

23 SEPTEMBER 2015

1. TODAY - AVOIDING TYPE III ERRORS
NEGOTIATING

2. REPORTS

FRANCINE GACHUPIN - SEAN, MENG, JING
ZHAO
- MEETING SUMMARY
- REPORT (SAMPLE SIZE)

ANDREW WEDEL - ^J~~ZHUS~~, NICK, MIN
- MEETING SUMMARY
- REPORT?

3. CLIENT MEETINGS

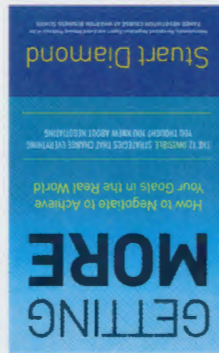
- ANDREW WEDEL
- RAN LI
- GUS MULDER

4. NEXT TIME: DIFFICULT SITUATIONS

→ BEGIN READING PAPER
BY SENN & JULIOUS
"MEASUREMENT IN CLINICAL
TRIALS"

- How would you use me to participate
- Student involvement
- cost - student
- developing questionnaire

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Getting More™ Four Quadrant Negotiation Model

| | |
|--|--|
| <p>Quadrant I-Problems & Goals</p> <ol style="list-style-type: none"> Goals: Short/long term. Problem(s): In reaching goals. Parties: Decision-maker. 3rd parties. What if No Deal? Worst case? Preparation: Time. Who has more info? | <p>Quadrant II-Situation Analysis</p> <ol style="list-style-type: none"> Needs/Interests: Rational, emotional, shared, conflicting, unequally valued. Perceptions: Pix in the head of each party. Role reversal, culture, conflicts, trust. Communication: Style, relationship? Standards: Theirs, norms. Re-examine Goals: Still realistic? |
| <p>Quadrant III-Options/Risk Reduction</p> <ol style="list-style-type: none"> Brainstorm: Options to meet goals, needs. What to trade or link? Incremental: Steps to reduce risk. 3rd parties: Common enemies, influencers. Framing: Create a vision, develop questions. Alternatives: To improve/affect deal, if necessary. | <p>Quadrant IV-Actions</p> <ol style="list-style-type: none"> Best options/priorities: Dealbreakers. Giveaways. Who presents: How and to whom? Process: Agenda, deadlines, time mgmt. Commitments/incentives: Especially for them. Next steps: Who does what? |

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1. WHAT ARE MY GOALS?
2. WHO ARE "THEY"?
3. WHAT WILL IT TAKE TO PERSUADE THEM?

AVOIDING ERRORS OF THE 3RD KIND

TYPE I ERROR: REJECT NULL HYPOTHESIS WHEN IT IS TRUE

TYPE II ERROR: FAIL TO REJECT NULL HYPOTHESIS WHEN IT IS FALSE

TYPE III ERROR: PROVIDING THE "RIGHT ANSWER" TO THE WRONG PROBLEM

A.W. KIMBALL 1957 JASA - PAGE 65

USUALLY CAUSED BY THE STATISTICIAN UNDERSTANDING A WRONG VERSION OF THE PROBLEM.

" IT'S NOT THE THINGS WE DON'T KNOW THAT HURT US;

IT'S THE THINGS WE KNOW THAT JUST AIN'T SO."

P. 78
SEE DIALOG 2, P 79. 1

VIDEO 4A. QUESTION TYPES P 84-87.

- USE OPEN QUESTIONS, IN CLIENT'S LANGUAGE, TO EXPLORE STATISTICAL ASSUMPTIONS
- USE SPECIFIC QUESTIONS (PARAPHRASING) TO TIE DOWN DETAILS

DIALOG P. 88

WHAT DO I LOOK FOR?

- WHAT IS THE SCIENTIFIC HYPOTHESIS?
- HOW DOES THIS STUDY ~~FIT~~ FIT WITHIN
 - THE SCIENTIFIC/MEDICAL CONTEXT
 - THE CLIENTS RESEARCH PROGRAM
- WHAT IS BEING MEASURED?
 - PRIMARY OUTCOME
 - SECONDARY OUTCOMES
 - OTHER COVARIATES
- HOW IS IT BEING MEASURED?
- HOW ARE SUBJECTS/OBJECTS / EU'S SELECTED OR CONSTRUCTED?
- IN EXPERIMENTS, HOW ARE TREATMENTS APPLIED? (IMAGINE DIFFERENT SCENARIOS)
- ~~B~~ WHAT ARE THE SOURCES OF VARIATION? RELATIVE MAGNITUDES?
- WHAT ARE SOURCES OF STATISTICAL DEPENDENCE? MAGNITUDE?

* IF DATA ARE ALREADY COLLECTED

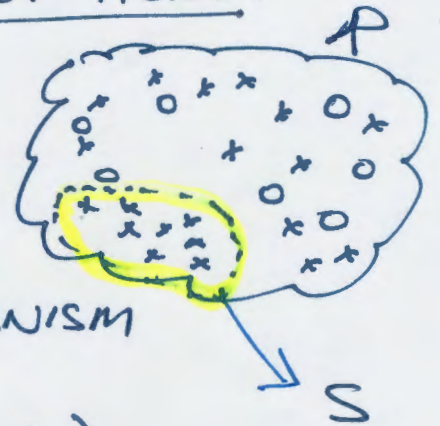
"HOW DID THESE DATA GET HERE?"

- USUALLY THE MOST IMPORTANT QUESTION.

HOW DID THE DATA GET HERE?

I. POPULATION - \mathcal{P}

A SAMPLE S IS SELECTED FROM \mathcal{P} BY SOME MECHANISM



$$S = g(\mathcal{P}) = (s_1, s_2, \dots, s_n)$$

HOW IS S SELECTED FROM \mathcal{P} ?

II. NOW FOR $s_i \in S, i=1, 2, \dots, n$

MEASUREMENT AND REPORTING $m(\cdot)$

$$m(s_i) = (y_{i1}, y_{i2}, \dots, y_{im}, x_{i1}, x_{i2}, \dots, x_{ip})$$

HOW ARE MEASUREMENTS MADE? REPORTED?

ARE SOME COMPONENTS MODIFIED?

OR NOT REPORTED?

(e.g. "OUTLIERS" REMOVED; VALUES CENSORED)

III. FINALLY WE WANT TO MODEL.

$$y_i = f(x_i | \theta) \equiv f(x_i | \theta, m, g, \mathcal{P})$$

WE WANT TO FOCUS ON THIS PART

WE OFTEN IGNORE THIS PART

CHAP 5 ASKING GOOD QUESTIONS

GOAL: LEARN ENOUGH ABOUT YOUR CLIENT'S PROBLEM TO BE HELPFUL.

IDENTIFY WHAT YOU NEED TO FIND OUT.

1. WHAT TYPE OF INVESTIGATION?

- EXPERIMENT
- OBSERVATIONAL STUDY
- SAMPLE SURVEY

CHOCOLATE BAR STUDY
P. 67

2. WHAT STAGE OF INVESTIGATION?

- ~~CHATFIELD'S 7 STAGES (P 70)~~

3. LEARN ABOUT CLIENT'S DISCIPLINE

How? - ASK THE CLIENT

- PREVIOUS PUBLICATIONS
- SIMILAR PAPERS

- WIKIPEDIA & WEB RESOURCES

- SHORT COURSES, TEXTBOOKS, SEMINARS

- "STATISTICAL METHODS FOR BLAH"

HOW MUCH TIME DO YOU HAVE/WANT TO SPEND?

SKIP

NEGOTIATING A SATISFACTORY EXCHANGE

YOU AGREE TO PROVIDE SOMETHING FOR
THE CLIENT.

THE CLIENT AGREES TO PROVIDE SOMETHING
FOR YOU.

YOU BOTH SHOULD BE SATISFIED.

BOOKS

GETTING TO YES - ROGER FISHER &
WILLIAM URY

THE NEW ART OF NEGOTIATING
GERARD NIERENBERG, HENRY CALERO

* GETTING MORE - STUART DIAMONIS

VIDEO SEGMENT 5

NEGOTIATION ISSUES IN STAT CONSULT

1. WHAT IS YOUR ROLE?
2. WHAT ARE THE ROLES OF OTHERS?
3. HOW WILL COMMUNICATIONS BE MAINTAINED?
4. WHAT ARE THE DELIVERABLES?
5. WHAT ARE THE DEADLINES?
6. HOW WILL YOU BE COMPENSATED?
7. WHAT ARE ACCEPTED STATISTICAL PRACTICES?
8. WHAT ARE THE OWNERSHIP RIGHTS?
9. WHAT CONDITIONS FOR SECURITY AND CONFIDENTIALITY?
10. WHEN IS YOUR PARTICIPATION FINISHED?

→ IDENTIFY WHICH ISSUES AFFECT YOUR INVOLVEMENT IN EACH PROJECT.

DIFFERENT PROJECTS, DIFFERENT ISSUES.

STYLES OF NEGOTIATION

HIGH CONTEXT STYLE - DRAW CUES FROM

SURROUNDINGS, NON-VERBAL ACTIONS,
NUANCE OF MEANING.

- OFTEN IMPORTANT TO CULTIVATE A PERSONAL
RELATIONSHIP.

LOW CONTEXT STYLE -

- ESTABLISH

Go to
P101

STYLE



LOW CONTEXT

- MOST IS
- MAY BE
- EXTREME

- MAY SEEK (OR NOT) (CONSPICUOUS)

- LIKELY VALUES ACCURACY OF LANGUAGE
AND DIRECT SPEECH

SEE EXHIBIT 6.1 P101 - STYLE TABLE

STYLES OF NEGOTIATION

HIGH CONTEXT STYLE - DRAW CUES FROM

SURROUNDINGS, NON-VERBAL ACTIONS,
NUANCE OF MEANING.

- OFTEN IMPORTANT TO CULTIVATE A PERSONAL
RELATIONSHIP.

- MAY TRY TO AVOID DIRECT CONFRONTATION,
AVOID "NO".

- ESTABLISHED CONVENTION DETERMINES POSITION

LOW CONTEXT STYLE

- MOST ISSUES OPEN FOR DISCUSSION

- MAY DELIBERATELY BEGIN WITH AN
EXTREME POSITION

- MAY SEEK (OR NOT MIND) CONFRONTATION

- LIKELY VALUES ACCURACY OF LANGUAGE
AND DIRECT SPEECH

SEE EXHIBIT 6.1 p101 - STYLE TABLE

CHANGES ARE THE RULE,
NOT THE EXCEPTION.

- AS YOU LEARN MORE ABOUT A PROJECT YOUR DECISIONS ABOUT STATISTICAL PRACTICES MAY CHANGE
- CHANGES IN THE PROJECT ENVIRONMENT OR SCOPE MAY AFFECT PRIOR AGREEMENTS
- NEGOTIATION CAN BE AN ONGOING AGENDA ITEM IN CLIENT DISCUSSIONS

IN ANY STATISTICAL CONSULTING NEGOTIATION
THERE SHOULD BE BENEFITS FOR YOU
AND BENEFITS FOR THE CLIENT.

WHAT ARE CLIENT BENEFITS?

TANGIBLE { STUDY DESIGN, ANALYSIS PLAN,
REPORT

IMPROVED QUALITY OF REPORT

INTANGIBLE { - ACCESS TO STATISTICAL EXPERTISE
- INCREASED CONFIDENCE IN RESULTS
- INCREASED RECOGNITION AMONG PEERS
- LEARN MORE STATISTICS

→ YOU CAN SUBSTITUTE TANGIBLE AND
INTANGIBLE BENEFITS.

CAN AUTHORSHIP BE SUBSTITUTED
FOR PAYMENT?

WHAT ARE THE BENEFITS TO THE STATISTICIAN?

TANGIBLE ITEMS: MONEY, SALARY SUPPORT
PUBLICATIONS, ACCESS TO DATA

?

INTANGIBLE ITEMS: GOODWILL
OPPORTUNITY TO LEARN { STATISTICS
OTHER SUBJECT
ESTABLISH RELATIONSHIP W/ CLIENT
RECOGNITION FROM PEERS
BEING INCLUDED/INVOLVED
IN A LARGER PURPOSE

? OPPORTUNITIES W/ OTHER
NEW CLIENTS,

- RESUME BUILDING