Media Influences on Innovation & Technological Evolution

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General Outline

- Theoretical Background
- Diffusion & Media theories
    - Problems with these theories
- Target Audience
- Proposed Research

Genesis

- Research into adaptive change of technology
- Culture – technology relationships
- Where does the place of primacy go?

Specific Instances

- Internet / Virtual Reality
  - Did current implementations draw inspiration from media sources?

- Handheld electronics
  - Form vs. Function, or actualization of   Sci-Fi concepts when tech level made it achievable?

- Military Design
  - Land warrior project, UAVs, etc.

Theoretical Search

- Technological Evolution theories
  - Nelson & Winter
  - Bassala
  - Petroski
- Cultural Evolution theories
  - Boyd & Richerson
  - Dawkins
  - Et. al.

Diffusion

- E.M. Rogers, (3rd ed., 1983,[1962])
- "The diffusion of innovations, thus, is essentially a *social process* in which subjectively perceived information about a new idea is communicated."

S-Curve
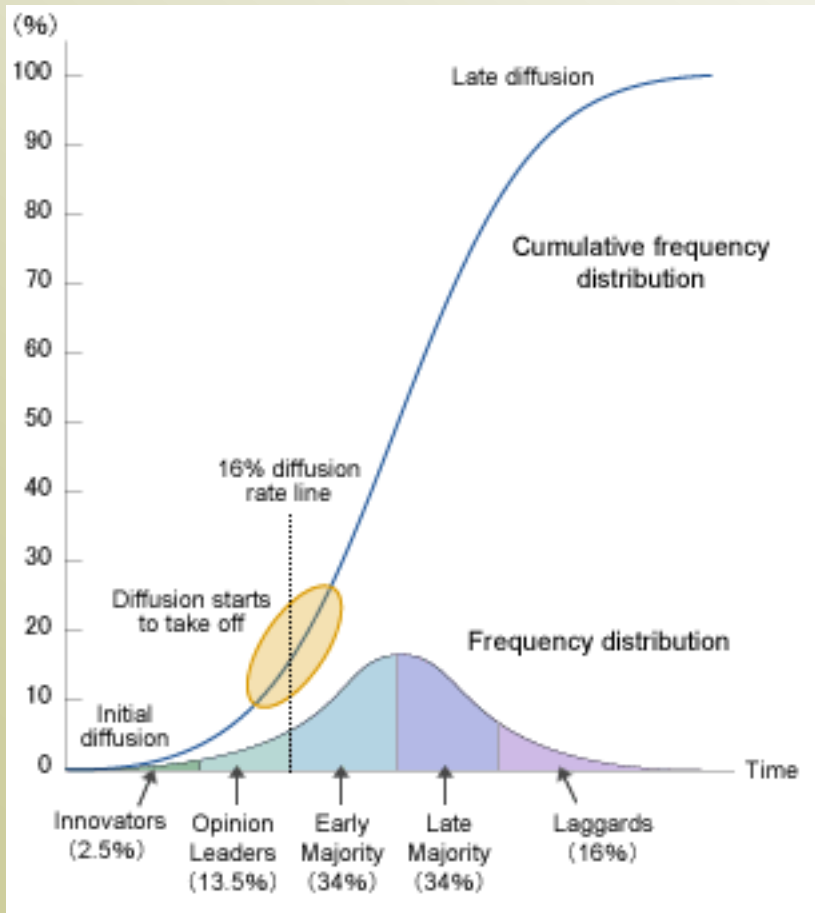
- Models the adoption of an innovation within a given population
- Not identical for each innovation, but follows the same general pattern.

Media theory

- Gerbner - Cultivation theory
  - Cumulative effects of exposure
- Katz – Uses & Gratifications
  - "equipment for living"
- So what is the media really being used for?

Problems with Diffusion

- Innovation-centric
  - Not an issue for the ISRN's purposes
- Longitudinal requirement
  - The process can only be viewed over *time*
- Recall bias
  - Issues with *post hoc* rationalization
- All 3 will need to be dealt with in research design

Problems with Media Theory

- Effects-oriented

- Approaches problem from the wrong direction.

- Selective in what "counts" as a violent (or other) event – inconsistencies in the fired.

Sample Design

- Iterative process
  - Grounded theory: results from initial study will determine subsequent research
- Interview
  - 'elicitation interview': open-ended, let the respondent provide the results, rather than using a questionnaire

S-Curve Zoom
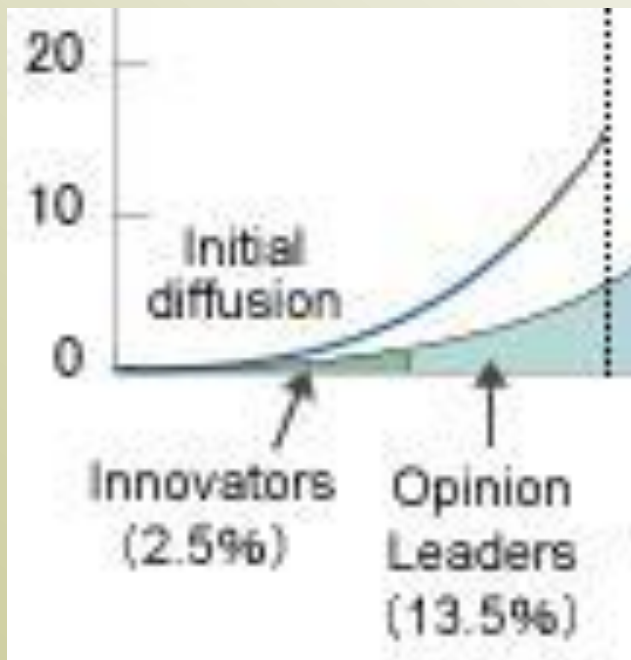
- Rogers' Innovators + Opinion Leaders
- Similar to Von Hippel's " Lead Users"
- This is where the research target lies
- Porous boundary between the groups

Continuum

- Designed to address the critiques of Diffusion Theory
- Provide a "moving snapshot" or the target audience
- Addresses 4 core groups to provide this range

Projected Results

- What percentage of the sample attributes innovation to media influences whatsoever?
  - How prevalent is the role of media influence
- What are the key media influences?
  - Repeated mentions, inter- or intra- group
- Are these media influences innovation-related?
  - Do they provide inspiration in different ways?

Conclusions