Visual IT assisted methods

New methods – new potentials

Abstract: Visual IT assisted methods offers new opportunities in the study of complex social phenomena such as cooking, serving and eating. This paper takes as a point of departure the challenges related to capturing insight in the broad category of foods capestudies. Foodscape inspired studies in public health nutrition try to understand the interactions between food, people such as eaters and intermediaries and space with the intention to change reality and provide better opportunities for healthy lifestyle. The paper gives examples from AAU-MENU research of the use of visual IT assisted methods and media ethnographic methods such as photo elicited methods, foodscape walkabouts, go along methods, perspective and cultural probes. Such new methods offers researchers new opportunities for getting a deeper and richer insight into complex fields of reality that food and eating represent. The presentation finally gives a couple of screen snapshots from using the Observer and Facereader in the FoodScape Lab (FSL).

Mikkelsen, BE

PhD Workshop: Visual IT assisted Methods in Cross-disciplinary Studies

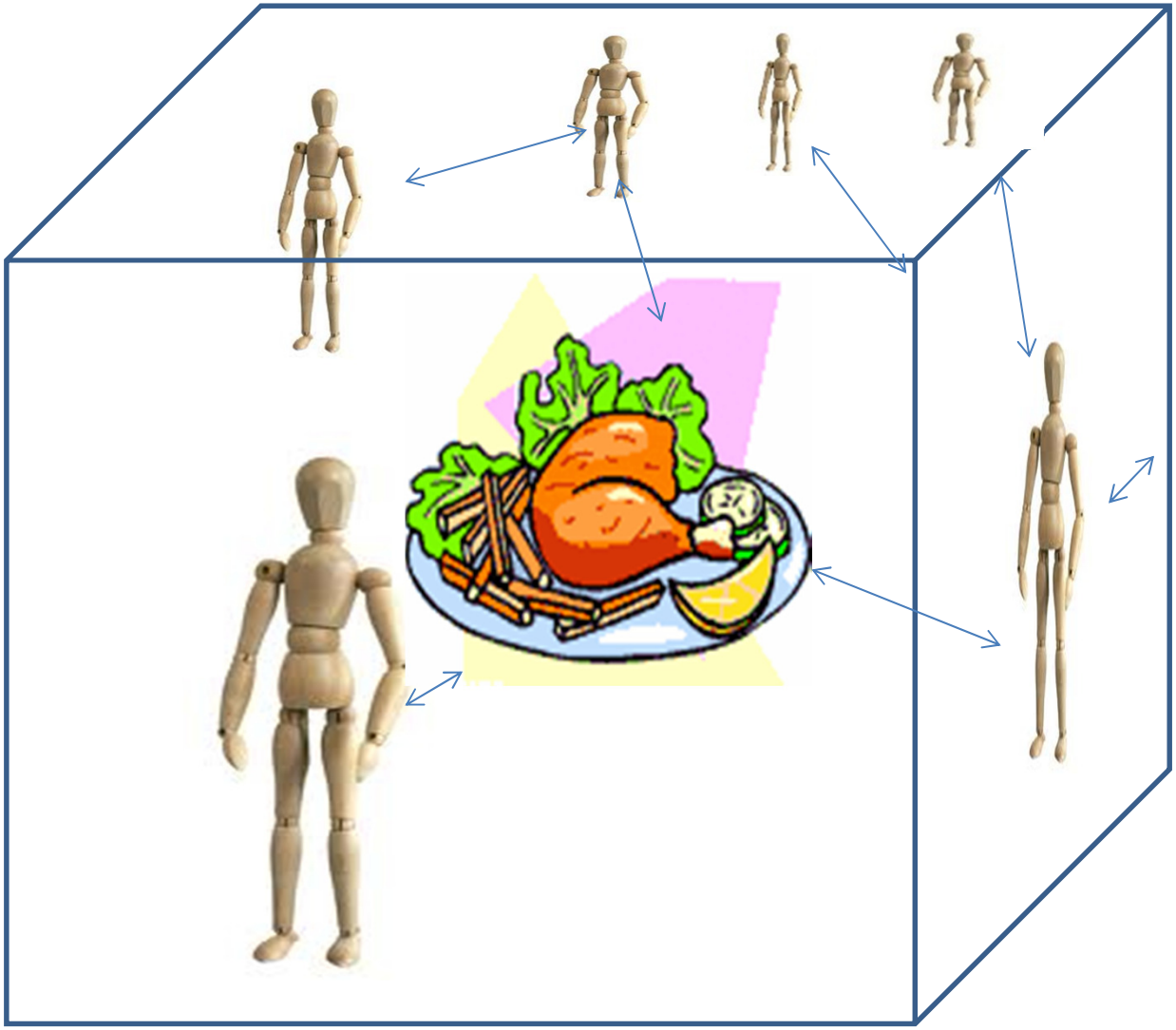
Sept 26, 27 & Oct 11, 2012

AALBORG UNIVERSITY

MENU MEAL SCIENCE & Public Health Nutrition

Foodscapes

People, meals & spaces



- Physical
- Mental
- Social

IMAGES OF FOODSCAPES - INTRODUCTION TO FOODSCAPE STUDIES AND THEIR APPLICATION IN THE STUDY OF HEALHY EATING OUT OF HOME ENVIRONMENTS
Mikkelsen, Bent Egberg
. Perspectives in Public Health, 2011

The captive foodscape

“the physical, organizational and socio cultural captive space in which individuals encounters meals, food, food related issues and intermediaries”

l Warners Foodscapes

Captive foodscapes
example of RQ

What happens when

people, places and food interact

in a captive environment

&

how can

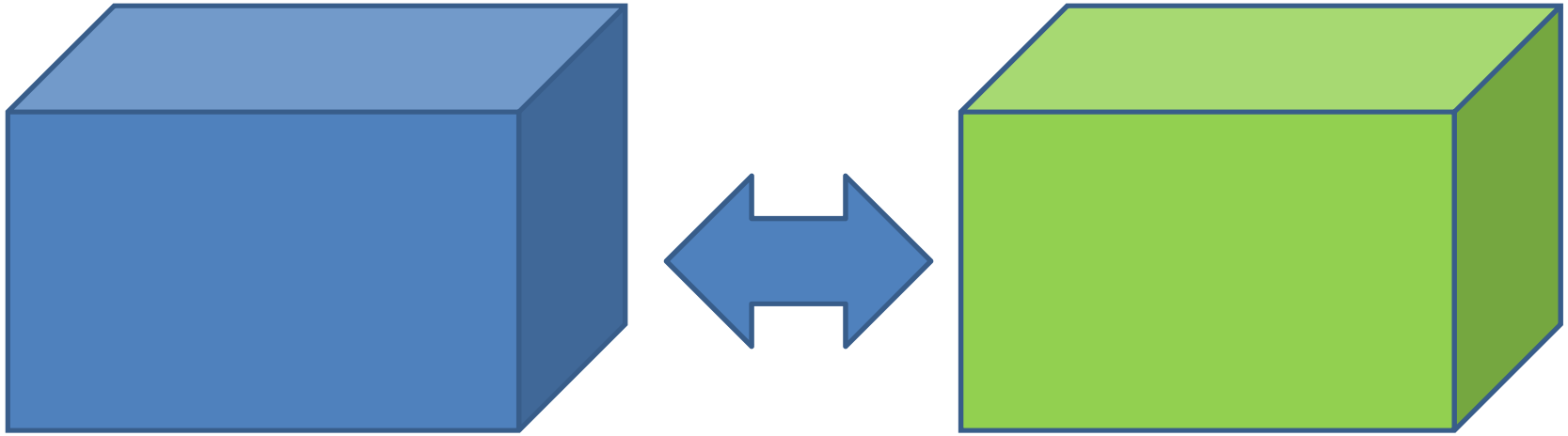
a better understanding of these interactions contribute to the development of better food related health promotion interventions?

- Nygård, R & Mikkelsen: Potentials for health promotion at worksite. - an intra inter cultural comparison of bus drivers' ethnical foodscapes, *Food Quality & Preference*, work in progress
- Nygård, R; Brnadhøj, M; Christensen, CB & Mikkelsen, BE: Måltidets mulighedsrum; accepted for *Tidsskrift for Forskning i Sygdom og Samfund*

The mental foodscape

How it is

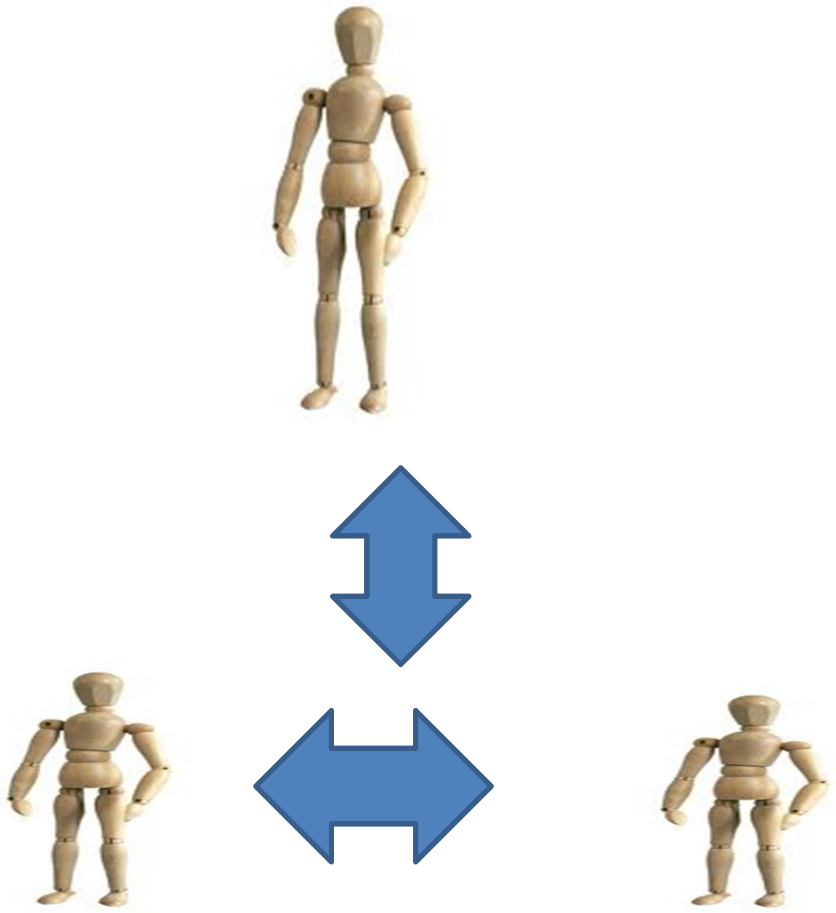
What it could be



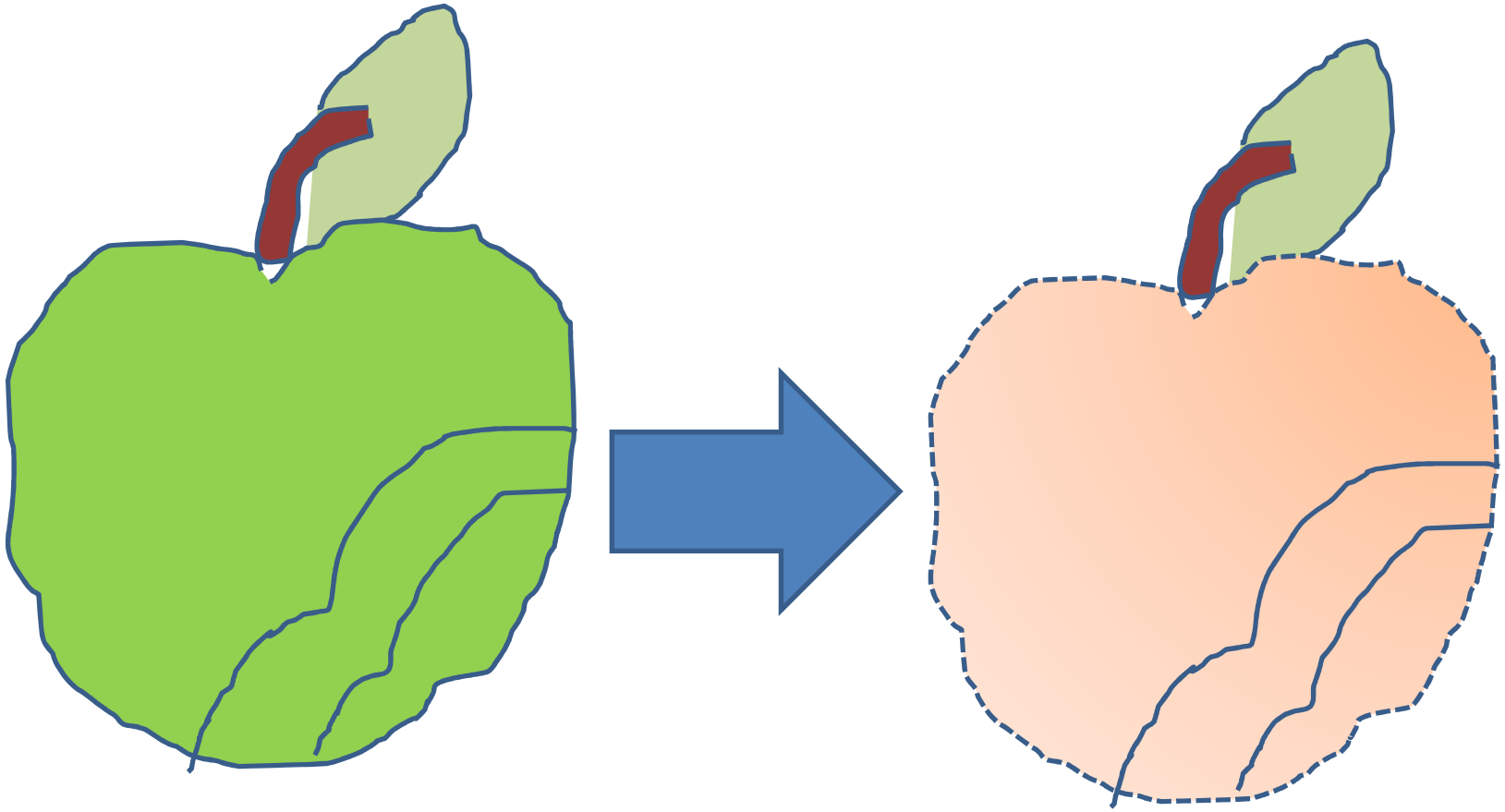
FS^1

FS^2

The social foodscape



Foodscapes created by language



Empirical sources

- Field work/cases study = living labs (in depth)
- Survey designs = large samples
- Register data/ litterature /document analysis
- Laboratory =

Visual & IT assisted methods

Two directions

- To collect data
- To communicate findings

Definition

Visual & IT assisted methods

- **are novel methods that assist the researcher in capturing data *FoodScape Studies***
- **based on easy accessible and available applications of all kinds of cameras (still or motion) and drawing devices**
- **Applied by either researcher or informant/subject**

Visual & IT assisted methods
some examples

- Media ethnographic methods are ways to capture and use these qualitative data as well as
- Informant created photos elicited methods,
- Form latin Elicere: “to extract”
- Go Along methods (supermarket, buffet, cooking etc)
- Perspective probes.
- Cultural probes (i.e. a food box, a camera and a voice recorder)
- Photo driven foodscape walkabout (XT pro, eButton)

Why Visual & IT assisted methods

Get the picture`?

Get the idea?

TABLE 2
Effect on dietary behavior of studies providing significance levels ($n = 5$)[1]

		Double difference effect: changes over time in I and C and I − C				Baseline-adjusted effect: I and C at follow-up adjusted for baseline values of outcome			
Reference and outcome	(Sub)sample	ΔI	ΔC	ΔI − ΔC	*P* value	I	C	*P* value	Es
Diet intervention									
Gaglianone et al, 2006 (49)									
Preferences for healthy foods	All	NR	NR	NR	0.012				
Sichieri et al, 2009 (51)									
Sugar-sweetened carbonated beverage intake per class (mL/d)	All	−69	−13	−56	<0.05				
Diet and physical-activity interventions									
Banchonhattakit et al, 2009 (62)									
Fast food eating behavior score	All								
Y2						30.02 ± 0.25[2]	28.78 ± 2.98	0.001	
Y3						29.63 ± 0.27	28.9 ± 3.2	0.001	
Francis et al, 2010 (67)									
Fruit intake ≥2 servings/d (%)	All	25	5.10	19.9	NR	NR	NR	NS[3]	
Vegetable intake ≥2 servings/d (%)	All	−1.8	−8.8	7.0	NR	NR	NR	NS[3]	
Mean soda intake, 8-oz (servings/wk)[4]	All	0.9	4.5	−3.6	NR	NR	NR	<0.05[3]	
Snacks high in fat, sugar, and salt eaten in the past 24 h (%)	All	−11	0.12	−11.12	NR	NR	NR	<0.05[3]	
Mean fried food (servings/d)	All	−1.3	−0.2	−1.1	NR	NR	NR	<0.05[3]	
Vargas et al, 2011 (72)									
Mean frequency of fast food consumption at school cafeteria	All	NR	NR	NR	0.001				
Mean daily consumption of fruit and vegetables	All	NR	NR	NR	NS				

[1] References 48, 49, 51, 65, 67, and 72: unable to calculate effect sizes based on reported results. References 46, 48, 65, and 66: reported outcome but did not
control; I, intervention; NR, not reported; Y2, year 2; Y3, year 3; ΔC, change in outcome for control; ΔI, change in outcome for intervention.
[2] Mean ± SD (all such values).
[3] Regression analyses for overall fruit, vegetable, and soda intakes; snacks high in fat, sugar, and salt; and fried food (after intervention, controlled for condi
[4] 1 oz = 29.6 mL.

Effectiveness of preventive school-based obesity interventions in low- and middle-income countries: a systematic review1–3
Roosmarijn Verstraeten, Dominique Roberfroid, Carl Lachat, Jef L Leroy, Michelle Holdsworth, Lea Maes, and Patrick W Kolsteren. **AJCN, First published ahead of print July 3, 2012 as doi: 10.3945/ajcn.112.035378**

Facts or feelings?

Le petit prince
The Little Prince
written and illustrated by
Antoine de Saint Exupéry

- **When you tell them that you have made a new friend, they never ask you any questions about essential matters.**
- **They never say to you, "What does his voice sound like? What games does he love best? Does he collect butterflies?"**
- **Instead, they demand: "How old is he? How many brothers has he? How much does he weigh? How much money does his father make?" Only from these figures do they think they have learned anything about him.**

- **If you were to say to the grown-ups: "I saw a beautiful house made of rosy brick, with geraniums in the windows and doves on the roof," they would not be able to get any idea of that house at all.** BEMI3
- **You would have to say to them: "I saw a house that cost $20,000." Then they would exclaim: "Oh, what a pretty house that is!"**

BEMI3

Just so, you might say to them: "The proof that the little prince existed is that he was charming, that he laughed, and that he was looking for a sheep. If anybody wants a sheep, that is a proof that he exists." And what good would it do to tell them that? They would shrug their shoulders, and treat you like a child. But if you said to them: "The planet he came from is Asteroid B-612," then they would be convinced, and leave you in peace from their questions.

They are like that. One must not hold it against them. Children should always show great forbearance toward grown-up people.

But certainly, for us who understand life, figures are a matter of indifference. I should have liked to begin this story in the fashion of the fairy-tales. I should have like to say: "Once upon a time there was a little prince who lived on a planet that was scarcely any bigger than himself, and who had need of a sheep . . ."

To those who understand life, that would have given a much greater air of truth to my story.

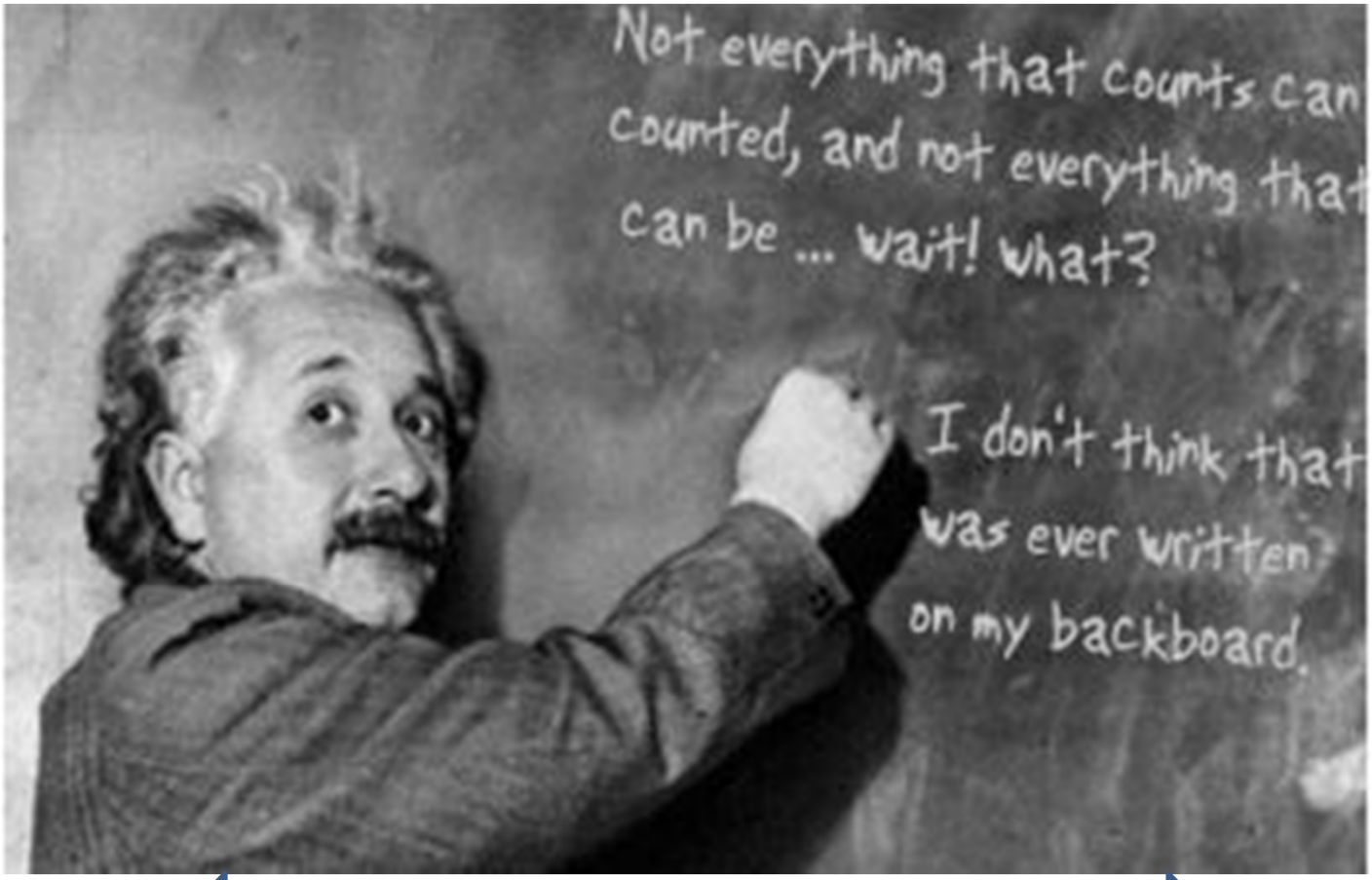
For I do not want any one to read my book carelessly. I have suffered too much grief in setting down these memories. Six years have already passed since my friend went away from me, with his sheep. If I try to describe him here, it is to make sure that I shall not forget him. To forget a friend is sad. Not every one has had a friend. And if I forget him, I may become like the grown-ups who are no longer interested in anything but figures . . .

It is for that purpose, again, that I have bought a box of paints and some pencils. It is hard to take up drawing again at my age, when I have never made any pictures except those of the boa constrictor from the outside and the boa constrictor from the inside, since I was six. I shall certainly try to make my portraits as true to life as possible. But I am not at all sure of success. One drawing goes along all right, and another has no resemblance to its subject. I make some errors, too, in the little prince's height: in one place he is too tall and in another too short. And I feel some doubts about the color of his costume. So I fumble along as best I can, now good, now bad, and I hope generally fair-to-middling.

In certain more important details I shall make mistakes, also. But that is something that will not be my fault. My friend never explained anything to me. He thought, perhaps, that I was like himself. But I, alas, do not know how to see sheep through the walls of boxes. Perhaps I am a little like the grown-ups. I have had to grow old.

Bent Egberg Mikkelsen; 15-09-2012

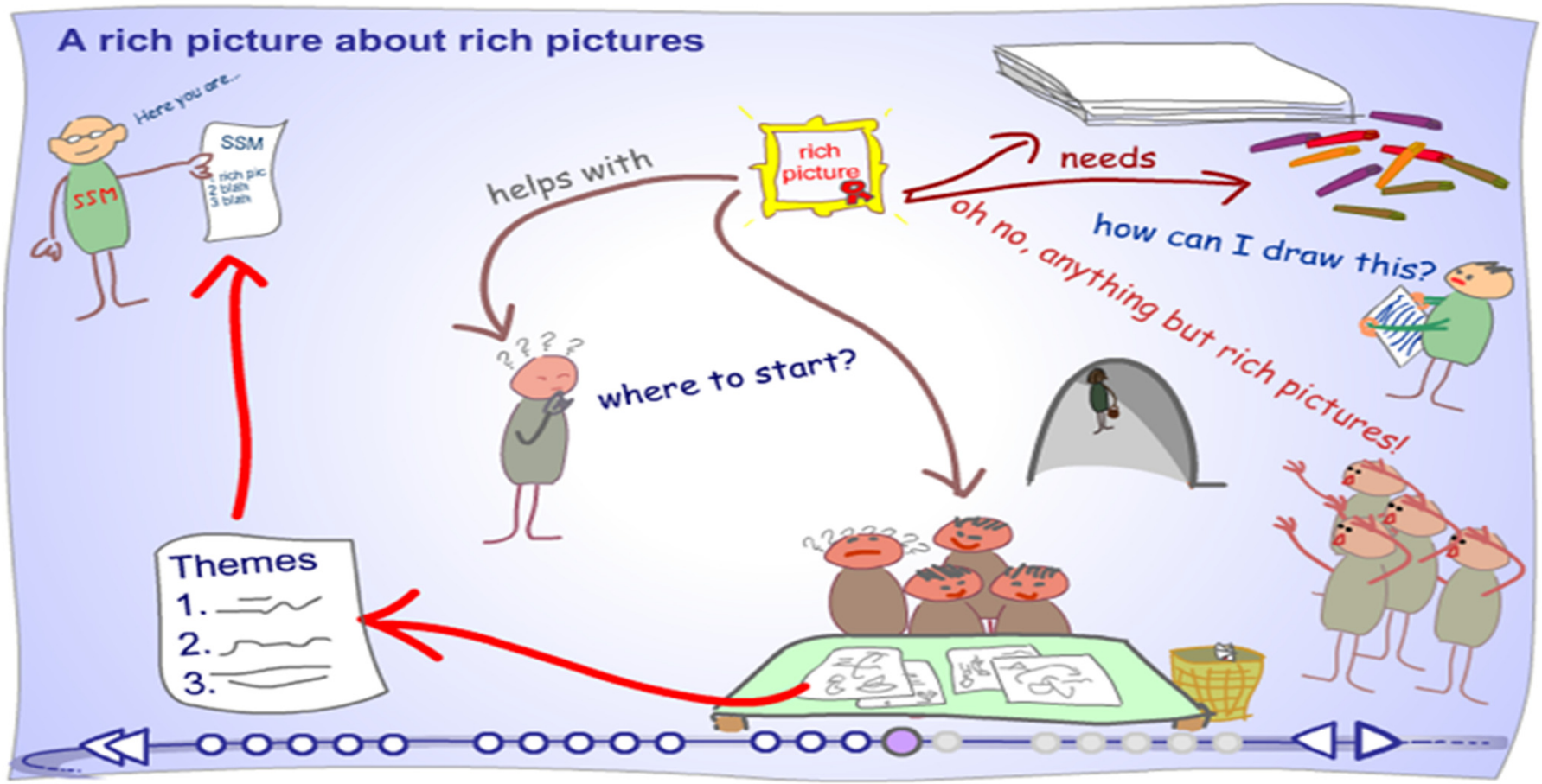
Casestudies or surveys?



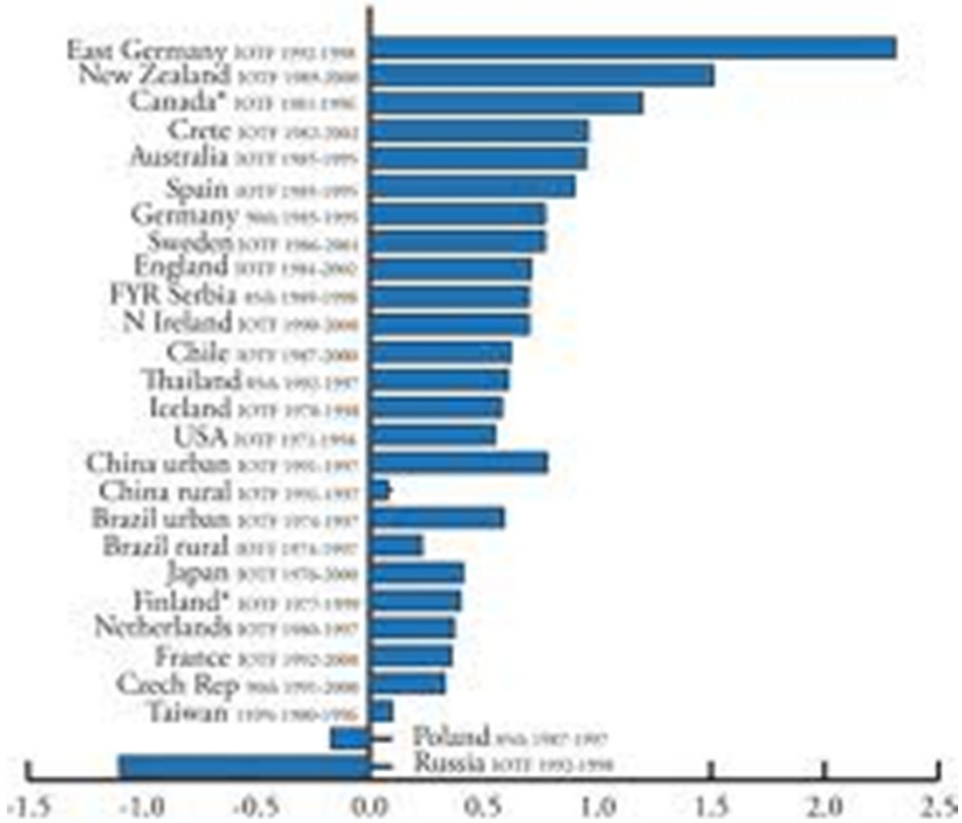
Applications of
Case Study
Research
3
EDITION
Real Social Science
APPLIED PHRON
CAMBRIDGE
Souci · Fachmann · Kraut
• Food Composition and
Nutrition Tables
• Die Zusammensetzung
der Lebensmittel Nährwert-Tabellen
• La composition des aliments
Tableaux des valeurs nutritives

In depth understanding?

Rich pictures?



The prevalance?



Why novel methods foodways seems to be ”tacit”

- Food is complex issue
- Hard to explain
- Difficult to put in writing
  - Maybe not for scitentist
  - But for informants
- Moments are ”volatile”/short shelf lifed

Trad'l methods often retrospective

i.e 24 recall/FFQ/7d food record

Some examples of applications

Example: The Image questionnaire

Dagmar project (www.dagmar.plan. aau.dk)

1. **Er du en dreng eller en pige?**

☐

☐

2. **Hvor gammel er du?**

☐

☐

☐

☐

Example: project Frida

www.frida.plan.aau.dk

DAGMAR

Example: The Fridge eAntroDevice

- Retro

- Online

Example from SoL

Sundhed og Lokalsamfund - SoL

AALBORG UNIVERSITET

FORSKNINGSCENTER FOR FOREBYGGELSE OG SUNDHED

Steno

Projekt SoL - Bornholm

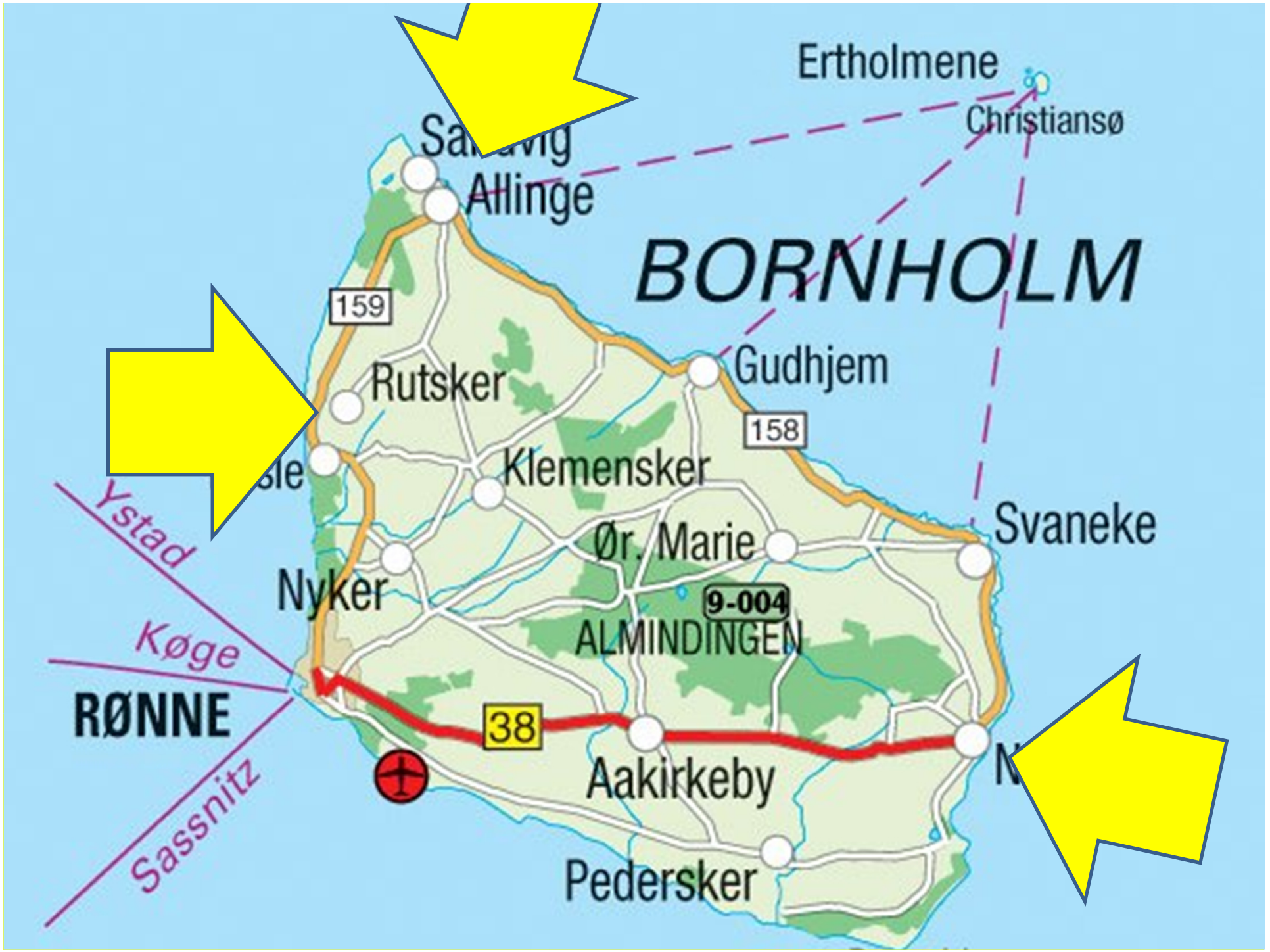
SoL er et sundhedsfremmende projekt med fokus på viden, holdninger og adfærd i relation til mad og bevægelse hos børnefamilier på Bornholm. Formålet med projektet er at skabe vedvarende forandringer i de bornholmske børnefamiliers spise og bevægelsesvaner ved at skabe forandringer flere steder i samfundet samtidig. En effekt der vil opstå ved at en stor del af lokalbefolkningen medinddrages i processen.

- FORSIDE SOL
- OM SOL
- FORSKNING
- FORSKNINGSPARTNERE
- SAMARBEJDSPARTNERE
- EVENTS, TIPS OG LINKS
- KONTAKT
- DOWNLOADS
- IN ENGLISH

The Sol Supersettings Intervention

http://www.tv2bornholm.dk/programmer/bare-lidt-sundere.aspx?videoID=32365&vidLoc=NewDB

SoL Citizen kick-off meeting


Ertholmene
Christiansø
Allinge
BORNHOLM
159
Rutsker
Gudhjem
158
Klemensker
Svaneke
Ystad
Ør. Marie
Nyker
9-004
ALMINDINGEN
Køge
RØNNE
38
Aakirkeby
Sassnitz
Pedersker

The SoL datacapture

co construction

The Bedside FoodScape

Courtesy of Kwabena Ofei

The Satelite Dining Room FoodScape

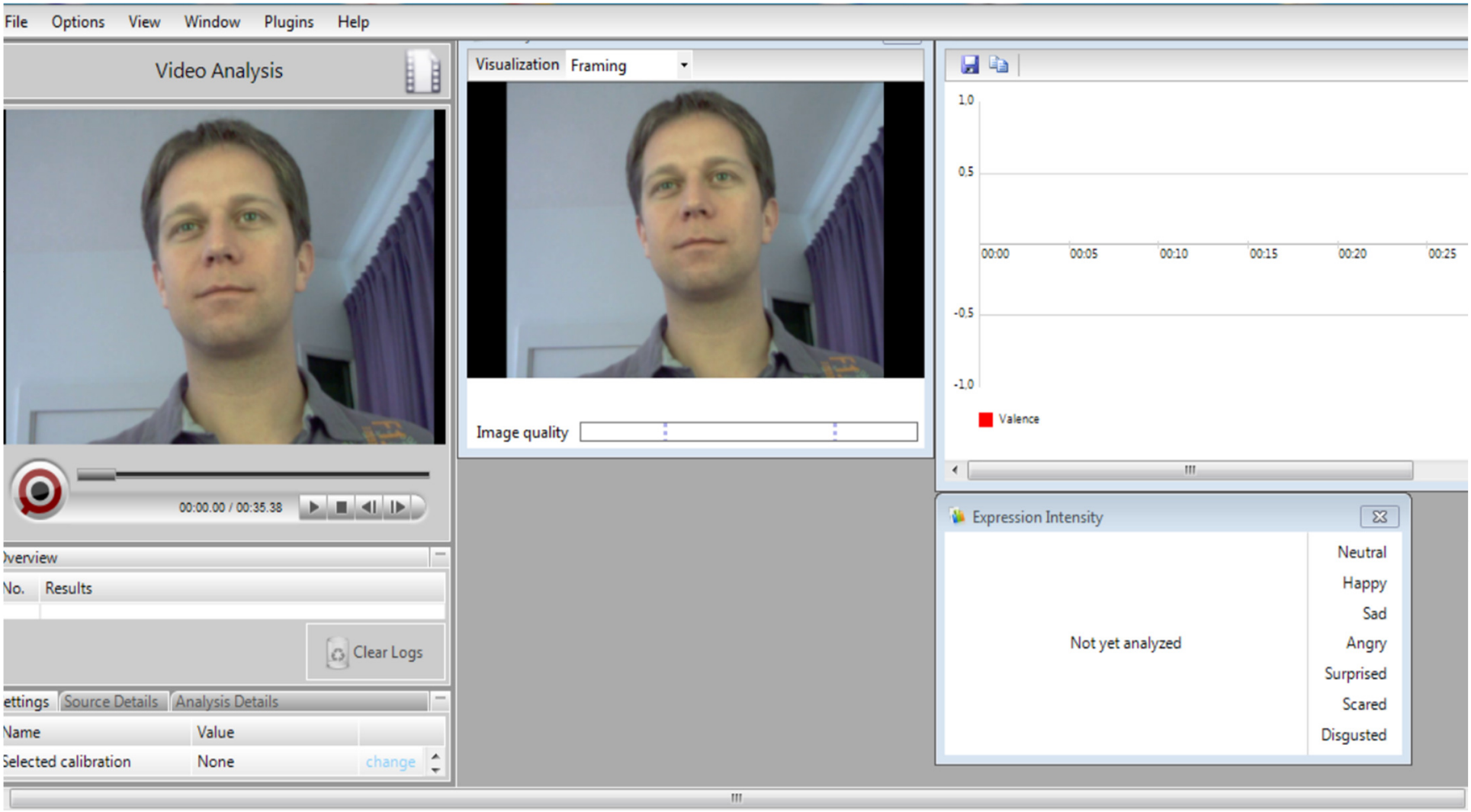
The Observer

The FaceReader

Video analysis detailed log - Face Model: General - Calibration: None
Start time: 25-09-2012 12:55:55
Filename: C:\Program Files (x86)\Noldus\FaceReader 4\Examples\Video\caucasian_male_xvid.
Frame rate: 8

Video Time	Neutral	Happy	Sad	Angry	Surprised	Scared	Disgusted
00:00:00.000	0.733858800		0.003639068		0.048949300	0.022193340	0.000638970
00:00:00.125	0.739775500		0.003742958		0.045778070	0.021009490	0.000651985
00:00:00.250	0.715555400		0.005625654		0.038422770	0.016435280	0.000791639
00:00:00.375	0.674729100		0.006574209		0.035462660	0.013697520	0.000908130
00:00:00.500	0.654712900		0.007374744		0.031641110	0.011142440	0.000937257
00:00:00.625	0.651097800		0.006242006		0.031418690	0.012188640	0.000790151
00:00:00.750	0.646924000		0.005135508		0.027552970	0.017289060	0.000647711
00:00:00.875	0.643704400		0.004230215		0.021607730	0.021601940	0.000654854
00:00:01.000	0.631208000		0.003623443		0.018038260	0.028995390	0.000622207
00:00:01.125	0.617694800		0.003483004		0.015707730	0.034413780	0.000564403
00:00:01.250	0.564385100		0.003318188		0.012837110	0.039183020	0.000699164
00:00:01.375	0.528374300		0.003202703		0.010712680	0.041950650	0.000935979
00:00:01.500	0.499570000		0.003108672		0.009209492	0.043852100	0.001102325
00:00:01.625	0.461286300		0.002904900		0.008850506	0.044053730	0.001218494
00:00:01.750	0.435607600		0.003177271		0.009865342	0.046396190	0.001251592
00:00:01.875	0.376265700		0.003254241		0.009034533	0.049765520	0.001346717
00:00:02.000	0.362594800		0.003392075		0.007129435	0.048995280	0.001502472
00:00:02.125	0.359677900		0.004222872		0.005505916	0.042786270	0.001708661
00:00:02.250	0.350349600		0.004599935		0.004340891	0.042253540	0.001734636
00:00:02.375	0.343186200		0.004592069		0.003388581	0.040477120	0.001791129
00:00:02.500	0.350077100		0.004406807		0.002838926	0.039386070	0.001936790
00:00:02.625	0.365863800		0.004306509		0.002454134	0.035667010	0.001902948
00:00:02.750	0.389603600		0.003905869		0.002180255	0.035551280	0.002003481
00:00:02.875	0.398272600		0.003596098		0.002067531	0.037528120	0.002126398

The FaceReader



The FaceReader and food literacy in the Kindergarten foodscape

Courtesy of Mette Mikkelsen

bemi@plan. aau.dk

Thank you for your attention and to my coworkers

Janice Marie Sorenson
Mette V Mikkelsen
Armando Perez Cueto
Michael Heasman
Lise Justesen
Laurits Skov
Kwabena Ofei
Chen He
Pernille Malberg Dyg
Mia Brandhøj
Sanne Sansolios
Sofie Husby
Henriette Nicolaisen
Camilla B Christensen
Rikke Nygård
Dwi Budiningsari
Sofia Lourenço
Dorte Ruge
Volodja Epremian
Michelle Werther

Read more on

www.menu.aau.dk/

Wanna stay updated on innovations in Public Health Nutrition?

Consider participating in the upcoming AAU-MENU PhD course

http://tinyurl.com/bmcu3yf