



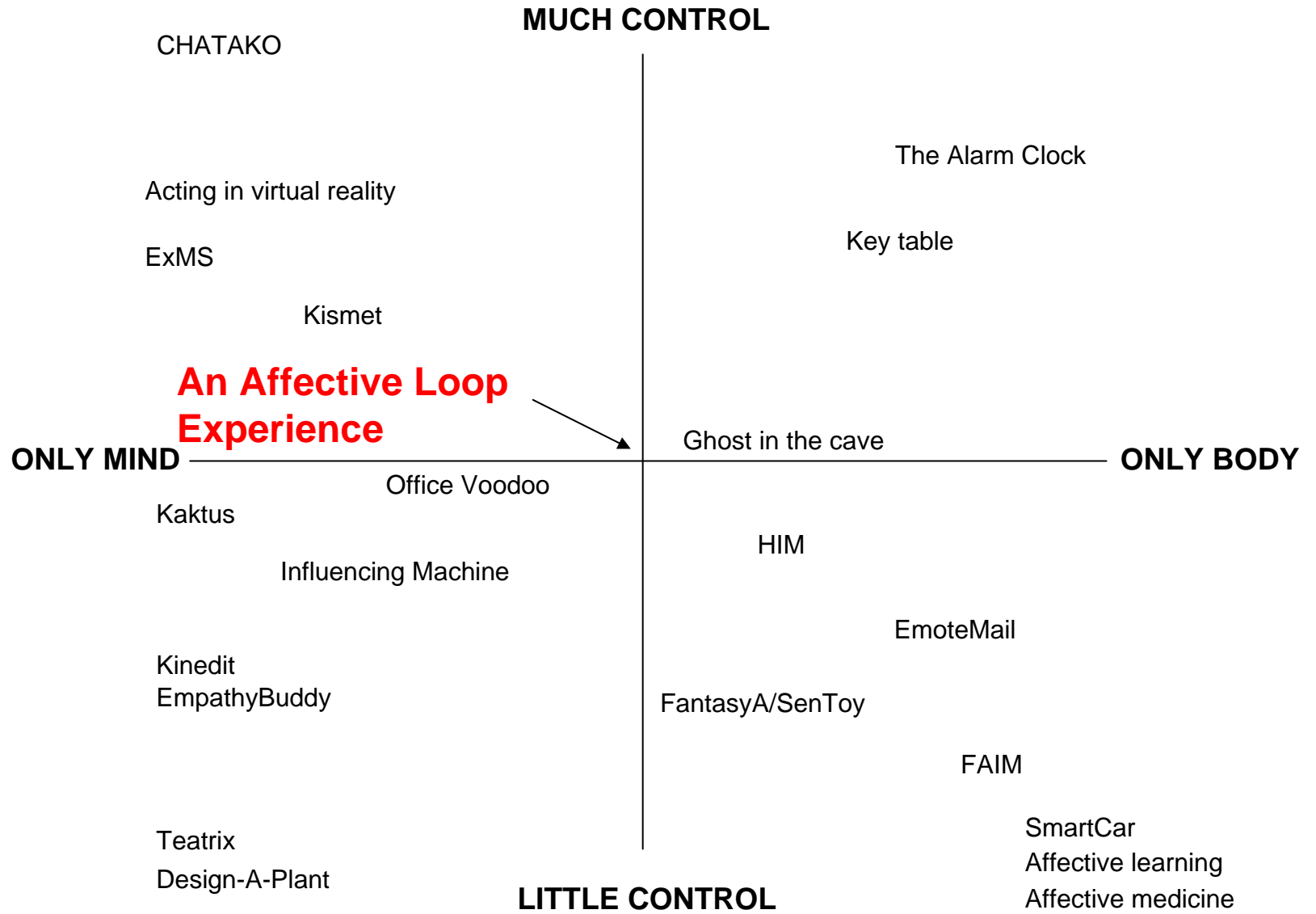
Designing and Evaluating eMoto

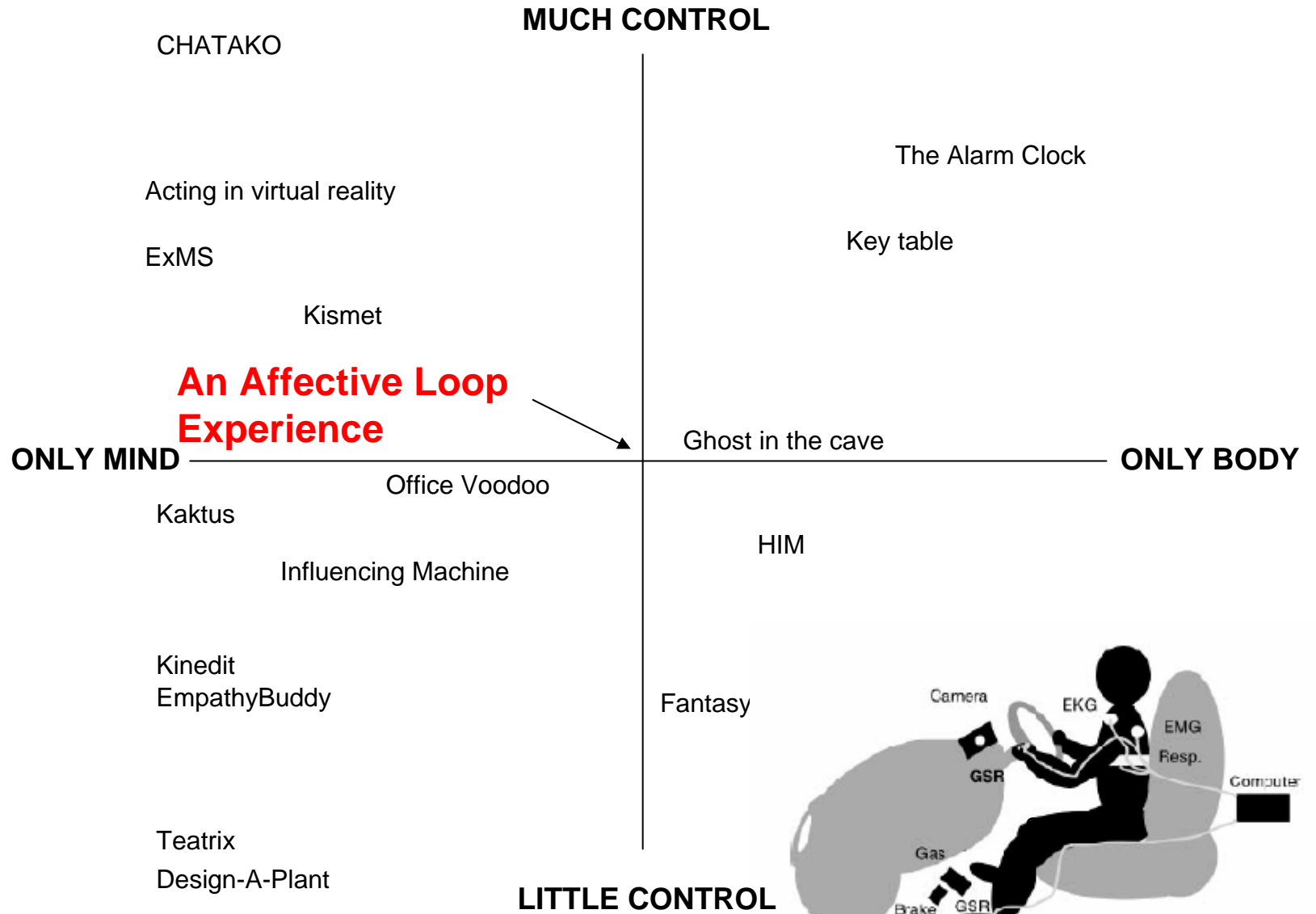
A mobile service that aims to embody our idea of an
Affective Loop

Petra Sundström, KTH/SU SICS

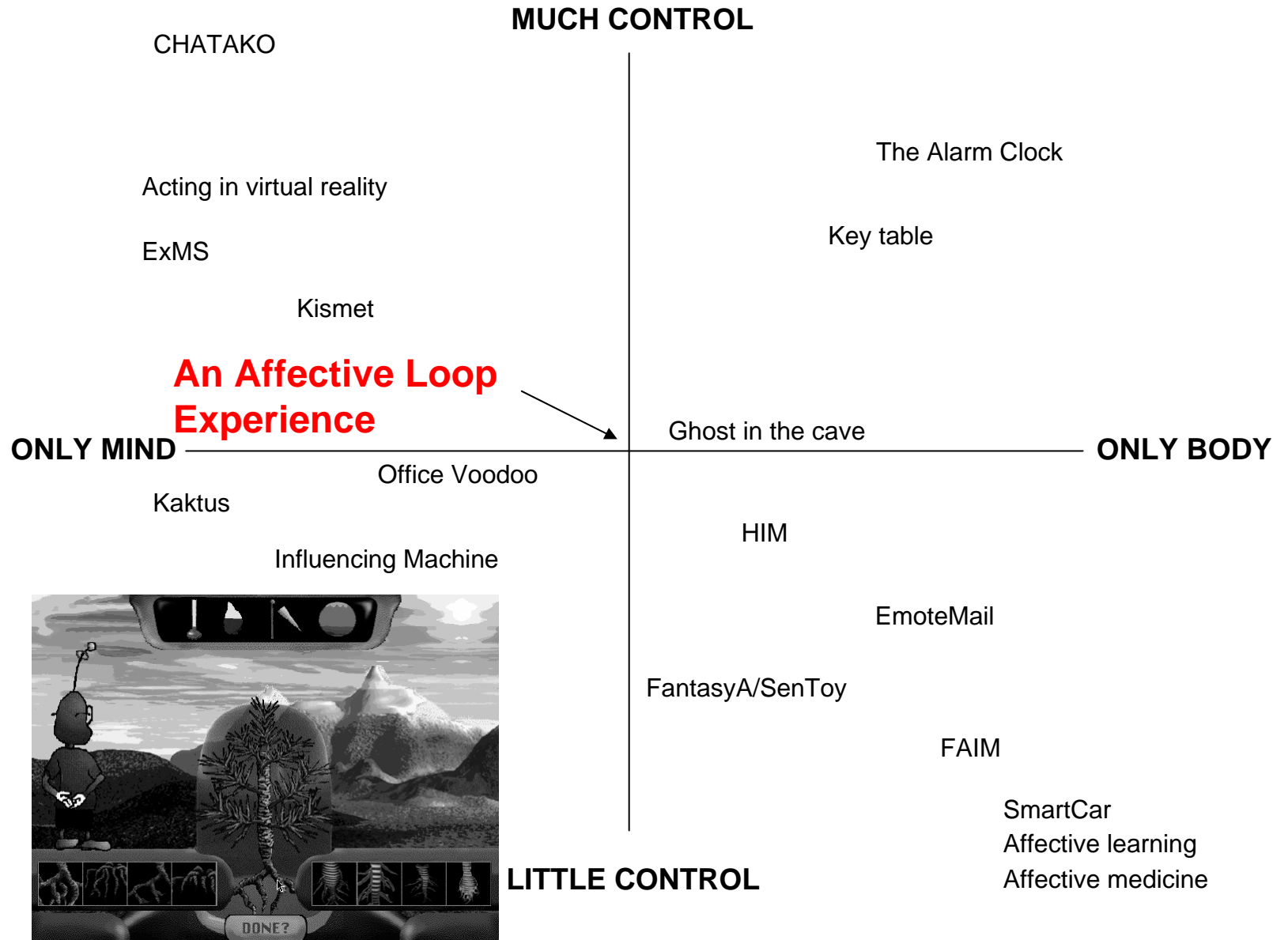
Anna Ståhl, SICS

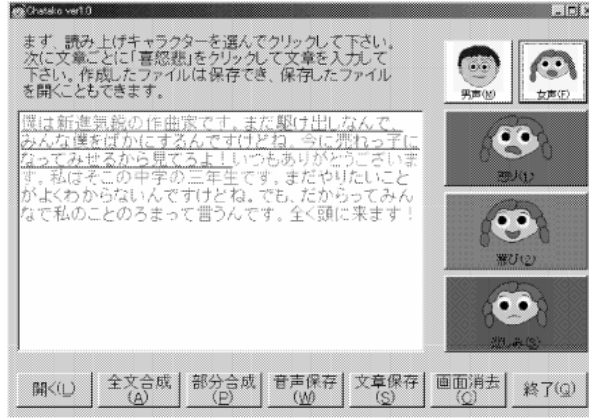
Kristina Höök, KTH/SU SICS





Petra Sundström – KTH/SU SICS





MUCH CONTROL

The Alarm Clock

Key table

Kismet

An Affective Loop Experience

Ghost in the cave

ONLY MIND

ONLY BODY

Office Voodoo

Kaktus

HIM

Influencing Machine

EmoteMail

Kinedit

EmpathyBuddy

FantasyA/SenToy

FAIM

Teatrix

Design-A-Plant

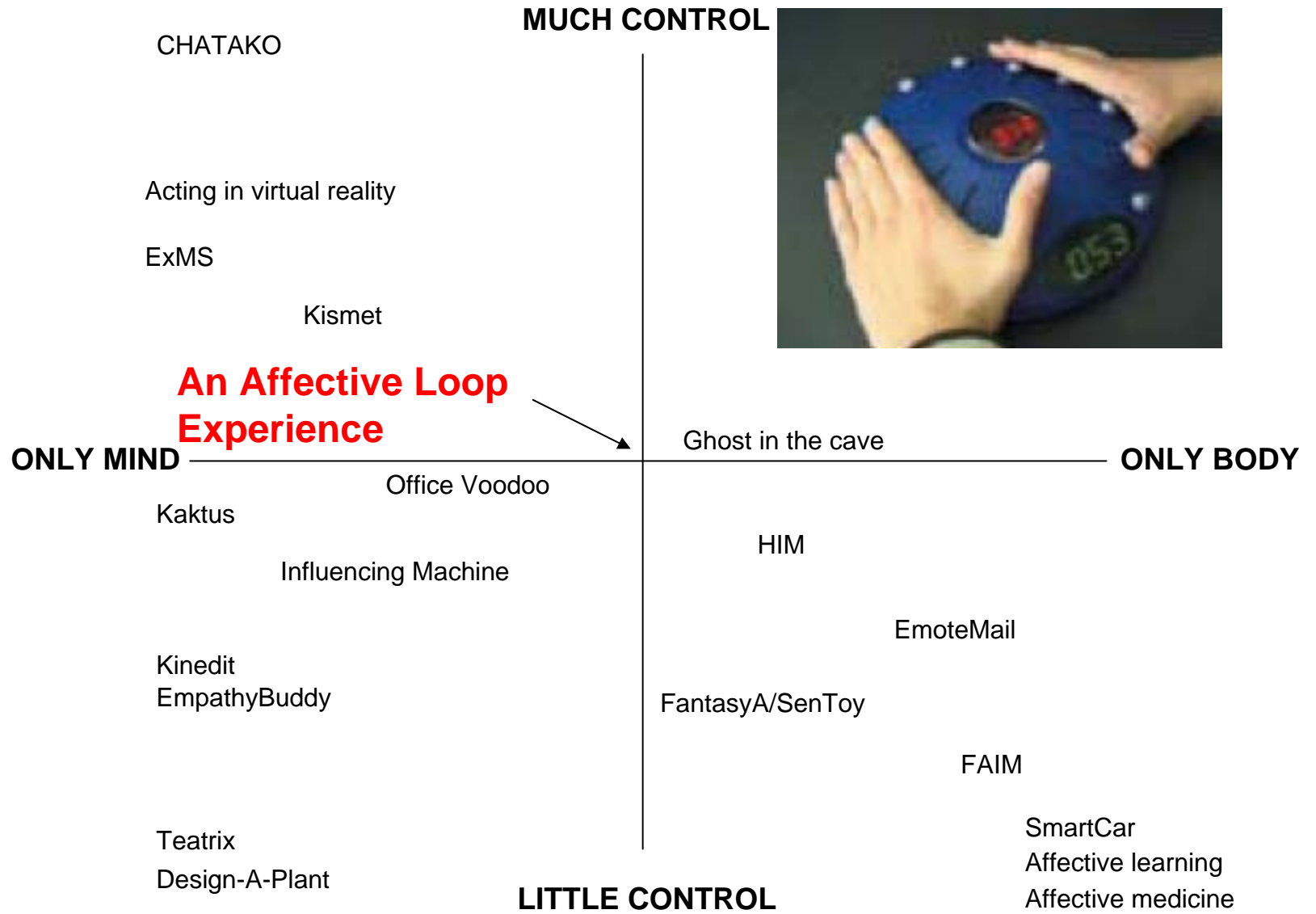
LITTLE CONTROL

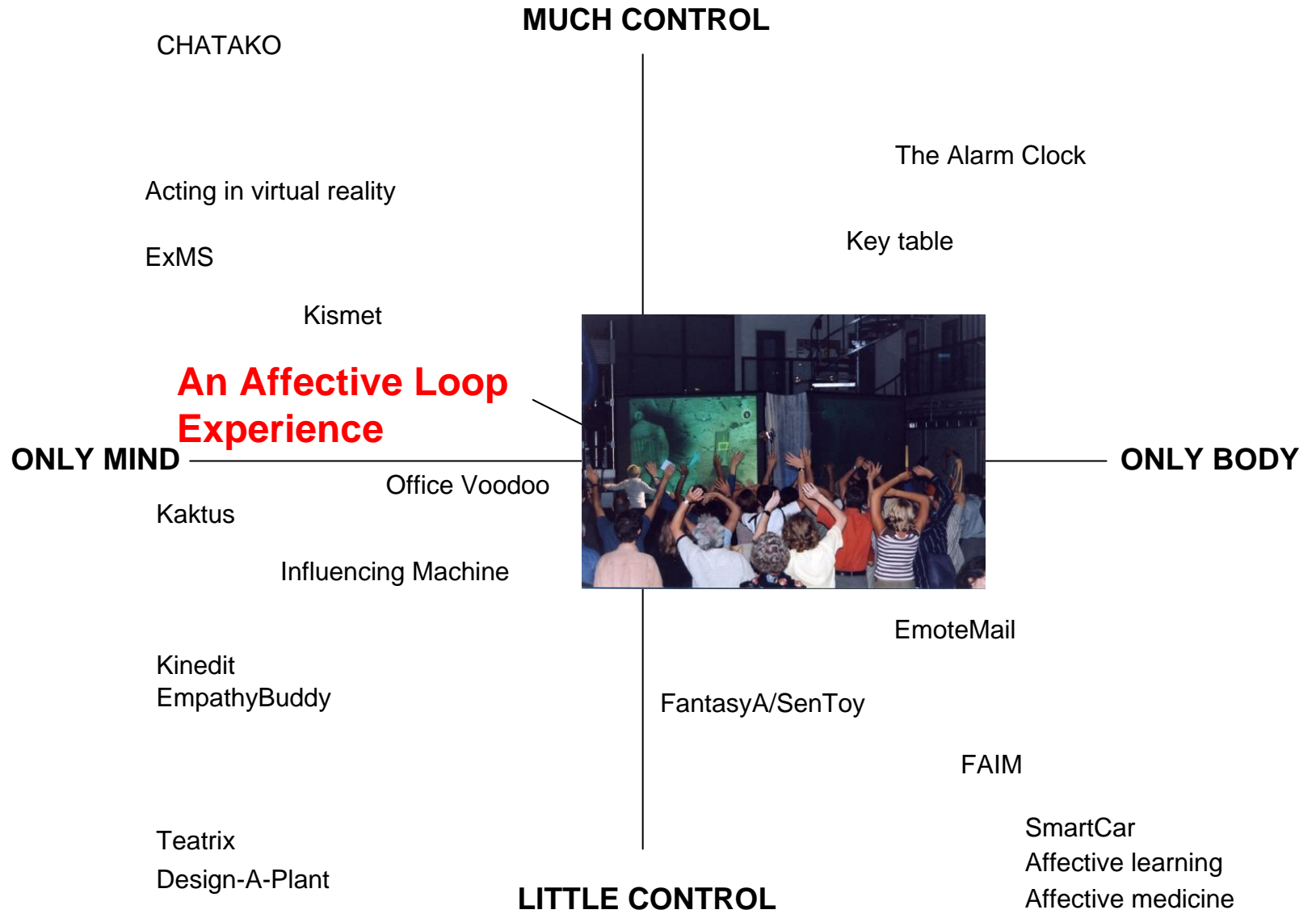
SmartCar

Affective learning

Affective medicine

Petra Sundström – KTH/SU SICS







How can we come Closer to an Affective Loop Experience?

- Problems with timing, control, harmony and coherency
- Inspired by embodiment (Dourish), flow (Csikszentmihalyi) and ambiguity (Gaver and colleagues) we believe in

A Foundation of Expressiveness

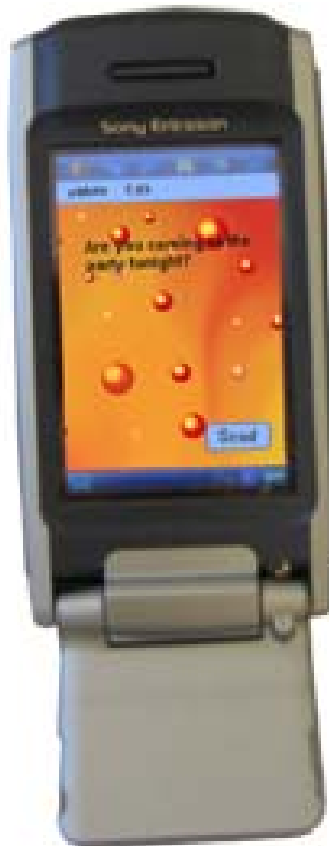


Methodology

- A mix of theory and user encounters
- A Laban-analysis of emotional body language looking for the inner experience of emotional expressions
- A user-centered design approach
 - A persona (Cooper)
 - A two-tiered evaluation model (Höök)



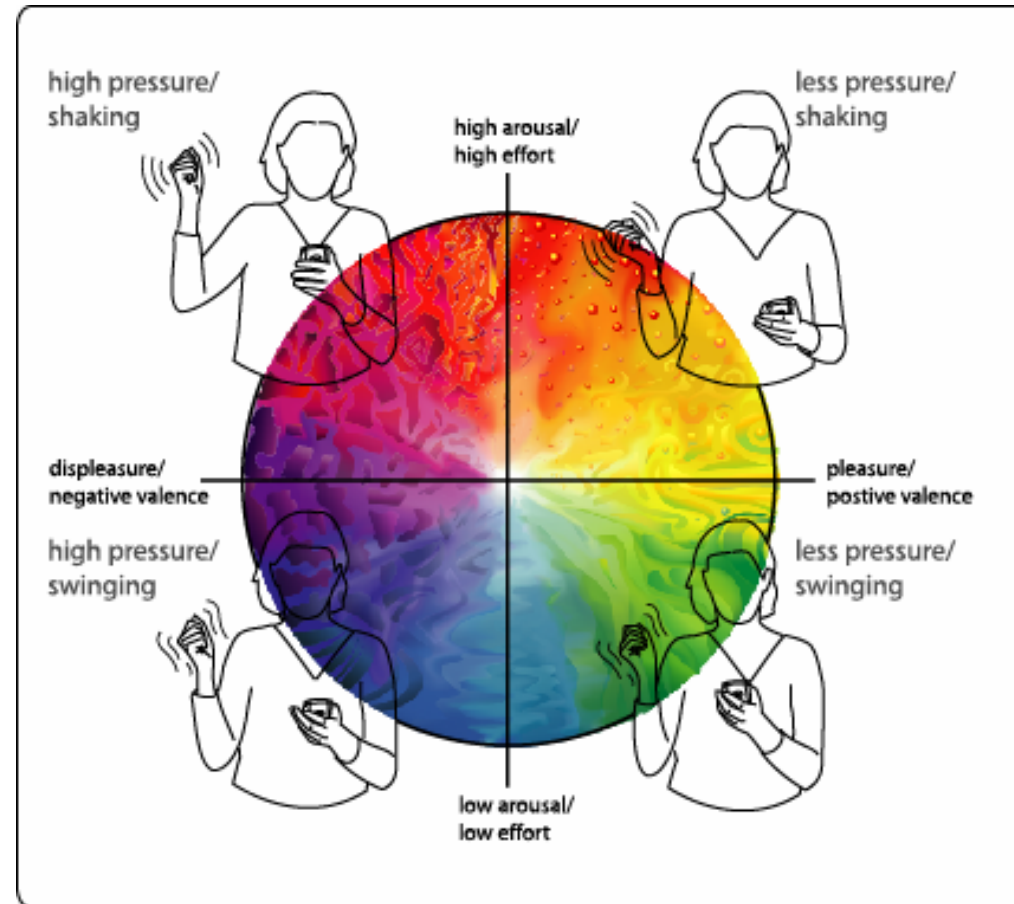
eMoto



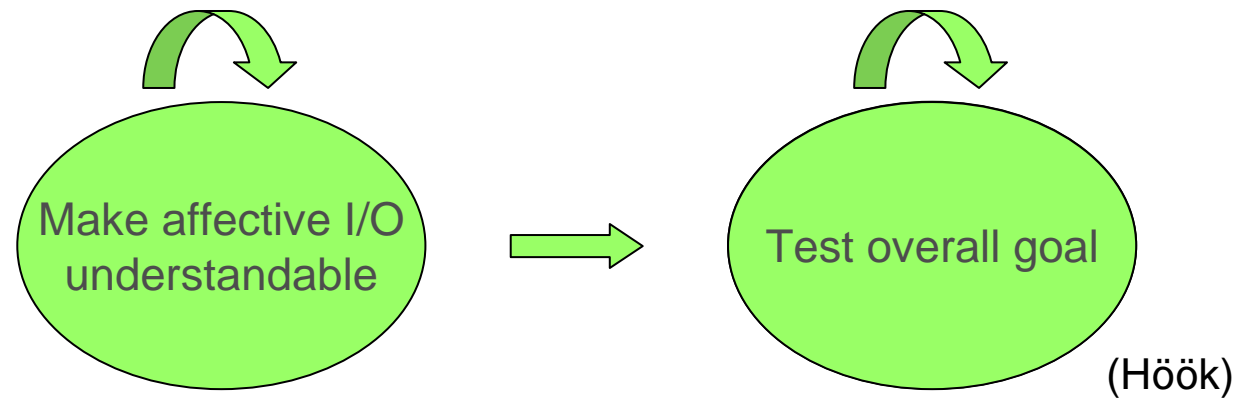
A User Scenario



The Affective Expressions



A Two-Tiered Evaluation Model



- A user study of the graphical expressions
- A user study of the gestures
- A final and “wild” evaluation of the overall goal
 - Cultural probes (Gaver et. al, Kaye, Hulkko et al.)
 - Experience clips (Isomursu et al.)



Evaluating the Overall Goal of an Affective Loop Experience

Letting Users Act as Researchers

Probes

User's



Notebook
Disposable camera
Postcards (some started)
Inspirational tasks

eMoto
(P910i mobile phone, extended stylus)

Spectator's



Notebook
Video camera
Postcards
Inspirational tasks



Users

Agnes (Spectator - her boyfriend)

25, Behavioral scientist, knows everyone else, lives in Uppsala

Isabella (Spectator - her cousin and a friend)

26, Consultant in the energy sector, knows Agnes, lives in Stockholm

Louise (Spectator - same as Susie)

25, writes her Master thesis in Technical Biology, knows Agnes and Susie (more Susie), lives in Stockholm

Susie (Spectator - her roommate)

24, writes her Master thesis in Technical Biology, knows Agnes and Louise (more Louise) and got to know Mona during the time of the study, lives in Uppsala

Mona (Spectator - one of her roommates)

25, Economics school graduate, knows Agnes and got to know Susie, lives in Uppsala



Data Received and for Us to Work With

- 96 emotos
Agnes 33, Isabella 16, Mona 23, Susie 13 and Louise 11
- 64 SMS left in the phones
Agnes 38, Isabella 0*, Mona 11, Susie 13 and Louise 2
- 12 postcards
Agnes 5, Isabella 2, Mona 3, Susie 2 and Louise 0
- ~45 minutes of “homemade” film
From everyone but Louise
- 4 user’s notebooks
Not Louise’s
- 2 spectator’s notebooks
Agnes’ and Isabella’s spectators
- 5 Interviews

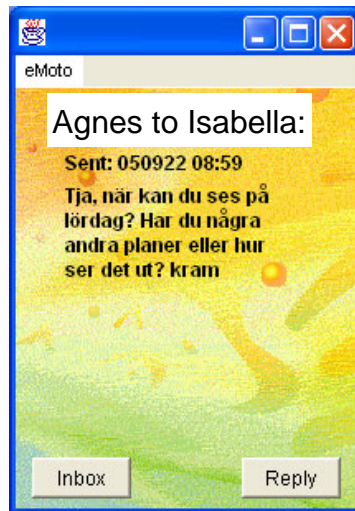


Three Kinds of Results

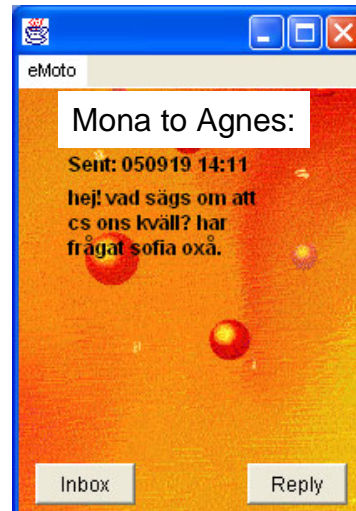
- eMoto as a mobile service
- Results on the affective loop
- Results on methodology

96 emotos

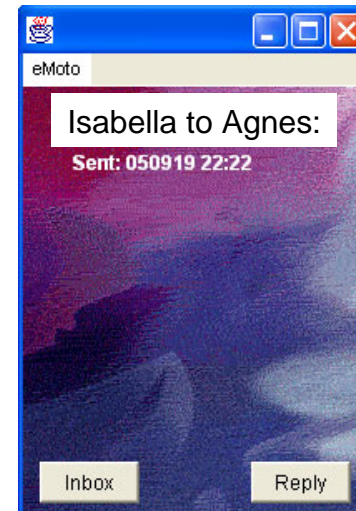
78 received and interpreted by the others in the study
18 were sent to people outside the study and therefore not interpreted



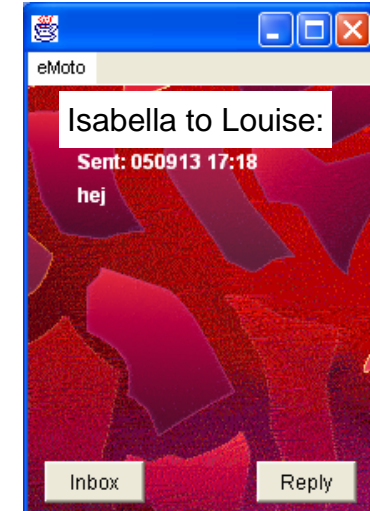
24 Successful emotional messages



4 Mis-understandings



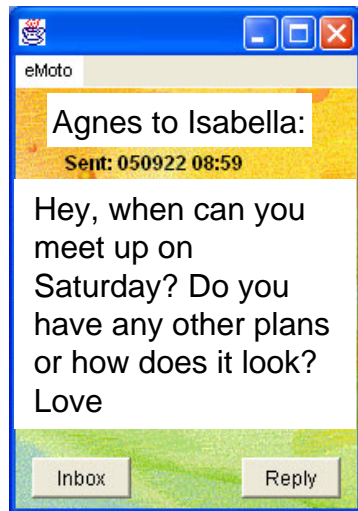
24 as a consequence of novel vs. more mature usage



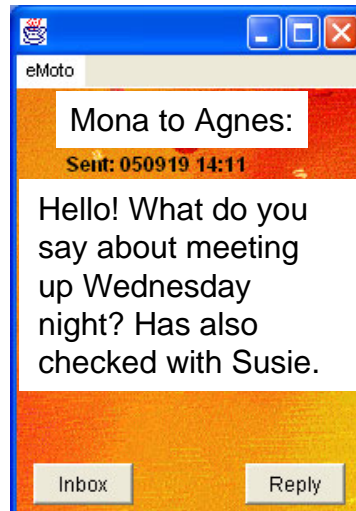
26 emotos were both sent and received as tests

96 emotos

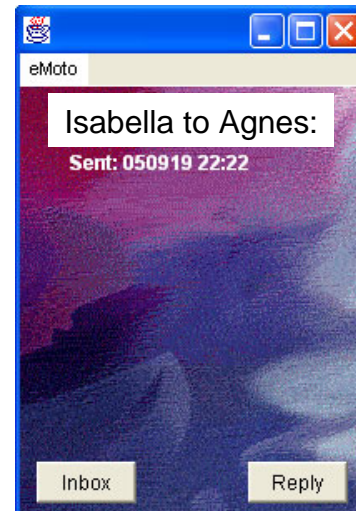
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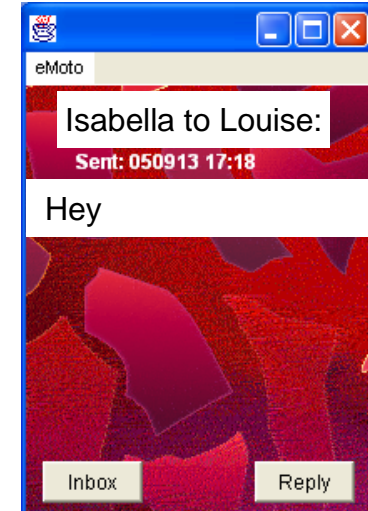
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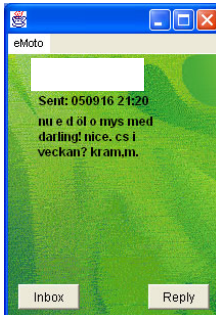
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26 emotos were both sent and received as tests

emotos

A Conversation that Starts out Successfully

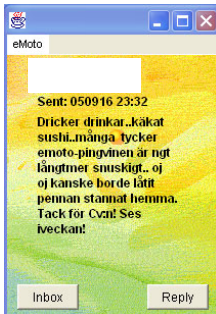


Successful Emotional Messages

Translation: Now it's beer and cozy with honey! Nice. Meeting up this week? Love, M.

Mona's intention: *"Here we're having it cozy, and then it's green and nice."*

Agnes' interpretation: *"Perfect! Nothing overwhelming instead it's cool, nice and calm and positive."*

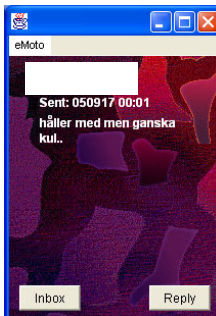


Successful Emotional Messages

Translation: Having drinks and sushi.. Many think the eMoto-penguin is something far more dirty.. Ops, perhaps I should have let the pen stay at home. Thanks for the cv! See you later this week!

Agnes' intention: *"People become so, they become so engaged with this pen and wants to be a little bit funny. It is an update. I just wanted to show that I had a good time, that it was fun and things. It doesn't need to be anything overwhelming, because if it's gonna be something overwhelming, then it's like something you have together."*

Mona's interpretation: *"Yellow is for Agnes like green is for me. Yellow is 'I'm happy and here it's sushi.'"*



Novel vs. More Mature Usage

Translation: Agree but quite fun..

Mona's intention: *"I want to show that I also thinks like her and then I want to express that stronger."*

Agnes' comment: *"I don't think the eMoto-expression correlates with what is written, so it has to be test"*



eMoto as a Communicational Tool

eMoto was perceived as something in between SMS and a phone call, something to use to friends who you have a greater need to express yourself to:

Mona: "Interesting is the guy you meet in the pub, you never call him, you send him an SMS because you're not brave enough to call him. And then it's like 'Shall I send an emoto or an SMS?' If you send an SMS the signal would be 'Now I'm a coward and...'. I think emotos end up somewhere in between an SMS and actually calling him."

The gestures lost their purpose when they were not communicated:

Agnes: "It's like Harry Potter when you send one of those screams or roars, when he has been bad and his mother sends him a kind of scream. That you get what I express."

...
"That you would get a chock if I was angry with you or something like that. It's fascinating to think about it, this physical aspect."



eMoto in a Public Environment

Both Mona and Susie sent postcards expressing how much they liked to show eMoto to others, however, most usage took place indoors in private and familiar environments.

More discrete gestures in a public environment:

Isabella: "Used eMoto in public today, down town. Noted that I was more restricted in my movements. I was gonna show a friend how it works, But I only shock it a little bit, but I pressed a lot more though. A little bit interesting when I thought of that later. At home I shake it wildly, but outside I don't do that. Have to use eMoto more often in public environments to see if my behavior changes, to see if I will get more comfortable?"

Perhaps it was not the gestures themselves:

Mona: "The stick is to big & tall & looks like a dildo. I know I shall try to look beyond the technical, but it undeniably restrains usage."

Agnes: "Sort of more convenient so that you would dare to use it, I think. As it were we sat and shock it and people looked at us like 'What the heck are they doing?' "



Three Kinds of Results

- eMoto as a mobile service
- Results on the affective loop
- Results on methodology



A Foundation of Expressiveness

Our inspiration from emotional body language paid off:

Mona: "I leave out things I think are implicit due to the color... the advantage is that you don't have to write as much, it's like a body language. Like when you meet someone you don't say 'I'm sulky' or something like that, because that shows, I don't need to say that. And it's the same here, but here it's color."

They were able to express their personality but they were still able to understand each other:

Mona: "All these colors are kind of perky and cheerful, I would guess Isabella, if I have green and Agnes has yellow, then perhaps she has orange to express that she's a little bit happy and perky."

Signs of Emotional Engagement



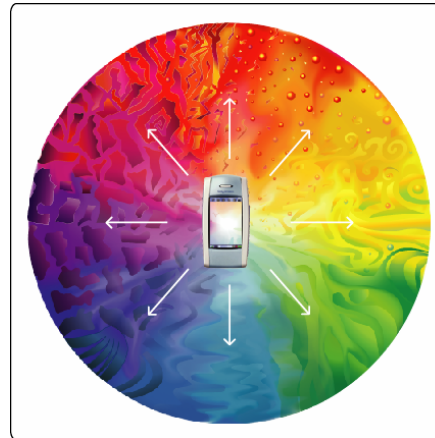
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Previous Problem Areas

Harmony and Coherency

Isabella: *"This is easiest to express, But that's because you have to use this one so much, and I'm one of those emotional people so I just RRRR..."*

Susie: *"The picture I think expresses joy, and that's wavy gestures, which is being happy."*



Susie: *"Yes, to get blue... the movements, yes I think so, absolutely. It's a little bit calm and things like that and... yes!"*

Mona: *"Like green is! Press a little, move it a little, then it becomes green."*

Previous Problem Areas

Control



Young woman standing: *"But couldn't you... do you know what color that's being sent when you send it?"*

Mona: *"Yes, I would have to get that color, what I want to get so to speak."*

Young woman standing: *"Oh, so you have to do it yourself and decide what color you want to get?"*

Mona: *"Yes."*

Young woman standing: *"That I think is strange. It would have been much more fun if you didn't know."*

The guy: *"If we connected it to a brain sensor and things like that."*

Young woman standing: *"No, but after you shake it like that, it becomes red but it's just the receiver who sees it, and then it says in a little display when you send it, a display that you can't change yourself."*

Mona: *"Yes, perhaps that would be fun."*

Young woman sitting: *"But imagine if you would send something that is wrong... and it becomes..."*

The guy: *"...but that you obviously can't interpret into something since it's just by random..."*

Young woman standing: *"But can you do that with that then, since no one..."*

Young woman sitting: *"But then someone has sat there and tried to get something, it has to be intuition."*

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New Problem Areas/Future Work

eMoto's main purpose did not seem to be an affective loop experience:

Mona: *"It could have been that circle so that you could point in the circle what color you would like it to be."*

Ok to become happier but not more angry:

Agnes: *"Do one really wants to reinforce the expression through movements? Presumably if one is happy, but not if one is sad... or not I anyway. Angry perhaps works fine. To relieve one's anger."*

...

"I mean, most often when one gets pissed one wants to kick and perhaps throw things."



Three Kinds of Results

- eMoto as a mobile service
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Letting Users Act as Researchers

They loved it:

- They forgot about us
- They felt important
- We got their scenarios not ours
- We could never have guessed their intentions

but:

- What the users see needs to be what we want feedback on, otherwise we have to educate them
- The further we take our prototypes towards being evaluated as products the further we have to bring them to a level of actually being products
- It requires users to be prepared to open up



Indications of Similarities with the Persona

The important bullshit:

Agnes: *"Louise, she probably can't express her feelings."*

...

(About Mona) *"She is a little bit eMoto."*

Playfulness:

Agnes using Louise's phone: *"But since I'm quite smug I send 'You are so good!' to myself."*

Interest in new technology:

Isabella: *"eMoto is a fun way to communicate, different from what I'm used to."*

Extrovert personalities:

Susie: *"eMoto is soooooooooooooo cool when I show to others what one can do with it."*

Analytic abilities:

Isabella: *"...what does it really mean when one sends an SMS for example, in other words the meaning of a smiley for example, the meaning of expressing oneself in a certain way. This that one can interpret things differently, and it is other people's interpretations... if I see yellow then that is positive to me, but I don't know what other people associate with that color."*

Creativity:

Agnes: *"I thought like this, now a lot of people has these bling-bling jewelry on everything, then you could attach a little ball or something, or one could rub on the mobile phone perhaps or just so that you hold it or something."*



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