Theories of Love

In this Lecture we present various Theories of Love, Mate Selection and Relationships and give an introduction to Simulating Artificial Love

Love in Everyday Psychology I

- Birds of a feather flock together
  - The more similar you are, the better.
    - same opinion
    - same habits
    - same likes and dislikes
  - Most Partner Agencies rely on this principle when matching their clients
- Opposite poles attract
  - Humans seek for those traits they don't have themselves
    - opposite characters can complement each other

Love in Everyday Psychology III

- what are the underlying assumptions?
  - What matters are the constituting parts, if the parts fit the relation (love) will occur.
  - partners are consumer goods
    - they must fit your lifestyle, timeplan etc.
    - if the partner doesn't work you can return him/her
    - once you know the partner the relationship gets boring
- this is only one way to view love
  - there are many types of love
  - concepts of love have changed throughout history
  - many people have integrated one or more of those historical concepts into their own theory of love
  - Science tries to find out what love is

Love in Everyday Psychology

- love is temporary
  - people fall in and out of love at increasing frequency giving rise to funny German words such as Lebensabschnittspartner
  - everything seems to change faster nowadays, so do we, that's why we don't fit together anymore after some time
  - Love has always been temporary, that's why Institutions such as marriage have been invented

- your dream partner is out there
  - there are so many millions of people out there, there must be someone who fits you perfectly
  - maybe your dream partner does not exist, but hopefully someone comes close
**Greek Typology of Love**
- **Eros**
  - In classic mythology, eros shot arrows through the eyes of the lover.
  - Live at the first glance.
  - Ancient Greek for love that develops slowly between siblings or playmates.
  - More like friendship.
- **Ludus**
  - Love as a game.
- **Pragma**
  - Not restricted to two-player games (Don Juan).
- **Mania**
  - Greek mania = madness from the gods, type of love that strikes you like a bolt from the blue.
  - Obsession, addiction, in love with love(), selfish.
- **Agape**
  - Christian love.
  - Selfless giving, altruistic, ideologic.

**Some Historical Views**
- Love as bittersweet (mania).
- Love as addiction and torture.
- "Love the looser of limbs shakes me a creature bittersweet, inescapable" (Sappho 630 B.C).
- Love as a God (Eros).
- Aphrodite, Eros.
- Power beyond the control of Humans.
- Love as the need for reunion.
  - Plato's Symposium, sphericals cut in halves by the gods.
  - Man and Woman are imperfect, therefore they strive for unification.

**Emancipation of Love**
- Curfey (18th century).
  - Sexual love is an ideal in itself.
  - It is ethical and aesthetic.
  - It makes you a better human.
  - Love pertains to courtesy and courtship but not necessarily to marriage(!).
  - Love is an intense, passionate relationship that establishes a holy oneness between man and woman.
- Romantic love (19th century).
  - Romantic Optimism.
  - And they lived happily ever after.
  - Romantic Pessimism.
  - This world is too restricted for love to unfold (Rome and Julia etc).

**Psychology of Love I**
- How is love measured?
  - Iterative process.
  - Formulate love hypothesis.
  - Create items for a questionnaire.
  - Use statistics to find significant traits.
  - Reformulate hypothesis etc.
- What is measured?
  - Happiness.
  - Duration of relations.
  - Investment, devotion ...
similarity perception model (Hassebrauck)
- used for prediction of relationship quality & duration

Female traits
\[ \begin{array}{c}
\text{male traits} \\
\text{from female perspective}
\end{array} \]
\[ \begin{array}{c}
\text{female traits} \\
\text{from male perspective}
\end{array} \]

Agents have models of each other
- ego model
- alter model

Attraction is only based on perceived similarities and their change over time

Difference between the sexes can be based on relationship memory

Love styles
- selfassured
- frightened
- ambivalent

Relationship styles
- anxious
- avoiding

Evolutionary viewpoint
- why should you run away from the opposite sex?
- fear gives you an evolutionary advantage

Goal conflict

Attraction
- love
- sex
- reproduction

Anxiousness
- fear
- escape
- survival
Martin Schneider, Universität Osnabrück

triangulating love

- Sternberg

Intimacy
(social)

Passion
(sexual)

Commitment
(rational)

Sternberg

Liking
(intimacy alone)

ROMANTIC LOVE
(intimacy + passion)

CONSOLATIVE LOVE
(intimacy + commitment)

INFATUATION
(passion alone)

PASSIVUS LOVE
(passion + commitment)

EMPTY LOVE
(rational)

the course of love

- all corners of the triangle have been considered in various life simulations
- we could do a simulation that will produce similar curves for the respective parameters
  - passion
    - evolutionary
    - biological simulation
  - intimacy
    - information sharing
    - agent simulation
  - commitment
    - game theory
    - economic simulation
- but will it be love?
**love as communication**

- Information theory (channel theory shannon)
  - Communication can only be disturbed by noise
- Systems theory (structural coupling)
  - Systems are closed but can irritate each other
  - There is a huge contingency (many possible meanings) in communication
- But we can construct consistent patterns of perception/interpretation that allow to reduce contingency and isolate a single meaning
- Reduction mechanisms:
  - Prejudices, roles
    - Very useful for nonintimate relationships
  - Love: stories
    - Very useful for intimate relationships
  - Love is just another (positive) prejudice (pink glases)
- Without those mechanisms communication would be improbable

**mission improbable**

- Niklas Luhmann
  - German Sociologist, Systems Scientist
  - „Zur Codierung von Intimität“ (Coding Intimacy)
- Love is a system to make communication possible which would otherwise be improbable
- Love has become a self-sustaining system
  - Before, you loved sb. because he was special
  - Now you love sb. because you love him
    - (If you could give a reason, it wouldn’t be love anymore)
  - In the past centuries there was a love codex promoted by novel writers
    - The codex was known but had to be varied to show that you don’t act by the script.
- Love is a system for intimate communications
  - Communications about you and your partner
  - Communications about your communications

**love as a story**

- Robert J. Sternberg (Psychologist)
  - „Love is a Story“ – a new theory of relationships
    - Only descriptive work, practically nothing on the functions of stories
- What defines a story?
  - A story has a temporal aspect
    - Beginning, end, climax...
  - We may learn about the development of love
- A story has a plot
  - Every story is unique
  - Stories fall into genres
    - What Sternberg describes are actually genres not stories
    - He gives prototypical stories defining each genre
- Stories have characters and roles

**personal love stories**

- The story that you create for your own relationship
  - To explain (reduce past contingency)
  - To anticipate (reduce future contingency)
- Multiple stories
  - His story – her story
  - Perceived story – perfect story
  - Both can favour multiple stories
- Resolving similarity-complementarity
  - Similar stories
  - Complementary roles
- Matching stories instead of character traits!
implications for love

- stories are very consistent, they will be pertained as long as possible
- conflicts concerning mate choice occur usually because each potential partner satisfies one of your stories
- if perceived story and perfect story diverge to much, the partners become unsatisfied and the relationship will eventually break

genres of PLS

- asymmetrical stories
  - teacher student story
  - sacrifice story
  - government story
  - police story
  - pornography story
- object stories
  - person as object
    - science-fiction story
    - collection story
    - art story
  - relationship as object
    - house and family story
    - recovery story
    - religion story
    - game story
- coordination stories
  - travel story
  - sewing and cutting story
  - garden story
  - business story
  - addiction story
- narrative stories
  - fantasy story
  - history story
  - science story
  - cookbook story
- genres stories
  - war story
  - theater story
  - humour story
  - mystery story
- action and symbolic action
  - hitting, shaking your fist
  - kissing, throwing a hand kiss
  - etc.

love as metaphor

- Sternbergs Genres (Storys), always describe love in terms of other cultural systems (business, hunting & gathering, harvesting, history, theater, war...)
- love seems to be a second order system that can only be described in terms of other possibly primary order systems
- it is also a theory about theories of love:
  - every lover has his personal theory according to which he shapes and perceives his loving behaviour
- love is used as a metaphor but in a very concrete sense:
  - people act according to metaphors
  - people perceive actions as love according to those metaphors

artificial metaphors

- what is a metaphor?
  - application of an old concept to a new domain
- how can artificial agents incorporate metaphors?
  - they should interact with each other „as if“ love was business, war etc.
- action and symbolic action
  - action – symbolic action
    - hitting, shaking your fist
    - kissing, throwing a hand kiss
    - etc.
A theory of actons I

- actons
- smallest unit of action
- acton
- a package of actons that is the fingerprint of your system interacting with the environment
- perception of actons
  - you can only perceive those aspects of an action
    - for your sensual apparatus was made
    - for which you can form a concept
  - shadow metaphor
    - the perception is the shadow cast of a high-dimensional acton molecule
- language is symbolic action
- messages are actons that are not intended to affect the physical environment directly (sometimes indirectly: command, query)

A theory of actons II

- example: opening a door
  - the door
    - perceives functional actons only
    - doesn't care about any other actons
  - other humans
    - perceive all kinds of actons
    - some of which are interpreted as: elegance, respect, politeness, hasty...n
  - important for love: the way she opens the door :-)
- example: the message
  - the door
    - perceives actons like soundwaves
    - but it doesn't really care
  - other humans
    - perceive actons, interpreted as message, question, proposal...

A theory of actons III

- agents evolve contingent behaviour when interacting with the environment
- action occurs between two system
  - whether the opener acts on the door or vice versa is a question of your viewpoint
- action is situation
  - it might be better to call an action situation, to get away from the unidirectional active-passive metaphor that is associated with the concept of action
  - from the perspective of an agent there is a difference between his intended action (open the door) and the situation that arises from agent/environment coupling
- metaphors in acton theory
  - metaphors are filters or projections through which actions are perceived and mapped into agent (mental) states
- being is acting
- physical presence is already action

Artificial love

- where is the love in the system?
  - if an agent 'likes' the actons (situations) that occur, it will seek to reexperience them
  - if the presence of somebody else plays an important part in situation perception we may call this love
  - what type of love it actually is depends on the metaphor which the individual agent applies.
- how to represent action
  - action string
    - inescapable actons (your own physical presence ...)
    - voluntary actons
  - the action strings of agent / environment are multiplied to produce a situation string
  - reinforcement of agent actons (not single actons) that result in positive situations
artificial love

- how to represent stories/metaphors
  - function to map (possibly complex) situation strings to simple agent states
- how to exchange concepts
  - metaphors can only be exchanged via messages
  - unfortunately an agent can only interpret them using the concepts/metaphors he already has!
- how to acquire concepts
  - we might have some innate concepts. existing concepts are subject to darwinian evolution inside the agent brain (meme theory)
- if a concept is applied to a new situation we call it a metaphor
  - what does "new" mean?
- is it really love?
  - aimed at physical presence but mental representation in metaphors

Martin Schneider, Universität Osnabrück