by the desire, not to rival God, but to emulate His ways. Let us hope that, by adhering to this ideal, we may some day reach the level of development about which it was said, "If the righteous wished, they could create a world."

### NOTES

1. A. Rosenfeld, "Religion and the Robot," *TRADITION* 8 (3), Fall 1966, 15-26.

2. A. Rosenfeld, "The Heart, the Head, and the Halakhah," *N. Y. State J. Medicine* 70 (20), Oct. 15, 1970, 2615-2619.

3. A. Rosenfeld, "Generation, Gestation, and Judaism," *TRADITION* 12 (1), Summer 1971, 78-87.



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4. A. Rosenfeld, "Judaism and Gene Design," *TRADITION* 13 (2), Fall 1972, 71-80.
5. R. Eleazar Flekeles, Responsa *Teshuva Me-Ahavah*, Prague 5569-81, No. 53.
6. R. Yisrael Meir Ha-Kohen, *Mishnah Berurah*, *Biur Halakhah* on *Shulhan Arukh Oraḥ Hayyim* 329; in opposition to the speculations in R. Yakov Hagiz, Responsa *Halakhot Ketanot*, Krakow, 5657, Pt. II, Nos. 37-38.
7. R. Zevi Ashkenazi, Responsa *Hakham Zevi*, Lemberg 5660, No. 93.
8. R. Yakov Emden, Responsa *Sh'eilat Yavetz*, Lemberg 5644, Pt. II, No. 82.
9. R. Zevi Hirsch Shapira, *Darkhei Teshuvah* on *Shulhan Arukh Yoreh Deah* 6, para. 11.
10. R. Gershon Hanokh Leiner, *Sidrei Taharot* on *Ohalot*, Pietrykow 5663, p. 5a. This reference was brought to my attention by Rabbi David S. Shapiro.
11. R. Yosef Rozin, Responsa *Zafenat Paneah*, Pt. II, Dvinsk 5700, No. 7.
- 11a. See note 2.
- 11b. See *Tosafot, Menahot* 37a.
12. R. Yakov Emden, Responsa *Sh'eilat Yavetz*, Lemberg 5644, Pt. I, No. 171. See also discussion in note 2.
- 12a. See note 4 for details.
13. R. Yekutiel Aryeh Kamelhar, *Ha-Talmud u-Madaei ha-Tevel*, Lwow 1928, pp. 44-5.
14. Gazzaniga, Michael S., "One Brain — Two Minds?" *American Scientist* 60, May-June 1972, pp. 311-317.
15. *Bereshit* 30:38 based on *Midrash Bereshit Rabbah*.
16. A. Rosenfeld, "Refrigeration, Resuscitation, and the Resurrection," *TRADITION* 9 (3), Fall 1967, 82-94.
17. This is not beyond the realm of the possible. In September, 1976 scientists at the Massachusetts Institute of Technology announced that they had assembled, entirely from off-the-shelf chemicals, a synthetic gene that performed its heredity function perfectly when inserted into a living bacterium.
18. *Sanhedrin* 37a, 38a.
19. Rashi: So that a woman should not confuse another man with her husband — by day, because of the appearance, or by night, because of the voice.
20. Rashi: If he knew what was in his friend's mind, he could seek out his hidden places and know where his money was.
21. *Berakhot* 58a.
22. Rashi: Who knows what is in the minds of all these.
23. *Sanhedrin* 37a.