

Behavior & Infection Control

Prof. Andreas Voss, Radboud University Nijmegen Medical Centre

Sponsored by WHO First Global Patient Safety Challenge – Clean Care is Safer Care

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Hosted by Hugo Sax, MD
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Clean Care is Safer Care

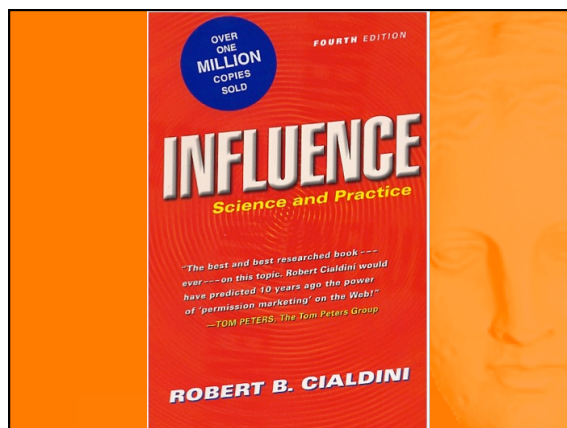
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Psychological models & Healthcare

- used to understand and predict behavior, but (so far) hardly used in healthcare
- Theory of Planned Behavior (TPB)
- Social Cognitive Theory (SCT)
- Operant Learning Theory (OLT)
- Common Sense Self-regulation Model (CS-SRM)
- Stage Models (SM)
- Implementation Intention (II)

Bonetti et al. Implementation Science 2010;5:20



Influence

- While we wish to make the most thoughtful, fully considered decision possible ...

we frequently resort to comply on basis of a single piece of information (trigger)

- “Click-whirr” (automatic response, fixed action pattern)
 - Mother turkey feeds chicks at the sound of cheep-cheep
 - Stuffed “pole cat” (natural enemy) → rage
 - Stuffed pole cat with cheep-cheep → feeding

Triggers for compliance

- Commitments
- Opportunities for reciprocation
- Compliant behavior of similar others
- Feelings of liking & friendship
- Authority directives
- Scarcity information

Commitments

- Shortcuts – judgmental heuristics
- Contrast principal
- Consistency



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Shortcuts – judgmental heuristics

- “Expensive = good” (and opposite)
- “If an expert said so, it must be true”
 - Airline industry “captainitis” 
- “Because”
 - Increase compliance even if no reasoning follows (example cutting lines)
 - Possibly based on “because” ... “just because” of parents when answering their children's questions 



Contrast principal


- Perceptual contrast
 - Buying suite and sweater → expensive item first
 - Selling the car first, than the options



Perceptual Contrast


Now that I have brought you up to date, I want to tell you that there was no dormitory fire, I did not have a concussion or skull fracture, I was not in the hospital, I am not pregnant, I am not engaged, I am not infected, and there is no boyfriend. However, I am getting a “D” in American History and an “F” in Chemistry, and I want you to see those marks in their proper perspective.

Your loving daughter,
Sharon




Consistency


- Most people have a strong desire to look consistent within their words, beliefs, attitudes
- Whenever one takes a stand that is visible to others, there arises a drive to maintain that stand in order to look like a consistent person.
- Therefore, written-down and publicly made commitments can be used to influence others and ourselves




Consistency

- At the beach 
 - Leaving a blanket with valuables – pretended theft
 - 4/20 people in the area reacted
 - Saying “watch my things” first → 19/20 reacted

If I can get someone to commit (take a stand or go on record)
I can set the stage for automatic consistency !




Food-in-the-door (1)

- Question to home owners – place large billboard “Drive Carefully” in your lawn
- Two groups: A) 17% complied B) 76% complied 
- Why the difference between A + B ?

B was asked a few weeks before to display a small 3x3in sign in window “Be a safe driver”

?

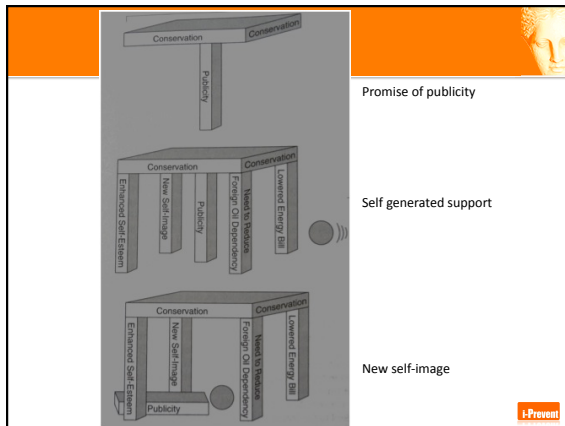


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Contrast & consistency principle applied in infection control ?

- Key-person as role-models
- Published list of supporters/let them sign a pledge
- Pre-prime your customer
 - Would you (theoretically) be supporting our goals? Followed by a visit to commit them to IC

Opportunities for reciprocation

- “we are obligated to future repayment”
- Regan et al. “Coke experiment”
 - Joe gave others (unasked for) a drink. Later asked them to buy raffle tickets from him
 - those who got a Coke bought more tickets
 - those you “liked” Joe bought more tickets
 - **but** relationship between “liking” and compliance wiped out in those that received a Coke !

“a feeling of indebtedness by doing us an uninvited favor”

Examples of reciprocation

- Mailing a \$5 gift along with a survey was twice as effective as a \$50 payment for sending it back (James & Bolstein 1992)
- → a small initial favor can produce a sense of obligation to agree to a larger return favor, since most of us find it highly disagreeable to be in a state of obligation

Reciprocation techniques

- **Reciprocal concessions**
 - Boy scout selling \$5 tickets for Saturday night event, when rejected offering \$0,50 candies (buyer feels that second request is a concession to him)
- **Rejection-then-retreat strategy**
 - Over ask first, than come with intended amount
 - Ask volunteers for 1 week of community service than offer 1 hour
 - Rejected-then retreat group has a higher compliance to actually do that service (85% vs. 50%)
- **Benefactor-before-beggar-strategy**

Benefactor-before-beggar-strategy

Disguised Krishna arrested for soliciting without a license when pressing candy canes on shoppers and than asking for donations

→ reciprocity rule

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Benefactor-before-beggar-strategy




A nice Christmas gift for your HCWs –

shortly before launching your HH campaign




Compliant behavior of similar others

- Principle of Social Proof
 - Important means that people use to decide what to believe or how to act is to look what other believe or do
- Social proof is most influential under two conditions
 - Uncertainty
 - Similarity




Principle of Social Proof

- “We view behavior as correct to the degree we see other performing it”
 - When lots of people do it – it must be right




50 million can't be wrong



“people want to be part of the majority”

Just One Of The 50 Million Americans Who Invests In U.S. Savings Bonds.

Across the country, more and more Americans are planning for the future of their children by buying U.S. Savings Bonds. This Little League slugger gets a Savings Bond for each birthday. As he grows older, his bonds grow in value. So he's not just getting a gift, he's getting an investment. Find out how U.S. Savings bonds are making millions of American dreams a reality. Call 1 800 4 US BOND for more information.


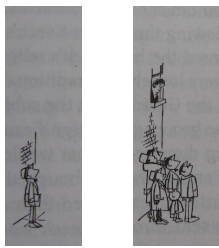


Social proof - examples

- Laughing tracks
 - Others laugh = it must be funny
 - we react to the sound (even if fake)
 - not the content
 - works even if the sound is artificial
- Church usher salting collection baskets



What is going to happen?




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Pluralistic ignorance




Uncertainty
Heart attack or drunk?
Other bystanders reduce personal responsibility




Using principles of social proof in infection control?

- Never again start a lecture with only 40% disinfect their hands ...
 - “all HCW agree that HH is the most important ...”
- Pay people to be the good example (role models)
- Movies with correct behavior around the hospital
- Campaign logo/IC-logo worn by all KOLs




Feelings of liking & friendship

- “We most prefer to say YES to the request of people we know and like”
- Factors leading to liking:
 - physical attractiveness (halo effect)
 - similarity
 - familiarity
 - praise
 - association




Halo effects

- Occurs when a positive characteristic of a person dominates the way a person is viewed
 - Good-looking = talent, kind, honest, intelligent
 - Works in many situations: even judicial process
 - handsome men lighter sentences




Similarity

- “We like people that are similar to us”
 - more likely to help those that dress like us



Compliments

- “We are phenomenal suckers for flattery”
 - Positive comments produce just as much liking for the flatterer independent if they were untrue or true



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Association

- An innocent association with either bad or good things will influence how people feel about us or a product
 - The good looking models next to the car
 - Rating of identical car changed with and without model
 - Men didn't believe that their judgment was influenced




Association

- SALE
 - Buying becomes more likely because it is associated with good experience in the past
- Celebrities and advertisement
 - Establish a connection; it doesn't have to be a logical one, just a positive one



Can you think about a situation in which you could use this ?

- Praise instead of criticize !
- Let others report about the outbreak & extra measures
- Infection Control luncheon
- Use a (local) celebrity (non-medical) to advertize for Infection Control



Authority directives

- Power of authority (Milgram study, 1974)
- Symbols of authority
 - Titles
 - Clothing
 - Automobiles







Power of authority (Milgram study, 1974)



Symbols of authority

- Appearance of authority is enough to get is into the *click, whirr* mode
- Symbols of authority
 - Titles
 - Clothes
 - Trappings



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Titles

- Prestigious titles lead to height distortion
 - Visitor to college presented as “Student” to “Professor” at 5 different levels, college students than asked to estimate length: Δ 0.5 per category or 2.5 in overall
 - Size and status is related




Clothes

- Request by well-dressed person is more frequently obeyed
 - Man walking crosses red-traffic light: in suit versus shirt & trousers
 - 3.5 x as many people followed suited jaywalker



Can you think about a situation in which you could use this ?

- Start wearing a tie?
- Get an impressive office
- Meet and be seen with senior clinicians and CEO
- Use your Porsche to work → would achieve the opposite in the NL





Scarcity information

- People assign more value to opportunities when they are less available
 - “limited number” and “deadline”
 - Difficult to get = valuable
 - Loosing freedom of choice → increases wish
- Psychological reactance
- Scarcity and information





Psychological reactance

- “Things that are difficult to get are better”
- When free choice is limited or threatened the need to retain our freedom makes us want them significantly more
 - “Terrible two and equally desirable toys of which one behind a Plexiglas barrier
 - Parental interference with young love



Censorship

- Response to “banned” information
 - Want the information even more
 - Believe the information more even though it wasn't received



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Commodity theory



- Sale of product
 - Standard info
 - Standard info + upcoming scarce
 - Standard info + scarce exclusive source x 6



'Feeding frenzy'


Humans and animals alike lose perspective on what they want and begin striking at whatever is contested

- School of fish when loose bait in water will snap on bare hook
- Overspending during auctions
 - \$145,000 for John T. Saturday Night Fever polyester suit, because two bidders became locked into a competitive bidding




Can you think about a situation in which you could use this ?

- Introduction of new hand-rub or catheters in your hospital
 - Present & announce, restrict it to ICU and those units that first order
- Announce a limitation of hand-rub and then find a "new source" of supply



Summary

- This were just a few examples of one book
- In order to effectively implement infection control we need more knowledge in behavioral science
- Behavioral science furthermore offers explanations we see in healthcare settings



The Spreading of Disorder



- Orderly alley
- No graffiti sign
- Flyer on handlebar
- avoid littering



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The Spreading of Disorder

- Orderly alley: 33% littering
- Graffiti alley: 69% littering



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The Spreading of Disorder

- When people observe inappropriate behavior, this weakens their concern for appropriateness



We need "order" in our hospitals and people showing appropriate behavior !

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2012 WHO Teleclasses	
Clean Care is Safer Care	
February 8 Behavioural Change in Infection Prevention and Control , Prof. Andreas Voss	
March 7 Achievements in Improving Injection Safety Worldwide , Dr. Selma Khamassi	August 8 Processing Medical Devices in Settings with Limited Resources , Dr. Nizam Damani
April 17 Implementing Change: The Technical & Socio-Adaptive Aspects of Preventing Catheter-Associated Urinary Tract Infection , Prof. Sanjay Saint	September 5 Successes and Challenges in Developing and Implementing Bundles in Infection Prevention , Prof. Dan Goldmann
May 7 Keeping the Hand Hygiene Agenda Alive: Acting on Data and the Influence of Global Surveys , Prof. Didier Pittet	October 2 The Role of Education in Low and Middle Income Countries , Prof. Shaheen Mehtar
June 6 Economic Impact of Healthcare-Associated Infections in Low and Middle Income Countries , Dr. A. Nevzat Yalcin	November 7 Measuring Impact: Key to Infection Control Scale-Up and Sustainability , Prof. Jacqui Reilly
July 11 Patient Involvement in Infection Control , Claire Kilpatrick	December 5 New Developments in Infection Control for Renal Dialysis , Prof. W.H. Seto

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