



Why do we like the foods we do?

Zata Vickers

Department of Food Science and
Nutrition

University of Minnesota



Outline

- n Why do we like/dislike foods?
 - .. Biological/Physiological
 - n Innate likes/dislikes
 - n Ability to learn consequences of eating
 - n Common among cultures
 - .. Social/Cultural
 - n Evaluative or associative conditioning
 - .. Pairing/mixing foods
 - .. Pairing foods with social value
 - n Vary among cultures



Biological

n Innate likes/dislikes

.. Tastes

n Like

- .. Sweet
- .. Salty
- .. Umami

n Dislike

- .. Bitter
- .. Sour
- .. (Irritants – hot pepper burn)

.. Odors

n None

.. Textures

- #### n Difficult to control (slippery, dry, adhesive, rough/harsh/sharp)



Sweet



Bitter





Physiological

n Ability to Learn

- .. Dislikes

- n Nausea


- .. Learned aversions. (1/2 don't have them)

- .. Likes

- n Calories

- .. Calorie density

- § Flavor paired with calories (Birch, McPhee Steinberg Sullivan)



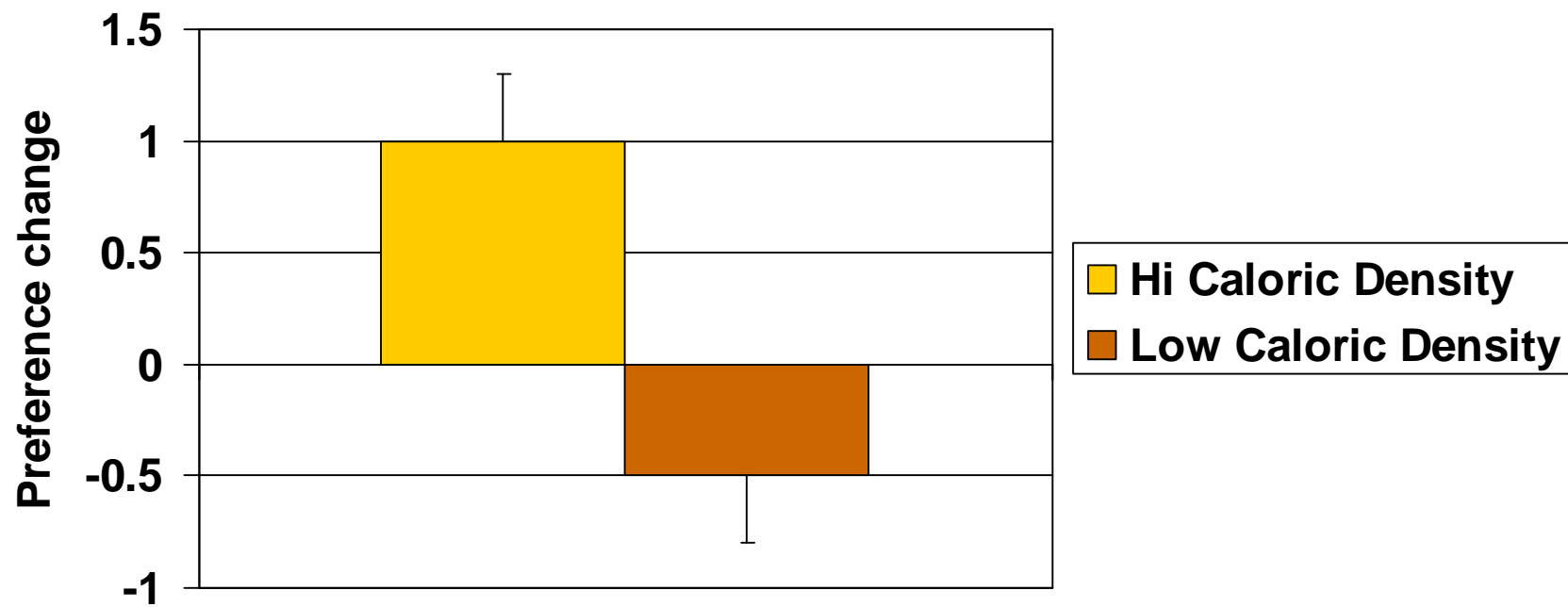
More Calories = More Liking

From Johnson et al 1991, Physiology & Behavior 50 1245-1251

- n Two yogurt drinks
 - .. high fat or low fat (220 or 110 kcal/serving)
 - .. 2 flavors— pumpkin and a orange chocolate
 - .. flavors balanced across fat contents
- n 8 opportunities to eat each yogurt
- n Before and after preferences for the 2 flavors.



Conditioned Preference for Energy Dense Yogurt Beverage



From Johnson et al 1991, Physiology & Behavior 50 1245-1251



Social/Cultural

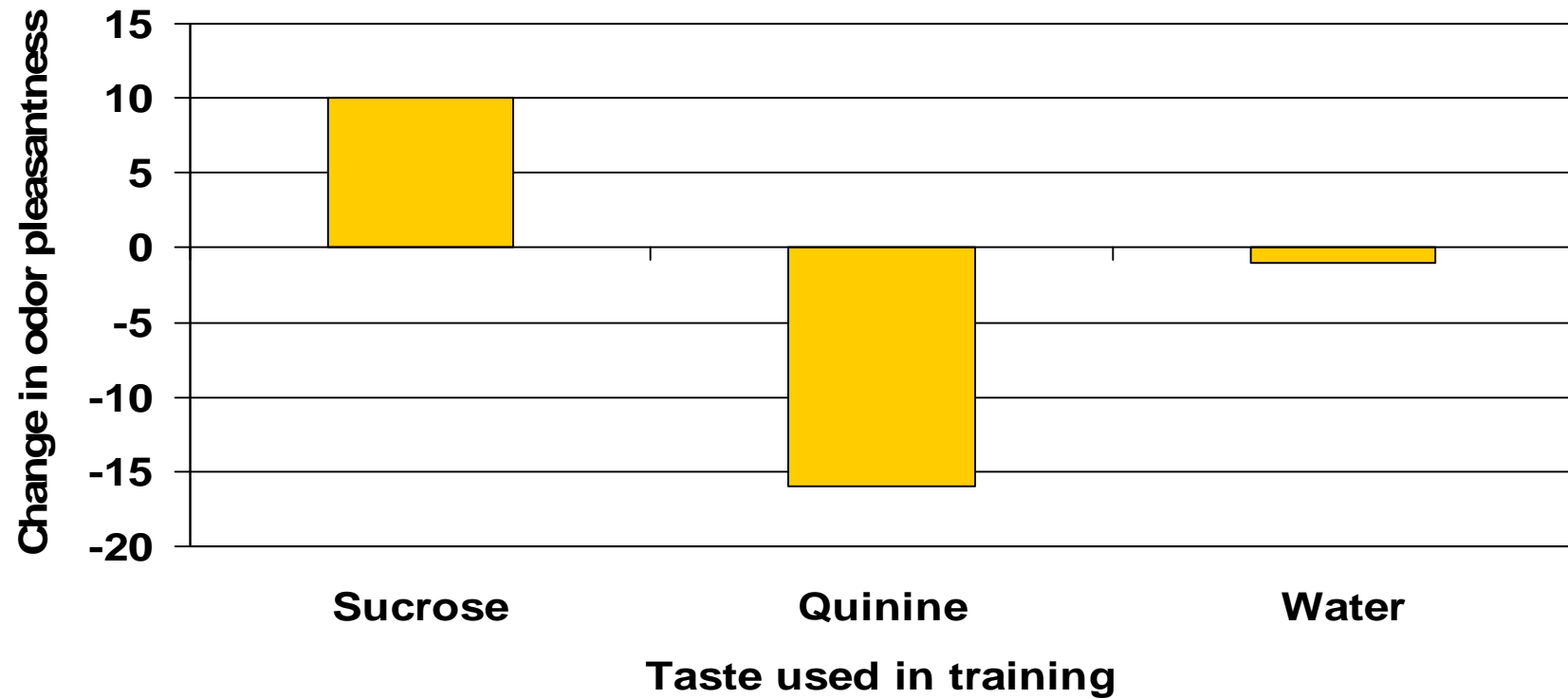
n Evaluative Conditioning - the transfer of **affect** from one object or situation to another by conditioning.

n **Flavor – flavor**

- ∴ Infant cereal with juice or formula
- ∴ Coffee with sugar



Flavor-Flavor Conditioning





Evaluative Conditioning

.. Flavor – value

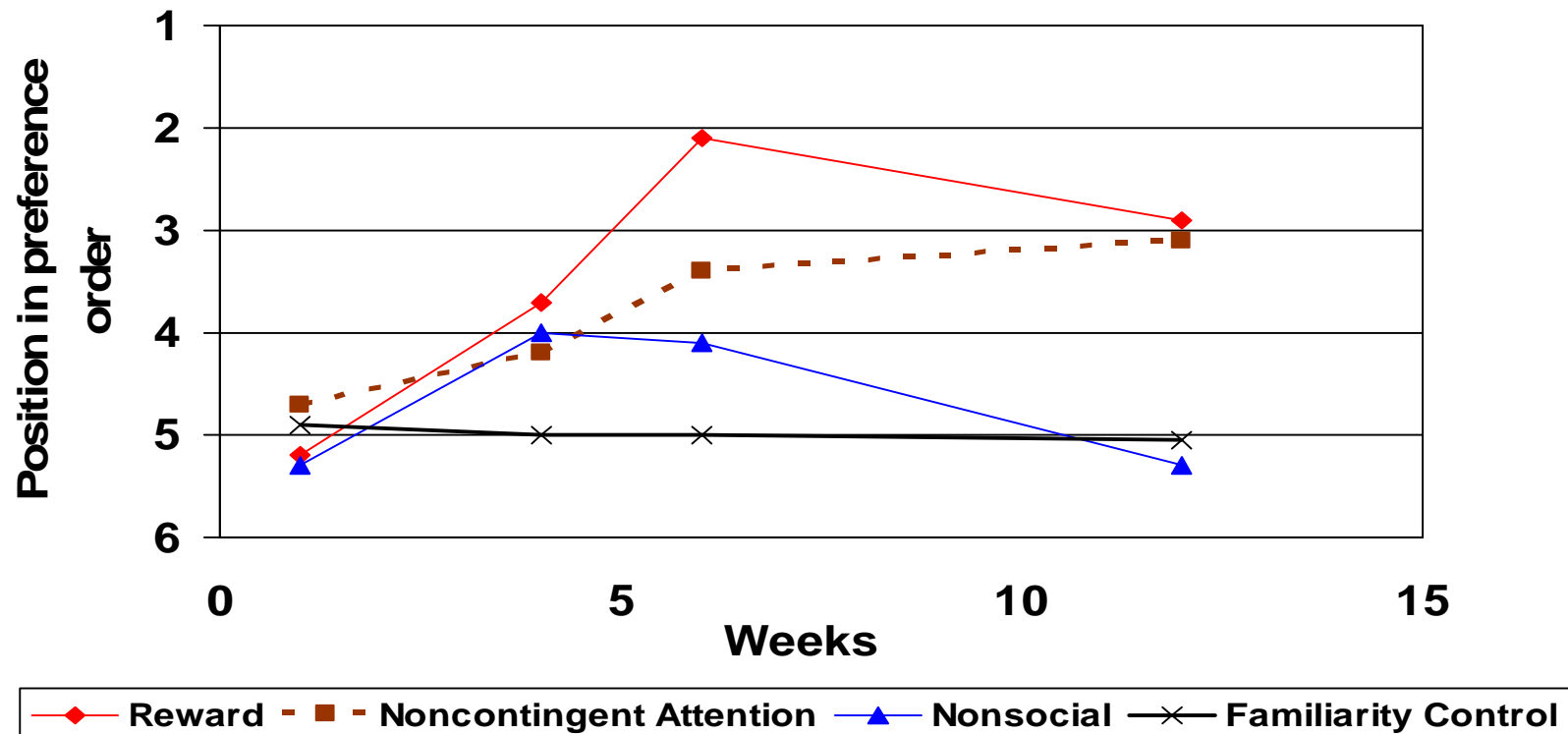
- n Reward
- n Positive social interaction
- n Hero or celebrity (parent, sibling, admired peer)
- n ? Health (ethical, economic, natural) value (doesn't influence liking? just choice -> exposure -> liking)



Flavor - Value

- n From Birch et al 1980
 - .. Reward
 - .. Non-contingent attention
 - .. Non social
 - .. Control - these children received the foods at snack time each day

Effect of Presentation Context on Preference for Snack Foods



From Birch et al 1980 Child Development 51: 856-861

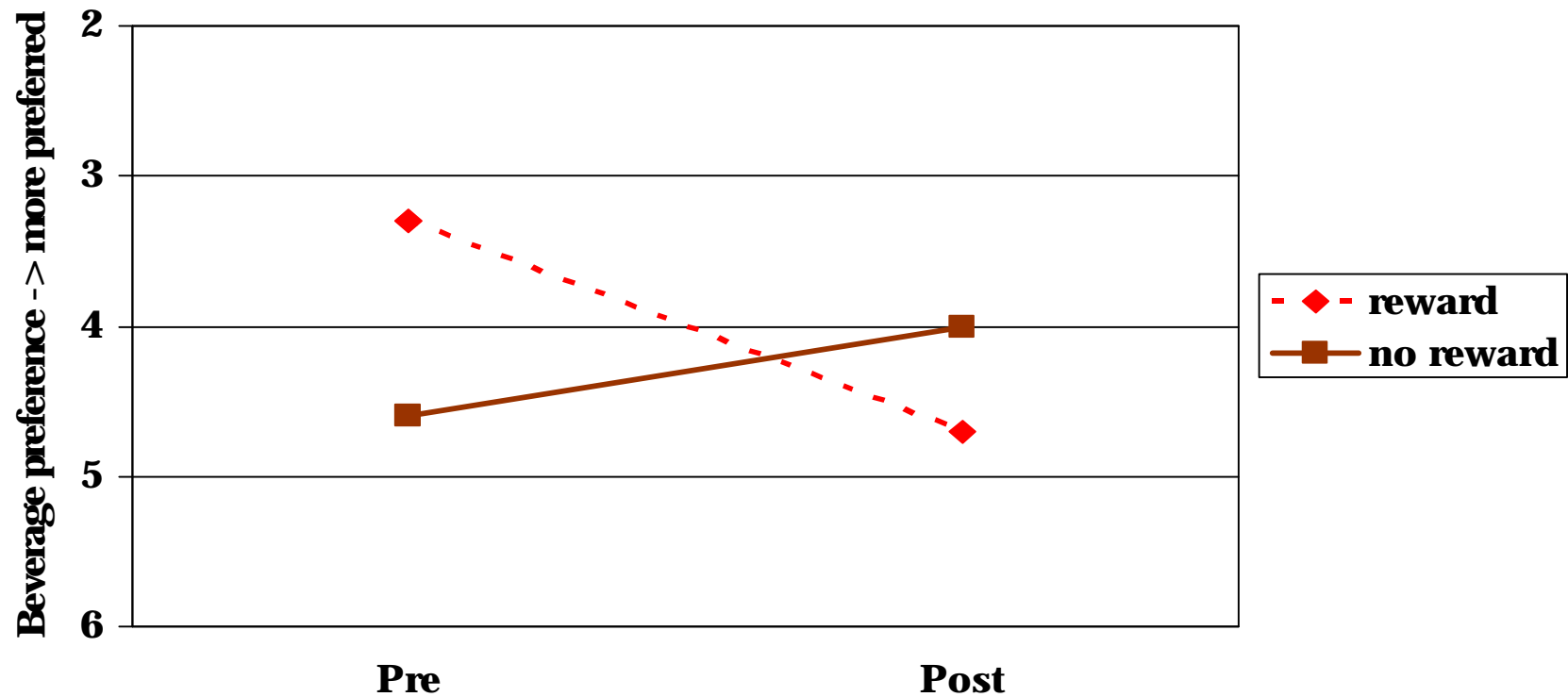


Reward Rewarded

?



If Rewarded for Eating → dislike





Hero (admired peers)

- n Measured preferences for several vegetables
- n Arranged groups of 4 children
 - ∴ Target child prefers vegetable A to vegetable B
 - ∴ Peers (older) prefer vegetable B to A
- n At lunch children are offered a choice of A or B
- n Day 1 Target child selects first
- n Other days other children select first



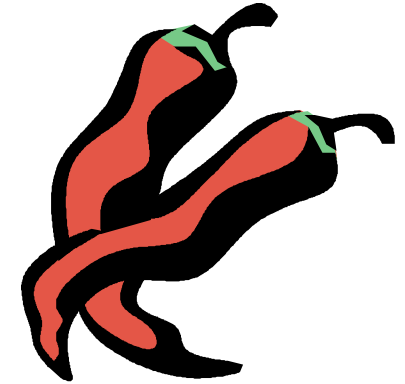
Peer Influence

Proportion of nonpreferred first choices

Group	Day			
	1	2	3	4
Target child	.12	.41	.59	.59
Peers	.15	.20	.16	.15

Chili Pepper Liking

(Paul Rozin's work)



- n Flavor-flavor conditioning -- salsa
- n Parents, older siblings, older friends
- n Not rewarded for eating Chili





Implication for Branding Beyond Borders

n Easiest

- sweet, salty, umami
- High calorie

n Build associations with:

- Positive social interactions
- Reward
- Admired people