Diffusion of Innovations

Review of Chapter 1 – E. M. Rogers
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Where Does our Work Fit In?

Research and Development Activities to Produce an Innovation

S-shaped Diffusion Curve
Diffusion (Rogers Definition)

• **Diffusion** is the process in which (1) an **innovation** (2) is **communicated** through certain **channels** (3) **over time** (4) among members of a **social system**.

• It is a special type of communication, in that the messages are concerned with new ideas.
Diffusion vs. Dissemination

• Diffusion
  – Unplanned & spontaneous spread of new ideas

• Dissemination
  – Planned & managed spread of new ideas
Diffusionists vs Disseminationists

• Diffusionists assume
  – Spontaneous acceptance
  – Of new technologies
  – By potential end users

• Disseminationists assume
  – Only by top down, managed control
  – By developers
  – Will new technologies be accepted
  – By potential end users
Diffusionists vs Disseminationists

- **Diffusionists**
  - Assume the potential end user
  - Has necessary scientific (rational) critical acumen
  - To perceive worth of innovation

- **Disseminationists**
  - Assume only the developer
  - Has necessary critical acumen
  - To perceive worth of innovation
  - And so the developer must manage its spread
Diffusionists vs Disseminationists

• The difficulty with contrasting these two approaches is this:
• Diffusionists look to the end user and the information base (social system and the software)
• Disseminationists look to the developer of the technology (hardware)
• They separate the dynamic interaction of
  – The developer and the end user
  – Hardware from software
  – Technology from the social system and its use of the information base.
• This may be why Rogers uses only one term “diffusion” for both concepts.
4 Main Elements of Diffusion

1. An innovation
2. Communicated through certain channels
3. Over time
4. Among members of a social system
An Innovation, A Technology

• Are these synonyms?

• An **innovation** is an idea, practice, or object that is perceived as new by an individual or other unit of adoption.

• A **technology** is “a design for instrumental action that reduces the uncertainty of the cause-effect relationships involved in achieving a certain outcome.”
A technology usually has 2 components which are...???
Hardware and Software

• Hardware – the tool that embodies the technology as a material or physical object

• Software – the information base for the tool
Diffusion Process

- Diffusion in its most elementary form is a process that involves:
  - (i) an innovation
  - (ii) an individual or other unit that has knowledge/experience using the innovation
  - (iii) another individual or unit that does not yet have knowledge/experience of the innovation
  - (iv) a communication channel connecting the two units.

- The communication channel is the means by which messages get from one individual to another.

- Mass Media
- Interpersonal
Diffusion Process

Time

% of adopters

Early Adopters

Take-off Period

Late Adopters
Diffusion of Innovation in the Industrialized World
Research Findings

• Early adopters and innovators rely on scientific data
• However, most end users do not evaluate an innovation on the basis of scientific data
• Most end users rely on experiential evaluations communicated by peers – individuals like themselves.
• Diffusion of innovation is the product of a complex of interpersonal and mass media communications within a pre-existing social system.
Diffusion in Developing Countries

• Local channels of communication
  – can be crucial on the household, village or tribal level
  – a local head person may have responsibility for well-being of the people.

• The social system (non-local) defines the broader
  – ethnic culture, religion and values of the people
  – This is also crucial for acceptance of a technology
Social System

• What does diffusion research say about social systems???
Social System

• Diffusion research shows that most people rely on SUBJECTIVE EVALUATIONS conveyed from near-peers – individuals like themselves.

• The heart of the diffusion process is a SOCIAL PROCESS that involves INTERPERSONAL COMMUNICATION RELATIONSHIPS.
What are the 5 characteristics of innovations that explain their different rates of adoption?
5 characteristics of innovations that explain their different rates of adoption

1. Relative advantage
2. Compatibility
3. Complexity
4. Trialability
5. Observability
What are the 5 adopter categories?
Adopter Categories

1. Innovators
2. Early adopters
3. Early majority adopters
4. Late majority adopters
5. Laggards
Rate of Adoption

• A measure of the length of time required for a certain % of the members of a system to adopt an innovation.