

Change/Diffusion Theory

How change comes about

Change Theory... what this presentation is about...

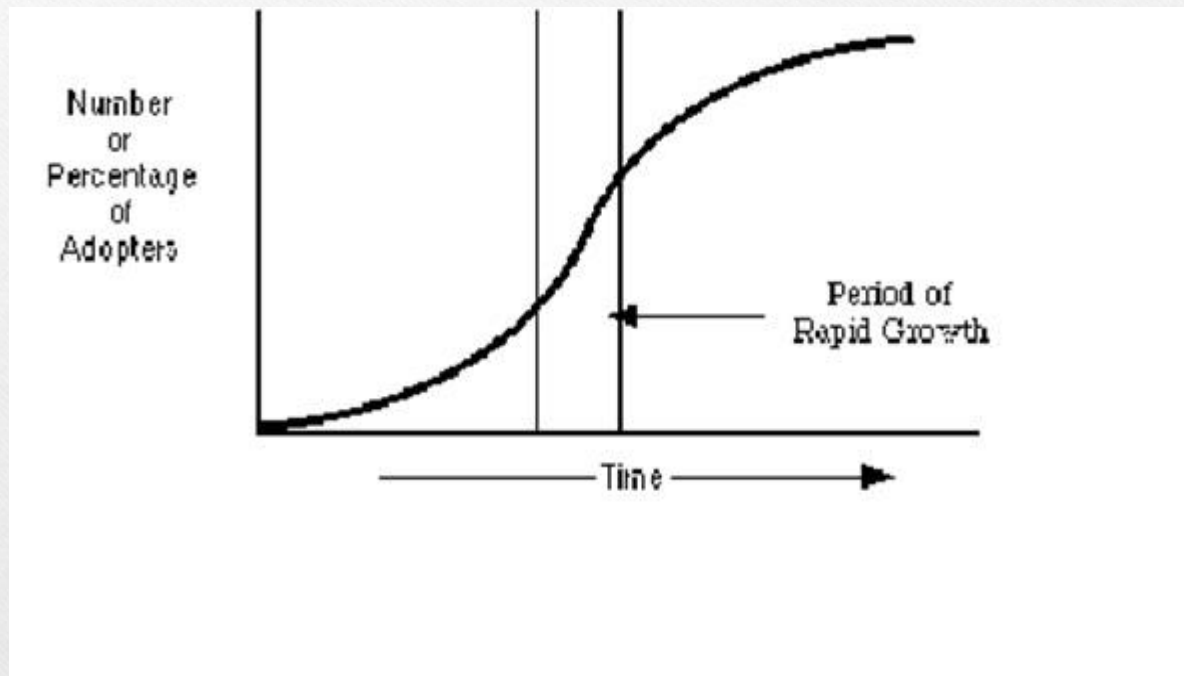
- A theory of action for an appropriate implementation/diffusion of changes in behavior (to get your customer to buy what you are selling);
- An overview of what motivates humans, and;
- Capacity building to assist with customer development

Diffusion

- **Not a well-defined, unified, and comprehensive theory...**
- **Original research (1903)**

French sociologist Gabriel Tarde plotted the original S-shaped diffusion curve. Tarde's 1903 S-shaped curve is of current importance because "most innovations have an S-shaped rate of adoption". (Rogers, 1983)

Rate of Adoption (S-Shaped Curve)



Diffusion

- **Ryan and Gross Study (1943)**
 - Studied how new technologies in agriculture (hybrid corn seeds) were accepted over time
 - Came up with earliest classifications as to types of adopters.

Modern Day Ancestry

- **Everett M. Rogers - Diffusion of Innovations**
 - First published in 1960, and now in its fifth edition (2003).
 - Synthesized theories into one work.
- “The process by which an **innovation is communicated** through certain channels over time among the members of a social system”.

Four elements are always present:

- 1. The Innovation** - ideas, practices, or objects that are perceived as new by an individual or unit of adopters.
- 2. The Communication Channels** - the means by which messages get from one individual to another.
- 3. Time** - the three time factors are:
 - (a) the innovation-decision process
 - (b) relative time with which an innovation is adopted
 - (c) an innovation's rate of adoption.
- 4. The Social system** - a set of interrelated units that are engaged in joint problem solving to accomplish a common goal.

McLuhan's Media/Technology Tetrad:

- What new does it bring to the table?
- What does it replace?
- What does it bring back?
- What happens when we over-depend on it?

Topics

- Life Cycle of a Big Idea
- Innovation Decision Process
- Perceived Attributes
- Individual Innovativeness
- Rate of Adoption

Life Cycle of a Big Idea

“It’s essential to understand where your idea fits into the **business life cycle** and **value chain...**”

- Barry Shuler, former CEO AOL.com

Business Cycles

- Invention
- Emergent – subsidiary technologies set in support
- Acceptance – lots of new inventions
- Sectorization – mass involvement of the idea
- Segmentation- new alternative styles, colors, etc.
- Consolidation
- Maturity- incremental, new breakouts but stable.

Business Cycles

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Value Chain

- Processors/chips
- PC Manufacturers
- Operating Systems
- Software Development
- Software Applications
- Peripheral Devices
- Retail Channels
- Sector Analysis and Marketing (tradeshows/magazines)

Decision Process

1. **Knowledge** - exposed and understand something new....

Prior conditions affect the innovation-decision process, such as:

- (1) previous practice,
- (2) felt needs/problems,
- (3) innovativeness, and
- (4) norms of the social systems.

Decision Process

- Entails seeking one or more of three types of knowledge about the innovation. Rogers describes these as:
 1. Awareness knowledge is information that an innovation exists.
 2. How-to-knowledge consists of the information necessary to use an innovation properly, and
 3. Principles knowledge consists of information dealing with the functioning principles underlying how the innovation works.

Decision Process

2. **Persuasion**- both individual (peer pressure) and/or mass communications:

- Rogers states that awareness and knowledge of an innovation can be made most efficiently through mass media.
- It will be interesting in twenty years or so, to ascertain if mass media will still be considered the most efficient means to create product awareness and knowledge.

Decision Process

- The knowledge & persuasion stages of the innovation-decision process are of great value to advertisers because at this vulnerable stage of the innovation-decision process, they are able to create an impressionable impact on their target audience.
- Advertisers should focus their efforts on creating awareness and knowledge when promoting a new product or innovation.

Decision Process

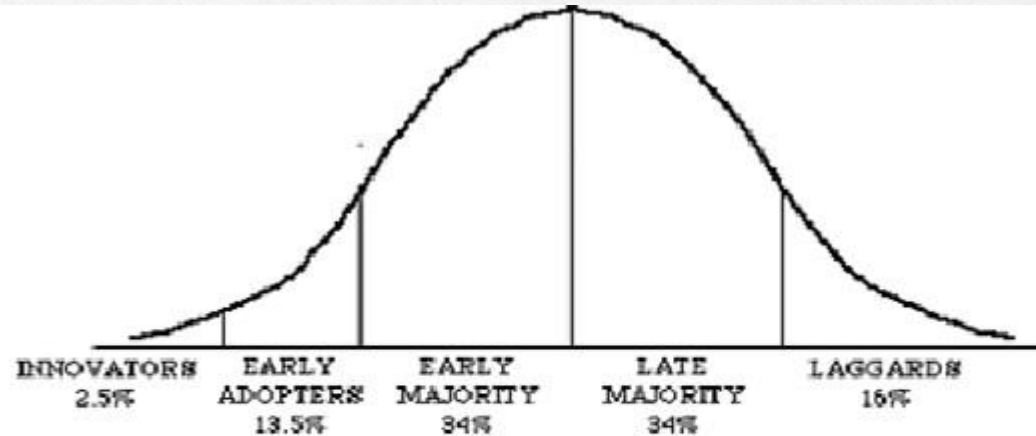
- 3- Decision to adopt or reject,
- 4- Implementation of the new idea,
- 5- Confirmation of this decision. ***

*** note that a change is not considered “locked in” until it reaches the final stage...

Perceived Attributes

- **Trialability**- able to experiment on a limited basis like a 30 free trial
- **Observability**- how visible are the results?
- **Relative Advantage**-degree to which the product is better than what is already out on the market. Why should I buy 5.0 when I already have 4.0, what makes the new version better?
- **Complexity**-the difficulty and understanding it for your use
- **Compatibility**-will it work with your older files

The Adoption Process



Lean Startup mostly deals with the first 13-20%.

Individual Innovativeness

- **Innovators-** (1-5%) - venturesome, desire for the rash, the daring, and the risky, control of substantial financial resources to absorb possible loss from an unprofitable innovation, the ability to understand and apply complex technical knowledge, and the ability to cope with a high degree of uncertainty about an innovation.

Individual Innovativeness

- **Early Adopters** (13-20%) - integrated part of the local social system, greatest degree of opinion leadership in most systems, serve as role model for other members or society, respected by peers, and successful.

Individual Innovativeness

- **Early Majority** (30-35%) -) interact frequently with peers, seldom hold positions of opinion leadership, one-third of the members of a system, making the early majority the largest category, and deliberate before adopting a new idea.

Individual Innovativeness

- **Late Majority** (30-35%) – adopt as a result of pressure from peers, economic necessity, skeptical, and cautious.

Individual Innovativeness

- **Laggards** (10-15%) – traditionalists-skeptics, possess no opinion leadership, isolated, point of reference in the past, suspicious of innovations, innovation-decision process is lengthy, and resources are limited.

Importance of labels

- Additional names and titles for the adopters of an innovation have been used in other research studies
- Rogers labels for the five adopter categories are the preferred or standard for the industry.
- The specific characteristics that Rogers' identifies for each adopter category is of significance to advertisers interested in creating an integrated marketing plan targeting a specific audience.

The value of mass communications (i.e., group dynamics)

“Ideas confine a man to certain social groups and social groups confine a man to certain ideas. Many ideas are more easily changed by aiming at a group than by aiming at an individual. “

“Working with Groups: The social psychology of discussion and decision”
- Josephine Klein

Discontinuance

- Per Rogers:
 - Many "discountenances occur over a relatively short time period" and few of them were **caused by supersedence of a superior innovation** replacing a previously adopted idea".
- One of the most significant findings was research done by Johnson and Vandan Ban (1959):
 - The relatively later adopters had twice as many discountenances as the earlier adopters. Previous researchers had assumed that later adopters were relatively less innovative because they did not adopt or were relatively slow to adopt innovations. This evidence suggests the later adopters may adopt, but then discontinue at a later point in time.

Discontinuance

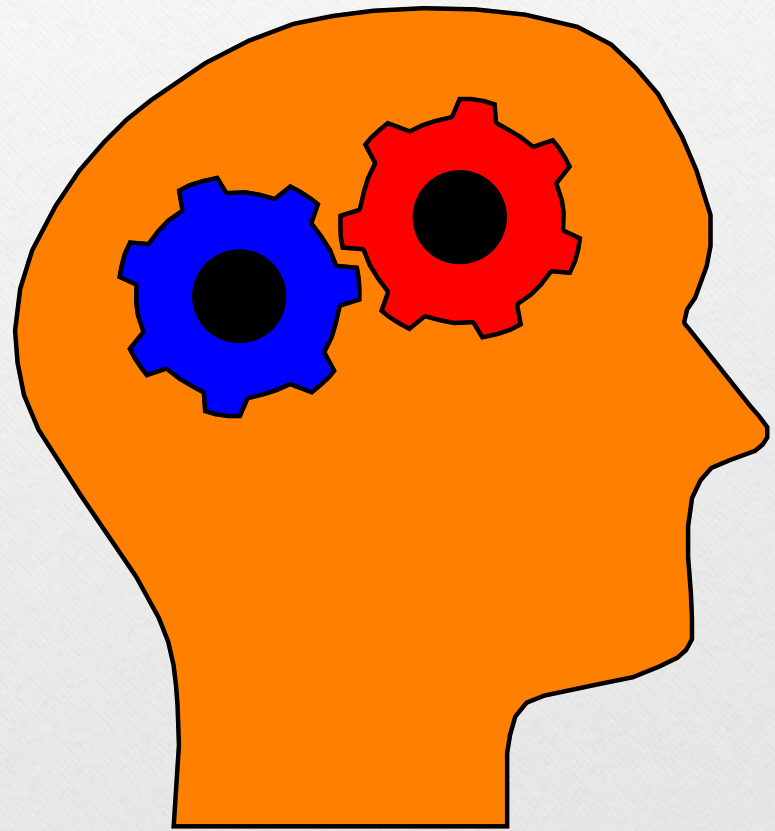
- Rogers identifies two types of discontinuance:
 - 1) disenchantment discontinuance - a decision to reject an idea as a result of dissatisfaction with its performance, and
 - 2) replacement discontinuance - a decision to reject an idea in order to adopt a better idea.

Just for Fun....

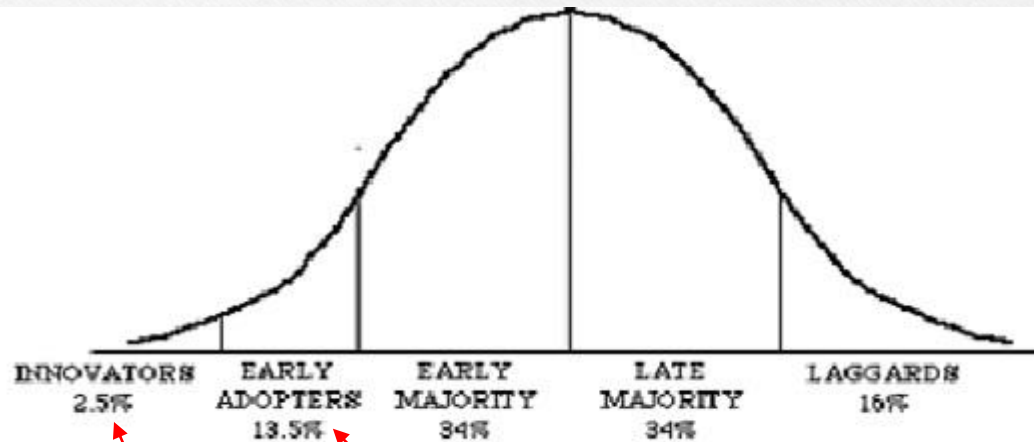
Diffusion as an economic model

How to become famous

- Get Lucky!
- Use a plan...

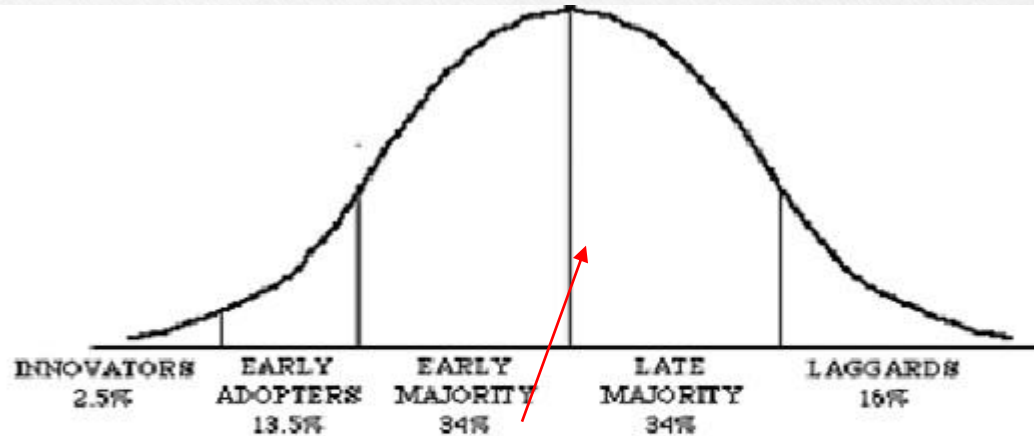


The Adoption Process



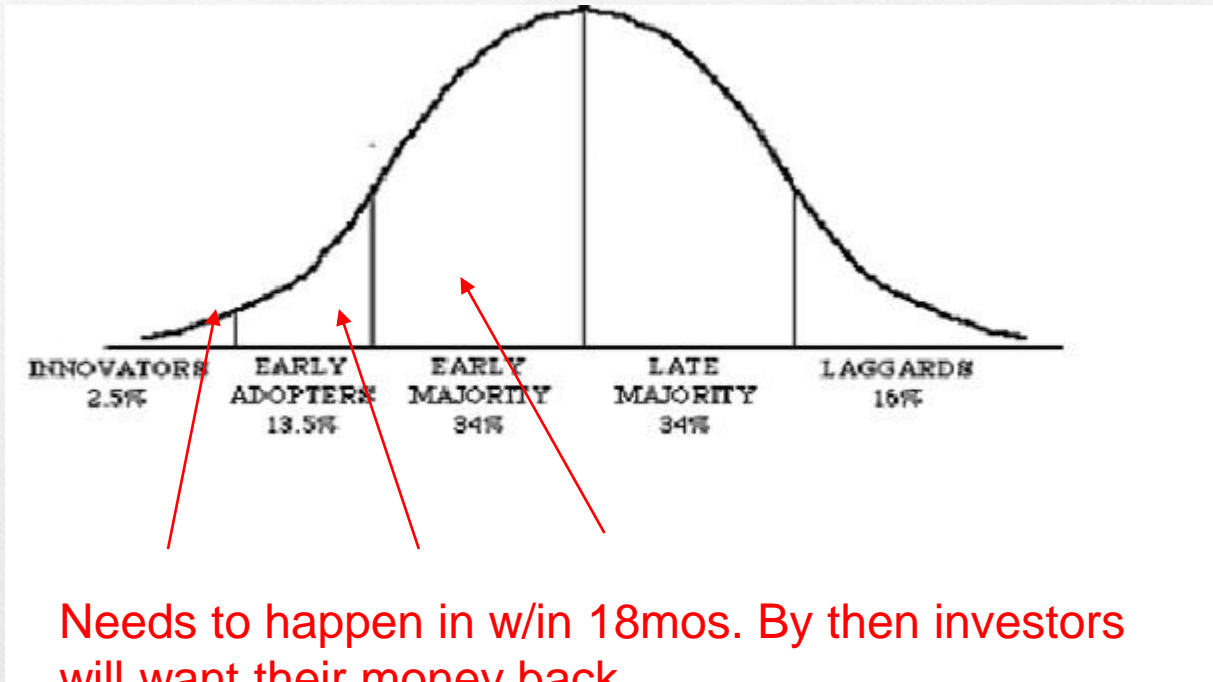
Where R&D is paid for

The Adoption Process



Prices begin to fall

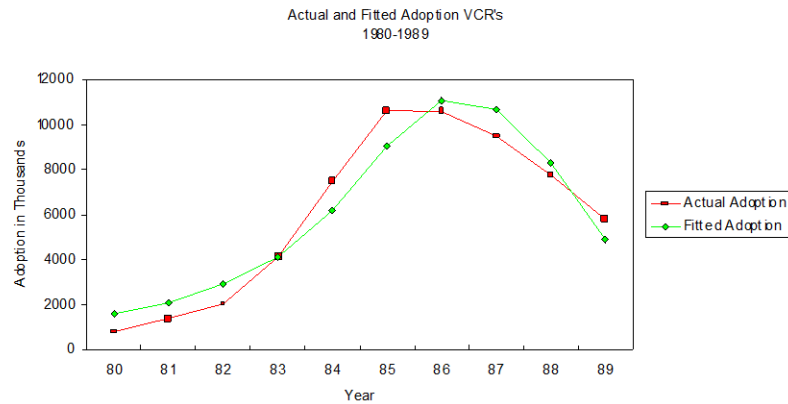
The Adoption Process



Needs to happen in w/in 18mos. By then investors will want their money back.

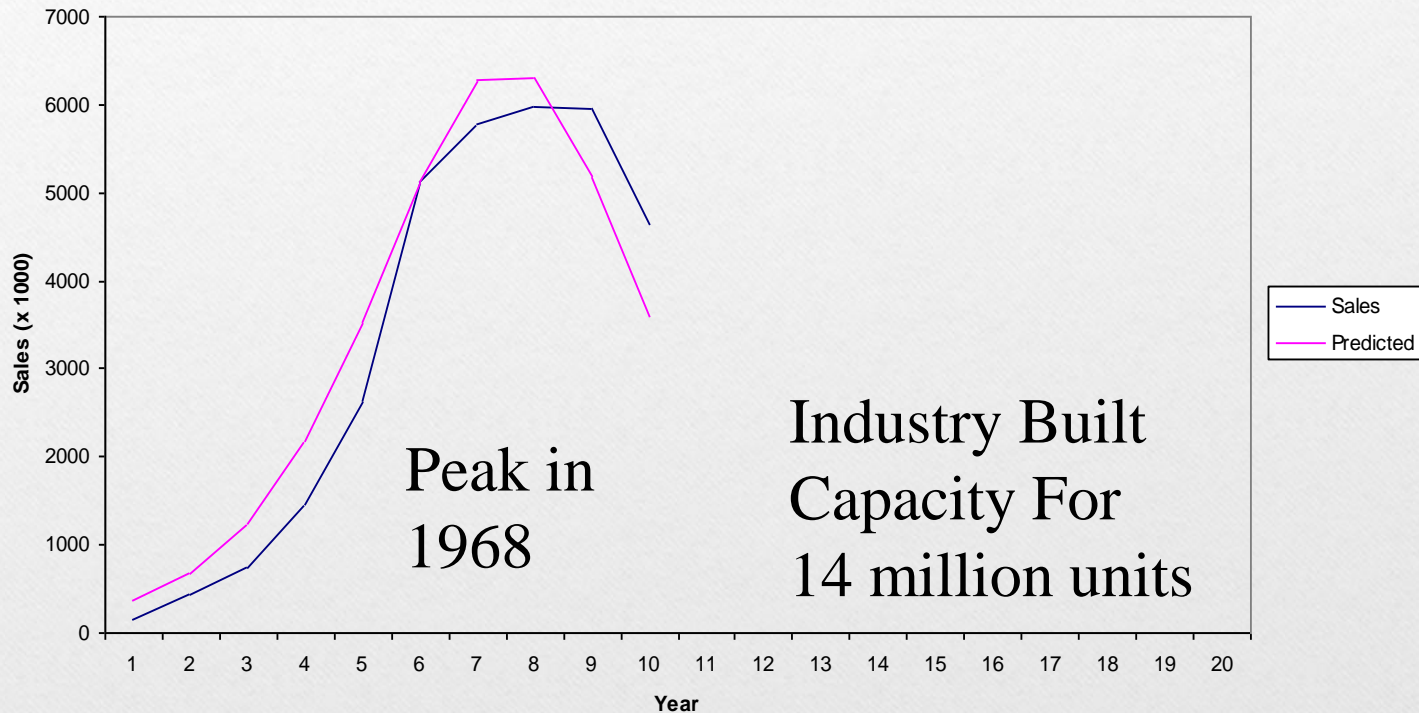
Always (Almost) Looks Like a Bell-shaped Curve

Adoption of VCR's

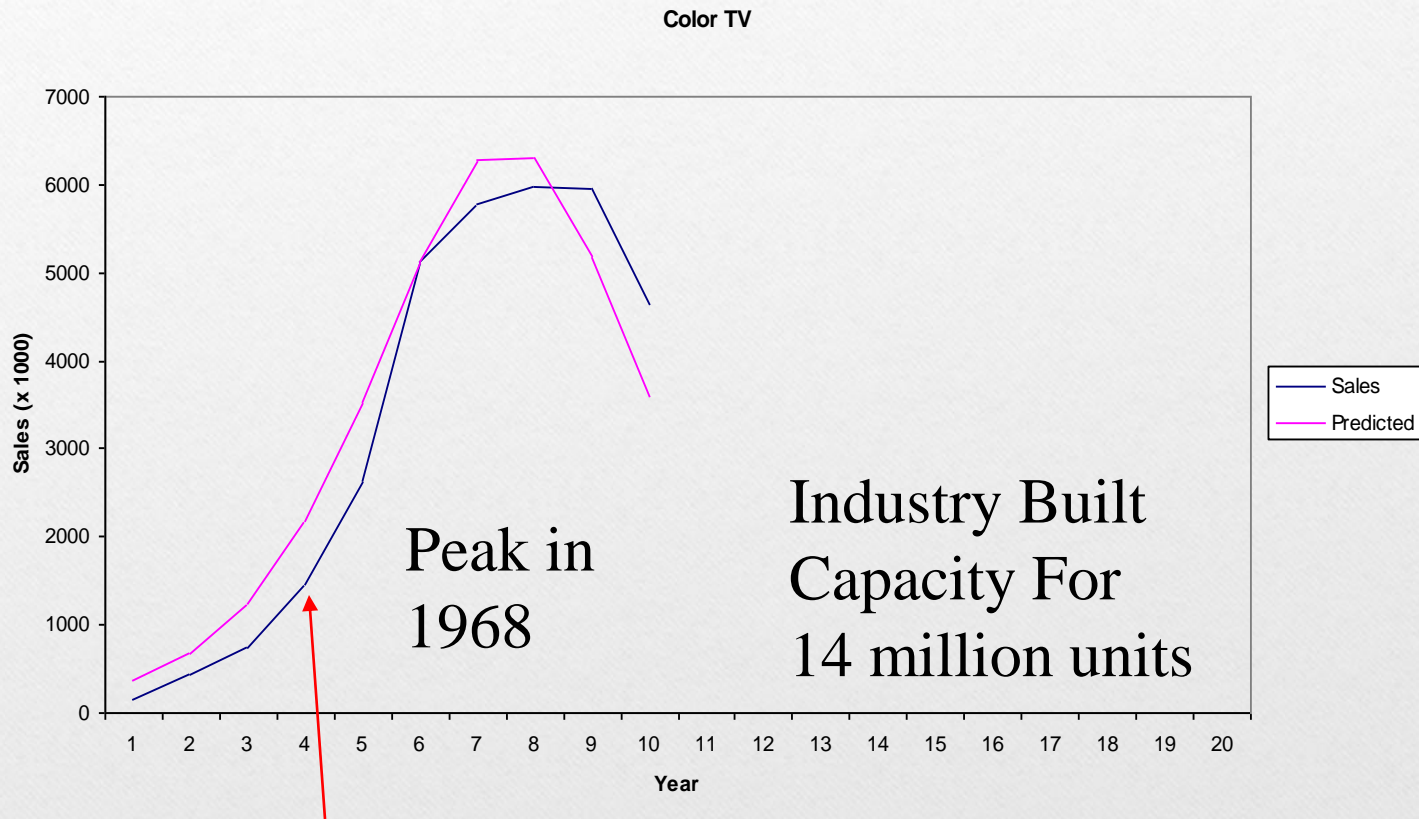


Color TV Forecast 1966

Color TV



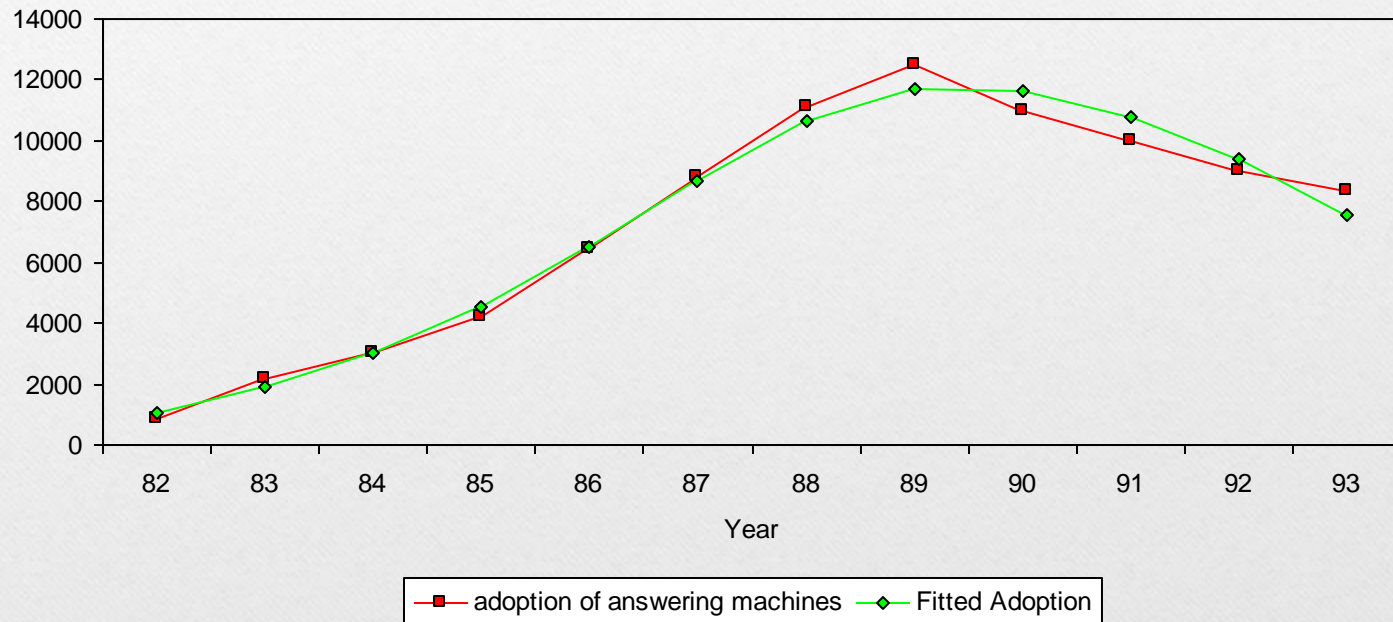
Color TV Forecast 1966



Bonanza TV Show

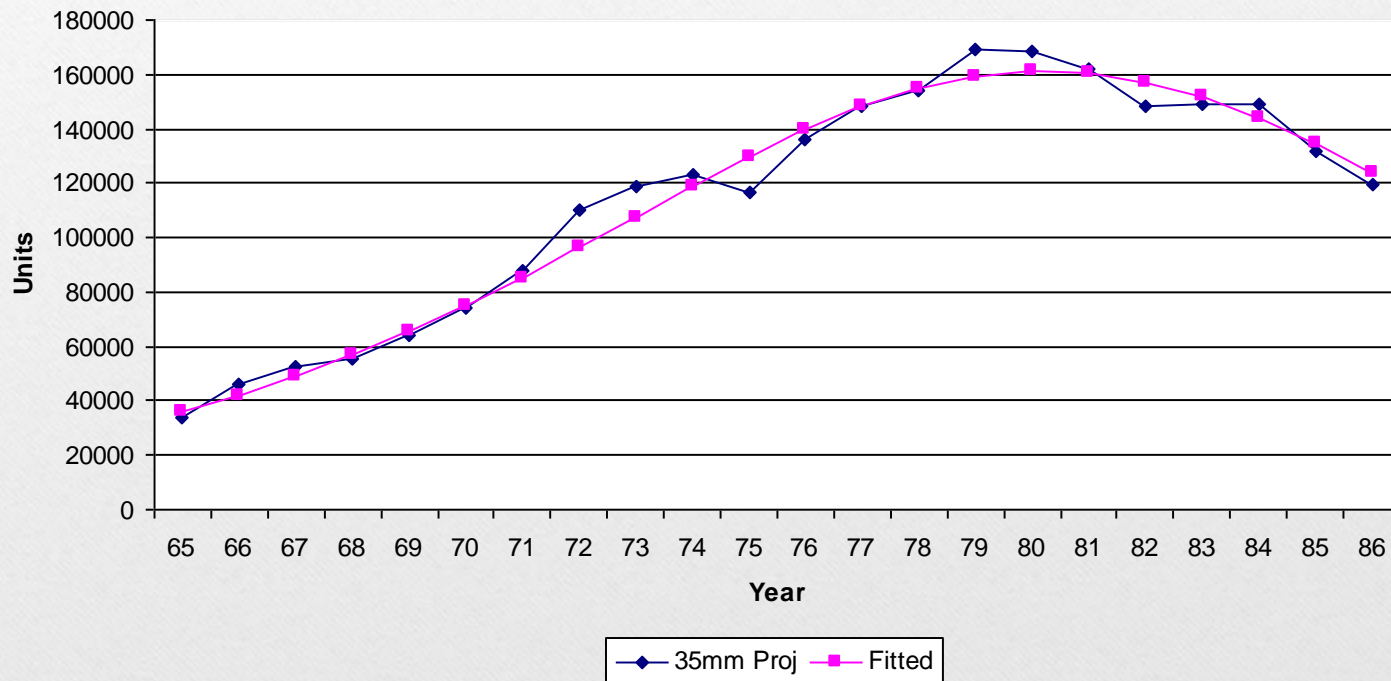
Adoption of Answering Machines (1982-1993)

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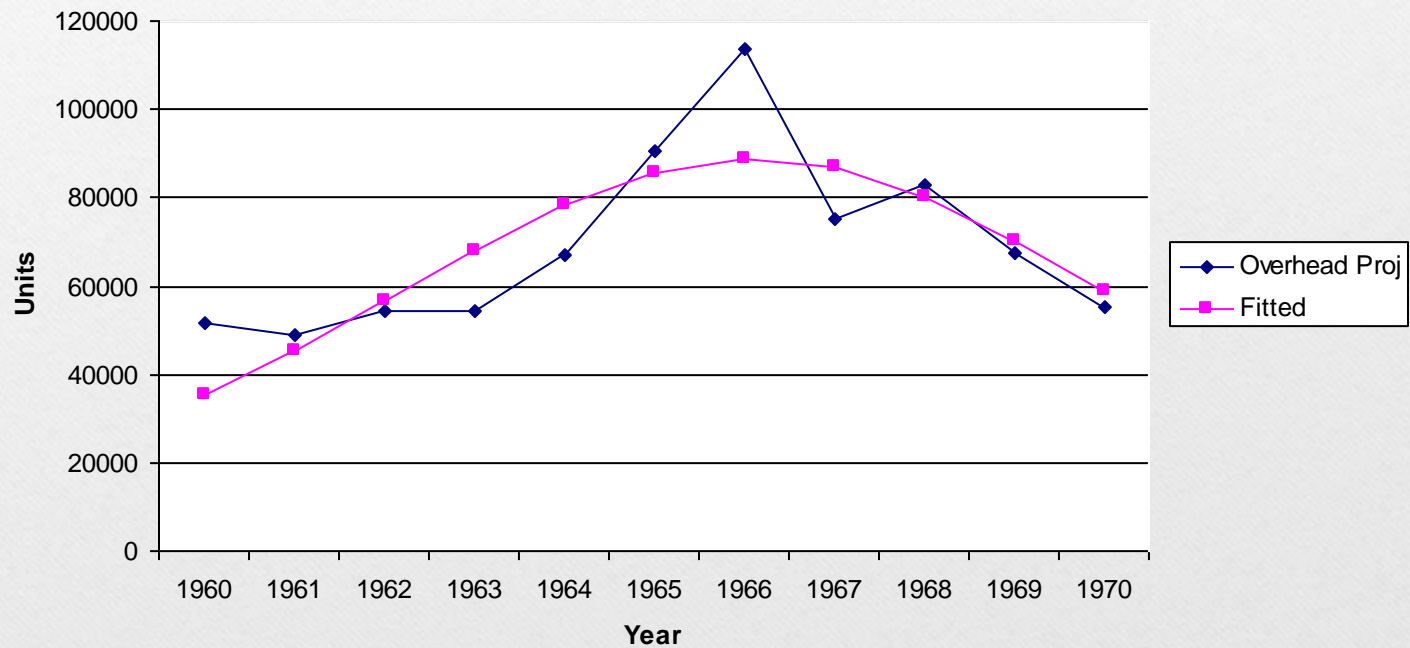
35 mm Projectors

Actual and Fitted Adoption of 35 mm Projectors, 1965-1986,
 $m=3.37$ million, $p=.009$, $q=.173$



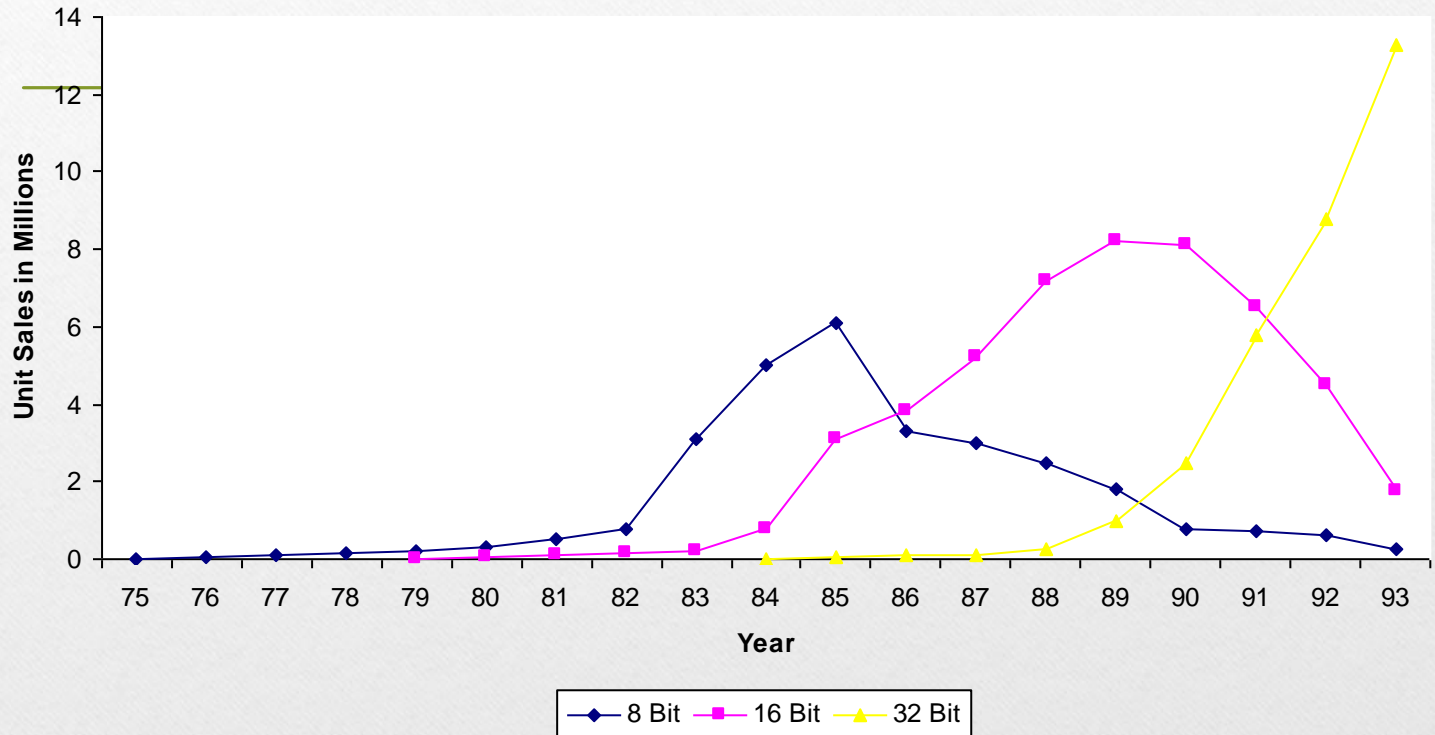
Overhead Projectors

Actual and Fitted Adoption of OverHead Projectors,1960-1970,
 $m=.961$ million, $p=.028$, $q=.311$



The Law of Successive Generations: Generations of PC's

World Wide Sales of Generations of Desktop PC's



Digging Deeper

- **Why Theories of Change Matter:**
<http://mobilizingstem.wceruw.org/documents/Why%20Theories%20of%20Change%20Matter.pdf>