


Howard Moskowitz
Moskowitz Jacobs, Inc.
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THE PSYCHOLOGICAL ECONOMICS OF SENSORY PERCEPTS




Topics covered

1. What is the goal?
2. Making it happen
3. What we expect the results to tell us and why
4. The dollar value of liking
5. What does each element contribute
6. Mind sets
7. Finding mind-sets
8. Implications for science & business



Topic 1 – What is the goal

- We want to put a dollar value on sensation
 - Why – because people are always talking about how important taste or texture is
 - Does that importance manifest itself in the data
 - When we do this – we may end up founding a new science – sensory economics (division of psychological economics)
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Is this the first time we've done it?

- No
- There are at least two separate books on this by the presenter
 - People, products, prices: Sequencing the genome of the consumer's mind (Galanter, Moskowitz & Silcher, in Press)
 - Mind Genomics: *The new novum organum* (Moskowitz, Silcher & Galanter, volumes 6a-6d)



Topic 2: Making it happen

- Don't reinvent the wheel
- Use experimental design ... conjoint measurement
 - Mix & match ideas
 - Get responses
 - Estimate contribute
- Difference – select dollar as rating

Here are some elements

Full set of 36

	Silo A – What the product looks like
	Imagine every drop of honey blended with brown sugar syrup.....a mouthwatering experience unlike any other!
	All-natural goodness you can see with a sweet yogurt coating
	Silo B – Texture as inferred from sound
	This is no ordinary sound... experience the sound of the pure texture that nature has to offer
	Indescribable sensation... crackling and snapping...like fireworks exploding in your mouth
	Silo C – Aroma
	Enticingly nutty aroma... hazelnuts, almonds, pistachios all crushed and blended together...
	The aroma of roses and jasmine...will have you coming back for more
0	Silo D – Textural/flavor sensation in the mouth
1	Mmm...sticky yet light...and just a tiny bit salty
2	Soft & chewy with a savory aftertaste
3	Silo E – Swallowing
4	So light and smooth...close your eyes and enjoy!!
5	Glides down like honey...unforgettably satisfying
6	Silo F –Internal sensations
7	Not filling... just enough to keep you going
8	Feels like you are one with nature and all is well with the world

Orienting the respondent

We are interested in your opinion about a totally NEW HEALTH snack for Today's hectic life.

On the following screens you will be presented with concepts (vignettes) and will be asked to rate each one on 2 questions:

1) **Based on what you see and read here, how much do you want to eat this snack?**

1=Not at all 9=Very much

and

2) ***What do you think is a fair price to pay for a package of 48 at a club store?***

1=\$6, 2=\$8, 3=\$10, 4=\$12, 5=\$14,

6=\$16, 7=\$18, 8=\$20, 9=\$22

Please make sure to use the entire 1-9 scale.

At the end, we will ask just a few questions to help us understand your needs.

Please click on >> to start.

>>

Done

Internet

175%

Example of concept w/scales

2/57

You can see every ingredient...that's what makes it so good

This is no ordinary sound... experience the sound of the pure texture that nature has to offer

Swallow slowly ... appreciate the moistness and richness as you take another bite

Leaves you with a feeling of nostalgia... just like when you were a kid

Based on what you see and read here, how much do you
want to eat this snack?

1=Not at all 9=Very much

Done

Internet

175%

*What do you think is a fair price to pay for a package of
48 at a club store?*

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

1=\$6, 2=\$8, 3=\$10, 4=\$12, 5=\$14,
6=\$16, 7=\$18, 8=\$20, 9=\$22

Done

Internet

175%



Topic 3: What we expect the results to tell us & why

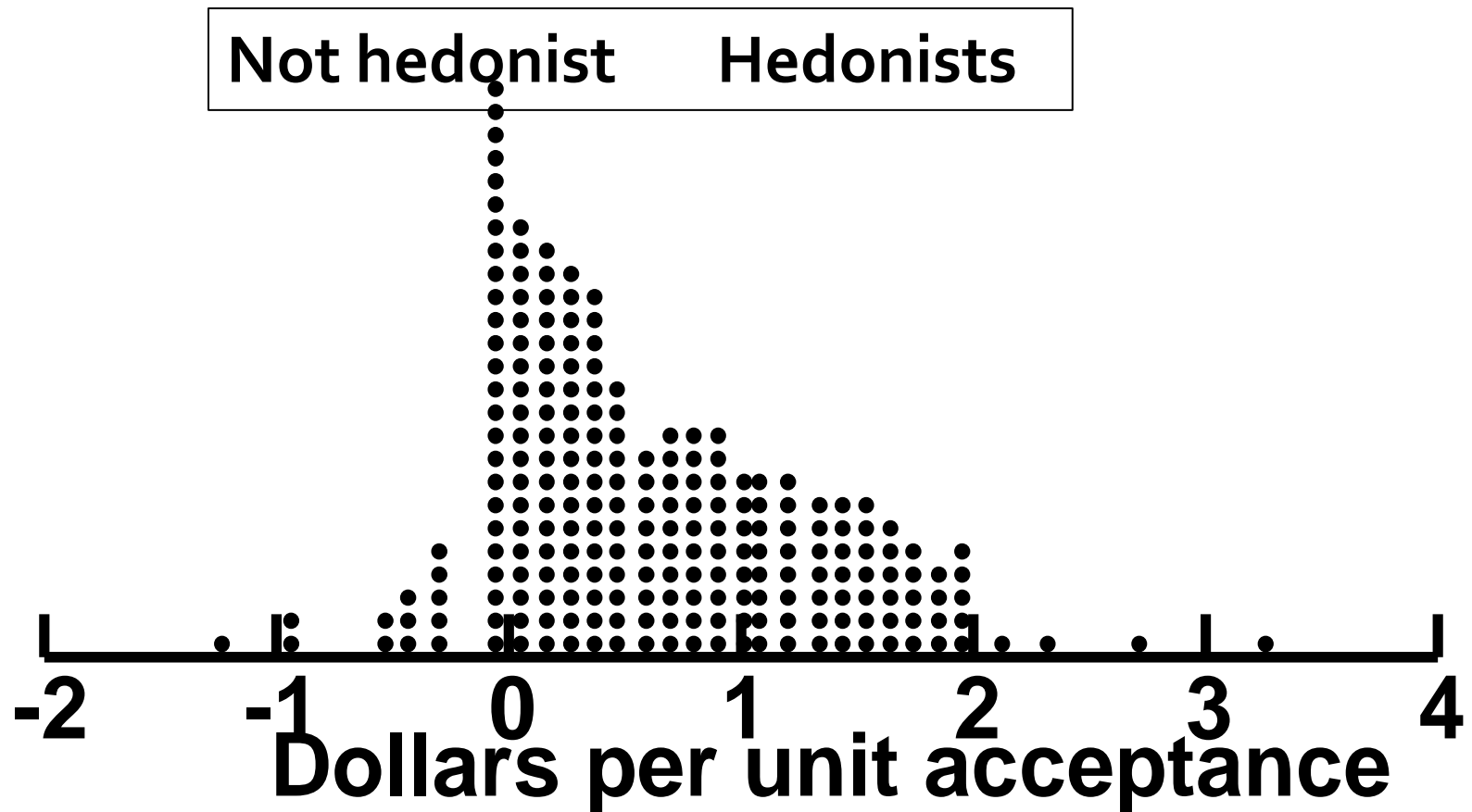
- We will systematically vary the elements in the test concepts
 - Get ratings of interest
 - Get ratings of \$\$ (price willing to pay)
- We will do this for each person
 - Relate our 36 elements to interest, prices
- We will create models
 - Overall, and then by element, and then segment

Topic 4: The dollar value of liking

- Is there any relation between how much a person likes .. And amount willing to pay
- Relate Amount to Liking
 - $\text{Amount} = a + b(\text{Liking})$
- What's the slope
 - Is everyone the same
 - Or...

The hedonic slope

Questions .. Who, For what



Slope differs by group

Some groups say they'll pay more/unit

Group	Constant	Slope
Total	7.16	0.76
Gender - Females	7.52	0.70
Gender - Males	6.62	0.84
Ethnic - Hispanic	8.93	0.53
Ethnic - Black	7.93	0.60
Ethnic - Asian	6.35	0.92
Ethnic - White	5.57	0.96
Children - None	7.11	0.72
Children - 1	7.13	0.87
Children - 2	5.02	1.11

Topic 5 – What does each element contribute?

- Use experimental design
- Relate presence/absence of each element to interest and to dollars willing to pay
- How...dummy variable regression
- Result 1 ...how each element drives \$\$
- Result 2 ... how each element drives interest

Dollar value & Interest

Estimated via dummy-variable regression

	Silo & Element	Total value of a sensory experience	
		Total Price	Total Interest
	Silo A - What the product looks like		
A1	Imagine every drop of honey blended with brown sugar syrupa mouthwatering experience unlike any other!	\$3.22	13
A4	Wholesome goodness you can see... seeing is believing	\$2.77	9
	Silo B - Texture as inferred from sound		
B1	As you chew, it makes a distinct sound to signal that your energy is going again	\$3.05	6
B5	Soft & slippery... like a stream of running water	\$2.47	2
	Silo C - Aroma		
C1	Enticingly nutty aroma... hazelnuts, almonds, pistachios all crushed and blended together...	\$3.41	18
C2	The aroma of roses and jasmine...will have you coming back for more	\$2.43	1
	Silo D - Textural/flavor sensation in the mouth		
D4	So chewy...with a faint buttery aftertaste	\$3.03	7
D1	Mmm...sticky yet light...and just a tiny bit salty	\$2.43	5
	Silo E - Swallowing		
E1	So light and smooth...close your eyes and enjoy!!	\$2.98	10
E2	Glides down like honey...unforgettably satisfying	\$2.62	6
	Silo F - Internal Sensations		
F5	Doesn't just give you a quick boost of energy...makes you feel like you can do just about anything	\$3.09	10
F1	Not filling... just enough to keep you going	\$2.81	9

Topic 6: Mind-sets

Different strokes for different folks

		Tot	S1	S2	S3	S4
	Frequency in the study population	100%	37%	25%	18%	20%
	Price Based Segment 1 - visual/aroma					
C1	Enticingly nutty aroma... hazelnuts, almonds, pistachios all crushed and blended together...	\$3.41	\$4.53	\$2.81	\$2.66	\$2.72
C3	A delicious sweet and fruity mango and papaya aroma...faint enough to remind you of summer...strong enough to have you asking for more	\$3.04	\$3.90	\$2.40	\$3.06	\$2.25
C5	Invigorating, delectable aroma...as if you just walked into a bakery	\$2.89	\$3.71	\$2.06	\$2.87	\$2.46
	Price Based Segment 2 - texture/sound					
B2	This is no ordinary sound... experience the sound of the pure texture that nature has to offer	\$2.92	\$2.41	\$4.19	\$1.99	\$3.08
B1	As you chew, it makes a distinct sound to signal that your energy is going again	\$3.05	\$2.60	\$4.09	\$3.06	\$2.55
B4	Hear every bit of the crunch in every bite! Absolutely delicious...naturally nutritious	\$2.90	\$2.46	\$3.92	\$1.93	\$3.26
	Price Based Segment 3 - mouthfeel/swallowing					
D4	So chewy...with a faint buttery aftertaste	\$3.03	\$2.65	\$2.30	\$4.81	\$3.08
E6	If you've had trouble with your little ones swallowing other wholesome foods, don't worry... your trouble days are over	\$2.81	\$2.22	\$2.97	\$4.41	\$2.32
E1	So light and smooth...close your eyes and enjoy!!	\$2.98	\$2.25	\$3.43	\$4.23	\$2.66
	Price Based Segment 4 - aftereffect					
F2	Feels like you are one with nature and all is well with the world	\$3.05	\$2.86	\$2.00	\$3.22	\$4.60
F6	Relaxes every muscle in your body... worth taking a break for	\$3.00	\$2.94	\$1.96	\$3.19	\$4.25
F3	Satisfy your hunger a little different this time	\$3.08	\$2.91	\$2.36	\$3.16	\$4.22

Topic 7: Finding mind-sets

They don't come with forehead identifiers

^sThe 30-second 'scratch test' to mind-type a person regarding what sensory experience is valued for snacks

How much would you **PAY** for each of these four sensory experiences which describe a healthful snack

Use values from 1 (pay less) to 9 (pay more)

Soft & slippery... like a stream of running water

7

Enticingly nutty aroma... hazelnuts, almonds, pistachios all crushed and blended together...

5

So light and smooth...close your eyes and enjoy!!

8

Feels like you are one with nature and all is well with the world

2

Can get 50%-60% right

Part A - elements	Part B - classification				Part C - response		
	S1	S2	S3	S4	P1	P2	P3
	-4.31	-4.11	-4.7	-4.91			
Soft & slippery... like a stream of running	0.24	0.57	-0.2	0.16	7	3	4
Enticingly nutty aroma... hazelnuts, almonds,	0.78	0.39	0.22	0.32	5	5	6
So light and smooth...close your eyes and	0.12	0.6	0.95	0.23	8	1	3
Feels like you are one with nature and all is	0.52	0.08	0.67	1.11	2	8	2
Part D - Result of evaluating the weighting function for each respondent, and the segment to							
Classification function value - Segment 1					3.3	4.6	2.8
Classification function value - Segment 2					6.7	0.8	2.4
Classification function value - Segment 3					3.6	2	-0.1
Classification function value - Segment 4					1.9	6.3	0.6
Part E - Success/Failure							
Actually in Segment 1	8	58%					
Actually in Segment 2	6	69%					
Actually in Segment 3	24	57%					
Actually in Segment 4	10	54%					
Total	48	60%					

Topic 8 – Implications

For science, for business

- New vista... inductive rather than deductive science
- Learn from patterns of responses..not from hypothesis tests..
- There's a powerful combination of elements and rating questions .. Leading to new databases
- Practical applicationsegmentation and typing tools for product design & marketing
- More elaboration & many experiments.. in the new multi-volume book on the science of the everyday: *Mind Genomics: The New Novum Organum*



MOSKOWITZ JACOBS INC.



THANK YOU!

New York

Dr. Howard Moskowitz

Office +1-914 421 7408

Mobile +1-914 572 1673

hrm@mji-designlab.com