

# Experimental Marketing Research in Tourism

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## Agenda

- 1 What is an experiment?
- 2 Examples of experiments
- 3 Let's do an experiment
- 4 Experimentation in tourism & leisure

# What is an experiment?





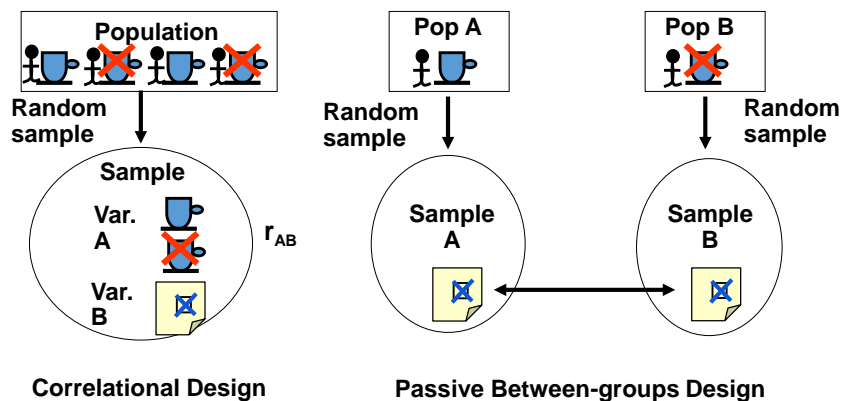
# Research question

Does coffee  
increase  
concentration??



## Non-experimental research designs

Does coffee increase concentration?



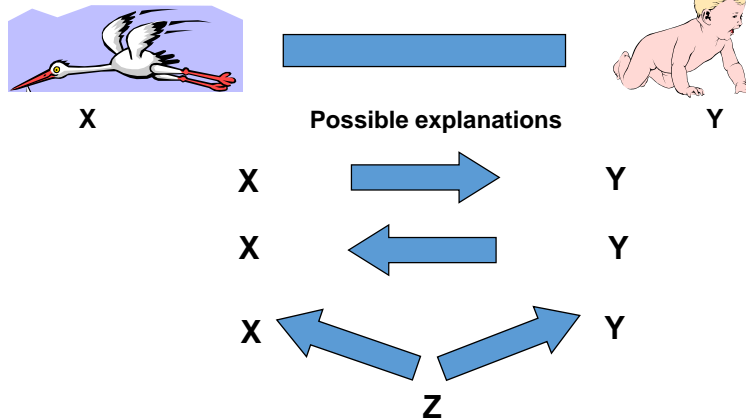
Cause-effect relationship

Correlation is not causality

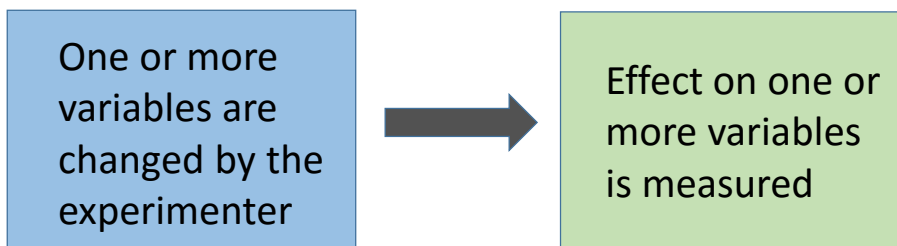
# Correlation is not causality



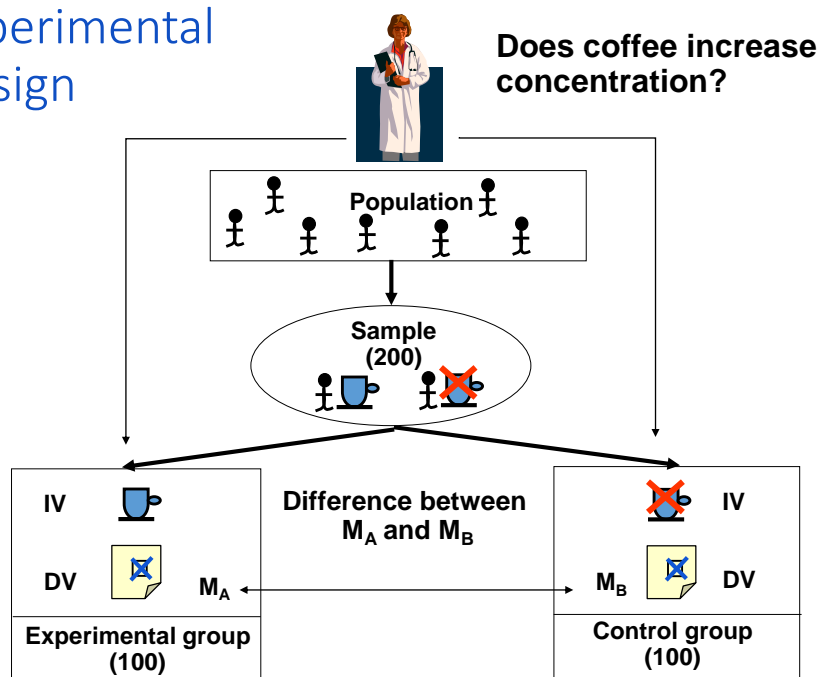
- Germany, 19th century
- Study: positive correlation between the number of storks and the number of newborn babies
- Do storks deliver babies?



## Experimentation



## Experimental Design



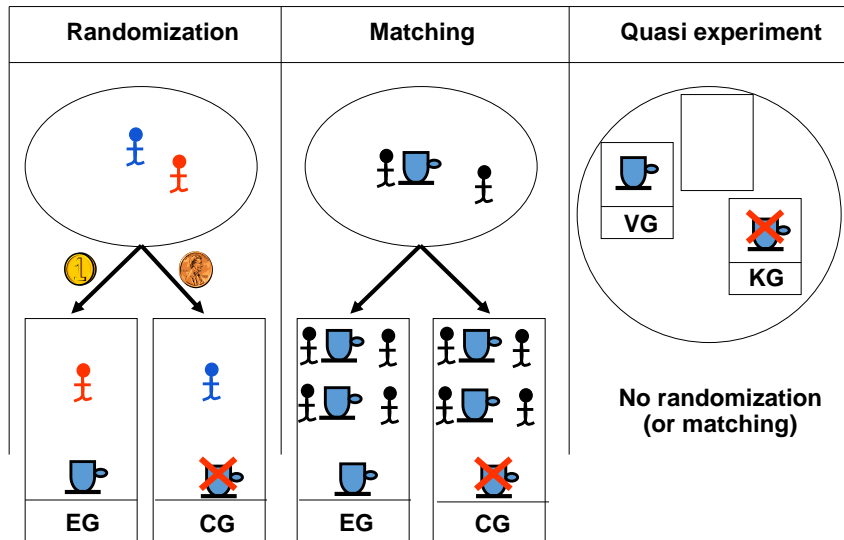
## Concentration Test

Once upon a tyme there wis a prince who wanted to marry a princess; but she would hawe to be a real princess. He travelled all over the world to find one, but nuwhere could he get what he wanted. There were princesses enough, but it was difficult to find out whether they were real ones. There was always something about them that was not as it shouldd be. So he came homme again and was sad, for he would have liked very much to have a real princess.

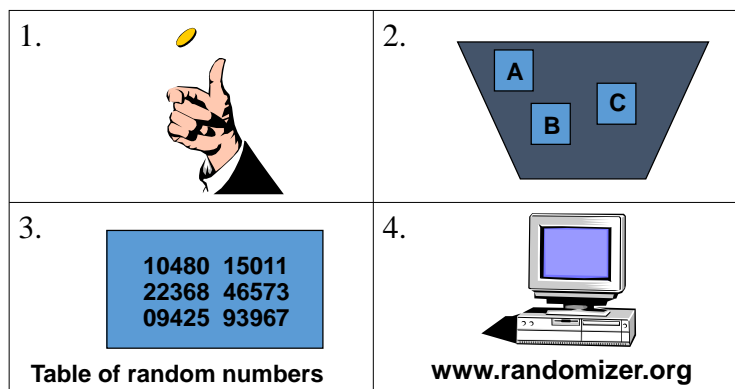
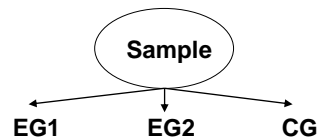
One eveming a terrible storm came on; there was thumder and lightning, and the rain poured down in torrents. Suddenly a knocking wis heard at the city gate, and the old king went to open it. It was a princess standing out there in front of the gate. But, goud gracious! What a sight the rain and the wend had made her look. The wuter ran down from her hairr and clothes; it ran down into the toes of her shoes and out again at the heels. And yet she said that she was u real princess.

"Well, we'll soon find that out," thought the old queen. But she said nothing, went into the bed-room, took all the bedding off the bedstead, and laid a pea on the bottom; then she took twanty mattresses and laid them on the pea, and then twenty eider-down beds an top of the mattresses. On thiss the princess had to lie all night. In the mrning she was asked how she had slept.

How are participants assigned to the experimental group and the control group?



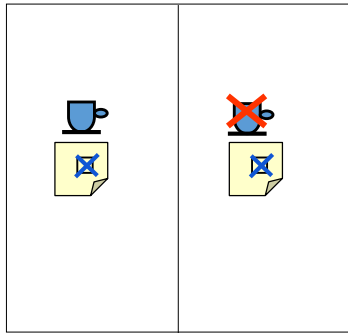
## Randomization





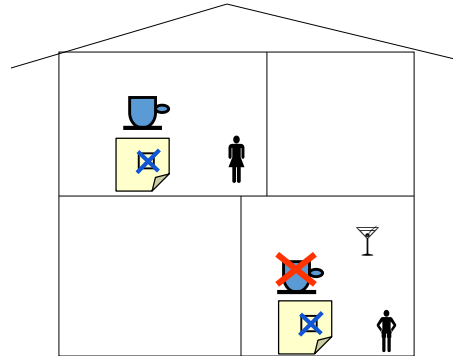
# Field Experiment vs. Laboratory Experiment

**Laboratory experiment**



Internal validity: high  
External validity: low

**Field experiment**



Internal validity: low  
External validity: high

## Examples of experiments

## Example: Field experiment

The effectiveness of verbal prompts on sales



*„A hamburger and a medium Coke, please.“*

*„Would you like Fries with that?“*



**→ Suggestive selling**

## Research Questions

1. To what extent does suggestive selling increase sales of food items?
2. Which factors influence the effectiveness of suggestive selling?

## Hypothesis 1

**H<sub>1</sub>:** The use of verbal prompts leads to increased sales of side dishes.

## The Mindlessness Phenomenon

- „Excuse me, I have five pages.  
May I use the Xerox machine  
because I'm in a rush?" 94%
- „Excuse me, I have five pages.  
May I use the Xerox machine?" 60%
- „Excuse me, I have five pages.  
May I use the Xerox machine  
because I have to make some  
copies." 93%

Langer, Blank & Chanowitz (1978)

## Hypothesis 2

**H<sub>2</sub>:** Forced-choice prompts are more effective than regular prompts.

## New dishes on the menu

**Alkoholfreie Getränke**

Coca Cola, Coca Cola light, Fanta, Almdudler	Beck 0,33	€1,30
Coca Cola, Fanta, Almdudler	PEI 0,33	€1,90
WAT! Extreme Zitrone od. Pfirsich	PEI 0,33	€1,90
WAT! Rosenquartel Emotion „Bitter Melone“	PEI 0,33	€1,90
WAT! Melon	PEI 0,33	€1,90
Rosenquartel Classic	PEI 0,33	€1,50
Cappo Orange	Beck 0,33	€1,70
Red Bull	Beck 0,33	€2,50
Stark	0,33	€0,70

**Alkoholische Getränke**

Gläser	Beck 0,33	€1,50
Gläser	Beck 0,33	€2,00
Gläser	Beck 0,33	€2,10
Stiegl od. Huter	0,33	€2,40
Stiegl weiss oder rot	0,33	€1,80
Flaschenwasser	0,33	€0,10

**NEU!**

**Geb. Champignons**  
**Geb. Emmentaler**  
**Geb. Alaska Seelachsfilet**  
**Vegetarischer Teller**

**Riifese Kaisersemmel**

	gefüllt mit:	Stück	Preis	Preis
Schneitz		€2,20	€2,20	€2,40
Schneitz & Käse		€2,50	€2,50	€2,70
Gr. Schneitz		€3,70	€3,70	
Carbon Blue		€2,90	€2,90	€3,10
Fleischhähnchen		€2,20		
2 Stk. Gemüsehähnchen		€2,90		

**+ 33% MEHR Pommes Frites**  
**€1,30**

**+ 20% MEHR Schweine-Fleisch**  
**€3,00**

## Hypothesis 3

**H<sub>3</sub>:** Prompting side dishes is more effective when the main dishes are less well-known to customers in a restaurant.

## Research design

- Two outlets of the Schnitzelhaus fast food chain
- Field time: 14 days
- Observation at noon and in the evening
- Three experimentators
- 2167 transactions recorded
- IV: Type of prompt
- DV: Ordering of side dishes



## Experimental Treatment

**EG 1**  
The moment



## Side dishes ordered by group

$\chi^2 = 59.96$ , 3 df,  $p = 0.000$

		Side dish ordered		
		Yes	No	Total
EG <sub>1</sub>	Frequency	113	427	540
Potato salad	%	21%	79%	100%
EG <sub>2</sub>	Frequency	126	414	540
Fries	%	23%	77%	100%
EG <sub>3</sub>	Frequency	121	419	540
Salad or fries	%	22%	78%	100%
Control group	Frequency	211	329	540
	%	39%	61%	100%
Total	Frequency	571	1589	2160
	%	26%	74%	100%

## Orders by main dish


Main dish		Side dish ordered			
		No		Yes	
		Freq.	%	Freq.	%
Schnitzel	EGs	41	4	895	96
	CG	51	19	222	81
Chicken nuggets	EGs	14	29	34	71
	CG	7	35	13	65
Sandwich	EGs	250	70	109	30
	CG	96	80	24	20

➤ 15

➤ 6

➤ 10

## Orders by main dish

 New!		Side dish ordered				
		No		Yes		
		Freq.	%	Freq.	%	
Fish	EGs	14	9	144	91	22
	CG	23	31	52	69	
Vegetarian	EGs	41	34	78	66	31
	CG	34	65	18	35	

## Example: Laboratory experiment

The effect of the human pheromone  
Androstenol on product evaluation



# Hypotheses

**H<sub>1</sub>:** Consumers who are exposed to androstenol will rate magazines related to men more masculine and more positively than consumers who are not exposed to androstenol.

**H<sub>2</sub>:** Consumers who are exposed to androstenol will have higher purchase intentions toward magazines related to men than consumers who are not exposed to androstenol.



## Evaluation of three magazines

(masculinity of the product/attitude toward the product/purchase intention)



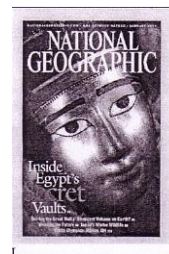
Women's magazine



Men's magazine



Neutral magazine



Only saw one magazine at a time  
Systematic variation of order

## Results

**Table 1. Perceived Masculinity of Magazines of Males Who Were Exposed to Androstamol and Those Who Were Not.**

Magazine	Control Group ( <i>n</i> = 25)		Experimental Group ( <i>n</i> = 26)		<i>df</i>	<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Female	6.16	1.46	5.85	1.54	49	-.75
Neutral	3.44	1.12	3.88	.77	49	1.66
Male	2.64	1.93	1.58	.90	49	-2.53*

\**p* < .05.

- Male consumers evaluated male magazines better when exposed to the pheromone.
- Purchase intention also increased.

# Let's do an experiment

## Our experiment

A large car manufacturer has recently been hit with a number of economic difficulties, and it appears as if three factories need to be closed and 6000 employees laid off. The vice-president of production has been exploring alternative ways to avoid this crisis. She has developed two plans:

### EG 1

*Plan A:* This plan will save one of the three factories and 2000 jobs.

*Plan B:* This plan has a  $1/3$  probability of saving all three factories and all 6000 jobs, but has a  $2/3$  probability of saving no factories and no jobs.

Framing: Perceived gains

### EG 2

*Plan A:* This plan will result in the loss of two of the three factories and 4000 jobs.

*Plan B:* This plan has a  $2/3$  probability of resulting in the loss of all three factories and all 6000 jobs, but has a  $1/3$  probability of losing no factories and no jobs.

Framing: Perceived losses

# Experimentation in tourism and leisure studies

Journal outlets	Field	SSCI	No. of articles	(%)
<i>International Journal of Hospitality Management</i>	Hospitality	Yes	25	15.5
<i>Journal of Gambling Studies</i>	Hospitality	Yes	21	13.0
<i>Journal of Foodservice Business Research</i>	Hospitality	No	11	6.8
<i>Journal of Hospitality Marketing and Management</i>	Hospitality	No	10	6.2
<i>Journal of Hospitality and Tourism Research</i>	Hospitality	Yes	9	5.6
<i>International Journal of Tourism Research</i>	Tourism	Yes	8	5.0
<i>Journal of Culinary Science and Technology</i>	Hospitality	No	8	5.0
<i>International Journal of Contemporary Hospitality Management</i>	Hospitality	Yes	7	4.3
<i>Journal of Travel Research</i>	Tourism	Yes	7	4.3
<i>Cornell Hospitality Quarterly</i>	Hospitality	Yes	6	3.7
<i>Asia Pacific Journal of Tourism Research</i>	Tourism	Yes	5	3.1
<i>Journal of Hospitality, Leisure, Sport &amp; Tourism Education</i>	Hospitality	Yes	5	3.1
<i>Tourism Management</i>	Tourism	Yes	5	3.1
<i>Journal of Travel and Tourism Marketing</i>	Tourism	Yes	4	2.5
<i>Information Technology &amp; Tourism</i>	Tourism	No	4	2.5
<i>Journal of Hospitality and Tourism Education</i>	Hospitality	No	3	1.9
<i>Scandinavian Journal of Hospitality and Tourism</i>	Tourism	Yes	3	1.9
<i>International Journal of Hospitality and Tourism Administration</i>	Hospitality	No	3	1.9
<i>Journal of Quality Assurance in Hospitality and Tourism</i>	Tourism	No	3	1.9
<i>Journal of Teaching in Travel and Tourism</i>	Tourism	No	3	1.9
<i>Annals of Tourism Research</i>	Tourism	Yes	2	1.2
<i>Journal of Sustainable Tourism</i>	Tourism	Yes	2	1.2
<i>Journal of Vacation Marketing</i>	Tourism	No	2	1.2
<i>Foodservice Research International</i>	Hospitality	No	1	0.6
<i>Journal of Ecotourism</i>	Tourism	No	1	0.6
<i>Tourism Analysis</i>	Tourism	No	1	0.6
<i>Tourism and Hospitality Research</i>	Tourism	No	1	0.6
<i>Anatolia</i>	Tourism	No	1	0.6

Experimental research  
in hospitality and  
tourism journals  
1972-2014  
n=161

Hoc Nang Fong et al. (2016).  
Experimental research in  
hospitality and tourism:  
a critical review.  
International Journal of  
Contemporary Hospitality  
Management, 28, 2, 246-266.

What's **your** research idea  
for an experiment in tourism,  
leisure & hospitality?

Flip Chart

1. **WHAT** would you like to find out?
2. **HOW** will you conduct the experiment