



Pricing

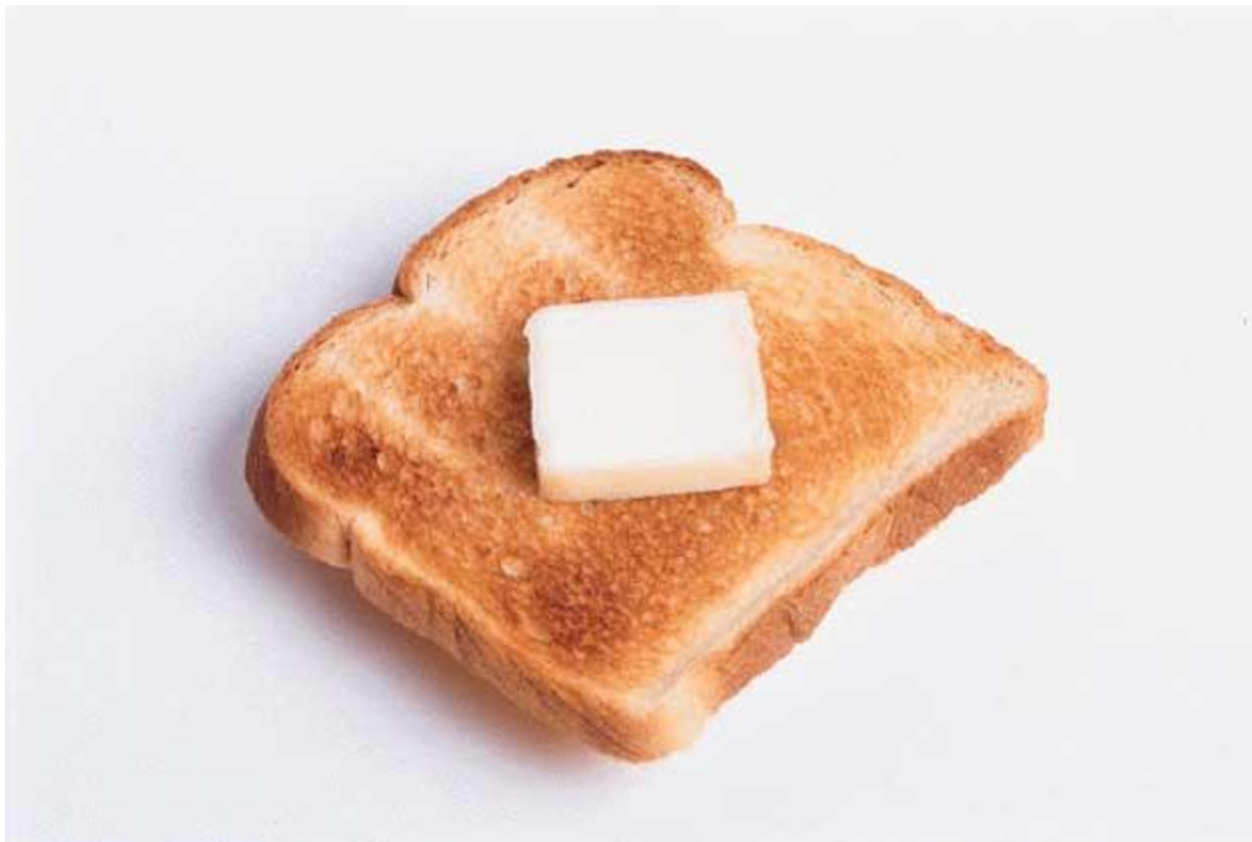


**HARRISON
METAL**

Pricing is not a math problem

It's a judgment problem

Toast



How much would you pay?

- Toaster

How much would you pay?

- Toaster
- Mechanical timer lets you get exactly the degree of toasting you prefer

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- Toaster
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- Faster warm-up ensures perfect browning right from the first slice

How much would you pay?

- Toaster
- Mechanical timer lets you get exactly the degree of toasting you prefer
- Faster warm-up ensures perfect browning right from the first slice
- Defrost setting for frozen bread before toasting

How much would you pay?

- Toaster
- Mechanical timer lets you get exactly the degree of toasting you prefer
- Faster warm-up ensures perfect browning right from the first slice
- Defrost setting for frozen bread before toasting
- Bagel setting to warm one side and toast the other

How much would you pay?

- Toaster
- Mechanical timer lets you get exactly the degree of toasting you prefer
- Faster warm-up ensures perfect browning right from the first slice
- Defrost setting for frozen bread before toasting
- Bagel setting to warm one side and toast the other
- Award-winning ProHeat elements guaranteed for two years

How much would you pay?

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- Defrost setting for frozen bread before toasting
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- Award-winning ProHeat elements guaranteed for two years
- Superlative quality, hand-assembled in England

How much would you pay?

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- Defrost setting for frozen bread before toasting
- Bagel setting to warm one side and toast the other
- Award-winning ProHeat elements guaranteed for two years
- Superlative quality, hand-assembled in England
- Iconic design, stainless steel costs manufacturer \$130 to make it

How much would you pay?

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- Iconic design, stainless steel costs manufacturer \$130 to make it
- Dualit brand, available at Williams-Sonoma

How much would you pay?

- Toaster
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- Defrost setting for frozen bread before toasting
- Bagel setting to warm one side and toast the other
- Award-winning ProHeat elements guaranteed for two years
- Superlative quality, hand-assembled in England
- Iconic design, stainless steel costs manufacturer \$70 to make it
- Dualit brand, available at Williams-Sonoma
- It's the same toaster that Queen Elizabeth uses at Buckingham Palace

Dualit Classic Toaster



Dualit Classic Toaster

\$259.95



How might we think about pricing?

- Standard model of supply and demand is powerful. It has some very nice features for **understanding** pricing
 - Downward sloping demand curves, utility and preference
 - "Elasticity" that links change in quantity to change in price
 - Supply curves, marginal costs of production and variable unit costs
 - Buyers and sellers use reason to make decisions
- But the standard model is less useful when **managing** pricing
 - New markets where demand is highly uncertain
 - Software, digital services where variable unit costs approach zero
 - Markets where humans make decisions only partly based on reason

... in a different way?

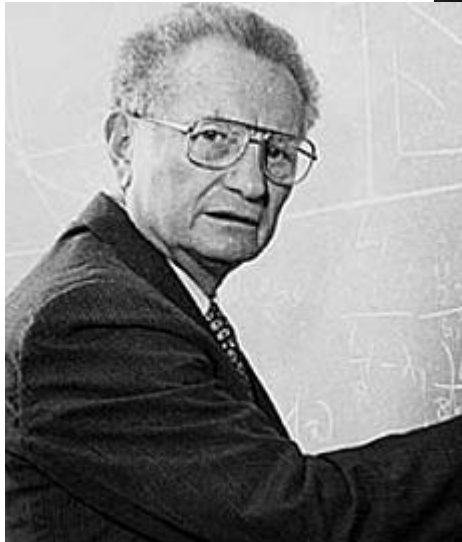
- Behavioral economics offers helpful modifications to the standard model
 - Intuition and reasoning operate together in a compound system
 - "Utility" is reference-dependent and loss-averse
 - Complex decision-making is simplified using prototypes as anchors, and accessible analytic techniques
- You can use four simple tools to improve your pricing judgment
 - Map substitutes and complements for your product
 - Design for both the intuitive and the rational p.o.v. of users
 - Create value-based prototypes (perceived value > price)
 - Build assortments to probe demand and increase conversion

Standard model - classical economics

Milton Friedman



Adam Smith

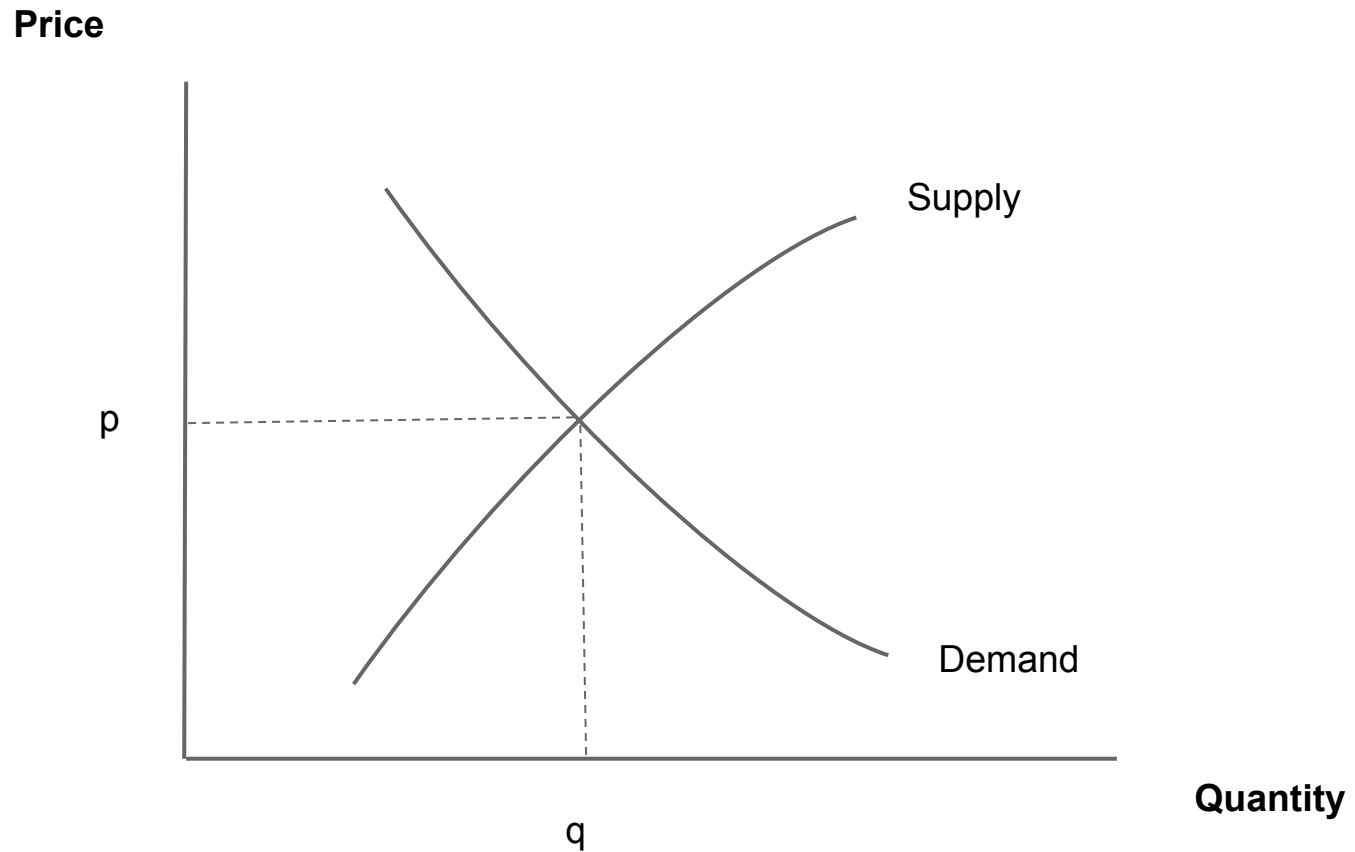


Paul Samuelson

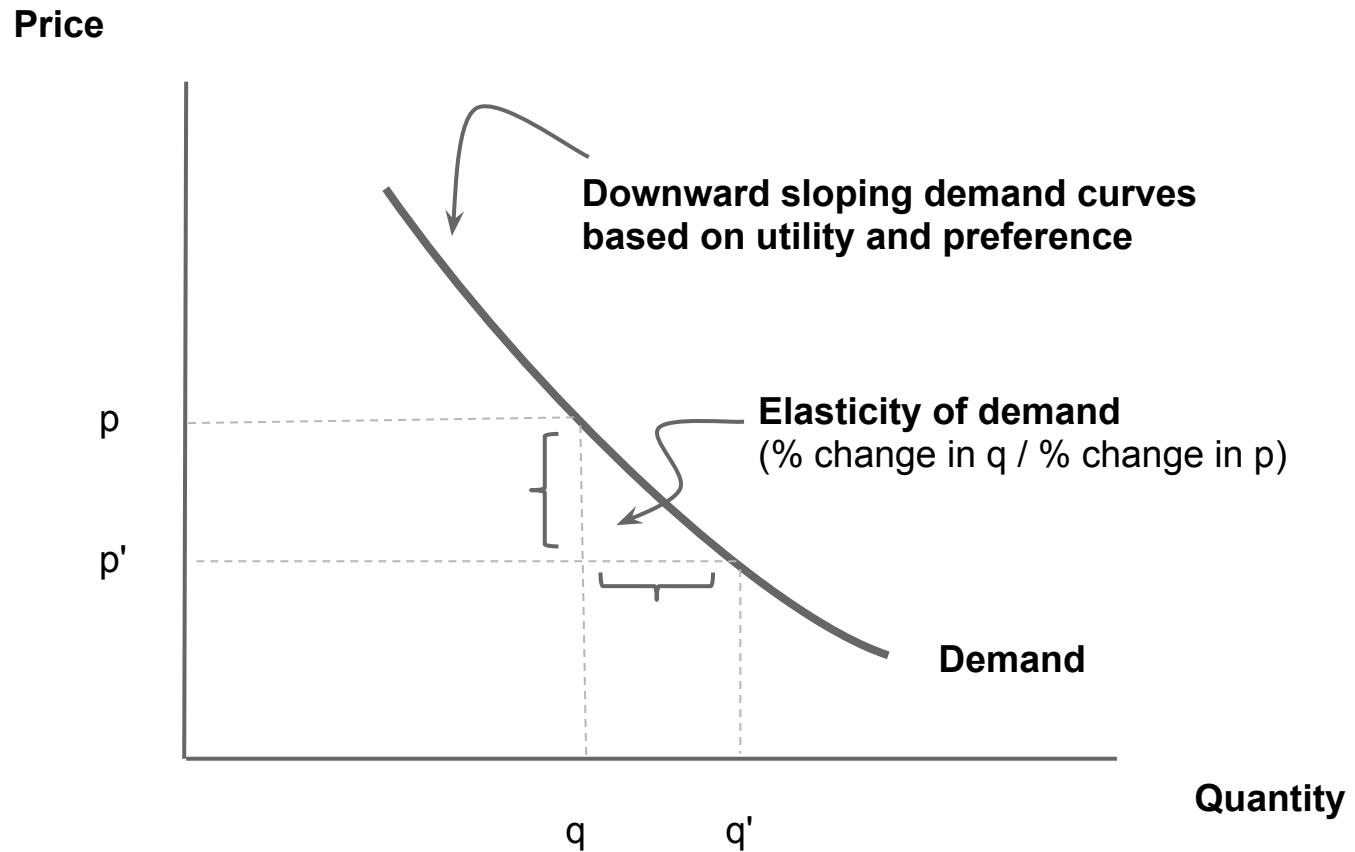
Daniel Bernoulli



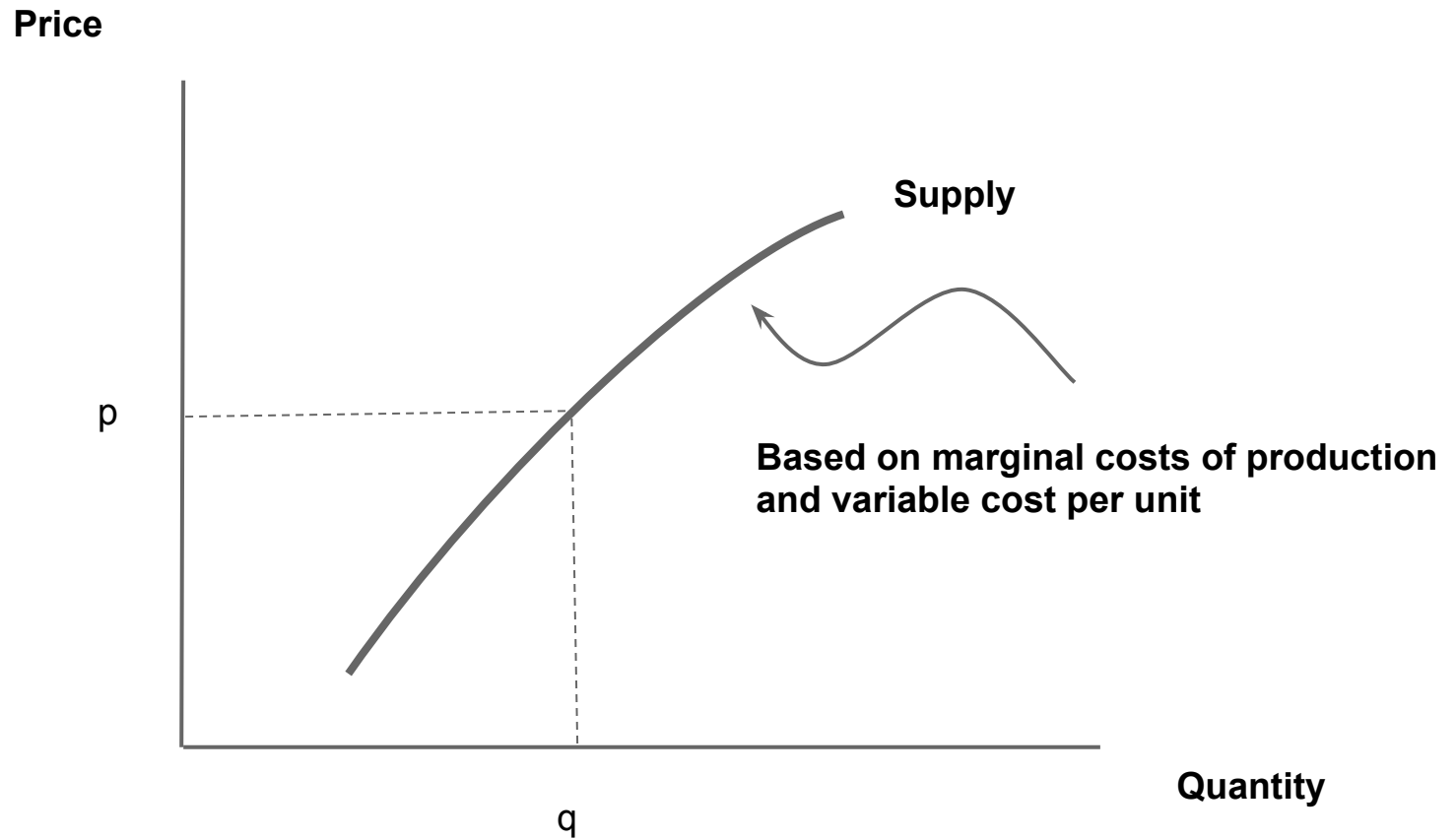
Standard model - supply & demand



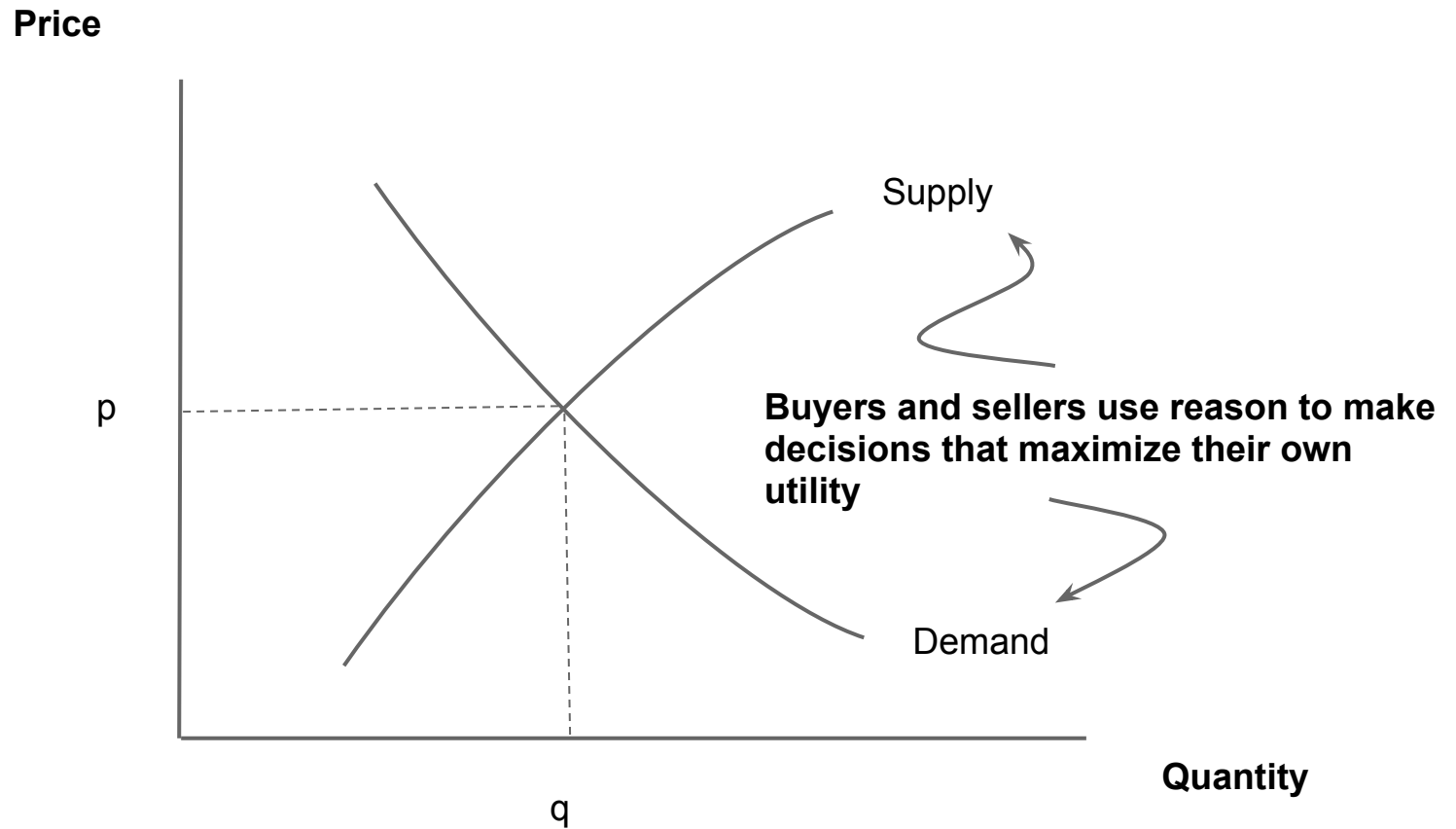
Nice features - demand



Nice features - supply



Nice features - rational actors

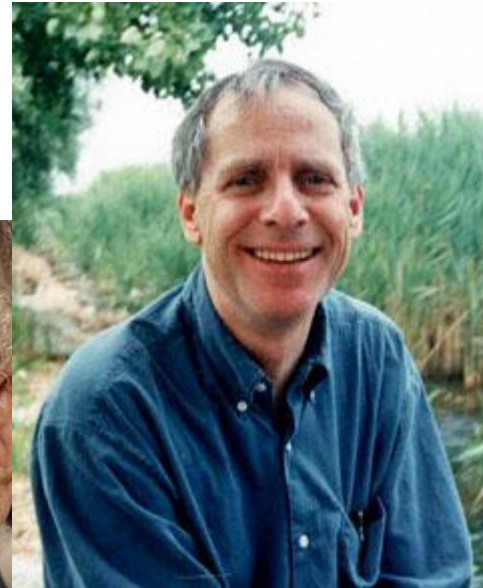


Problems with the standard model

- In new markets preferences and utility have not been established, therefore no demand curves
- In software and digital services, variable costs and marginal costs may approach zero, makes supply curves behave in weird ways
- Dis-utility from losses is not proportional to utility from gains
- Human psychology is burdened with / blessed by perception and intuition alongside reason

The psychologists

Daniel Kahneman and Amos Tversky



Behavioral economics helps

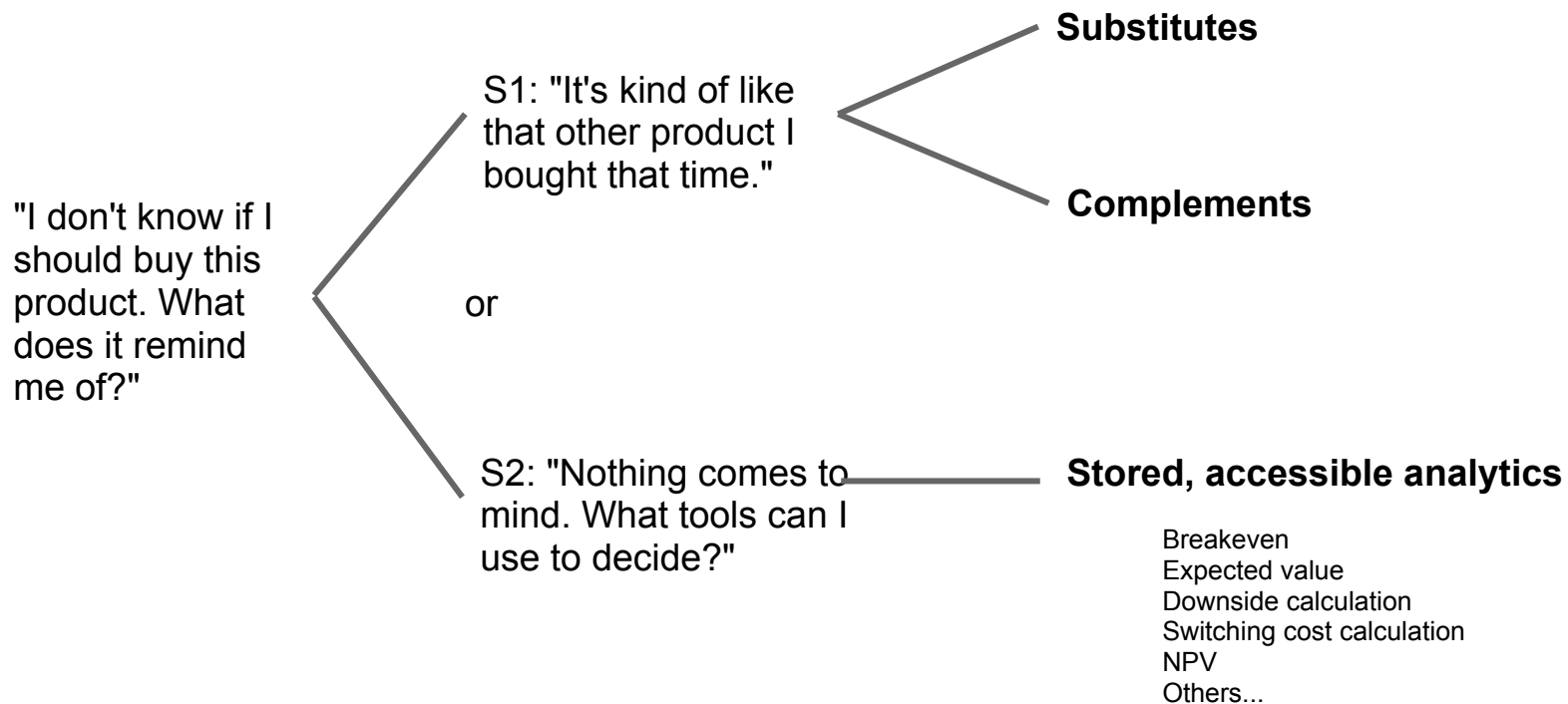
Kahneman and Tversky described a compound cognitive system, where intuition and reason operate together

Intuition (S1)	Reason (S2)
<ul style="list-style-type: none">• "Trusting plausible judgment"• Fast (like perception)• Automatic (like perception)• Quickly accesses prototype answers and suppresses uncertainty• Low processing cost, low cognitive load• Prone to errors	<ul style="list-style-type: none">• Careful, based on doubt• Slower, more effortful• Accesses stored analytic techniques and methods• Higher processing costs, higher cognitive load• Good at monitoring S1 but only if prompted to investigate

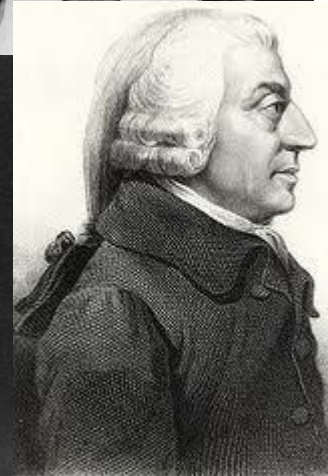
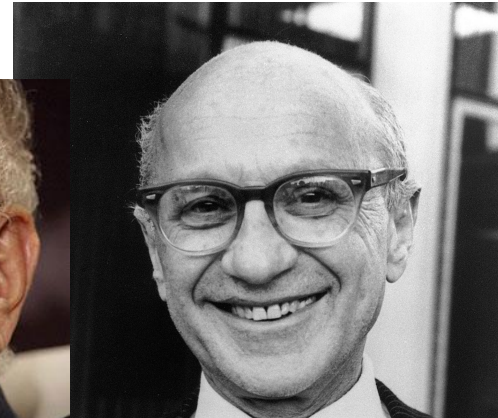
Source: "Maps of Bounded Rationality: Psychology for Behavioral Economics," Daniel Kahneman's lecture December 8, 2002 when he received the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel, Stockholm, Sweden. Reprinted in *The American Economic Review*, vol 93, no 5 (December 2003).

Behavioral economics helps

Buyers make hard decisions by accessing mental anchors like substitutes or complements, and stored analytic methods (in that order)



How do we sort all this out?



Synthesis

Core truths of the standard model

+ **Insights into humans** of the behaviorists

+ **Practical tools** that help managers make better judgments

= A better way to manage pricing

Four tools

- **Map** out your product's substitutes and complements -- they anchor your buyers' thinking in S1
- **Design** with the buyer's intuitive (S1) and rational (S2) thinking in mind
- **Prototype** a value-based price for your product (perceived value > price)
- **Build** an assortment around to probe demand curve and increase conversion

#1: Substitutes and complements

These are the highly accessible anchoring ideas that your buyers fall back on when they think about your new product using S1

Substitutes	Complements
<p>Without your product, how would your target user solve this problem?</p> <ul style="list-style-type: none">○ Do nothing○ Buy a competitor's product○ Jury rig a DIY solution○ Eliminate the underlying problem○ Hire someone to deal with it○ Keep using your earlier version of the product	<p>What are the other products you'd expect to find in nature alongside your product?</p> <ul style="list-style-type: none">○ A left shoe to go with a right shoe○ Printer with a desktop computer○ Cocktail table with a sofa○ Github subscription with a Heroku account

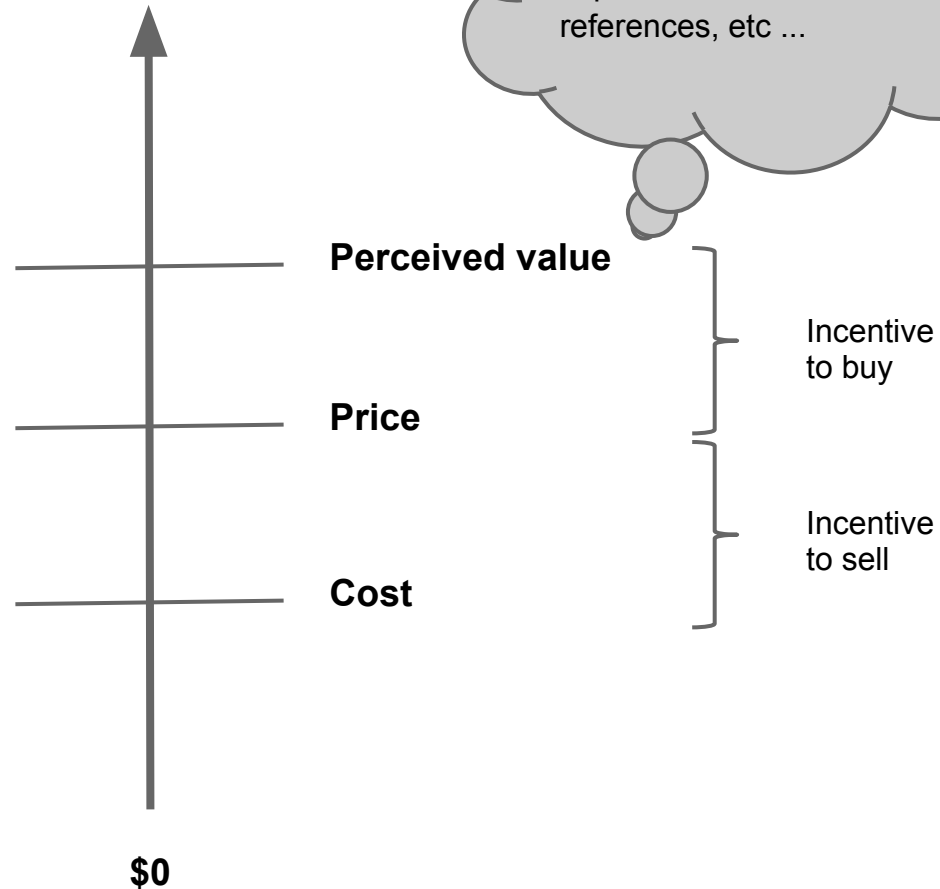
#2: Intuitive and rational thinking

- **Intuitive (S1):** immediate, automatic thoughts that "lean in" or "push back"
- **Rational (S2):** careful, effortful analytic tools that monitor S1
- To make a sale, *bolster S1* or *call on S2* to influence decision-making

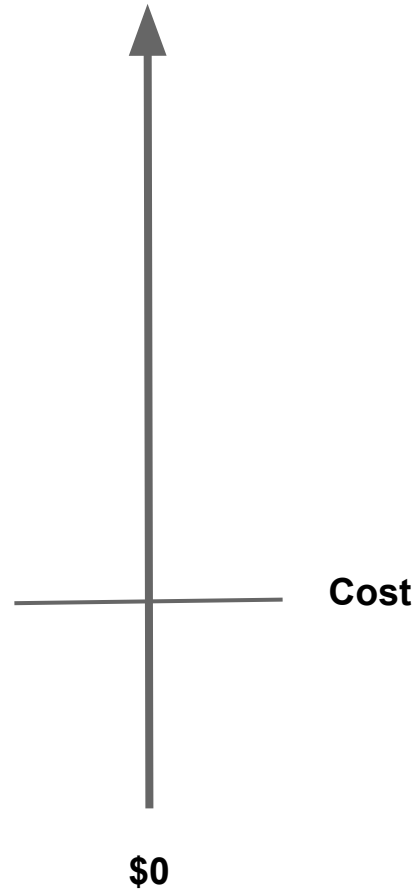
	Intuitive (S1)	Rational (S2)
Buyer's POV	Anchor ideas / prototypes / analogies Endowment state they don't want to lose Loss aversion	Household budget constraint Personal utility function Breakeven analysis Competitive price-value NPV

#3: Value-based pricing

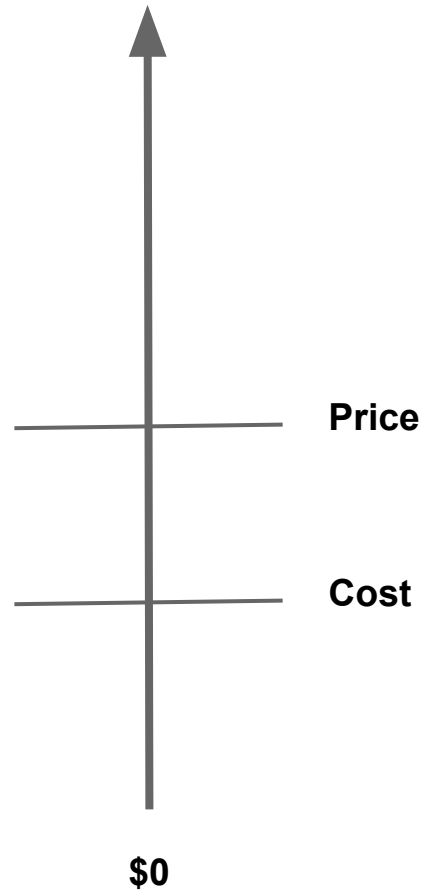
- Dolan's genius was to identify two separate gaps that drive product decisions
- He accidentally created a tool for S2 to monitor S1



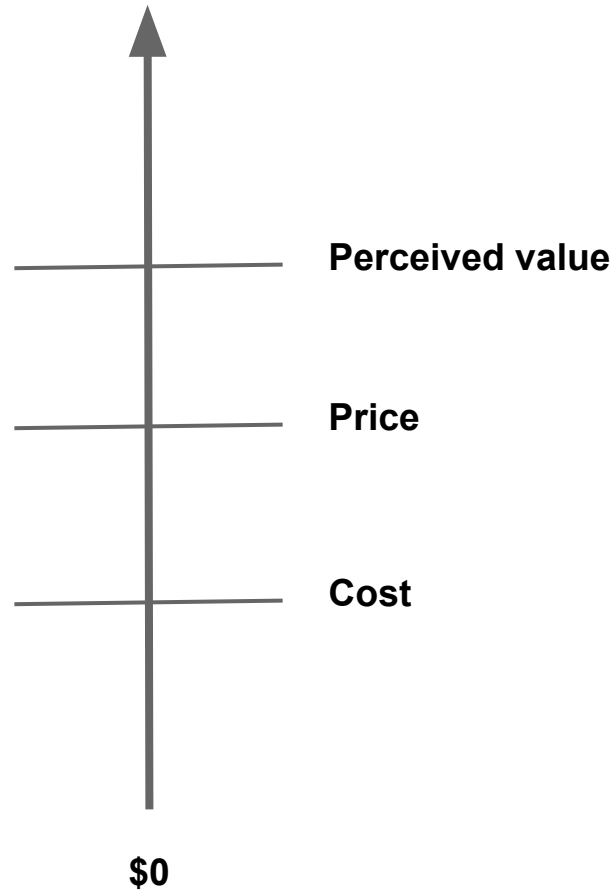
Robert Dolan's genius



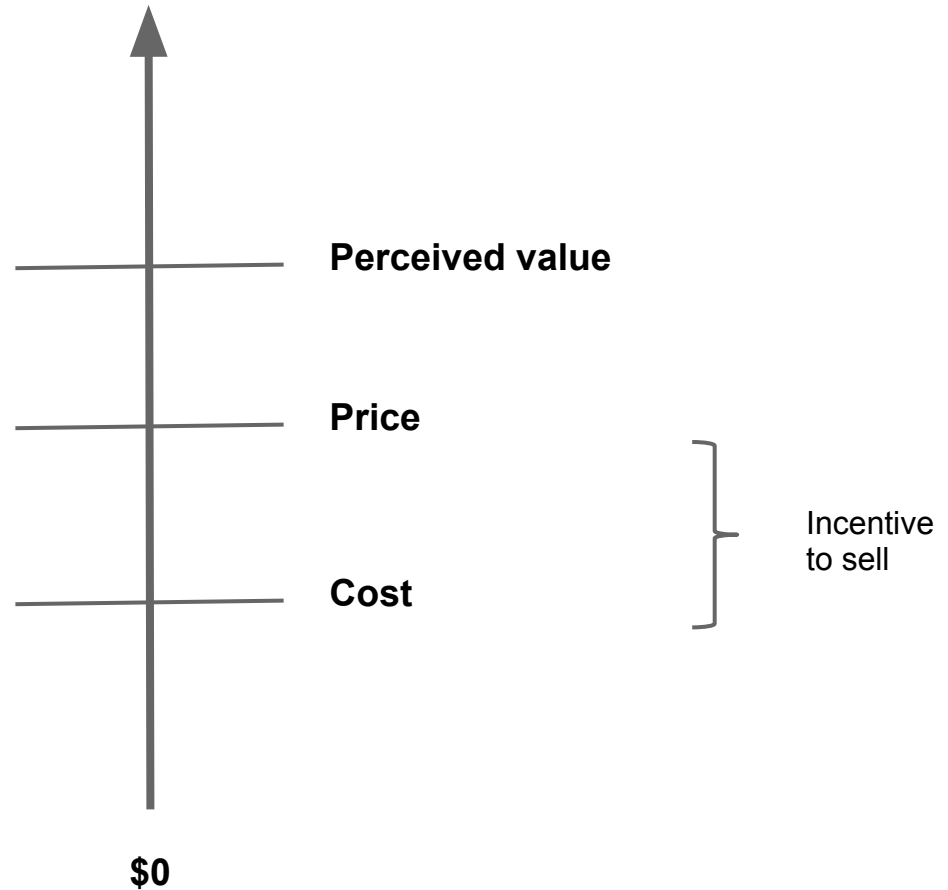
Robert Dolan's genius



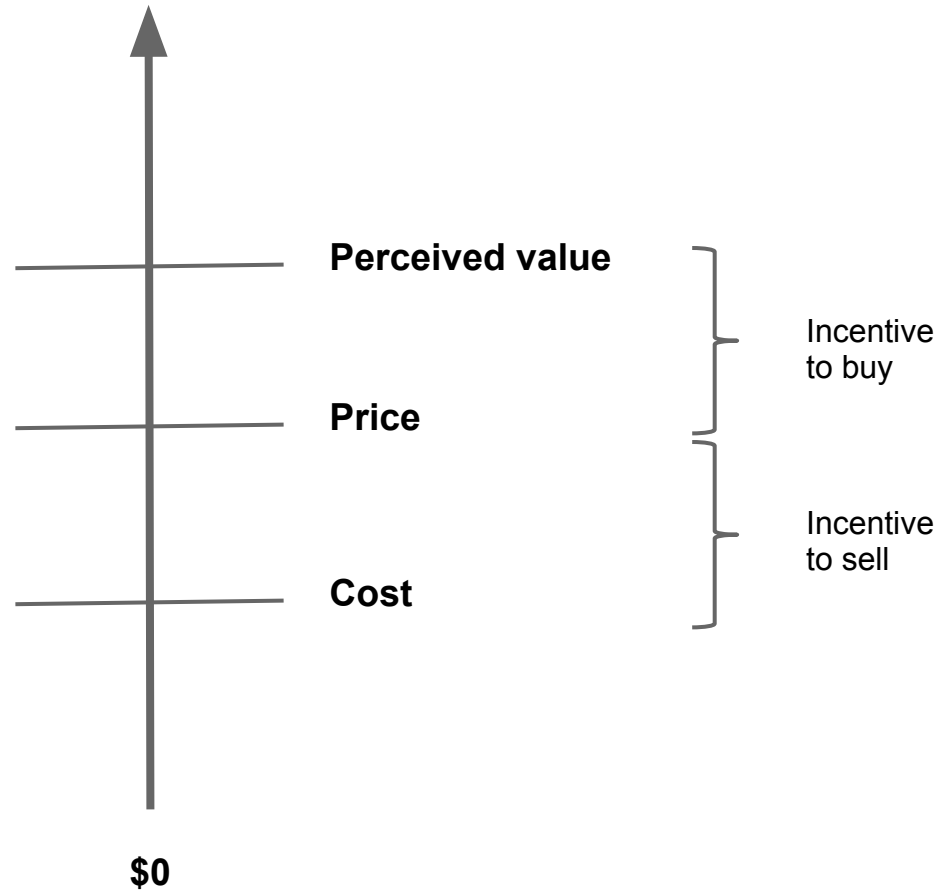
Robert Dolan's genius



Robert Dolan's genius

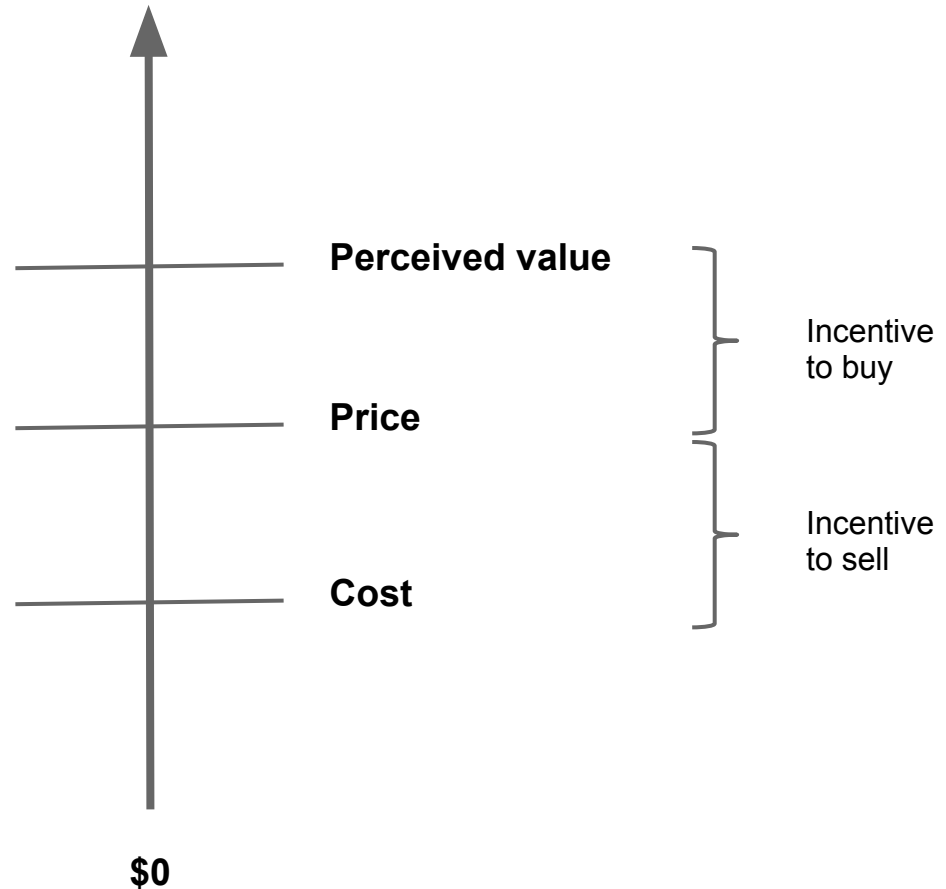


Robert Dolan's genius

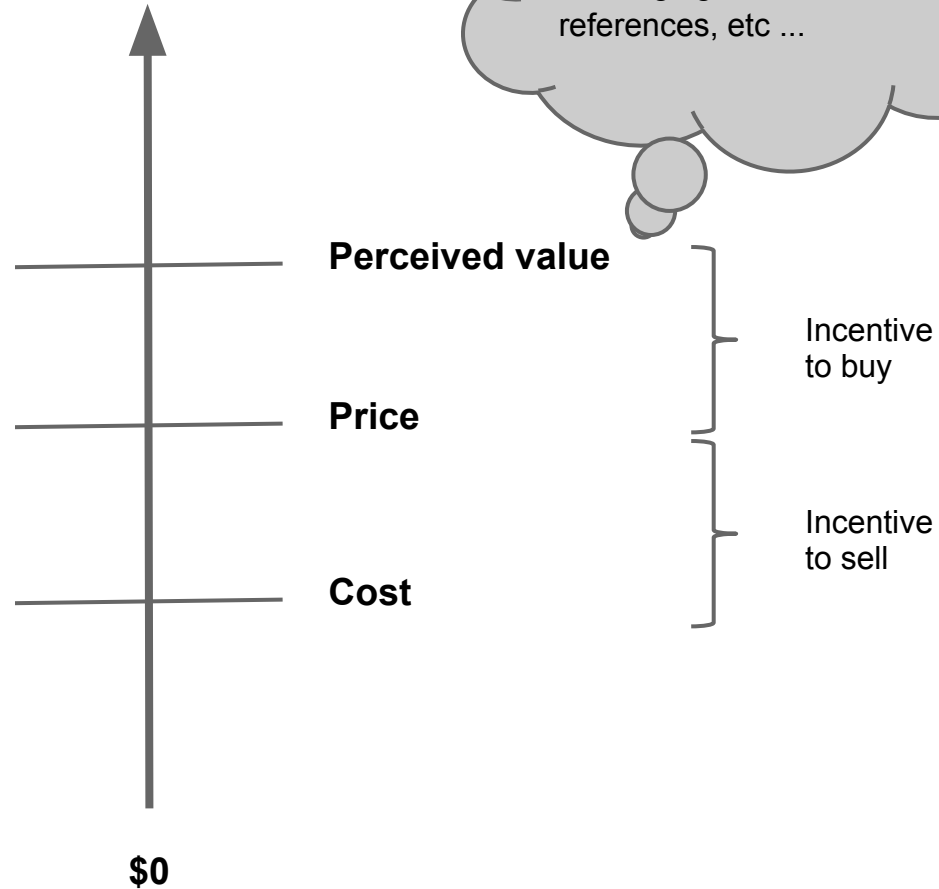


Robert Dolan's genius

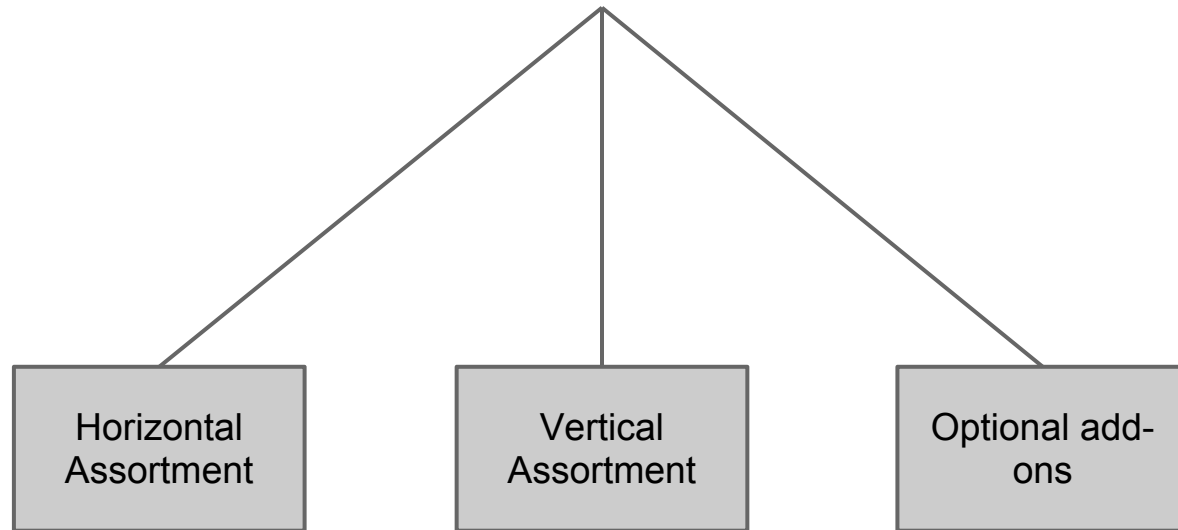
- Dolan's genius was to identify two separate gaps that drive product decisions
- $\text{Price} > \text{cost}$ is a given
- $\text{Perceived value} > \text{price}$ is a true insight



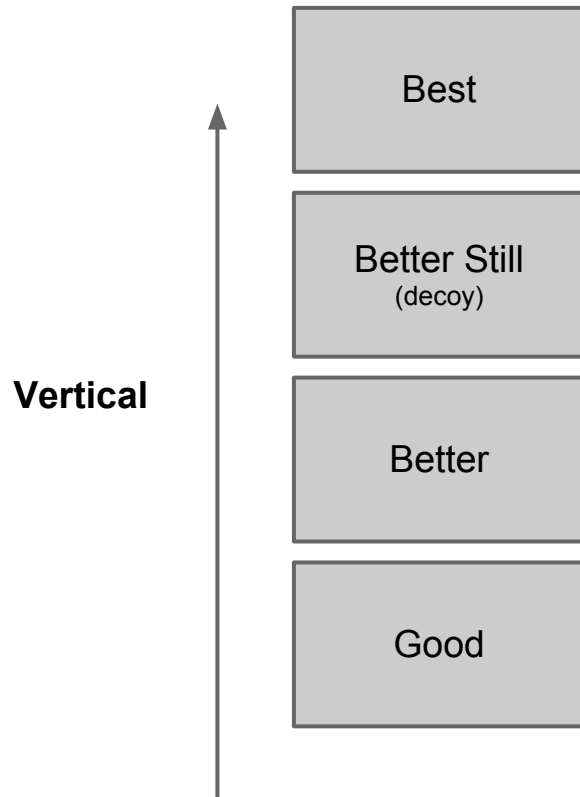
Dualit Classic Toaster



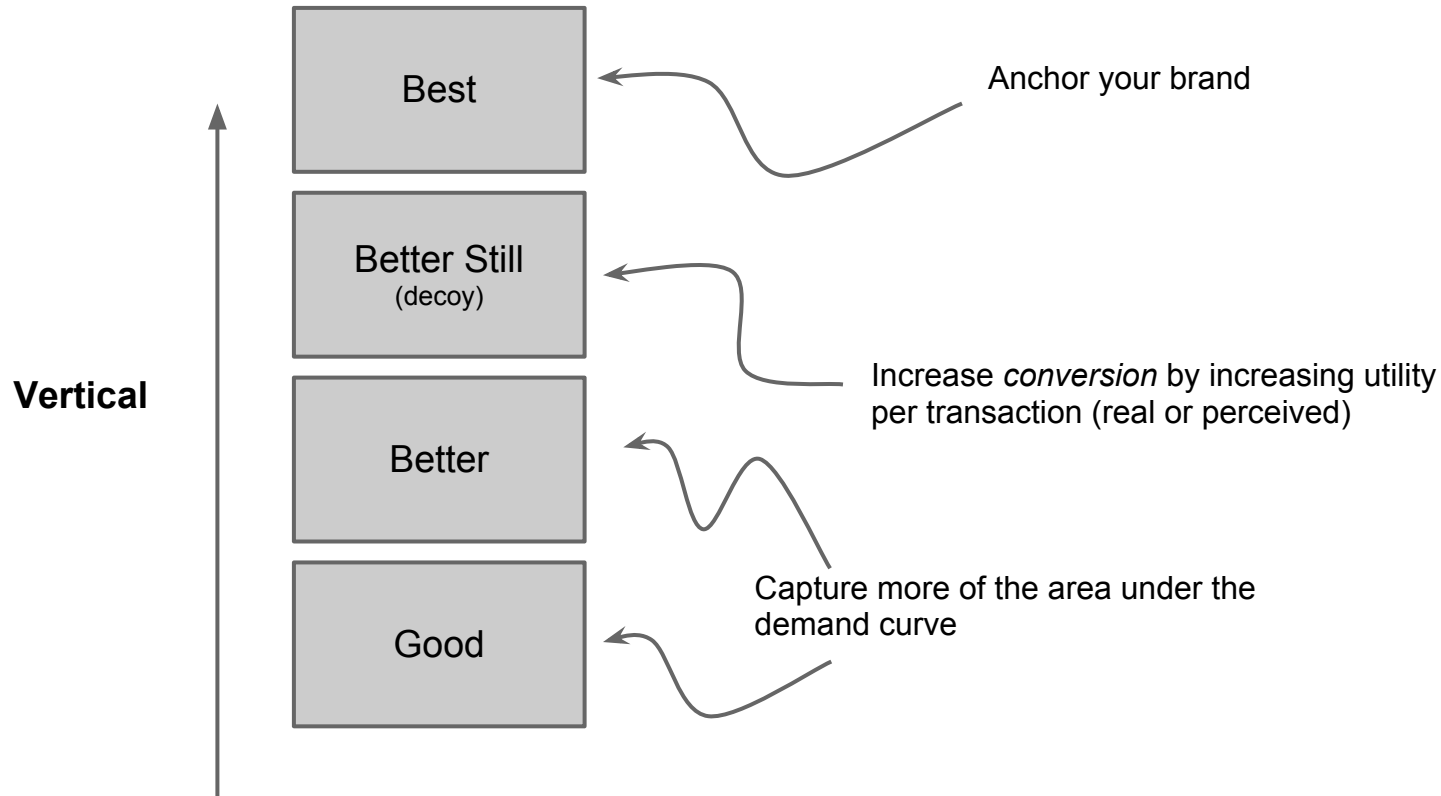
#4: Build assortments for the win



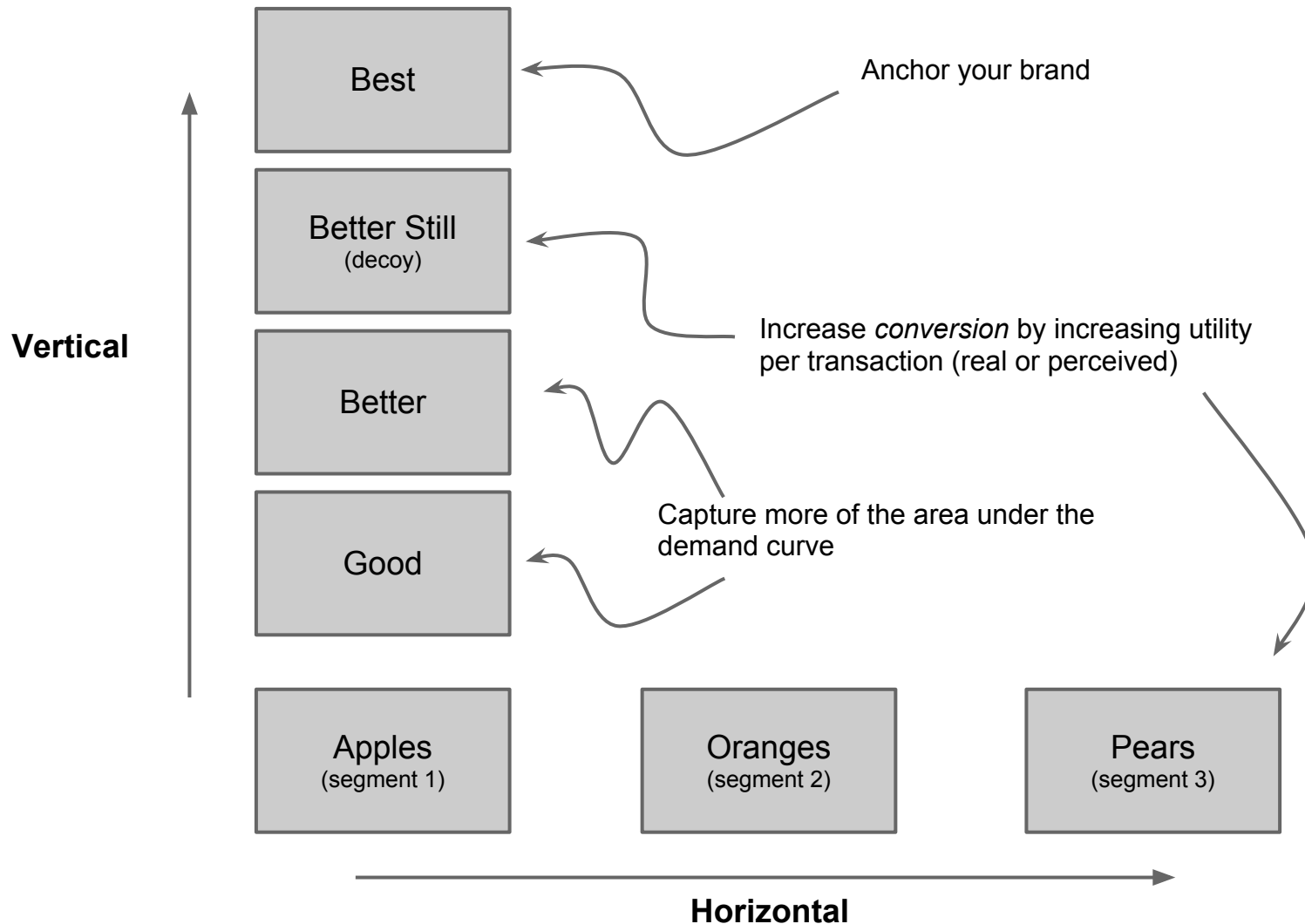
#4: Build assortments for the win



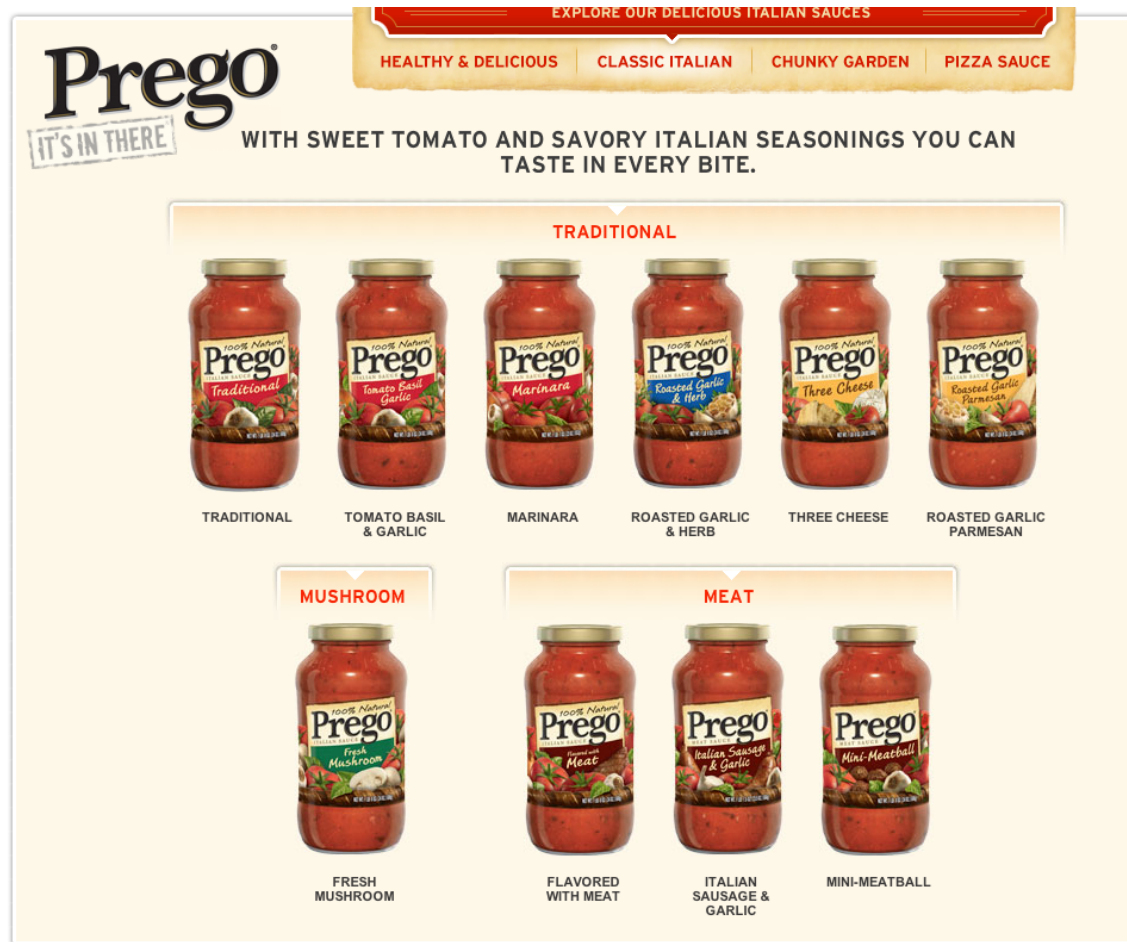
#4: Build assortments for the win



#4: Build assortments for the win



Horizontal assortment increases utility and conversion rate (shifts demand curve out)



Horizontal assortment in house dresses, Sears catalog, 1903

A PAGE OF BIG VALUES IN WRAPPERS AND HOUSE DRESSES

SIZES, 32 TO 44 INCHES BUST MEASURE. ALWAYS
GIVE BUST MEASURE

SEARS, ROEBUCK & CO., CHICAGO, ILLINOIS.

ONE-PIECE HOUSE DRESSES.

\$1.48 THIS ONE-PIECE HOUSE DRESS is made of crepe in the regular gingham stripe. Includes waist made of satin, which buttons separately. Also buttons from shoulders; plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887160
Price\$1.48
If by mail, postage extra, 25 cents.

\$1.48 VERY NEAT ONE-PIECE HOUSE DRESS, made of crepe. Plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887212
Price\$1.48
If by mail, postage extra, 25 cents.

\$1.69 THIS SERVANT-LOOKING ONE-PIECE HOUSE DRESS is made of solid color chambray gingham, trimmed across front with folds and piping. The bodice is collar and cuffs, and held in front. Back trimmed with lapel collar. Includes waist of same. Plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887215
Price\$1.69
If by mail, postage extra, 25 cents.

WRAPPERS.

98c THIS PLAIN ONE-PIECE HOUSE DRESS is made of crepe; includes waist made of satin, which buttons separately. Plain, turn-down collar and cuffs. The attached skirt is made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887218
Price98c
If by mail, postage extra, 25 cents.

\$1.49 THIS STEELISH ONE-PIECE HOUSE DRESS is made of good quality chambray, belted from the shoulders, which gives the desired fullness. Plain, turn-down collar and cuffs. The attached skirt is made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887238
Price\$1.49
If by mail, postage extra, 25 cents.

98c THIS BLACK AND WHITE SHEPHERD CHECK WRAPPER is made of washable goods, belted in front with folds and piping. The contrasting color. The plain turn-down collar, which is made to match. Includes waist of same. Plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887372
Price98c
If by mail, postage extra, 25 cents.

\$1.27 THEN IS A VERY NEAT WRAPPER, made of good quality washable goods. Includes waist made of satin, which buttons separately. Plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887375
Price\$1.27
If by mail, postage extra, 25 cents.

\$1.39 HERE IS A VERY NEAT WRAPPER, made of good quality washable goods. Includes waist made of satin, which buttons separately. Plain, turn-down collar and cuffs; skirt made of crepe, color, gray and white stripes. Sizes, 32 to 44 inches bust measure. Mention also desired when ordering.

No. 3887381
Price\$1.39
If by mail, postage extra, 25 cents.

Horizontal assortment in BB guns, Daisy, 1950s



Vertical assortment (good, better, best) captures more of the area under the demand curve



Pricing
Starts at \$20/month

45-d
Start using

Honest prices, no surprises.

Pay as you go. No long-term contracts. No per-user fee

You can switch packages or cancel any time

Manage UNLIMITED projects Includes 100 GB for file storage	\$150/month
Manage up to 100 projects at once Includes 40 GB for file storage	\$100/month
Manage up to 40 projects at once Includes 15 GB for file storage	\$50/month
Manage up to 10 projects at once Includes 3 GB for file storage	\$20/month

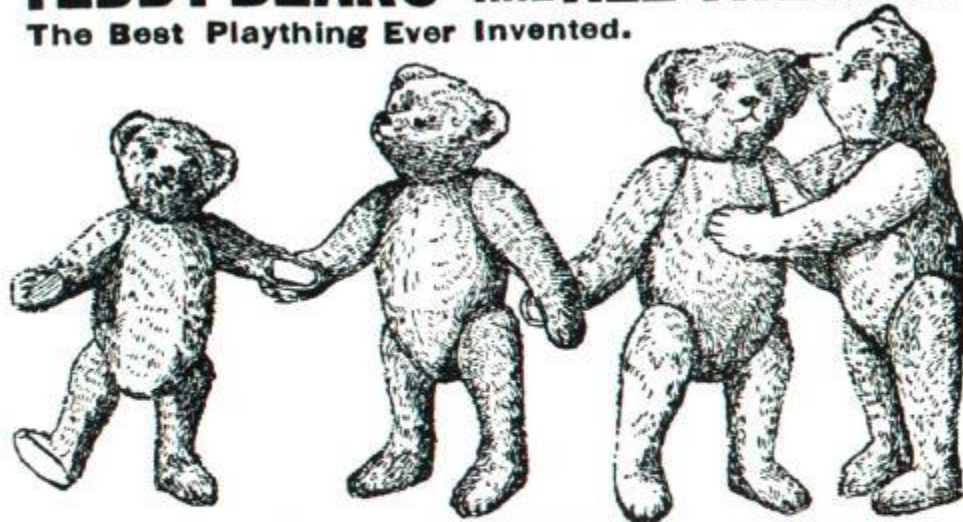
Also included in every package: Unlimited users, SSL data encryption (the same as online banks), and daily backups of your data to prevent permanent data loss.

Get started today with a 45-day free trial

No obligation, no credit card required.

Vertical assortment in Teddy Bears, 1909

"TEDDY BEARS" ARE ALL THE RAGE The Best Plaything Ever Invented.



THESE BEARS ARE THE MOST SENSIBLE AND SERVICEABLE

toys ever put before the public. Not a fad or campaign article, but something which has come to stay on merit alone. An article which will afford your children and even yourself great amusement and lasting pleasure. Made of the finest quality imported bear plush, they closely resemble the little cubs. They are full jointed and will assume countless different positions (four of which we illustrate). Each bear has a natural voice, produced by slight pressure on the front of body, and they are practically unbreakable. We offer these bears in four sizes. Natural cinnamon color only. The larger the size the better proportioned are the bears. Order one of these bears at once for your boy or girl, and you will find that no toy which you could select would give them more actual pleasure and entertainment.

No.	Size	Shipping Wt.	Price
18K23358	10 inches high	10 ounces.	\$0.75
18K23360	12 inches high	16 ounces.	1.19
18K23362	14 inches high	18 ounces.	1.75
18K23364	16 inches high	24 ounces.	2.38

Vertical assortment in "talking machines," early 20th century

YOUR MONEY WILL BE IMMEDIATELY RETURNED TO YOU FOR ANY GOODS NOT PERFECTLY SATISFACTORY.

24 GENUINE COLUMBIA P RECORDS AND THE OXFORD JR. TALKING MACHINE ALL COMPLETE

YOUR OWN SELECTION OF SUBJECTS

THE NEW OXFORD JR. TALKING MACHINE IS A STRICTLY HIGH CLASS TALKING MACHINE, FOR REPRODUCING STANDARD SIZE WAX CYLINDER RECORDS. IT IS A THOROUGHLY WELL MADE MACHINE AND NOT TO BE COMPARED IN ANY WAY WITH THE CHEAP MACHINES THAT HAVE BEEN SO EXTENSIVELY ADVERTISED RECENTLY.

IT IS A HIGH CLASS MACHINE, MADE IN AMERICA

made by expert and experienced workmen in one of the largest and most successful talking machine factories in the world. It is made of good materials throughout, fitted with a high class spring motor, with machine cut gears, everything about it strong and substantial. The record will permit loud devices which make the reproducer drive, it does so as it travels along over the surface of the record. There are many bad reproducing machines in the world, but this machine is entirely perfect in the Oxford Jr. Talking Machine as the reproducer is not driven by the curve over the surface of the record, but by the point led device exactly the same as the highest priced machines. This machine is made with heavy, solid and substantial iron frame, finished in black enamel, and gold wire decorations. It is made with standard size tapered motor, and will use any standard size of wax cylinder record, Columbia, Edison or any other standard make.



THE REPRODUCTION

of the human voice or of instrumental music, as rendered by the Oxford Jr. Talking Machine, is just exactly as good as with machines costing ten and fifteen times the price which we ask for this machine. It is made with a high grade, black enamel and gold wire decorations, with a large and beautiful reproducing point. It is equipped with a large and gold wire with large spring wide belt, the body of the horn made of the best steel, with the best enamel finish, the bell made of mild brass, highly polished, giving the machine a most handsome and substantial appearance. It is of the quality of a large black and gold tone arm, and is made strong to the extent of sound and timbre and sweetens of tone.

THE OXFORD JR. TALKING MACHINE is not a toy. It is a high class machine, a machine that may be compared in the ordinary market to one that costs ten or twenty times as much. It is strong and substantial, may be operated with five clock work motor, automatic feed device and extra large black and gold tone arm.

FIFTY THOUSAND RECORDS PER MONTH. Under contract with the large manufacturers of records in the world they are to furnish us the new 10,000 Columbia P records, standard size wax cylinder records per month, greater Columbia P records, the exact same records that have for years been sold at 50 cents. Not today cannot be purchased in any other market for less than 25 cents each. If you want one million records (more than fifty car loads), the nearest order ever placed for talking machine records by any dealer anywhere in the world. We have succeeded in reducing the cost to us just the correct fraction above the actual cost. At which high class reproducing records are even more perfect for any dealer, and in making of three quality, reproduction of the OXFORD JR. TALKING MACHINE AND TWENTY-FOUR OF THESE HIGH CLASS STANDARD SIZE RECORDS AT \$4.75. We are giving you the benefit of the saving which we effect by means of our tremendous purchasing power.

UNDERSTAND, OUR SPECIAL PRICE \$9.75

includes the 24 Columbia P records, large black and gold tone arm, an outfit that a few months ago would not have been purchased for less than \$15.00.

No. 20K5041 Oxford Jr. Talking Machine, complete of Oxford Jr. machine as illustrated and described above and 24 Genuine Columbia P Records. Shipping weight, 35 pounds. Please your selection of Records from the list on page 199 and 200, the list of genuine Columbia P Records.

THE TYPE F H HARVARD DISC TALKING MACHINE

\$15.90

The large Flower Horn with which this machine is equipped, possesses, to an unusual degree, the magnificent acoustic or tone qualities which are peculiar to the latest type of flower horns. The unusual musical quality of the flower horn, its ability to reproduce sound more absolutely true to the original music, is due to the peculiar curve and the acute vibrating bell, which gives the usual retardation of the sound waves, thereby giving a deep, clear and natural tone to every note.

THIS HORN is made with fine baked on enamel finish, ornamented with the musical quality of the machine, also contributing greatly to the beautiful appearance of the entire.

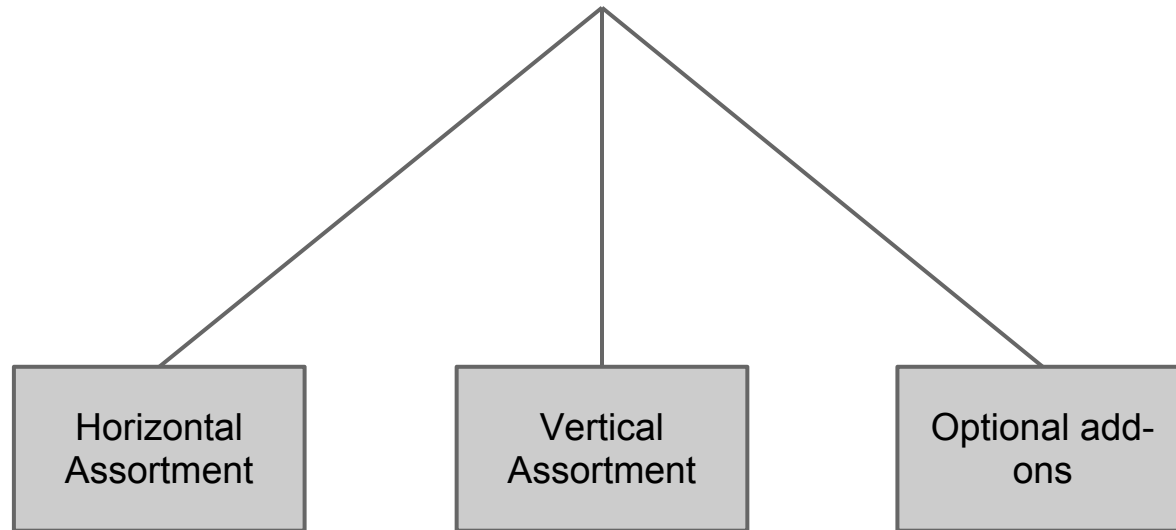
THE MELLOWNESS OF TONE AND REAL MUSICAL QUALITY of the reproduction, as rendered by the Type F H Harvard Talking Machine, is due partly to the new sound analyzing reproducer with which it is equipped and partly to the special acoustic properties of the flower horn, or rather to the combination of these two features. This reproducer is the latest product of the largest talking machine manufacturer in the world and represents the result of years of constant experiment and improvement. It is called the "sound analyzing" reproducer because of its ability to bring out every tone clearly and with the exact tone quality of the original music. It not only increases the volume of sound, but enriches the quality and removes those qualities which with the cheap machines and less perfect types of reproducers were lost entirely. It is equipped with the automatic needle holder by which the needle is clamped into place and held securely by a spring after a slight pressure upon the lever instantly releases the needle, thus avoiding the use of the annoying set screw arrangement used in other reproducers.

GENERAL CONSTRUCTION. The Type F H Harvard Disc Talking Machine is made with golden oak cabinet of plain but elegant design, substantially made, all corners dovetailed and with removable top to afford access to the motor for oiling or occasional cleaning. The swinging arm and bracket, supporting the horn and reproducer, are beautifully designed and made from aluminum, highly ornamental and non-tarnishable. The turntable, of a special composition metal, is 10 inches in diameter, the cabinet measures 11 1/2 inches by 10 inches by 14 inches high, the horn is 19 inches long with 17 inches in diameter. This machine is equipped with a powerful spring clock work motor, made throughout from brass and the best quality of steel, all gears and pinions machine cut to insure absolutely even and smooth running qualities. Perfectly uniform speed, essential to perfect reproduction, is obtained by the improved automatic governor and worm gear, perfect control of the speed is obtained by the new tension screw and the motor is stopped or started simply by pressing in or pulling out a small knobbed rod.

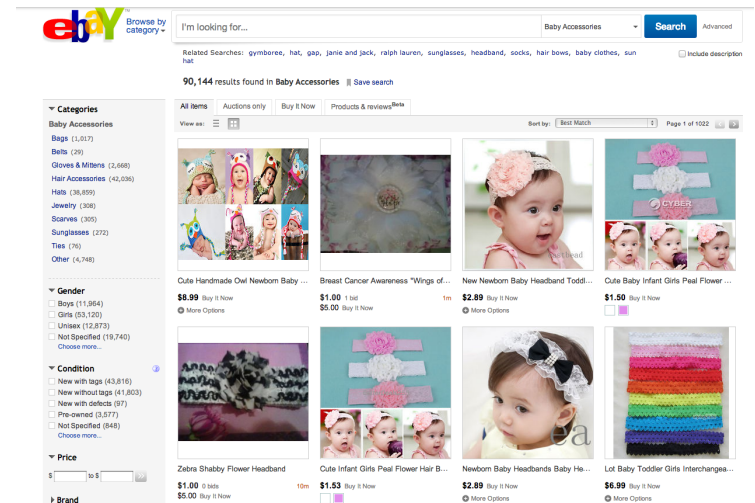
USES ANY KIND OF DISC RECORD. This machine is adapted to any style, any size or any make of flat disc record. Just think of the great variety of selections available for use with this machine and the wonderful possibilities for entertainment which it affords.

No. 20K5048 The Type F H Harvard Disc Talking Machine, with golden oak cabinet, large flower horn, sound analyzing reproducer, exactly as illustrated and described above. Shipping weight, 35 pounds. Price, **\$15.90**

#4: Build assortments for the win



Optional **add-on features** increase margin, utility, and improve price "customization"



Improve your pricing judgment

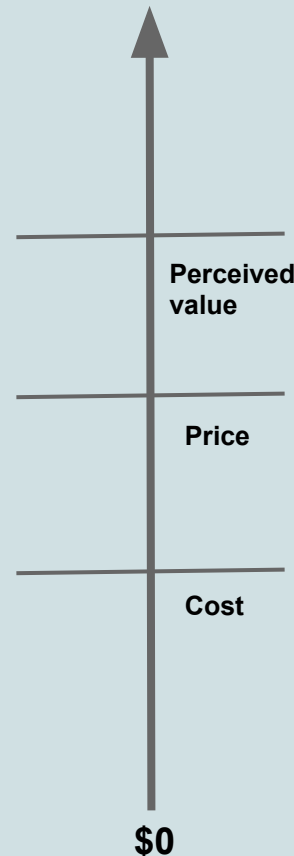
1 Buyer's anchors

Substitutes	Complements

2 Buyer's cognitive system

Intuitive (S1)	Rational (S2)

3 Value-based prototype



4 Assortment

Horizontal

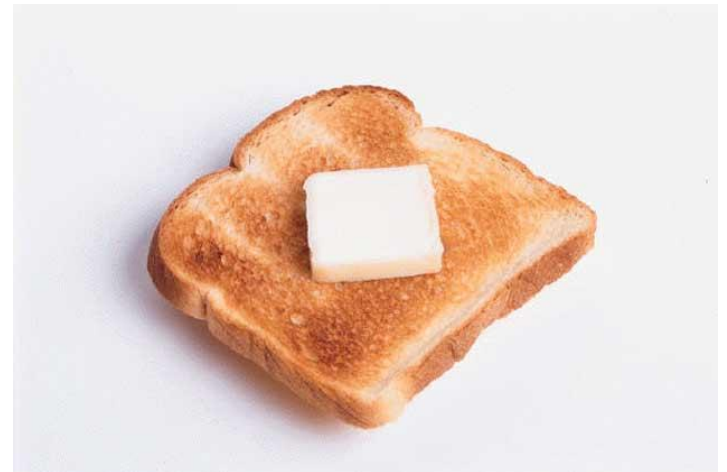
	Apple
	Orange
	Pear

Vertical

	Best
	Better still
	Better
	Good

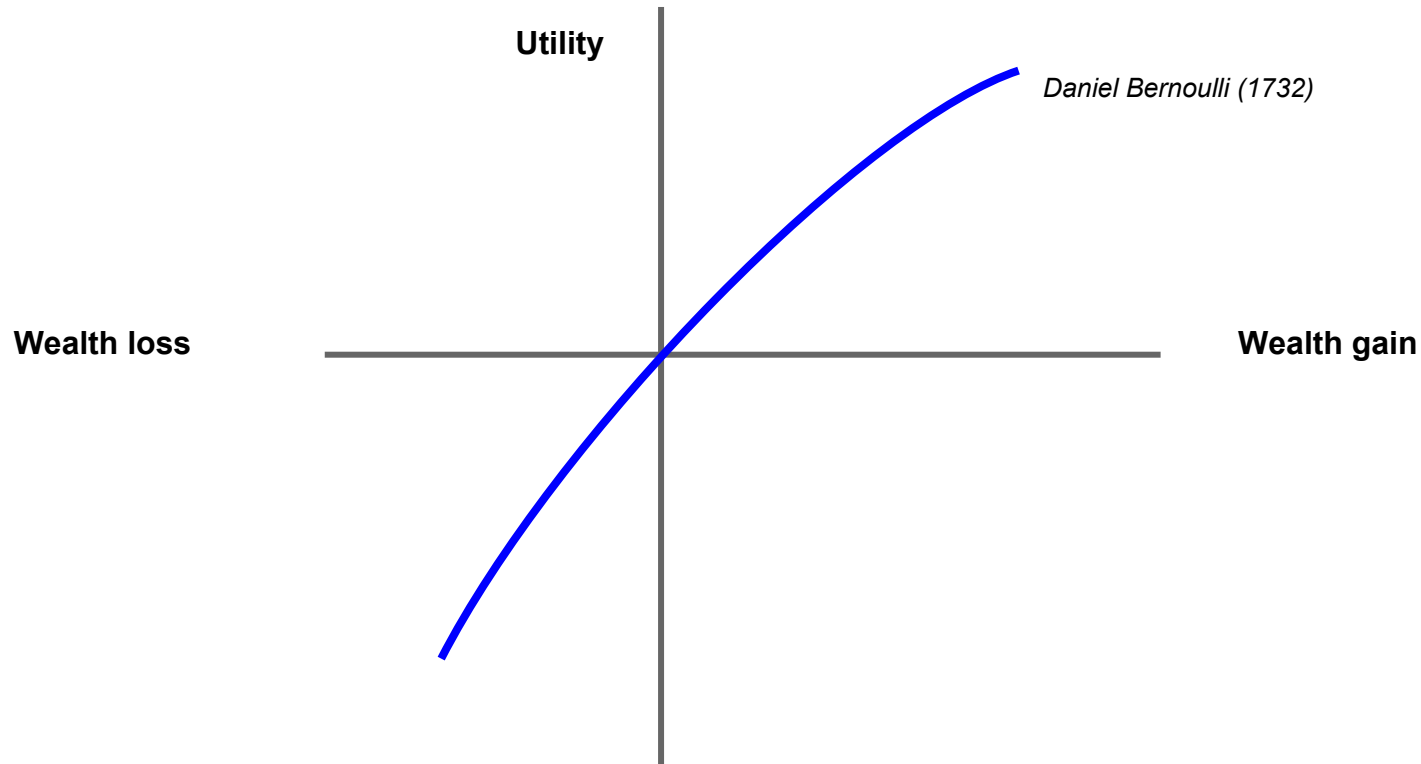
Applying the Toolkit

The Case of the Dualit Toaster



Nice features - wealth, utility, risk

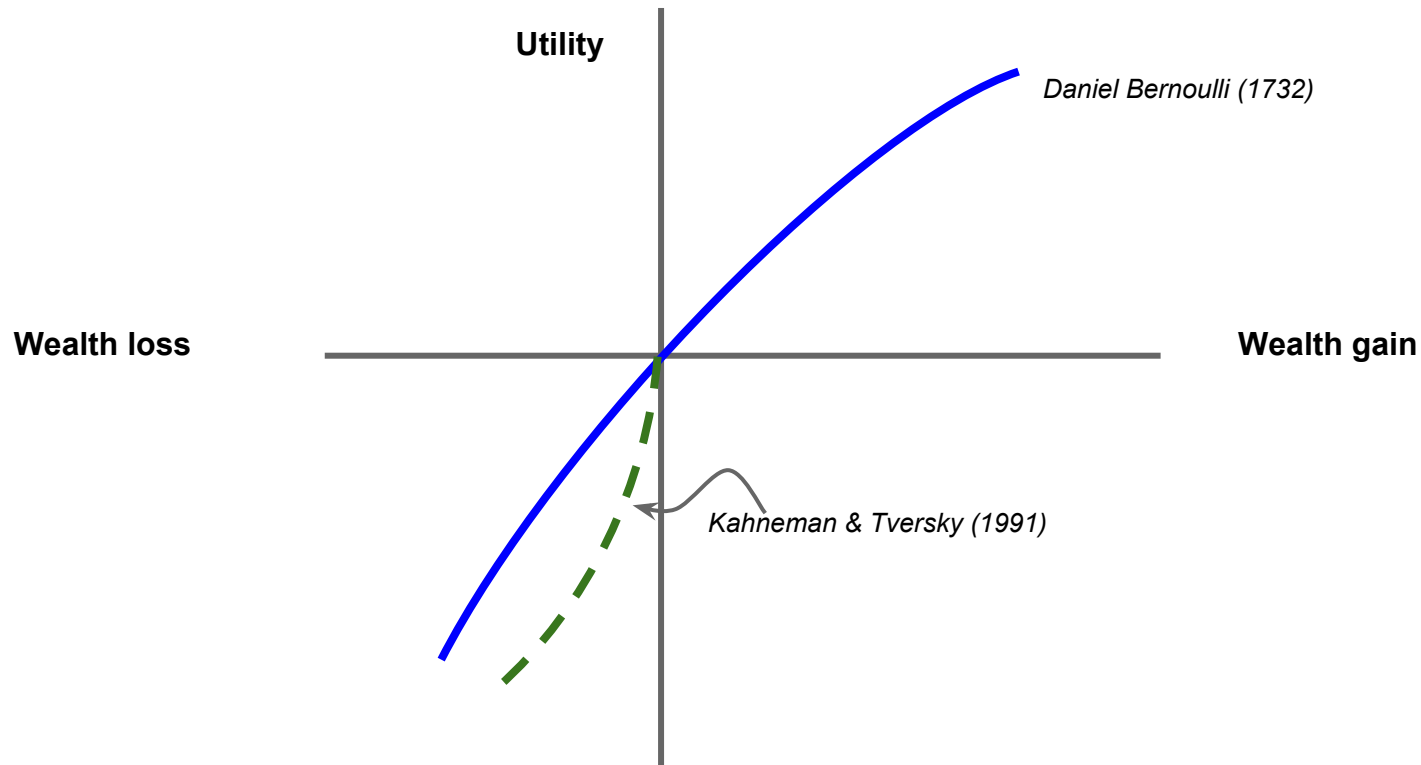
People's utility from changes in wealth can be measured and used to assess risk.



Source: "Exposition of a New Theory on the Measurement of Risk," Daniel Bernoulli, 1738. Translated from Latin to English by Louise Sommer in *Econometrica*, vol 22, issue 1 (January 1954).

Behavioral economics helps

Buyer's intuition is dominated by reference dependence and loss-aversion. This creates the "endowment effect" -- a tendency to overestimate the pain of a potential loss



Source: "Exposition of a New Theory on the Measurement of Risk," Daniel Bernoulli, 1738. Translated from Latin to English by Louise Sommer in *Econometrica*, vol 22, issue 1 (January 1954); "Maps of Bounded Rationality: Psychology for Behavioral Economics," Daniel Kahneman's lecture December 8, 2002 when he received the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel, Stockholm, Sweden. Reprinted in *The American Economic Review*, vol 93, no 5 (December 2003).

Dualit Classic Toaster

- Stainless steel with a lever to lower, raise bread
- Mechanical timer allows the degree of toasting you prefer
- Faster warm-up ensures perfect browning right from the first slice
- Defrost setting for frozen bread before toasting
- Bagel setting to warm one side and toast the other
- Superlative quality, hand-assembled in England
- Iconic design, costs manufacturer \$72 to make it
- It's the same toaster that Queen Elizabeth uses at Buckingham Palace



#1: Substitutes and complements

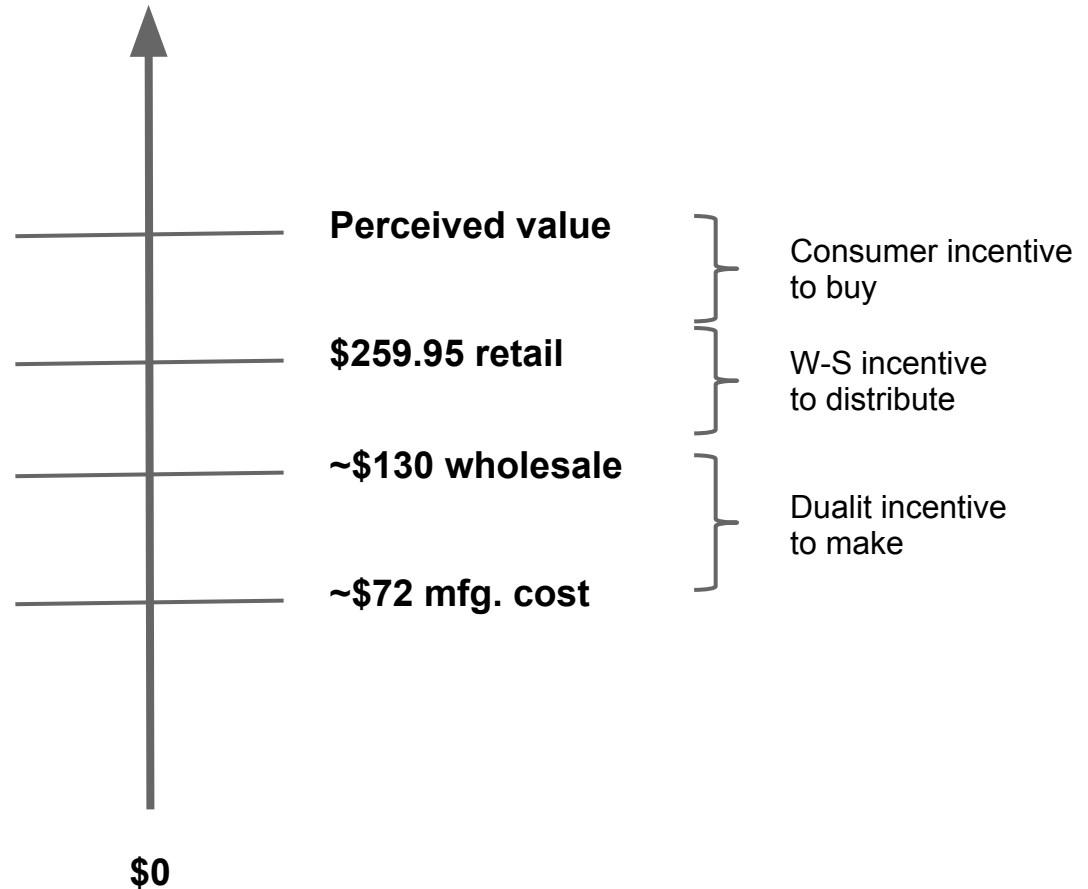
The target user is an affluent, status-conscious household where the key decision-maker gets her or his self-esteem from the quality of the kitchen

Substitutes	Complements
<p>Without your product, how would your target user solve this problem?</p> <ul style="list-style-type: none">○ Do not eat toast○ Buy a toaster at Target or amazon that looks sort of like this one but isn't○ Toast in the oven○ Delegate decision to the cook○ Keep using the old toaster and hide it in the cupboard	<p>What are the other products you'd expect to find in nature alongside your product?</p> <ul style="list-style-type: none">○ Sub-zero refrigerator○ Bread bought at local bakery○ Calphalon pots and pans○ Henckels knives

#2: Intuition and reason

	Intuition POV (S1)	Reasoning POV (S2)
Demand side	<ul style="list-style-type: none">• High-status kitchen• High performance appliances• Basic functionality is excellent• Style points for design• Heritage of the product	<ul style="list-style-type: none">• Household budget = \$25k / month, 30% discretionary• Lasts 3x longer so \$/slice is not so bad
Supply side	<ul style="list-style-type: none">• Aspire to be the premier brand forever• German brands must be crushed• 100 years of leadership• Premium position is more important than volume• Rely on high-end retailers to bring to market	<ul style="list-style-type: none">• Unit cost = \$72 fully loaded• Retailer needs to make 50% margin• Revenue growth• Customer segmentation

#3: Value-based price prototype



#4: Build assortment

Original toaster

Built for commercial use



2 Slot NewGen Toaster

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Combi toasters

A perfect combination



3 Slot Vario Toaster

[Read More](#) ▶

Bun toasters

Buns, bagels and teacakes



4 Slot NewGen Toaster

[Read More](#) ▶

Sandwich toasters

For the perfect toasted sandwich



6 Slot Vario Toaster

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