



The Knowledge to Practice Process

David Patrick Ryan, Ph.D.

Director of Education and Knowledge Translation, Regional Geriatric Program of Toronto
Assistant Professor, Faculty of Medicine, University of Toronto

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What is knowledge translation?

“the exchange, synthesis and ethically-sound application of knowledge - within a complex system of interactions among researchers and users - to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system.” (CIHR)

Why do we need the idea of KTP

Consistent evidence of failure to translate research findings into clinical practice

30-40% patients do not get treatments of proven effectiveness

20–25% patients get care that is not needed or potentially harmful

Schuster, McGlynn, Brook (1998). Grol R (2001)

Issues in CE research design

Simple/main effect designs are the rule

Focus on events rather than processes

Focus on single disciplines

Research is seldom programmatic

Quantitative and qualitative designs are seldom combined

Theory seldom guides practice

Constructs guiding research are seldom fully validated

Little or no effect

Educational materials

Didactic educational meetings

Sometimes Effective

Audit and feedback

Local opinion leaders

Local consensus processes

Patient mediated interventions

Generally Effective

Educational outreach visits

Reminders

Interactive educational meetings

Multifaceted interventions including two or more of:

- Audit and feedback
- Reminders
- Local consensus processes
- Social marketing

What the meta-analyses of RCTs in CE tell us

(Bero et al., 1998, Grimshaw et al., 2001)

What outcomes are we looking at?

Satisfaction

Attitudes/intentions

Knowledge

Practice change

Guideline adoption

Clinical outcomes

Most frequent



Least frequent

Words of advice for young people

Minimizing variation to reduce error and increase the quality of health care through the use of standardized guidelines “has not been as successful as traditional logic might suggest” (Miller et al 2001)

There seems to be little relation between the quality of the evidence and its diffusion into practice (Fitzgerald et al 2002)

The ways people actually work usually differ fundamentally from the ways organizations describe that work (Mintzberg & Vander Heyden,, 1999)

Our beliefs to the contrary, a great deal of human behavior is illogical (Kruger & Dunning, 1999) (Tversky & Kahneman, 1967)

Beneath each espoused culture lies another that is implicit, informal and unacknowledged (Argyris 1990),

Culture eats change for breakfast

Knowledge is situated and socially constructed (Schein, 1996)

If learning were an iceberg, formal learning may be its tip (Livingstone, 1999)

Useful models, theories and ideas

KTP models (e.g. RGP, Ottawa Models)

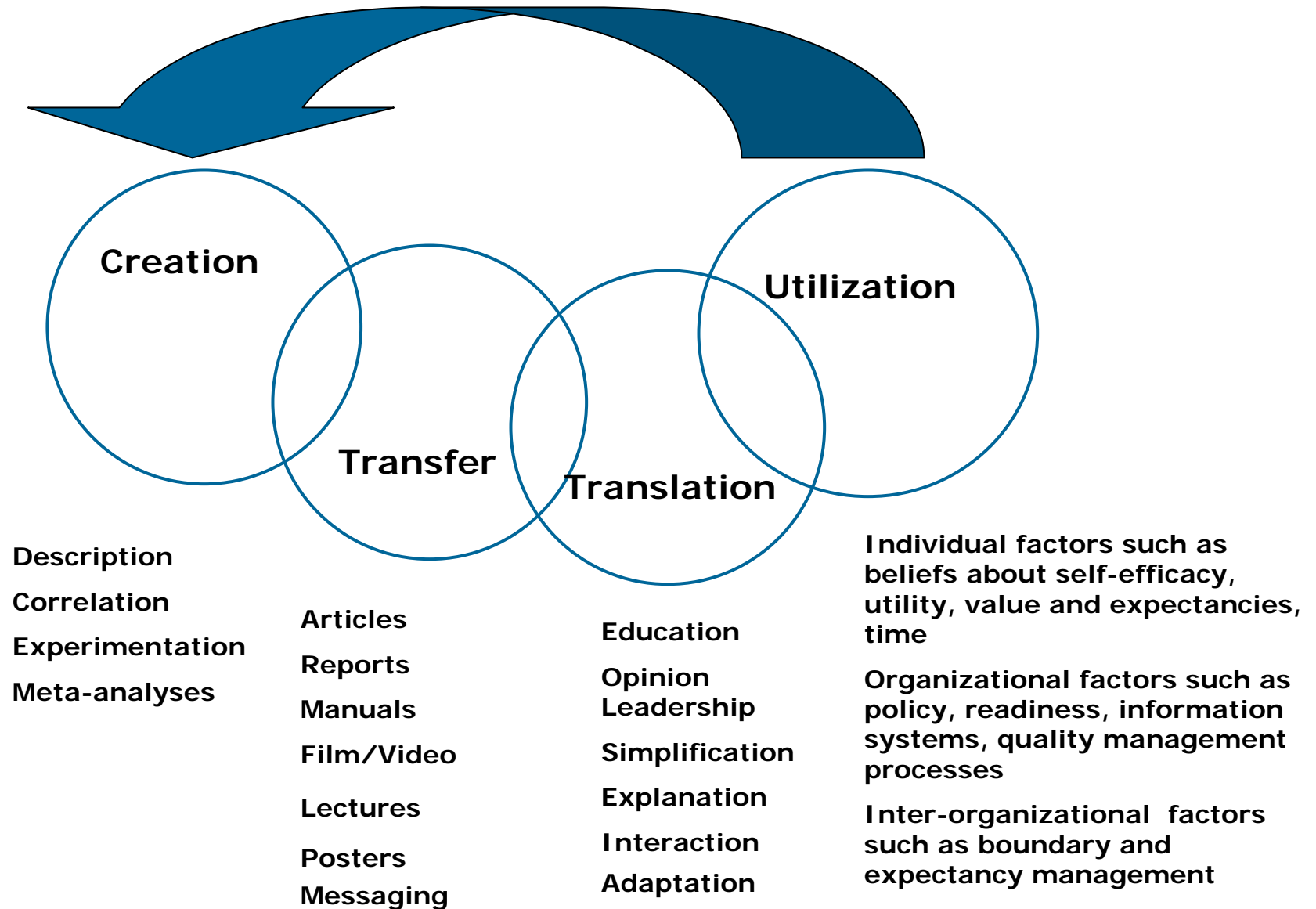
Innovation diffusion theory

Social network theories

Systems and complexity theories

Cognitive-behavior theories and social psychology

The Knowledge to Practice Process



The Ottawa Model (Graham 2005)

Assess

+

Monitor

+

Evaluate

Innovation

- development process
- attributes

Potential Adopters

- awareness
- attitudes
- knowledge/skill
- concerns
- current practice

Practice Environment

- structural
- culture/social
- patients
- economic

Interventions

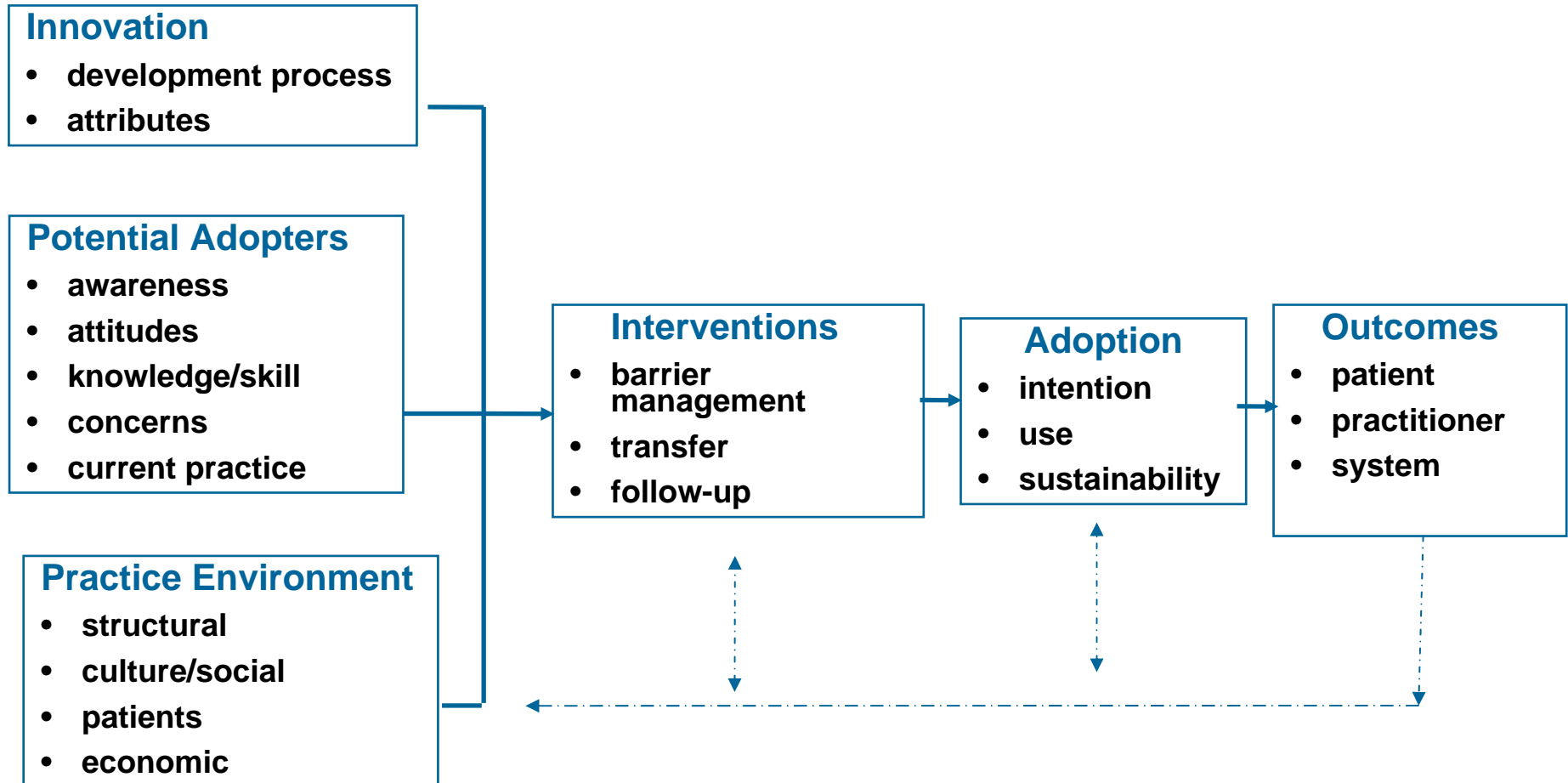
- barrier management
- transfer
- follow-up

Adoption

- intention
- use
- sustainability

Outcomes

- patient
- practitioner
- system



Determinants of innovation adoption:

1. **Relative advantage** (better than precursor)
2. **Compatibility** (consistent with existing values, and experiences)
3. **Complexity** (perceived as easy to use)
4. **Trialability**, (can it be tried before adoption)
5. **Observability** (are effects observable to others)
6. **Image** (does it enhance image of social status)
7. **Voluntariness** (is adoption voluntary)

The structure of capital for KTP

Financial capital:	Money and infrastructure
Human capital:	Skills and interests
Information capital	Knowledge creation and management
Social capital:	Interpersonal and social influence

social network theories

Structural holes (Burt)

Resource mobilization and connectedness (Lin)

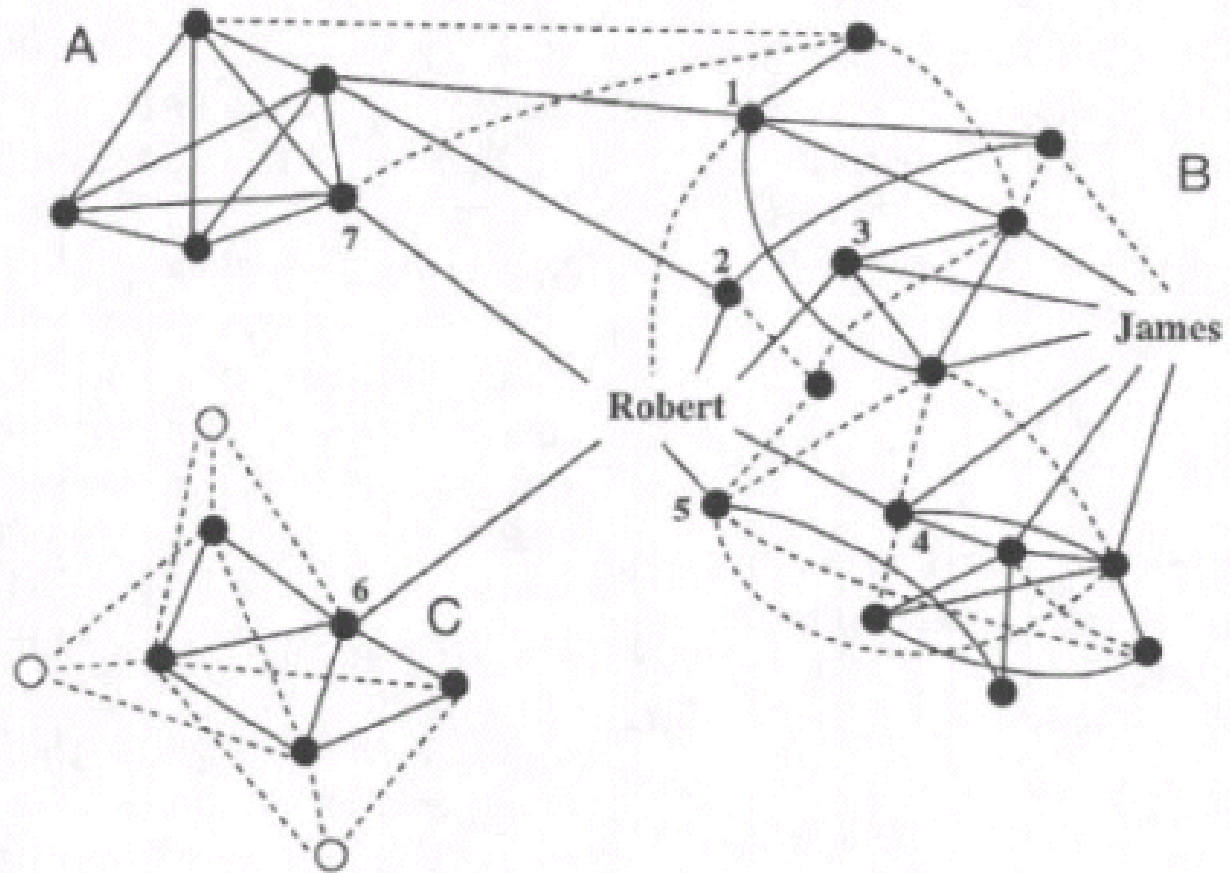
Peripheral participation (Wenger)

Strength of weak ties (Granovetter)

Trust and strong ties (Uzzi)

Networked individualism (Wellman)

A network analysis diagram (Burt, 1999)

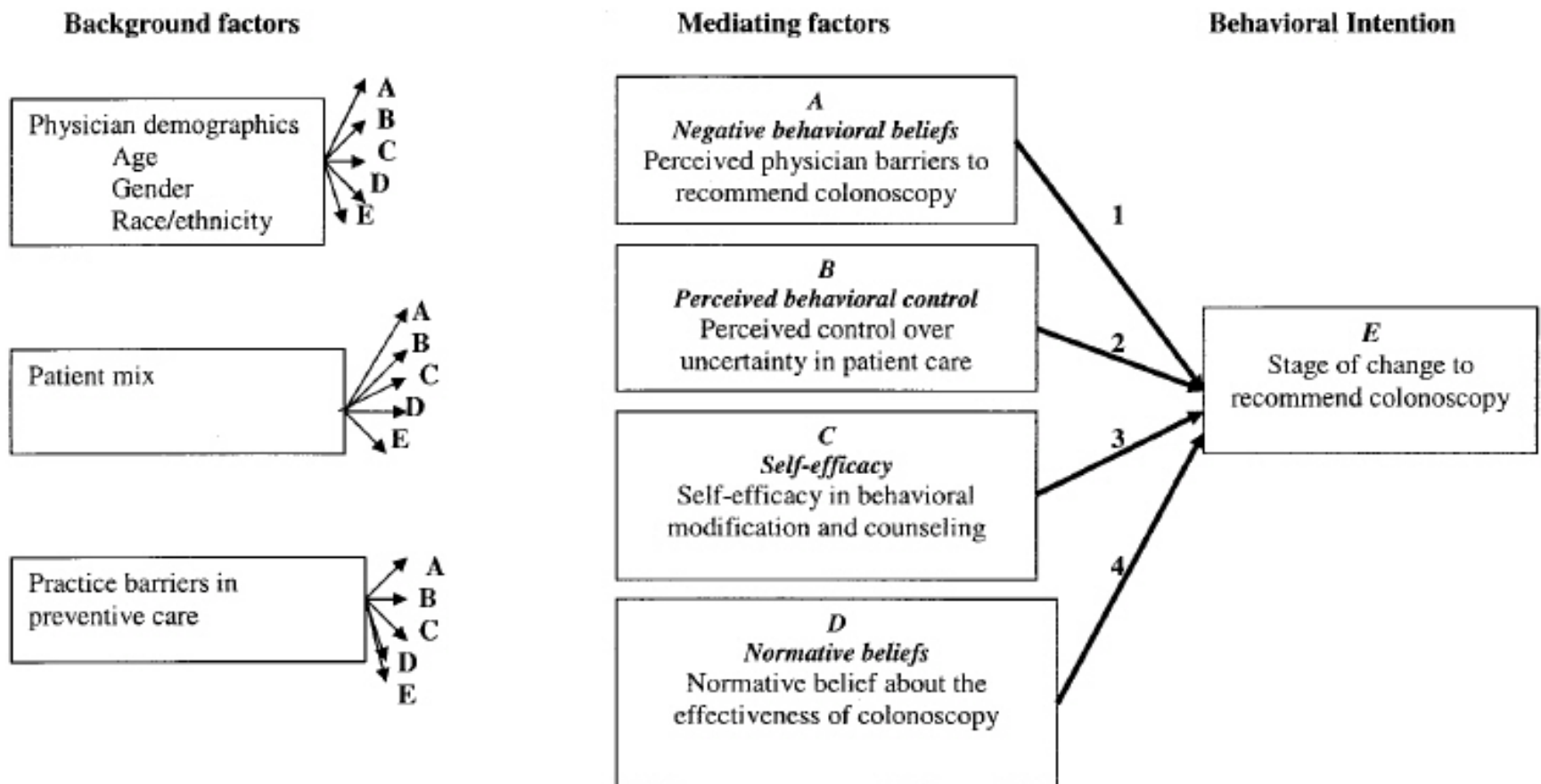


Network character, type of change and prescriptive interventions (McGrath & Krackhardt, 2003)

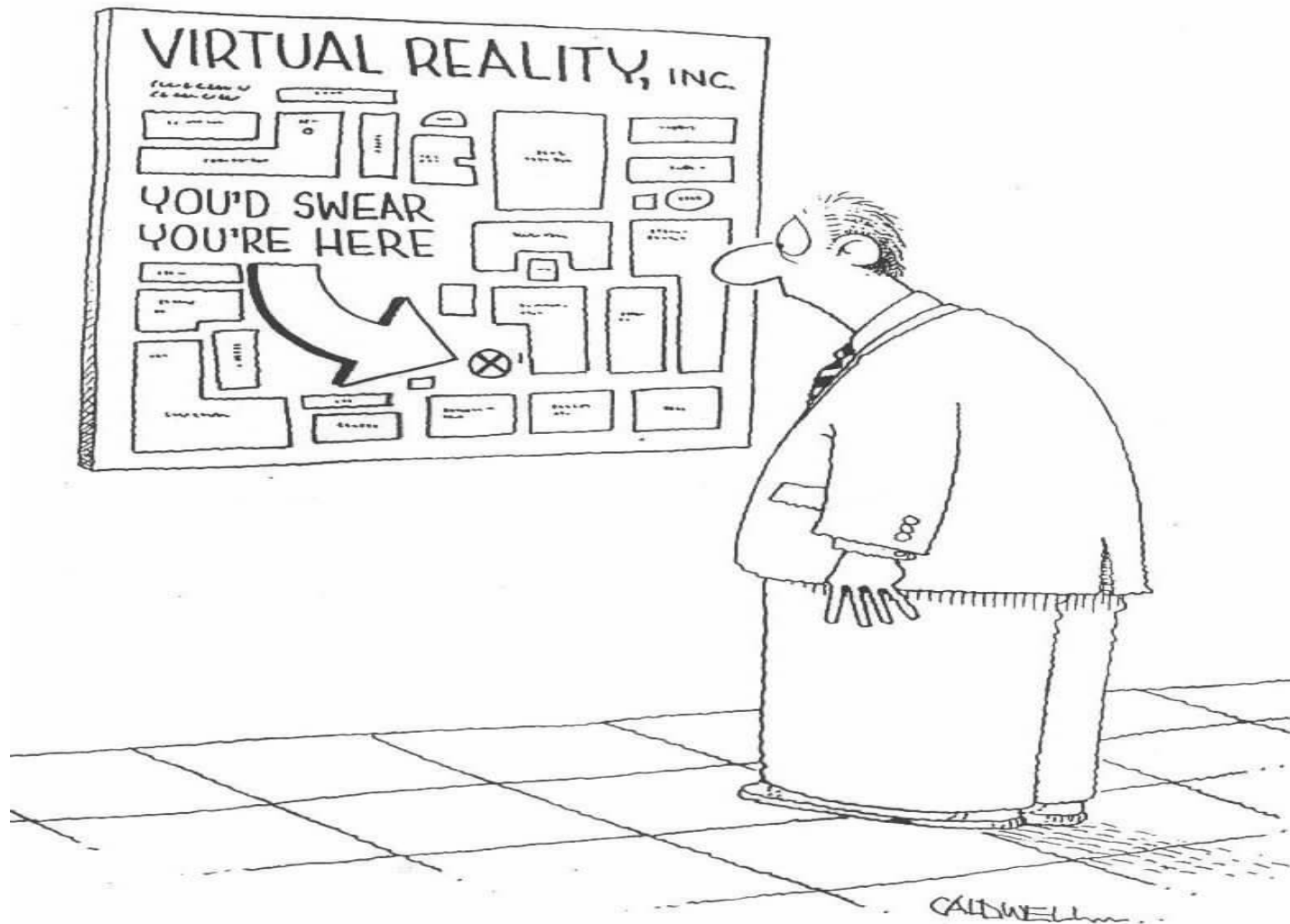
Change Model	Type of change	Network character	Mechanism	Where to intervene
External ties	Network wide	Strong dense ties exist with many external ties across subgroups	Trust and social identity	The people with strong external ties (structural holes)
Viscosity	Adoption of controversial innovations	Strong, dense internal ties but few external ties across subgroups	Individual commitment within a subgroup	Introduce change in one group at periphery (strength of weak ties)
Structural leverage	Innovation clearly superior	When the networks formal structure is low	Creating buzz (contagion)	Introduce change to a friend of a network member (opinion leaders)

Cognitive-Behavioral and Social-Psychological Theories

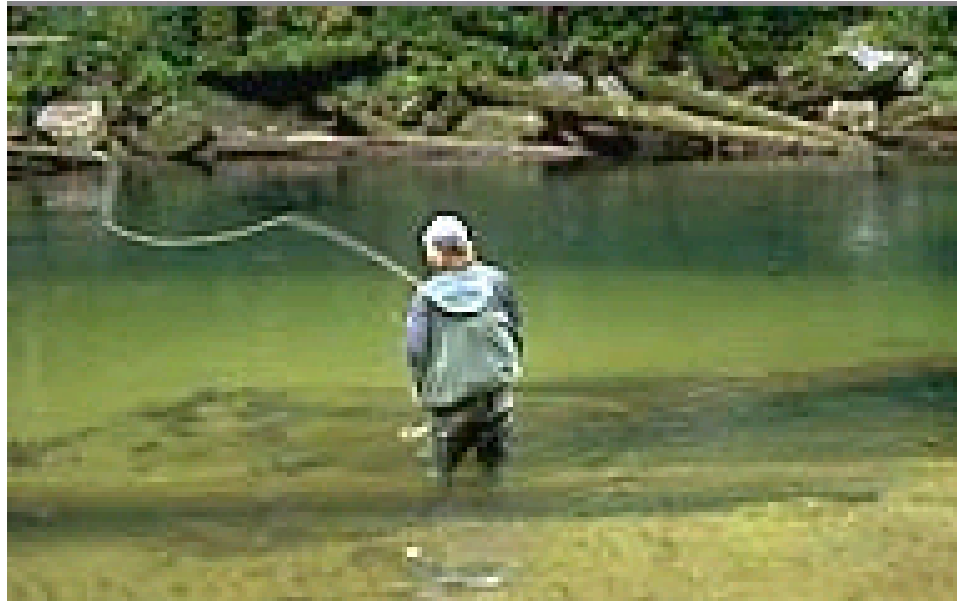
An application of the theory of reasoned action and planned behavior (Fishbein & Ajzen, 1975) and self-efficacy theory (Bandura, 1986) to the prediction of colorectal cancer staging (Honda & Gorin, 2006)



Let's examine our ongoing knowledge to practice work in light of the material presented



Please take a copy of the reference list for this talk



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