



The Emerging Social Significance of the Magnetic-Tape Write-Enable Ring

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1 April 1985

Abstract: *Magnetic tape write-enable rings are found, by virtue of physical characteristics and wide general availability, to be of considerable use outside their designed application area. Their serendipitous significance is conceptually analogous to that of the paper clip.*

1. Introduction; Nomenclature

In this paper I consider informally a phenomenon which I believe has been widely observed but seldom (if ever) discussed in the open literature. It concerns the flexible plastic rings which, by being inserted in a groove in the back side of a standard reel of $\frac{1}{2}$ " magnetic tape, indicate to the hardware of a tape drive that write operations on the tape are permitted. I assume a general familiarity with the object.

These rings are known by a variety of names, such as *write* or *write-enable rings*, *wrong-enable rings*, and even *FUE rings*. There is a small subset of those people who deal with computers who choose to call them *write-protect rings*. However, such a choice of term must be regarded as seriously misguided; one cannot in good conscience label a device as "protective" when protection is achieved by absence of the device.² Worse yet, such a mislabeling can only lead to an inane progression of terms comparable to "flammable", "inflammable", "nonflammable", and "noninflammable". I shall refer to them as *write rings*.

2. Ecology of Write Rings

In order to grasp the social significance of write rings, it is first necessary to understand a bit about their nature. Write rings, although by superficial observation quite inanimate, should be regarded as a species with peculiar characteristics and habits.

Write rings are rather gregarious. Although it is possible to keep a single write ring in isolation, it is readily observed that if left in the open (say, on a desk or shelf) it will disappear in a matter of a few days. A population is self-sustaining at around four. Above ten, the population will slowly but inexorably increase. I have maintained a small population in my office for about a year—currently five, from an initial six. The population in our computer room, which was perhaps fifteen when we moved two years ago, now stands well in excess of a hundred. It should be noted that considerable migration

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USENET: {hao,ucbvax,allegro}!nbires!rcd

²One might except from this view the realm of international defense, where weapons serve to protect by virtue of not being used.

occurs. Again by example, my own colony, which began as all yellow, now contains two yellow, two black, and one "transparent" (about which mutation, more later). The general migratory patterns seem to be similar to those of ballpoint pens.

At this point, a comparison with wire coathangers is tempting. Although it is certainly true that both coathangers and write rings tend to accumulate, and both have a number of uses incidental to their main purposes, there are significant differences as well. Coathangers are of a particularly foul disposition. Left to themselves in a dark closet, they will entangle one another, defying their human keepers to separate them without damage.³ The write ring, whether by a more jovial disposition, a less engaging personality, or simply a more rotund physique, is not in the least prone to such joining behavior.

The write ring is stiff but somewhat flexible, and not entirely elastic: It can recover from a moderate flexing but will retain some part of a more serious deformation.

Write rings exist in a symbiotic relationship with reels of tape, a new reel of tape normally being born with a ring in it. There are no recorded instances of write rings being born outside of tape reels. Rings occur in a number of colors—blue, black, and yellow being the most common.

There are two characteristics which bode ill for the survival of a write ring:

- Some have the misfortune to be born as "albinos" of an almost-transparent milky white. This renders them quite difficult to see in their reel habitat. Camouflage in this case is in no way an advantage.
- Some may, in later life, lose the appendage by which they are grasped in order to remove them from their burrow in the back of the tape reel. Since this is their preferred residence, they are always reluctant to leave it and without the appendage (perhaps through self-consciousness or fearing a danger) may entirely refuse to leave.

The danger of either the mutation or the amputation is this: It should be understood that the presence of a write ring in a tape is regarded by humans as, at best, a mixed blessing. The ability to write on a tape always carries the risk of destroying data. Failure to see a write ring or inability to remove one is therefore regarded by humans as an act of overt hostility on the part of the ring, for which cause its very existence may be terminated quite abruptly and violently.

3. Write Rings in Human Society

In this section I shall consider some of the better-known uses of the write ring. Since, as previously stated, virtually all information is anecdotal, it may well be that there are other common uses of which I have not been made aware. Of course, I shall omit discussion of the primary tape write-enabling function.

³Some have supposed this to be an elaborate form of mating ritual. This view is not currently in favor by the majority of researchers.

The use of the write ring as a toy for the common domestic feline (*Felis domestica*) may be one of its earliest uses outside the computer room. It has a number of serendipitous characteristics: soft enough to chew, sturdy enough not to be destroyed easily, too large to swallow by accident, small enough to be carried or moved easily, of an apparently interesting shape, and having a groove which can be hooked by claws. I have done a little exploratory work here with several breeds—not enough to be conclusive, but the results suggest that write rings might be of interest to most breeds. Tests on Burmese, Abyssinian, and Persian, as well as the common "domestic shorthair", showed uniformly positive response.⁴ Write rings are obviously advantageous in human-cat interactions as they provide a useful buffer between the cat's claws and the human's rather poorly protected fingers.

There are many nonspecific uses of write rings, such as leveling an unsteady table. These uses serve only as indicators of their general availability; one might as well have used a matchbook. Serious students will distinguish such usage from the form-specific uses.

One of the foci of art in the last several decades has been sculpture with "found objects" (colloquially, "junk"). Write rings seem ideal for this, having advantages such as a natural variety of color, availability, etc. However, extant sculptures seem to be limited to amateur work seen in the offices of computer-related professions. This apparent anomaly may be due to the fact that write rings are not yet well recognized by the general populace. The "art" of creating with found objects must lie in innovative constructions of mundane objects; any semblance of innovative character in the objects themselves would detract from the already-tenuous appeal of found-object art.

The flexibility of the ring is such as to invite absent-minded toying. This is the primary recreation of the rings in the colony in my office. They seem not to mind in the least, perhaps because of their durability. The write ring is eminently functional as an "executive pacifier."⁵ The plastic deformation characteristics mentioned in the previous section are essential here: Ordinary flexing is reassuringly nondestructive, but an aggressive flex yields a lasting deformation which can be interpreted by the flexer as proper submissiveness of the flexee.

The form factor of write rings invites them to be thrown. They lack any aerodynamic characteristics of note; in no way are they a substitute for the FRIS-BEE⁶ flying disk. On the other hand, because write rings are much smaller and lighter, they can be thrown over the standard cubicle walls of modular offices⁷ as a mild form of reprisal without fear of injuring the recipient.

⁴Thanks to Mrs. Diane Lemos-Dunn of the Lakme Cattery in Boulder, CO, for providing the feline experimental subjects for this work.

⁵It can be objected that a write ring utterly lacks the elegance of a \$25 gold-plated nut and bolt on a walnut stand. Of course, it also lacks the price. The write ring is the pacifier of choice over any commercial toy whenever the desire for a facade of technical sophistication exceeds the desire for a facade of upward mobility.

⁶FRISBEE is a registered trademark of the Wham-o Corporation.

⁷[Wein71] discusses the noise-enhancing, communication-inhibiting effect of such walls. A ring thrown over such a wall conveys information quite directionally and clearly, but the information content is low.

The lack of lift or aerodynamic stability is of no consequence in close quarters, and the low cost eliminates any fear of loss if the recipient is so disposed as not to return the ring promptly.

A more ambitious and inventive use of write rings as projectiles has been observed at a rock concert.⁸ Flying disks are commonly prohibited at such events; the large open areas and the common trance-like mental state of attendees makes the danger of minor injury from a disk rather likely. The write-enable rings are so small as to be harmless. The difficulty of explaining to stadium security the need for two hundred write rings was met by tying a length of string through their centers and presenting the resulting toroid as "a cushion"—which device was met with perplexity and a bit of skepticism but was nonetheless allowed to pass the gates. The rings circulated among the crowd quite visibly for several hours and sporadically thereafter to the end of the evening. [The reduction in the circulating population of rings is a natural consequence of having many curious recipients, who may be treated as "absorbing states" in a model of the process.]

4. Comparison with the Paper Clip

The paper clip is widely known to have uses far beyond the simple matter of holding papers together. It is used to unjam mechanical devices, repair certain clothing failures, make necklaces and bracelets for children, clean fingernails, and so on. An anecdote circulating some years back held that an agency of the U.S. government (possibly the General Services Administration) had studied the use of paper clips and found that fewer than half were ultimately used to clip papers.

Write rings are not available in quite the quantities that paper clips are (let us hope, at least), but the proportion which can be considered surplus is substantial. Write rings are born one per tape but are used at most one per tape drive. Tapes outnumber tape drives by perhaps three orders of magnitude, so the number of rings available for other purposes must be well in excess of 99% of all rings.

Write rings share with paper clips the advantages of extremely low perceived cost (no fear of waste) and ready availability in some environments. The existence of multiple colors is a definite advantage. (As evidence for the appeal of color, colored paper clips now exist.) Write rings currently have a whazzat advantage. This encourages their use where they will be noticed by people who won't recognize them and will ask about them. This advantage will remain until write rings have become commonplace; it is a bootstrapping device.

5. References

- [Wein71] Weinberg, Gerald M. *The Psychology of Computer Programming*. Van Nostrand Reinhold, New York, 1971.

⁸The *Grateful Dead* at Red Rocks Park, Morrison, Colorado, July 1979.