

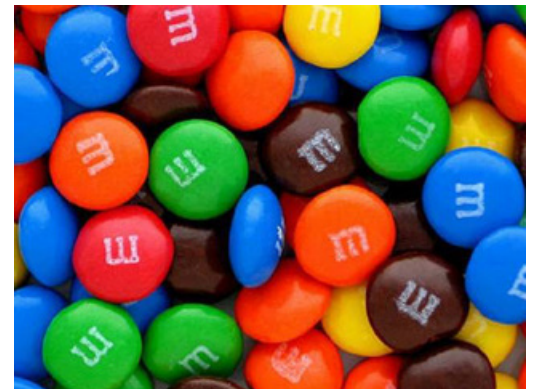
Seasonally Appropriate Reinforcers

Andy Lattal



“Visions of sugar plums” is but one of many descriptors featuring sweets used when describing this season of the year. Believe it or not, there is a connection between such visions and the history of behavior analysis. Gumdrops, along with raisins, currants, and “party mints,” served as reinforcers in some of the earliest learning experiments with children as subjects (Bijou & Sturgis, 1959). The sweet I wish to feature during this season of the year, however, is the familiar one that “melts in your mouth and not on your hand.” Yes, that’s it: the M & M, perhaps the most prominent candy in the history of our science.

In a comprehensive and influential review of “operant methods in child behavior and development,” Bijou and Baer (1966) discussed the use of M & Ms as reinforcers with children second, right after money. They noted the M & M slogan (see above) as a positive arguing for their use, but also several drawbacks, namely, concerns of parents with tooth decay resulting from too many sweets and the fact that “it is generally known that children will eat candy when they will not eat other food, candy is not insensitive to satiation” (p. 753). Despite these drawbacks, M & Ms became associated with operant research with children to the point that at least one behavioral research equipment manufacturer (the Ralph Gerbrands Company) advertised a pellet dispenser that could be adapted for dispensing M & Ms. ([see Figure 1](#)).



Using M & Ms as reinforcers may have started at the University of Washington soon after their 1956 introduction on the American culinary scene. Bijou was on the psychology faculty there, where he had an active research program focusing on the study of operant behavior of children. Bijou and Sturges (1959) described a discrimination learning experiment conducted with children conducted by Brackbill and O’Hara (1957) in which the reinforcers were M & Ms. Long before this, however, Warren and Brown (1943) used as reinforcers “candy pellets, approximately hemispherical in shape, ... made of sugar, corn syrup, and gelatin ... “ (p. 186). These pellets were the direct ancestor of M & Ms, but that history takes us too far from the topic of this brief piece.

The combination of a decline in operant laboratory research with children, general health concerns with candy for children, and the rise of the technology of Functional Analysis for general use by applied behavior analysts to identify functional reinforcers led to the demise of M & Ms (as well as other more structurally defined reinforcers) in research and practice. Visions of M & Ms, however, still dance in the heads of an older generation of behavior analysts.

Figure 1. Advertisement for a Gerbrands Company M & M dispenser.

GS210 GS230



MOTOR DRIVEN

- M & M CANDY DISPENSER
- MONKEY PELLET DISPENSER
- MARBLE DISPENSER

The exit tube of the feeder comes out through the front part of the bottom of the cabinet. A spring or plastic tube is provided which can be attached to the exit tube so that the pellets may be conducted to the animal's food tray.

The feeder comes with a choice of two mounting brackets. One is a wall bracket, the other is a pipe bracket suitable for fastening the feeder to the pipe structure common to gamma chains, etc. It is also possible to mount the feeder on any part of a flat surface such as plywood, etc., as long as some provision is made to allow the pellet tube to extend through it.

This is a very well made dispenser. We have spent considerable time in developing and testing it. All parts are properly machined and carefully assembled. Only components of the best quality are used in its construction. With a little care and periodic cleaning it will give excellent and trouble free service for many years.

The standard pellet sizes are described below. But we are prepared to make up dispensers for pellets larger or smaller than those listed, i.e., for any spherical or nearly spherical pellet up to a diameter of 11/16 inch.

Pellet Dispenser, Model A, Motor Driven
300 mg. 7.5 mm dia. Noyes banana pellets
600 mg. 8.7 mm dia. Noyes banana pellets
1 gram 11.1 mm dia. Noyes banana pellets

Catalog No. GS210

M & M CANDY DISPENSER

This is a dispenser made for dispensing M & M candies. In all other respects it is identical to our Model A Pellet Dispenser.

Catalog No. GS220

MARBLE DISPENSER

This is a dispenser made for dispensing marbles or round candy balls. In all other respects it is identical to our Model A Pellet Dispenser.

Catalog No. GS230

MONKEY PELLET DISPENSER

The Model A Motor Driven Dispenser is intended for use with the larger size pellets commonly used with monkeys. It features high reliability, quiet operation, and extremely fast pellet delivery.

The motor which drives the pellet disc operates from 110 volts 60 cycles AC. It is a clutch type motor which insures accurate positioning of the rotating pellet disc. A low current 24 VDC relay, internal to and part of the dispenser, controls the operation and cycling of the dispenser. Since the only signal required is that necessary to operate the relay, the drain on the DC power supply is very low. Thus it is not necessary to provide a separate high current power supply or capacity network for the dispenser.

A standard power cord is brought out of the cabinet for connecting the motor to a 110 VAC line. A 4 terminal Cinch-Jones female connector, mounted on the cabinet, provides the connection to the 24 VDC control relay. This connector also provides an isolated 50 millisecond formed pulse at the end of each cycle (to operate programming equipment, counters, etc.).

The size of the cabinet housing the motorized drive mechanism and its controls is 4 x 5 x 8 inches. The pellet bowl is made of aluminum and is attached to the top of the cabinet. The diameter of the bowl is 3-7/8 inches and the depth is 4-1/2 inches.

The dispenser is very easy to clean. Just brush or blow the dust away. No disassembling is required.

GERBRANDS CORPORATION
8 Beck Road, Arlington, Massachusetts 02174 (617) 645-6415
Quality instrumentation since 1900.

1962

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