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Transforming Identity –
The Elements and the Stability of Implicit Theories About How Love Can Be Developed

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Abstract

The goals of this paper are to identify implicit theories of romantic love and to find indications about the stability resp. transformability of these theories. Such information is essential in order to find basic cognitive representations for developing personal identity and related social skills, especially for relationship education programs. The analysis is based on a human developmental model consisting of 5 developmental steps (from awareness, acceptance, care, trust to love) and 15 related instructional strategies (like, for example, establishing knowledge-based interactions or maintaining novelty). Fifty-two undergraduate students had to answer two times (within several weeks) three questions about features, causes, and the learnability of love for exploring their implicit theories. Content analysis has been applied for categorizing the developmental steps and instructional strategies within their reports. Results indicate that all elements of the human developmental model of love can be identified, but vary inconsistently within the implicit theories. Also, an instructional intervention, i.e., a lecture on love, has not changed these theories significantly indicating a high stability resp. a low transformability. Finally, shortcomings, additional conditions for changing implicit theories, and future research activities are outlined.

Keywords: Human development, theory of love, relationship building, naive theories, qualitative data analysis

Transforming Identity –
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About How Love Can Be Developed

"Love changes everything" (from Webber´s "Aspects of Love") or love transforms many facets of human experiences. When this statement is true, then it would be important to be able to transform love too. However, transforming identity and related social skills represents no trivial task for educational systems because such skills are affected by multiple and rapidly changing influences, especially in the case of a highly complex emotion like love. That love is something that transforms can easily be supported by the high divorce rates (about 40 to 50 percent) in modern Western societies. Divorce from a once beloved partner has many emotional, social, economic, and other consequences so that marriage and relationship education programs or couple therapies have been implemented in order to re-establish love or at least to keep partnerships alive (see, for example, Halford, 2011). However, in most cases, such interventions occur when severe problems within relationships already exist. Another way for increasing the chance of long lasting loving relationships might be to establish prevention programs like, for example, school-based social competence interventions (Topping, 2012).

Recently, Astleitner (2014) has proposed a prescriptive human developmental model on fostering love that can be used for prevention programs dealing with concepts and processes about love (see Figure 1). The developmental model consists of five developmental steps from awareness (i.e., the perception of somebody

on the basis of a cognitive construction process), acceptance (i.e., the respect for somebody because of a positive evaluation), care (i.e., the support of somebody´s welfare), trust (i.e., the degree a person believes to can count on somebody), and love (i.e., a strong feeling based on intimacy, passion, and commitment; see the triangular theory of love by Sternberg, 1986). For each of these developmental steps, it is assumed that they can be stimulated by certain instructional strategies. Awareness can be affected by knowledge-based interactions (e.g., telling personal histories), acquiring emotional intelligence (e.g., expanding empathic behavior), or allowing positive bias (e.g., seeing the partner in a positive light). Expressing high meaning (e.g., by rewarding), searching for similarities or complementarities (e.g., by finding common goals in life), and promoting tolerance (e.g., by showing the interdependences of problems) should affect acceptance. Care can be realized by expanding others (e.g., putting aside self-interest), achieving compassionate goals (e.g., having a "boy scout"-perspective in life), and doing perspective taking (e.g., by role-play activities). The instructional strategies for trust concern being positive and open (e.g., by conducting "self-science"), negotiating identities (e.g., by finding solutions without harming others), or keeping balance (e.g., by coordinating personality developmental activities). Finally, realizing togetherness, passionate emotions, and defending might affect love (e.g., by increasing time spent together). It is also important to communicate love (e.g., by giving complements) and to maintain novelty (e.g., by undertaking new intellectual or physical activities).

Within the developmental model, also a certain learning mechanism as transformative source has been proposed. Learning is based on varying elements (goals, knowledge, and experiences), a changing focus (self, other), different more or less emotional types of processing (from cognitive to unconscious), and needs learning support based on effective principles of instruction (Merrill, 2009).

This model has resulted from a comprehensive review of research on fostering love and was tested in a first validity study with undergraduate students (see Astleitner, 2014). For example, within this study, more than 80% of students found acceptance to be an important step in reaching love. About 70% of the students found awareness and trust of high importance, whereas only about 50% have found care as being important.

Include Figure 1 about here!

Despite this high agreement about the importance of the postulated developmental steps, it can be doubted that a highly emotional and sometimes unconscious process or product like love can be regulated by a more or less rational step-by-step instructional procedure. Human beings like to allow uncontrolled feelings, to establish self-illusions, or to have fallacies and biases in judgments (e.g., Pohl, 2004; Hood, 2012). That is also true for love or intimate relationships (e.g., Fletcher & Kerr, 2010). However, people also have conscious thoughts about love and such thoughts influence behavior significantly (e.g., Baumeister, Masicampo, & Vohs, 2011).

Conscious thoughts are crystallized in more or less stable and measureable “implicit” (or also “naive”, “subjective”, or “personal”) theories about a phenomenon (e.g., Frommer, Reissner, Tress, & Langenbach, 1996). Such theories concern assumptions or beliefs about the causes, processes, and effects about a phenomenon from an individual person and can be found in “implicit theories of relationships” (e.g., Knee, Patrick, & Lonsbary, 2003). Also, Sternberg (2006, p. 191) has argued that love can be seen as a story containing “conceptions of what love can be”. He has identified 26 kinds of stories dealing with aspects of love like addiction, art, business, collection, cookbook, and so on. Fehr (2006, p. 228) has investigated conceptions of love as prototypes and found that features like trust, caring, or intimacy have been considered as central whereas others like, for example, sexual passion as peripheral.

Based on this kind of research, it was the first goal of this study to find out, whether the developmental steps and the instructional strategies of the human developmental model on fostering love can be found within implicit theories of love in undergraduate students. This group has been selected because first major experiences in romantic love are often made within this range of age; therefore basic skills in finding and developing close relationships should be identifiable and also transformable because they are not yet stabilized in long-term experiences (e.g., Sternberg, 1986, p. 126).

Also, implicit theories build a bridge between scientific theories and practical behavior (e.g., Gastager, Patry, & Gollackner, 2011). If implicit theories are close to scientific

theories, then there is a high chance that practical behavior is founded by important well-proven research findings for successful relationship building and maintenance. So, it is an essential question whether the implicit theories of students correspond to our scientific human developmental model, because such theories can represent an important part of a "romantic competence" as outlined by Shulman, Davila, and Shachar-Shapira (2011). Also, on the one hand, it is an open question whether our model delivers an exclusive and saturated representation of implicit theories of love and its development. On the other hand, it can be expected that people do not have implicit theories that fully correspond with our research findings (based on a comprehensive review of literature), because they have never been systematically instructed on the issue of love.

The second goal of this study has been to find indications whether such implicit theories transform over time, especially when individuals are confronted with knowledge about love and how love changes. To change love represents a difficult entrepreneurship, because love is highly based on emotions or emotional processes. Such processes are instable, highly fluctuating, or not based on rational decisions what makes it difficult to design effective education on love. However, implicit theories about love might be represented in memory in different ways, for example, as "cognitive representations of attachment" (Collins & Allard, 2003) or "working models of attachment" (McCarthy & Maughan, 2010). And, when they are represented in memory, then they can change or be transformed by memory or learning processes. For example, Regan, Kocan, and Whitlock (1998) have found that participants falsely recognized or recalled features of a concept of romantic love. Therefore, on the

one hand, it can be expected that implicit theories of love change when they are confronted with knowledge about love and how love changes. However, on the other hand, changing the development of love might be difficult because implicit theories of love can also be classified as relatively stable "belief systems" or "attitudes". For example, Cacioppo, Bianchi-Demicheli, Hatfield, and Rapson (2012) have reported that love has shown increased brain activities not only in areas that are associated with euphoria, reward, or motivation, but also in higher-order cortical brain areas involved in more long-term social cognition or self-representations related to identity.

Method

Participants

Overall 199 undergraduate students, who have attended a lecture on "love and education" at the Department of Educational Research at the University of Salzburg (Austria), have taken part in this study. However, data of only 52 students, who have done all intended measurements, have been used in content and statistical analyses. These students, 98 percent of them were females, had an average age of 22.3 years. 59.6 percent of the participants have stated that the lecture had a strong or very strong effect on their personal opinions on love and 94.2 percent have indicated that they often or always have attended the lecture.

Design and Procedure

The first measurement of implicit theories of love has been taken at the first regular session of the lecture, the second measurement has been about eight weeks later. During this period, the following issues (with references) have been presented in eight

one-and-a-half-hour-sessions together with an audio presentation based on about 80 Powerpoint-slides, related video sequences, and discussions together with the students: Love from a non-scientific perspective, everyday theories about love, a working definition of love, reasons and goals for dealing with love from an educationist point of view, pre-conditions for a theory of love, theories of love, love styles, love ways, mental models of relationships, types of close relationships, love as a general social factor, love as self-expansion, bias in evaluations of partners, personality characteristics and love, and historic changes in close relationships. All slides have been downloaded by the students and used for taking notes and learning. The human developmental model from Astleitner (2014) has not been included in all of these sessions.

Instructions

At the first and second measurement, students have been asked three questions:

1. In your opinion: When is love realized resp. what features do love have?

2. How does love develop resp. what causes love?

3. In your opinion: Can love be learned resp. what can be done so that love lasts a long time?

Students had about 15 minutes to answer the questions on a double-sided sheet of paper.

Content Analysis

The written reports have been analyzed by using a category system that consists of all developmental steps and instructional strategies together with brief descriptions, illustrative examples,

and coding rules (Miles & Huberman, 1994). Here are some examples from the category system:

- Awareness strategy (3) “Allowing positive bias”: is about raising the positive characteristics of a partner in order to stabilize a relationship at the early beginning (definition); “you find the partner you love always perfect”, “you see everything positive, negative things are faded out”, or “you see things through rose-colored spectacles” (illustrative examples); within the text an enhancement, optimistic, or control bias must be stated (coding rules).
- Acceptance strategy (6) “Promoting tolerance”: concerns apologies or concessions and highlighting interdependence in case of problems; “to find compromises” or “to accept mistakes of the partner”; there must be an understanding that nobody is perfect and that finding common solutions or remedies is necessary.
- Care strategy (9) “Doing perspective taking”: is about seeing life with the eyes of the other; “to consider the focus and the values of the partner”; with a clear change of a point-of-view.
- Trust strategy (12) “Keeping balance”: means that within the relationship, the influence of both partners is about equal, the relation between costs and benefits is adjusted, and that there are common goals and values; “a permanent process of negotiating and interacting with the partner, also a common work”; both partners should be of equal importance within the relationship.
- Love strategy (15) “Maintaining novelty”: is done by including new mental or physical activities into the relationship; “to

start a new adventure that increases attachment"; a variation of relationships´ elements as a stimulating experience.

Developmental steps and instructional strategies have been counted only once per report.

Reliability Check and Statistical Tests

Reliability of the content analysis has been computed two times by one rater. Two reliability checks based on 100 classifications each, both within several weeks, have shown correspondence rates of 85 percent (for the first measurement) and 91 percent (for the second measurement) indicating acceptable reliability. For testing statistical significant differences of percentages between two dependent measurements, the SPSS 22-Nonparametric *McNemar-Test* was used (see also: Bortz & Lienert, 2003, p. 118).

Results

Within table 1, the results of the content analysis are depicted for all developmental steps and instructional strategies for the first and second analyses.

Developmental steps have been identified in 11.5% (for awareness at the second analysis) to 65.4% (for love at the second analysis) of participants´ reports. Statements about trust can be found in more than half of the implicit theories in both analyses (63.5 and 51.9%), followed by love (38.5 and 65.4%), and acceptance (28.8 and 36.5%). Only less than a quarter of participants have included at least one statement about care (17.3 and 23.1%) and awareness (25.0 and 11.5%). Instructional strategies related to the human developmental model have been found in both analyses for awareness (with a range from 7.7 to 50.0%), acceptance (1.9 to

34.6%), care (3.8 to 34.6%), trust (11.5 to 30.8%), and love (7.7 to 23.1%).

Include Table 1 about here!

After attending a lecture on love, the implicit theories of participants had more statements (based on our developmental model) concerning instructional strategies of establishing knowledge-based interactions (X^2=8.552, $p < .01$) and negotiating identities (X^2=6.050, $p < .05$), and the developmental step of love (X^2=7.043, $p < .01$). All other developmental steps and instructional strategies have not changed in a statistically significant way ($1 \geq p \geq 0.070$). However, six instructional strategies have been stated less frequently (i.e., acquiring emotional intelligence, promoting tolerance, expanding others, being positive and open, realizing togetherness, passionate emotions, and defending, and communicating love).

Within the second analyis, also additional instructional strategies outside our developmental model have been explored by using the "codes and coding"-procedure from Miles and Huberman (1994). Three have been discovered:

- Strategy "Socialization" (30.8%): means that a healthy and caring home and the love of parents are an important factor for being able to give and get love. This strategy is about learning to love based on family experiences.
- Strategy "Biochemical processes" (38.5%): is about stimulating love by smelling, hormonal stages, or biochemical brain processes. Some of these strategies might be designed in some

way (e.g., smelling by perfumes), but others occur with no or little control by consciousness and therefore educational interventions.

- Strategy "Crisis situation" (34.6%): concerns difficult situations in life (e.g., loss of job) in which there is an increased probability that love develops.

Discussion

There are some methodological shortcomings resulting from the exploratory character of the study (e.g., Lipsey, 1990). For example, we have measured changes in implicit theories without establishing an experiment-like intervention study so that (without a control group and without a clear intervention goal) there is no causality-related interpretation of our results. Also, the small sample size does not allow any generalization of findings even not for female adolescents who have dominated our sample. Reliabilities of the content analyses have been good, but not optimal due to the many interlinked emotional concepts and the high proximity of developmental steps and related instructional strategies (especially for the concept of love).

Despite these shortcomings, the results of this study show that many of both the developmental steps and the instructional strategies are essential elements in undergraduate students´ implicit theories of love.

Such implicit theories can be considered as pre-knowledge what can be used effectively within educational training settings on love. They build a first knowledge structure on love that allows to elaborate and to expand more complex social skills on love and its development. However, the changing of implicit theories seems to be

difficult when taking the results of this study into account. Only few participants have changed their implicit theories on love after an intervention of about 12 hours in time (with many case studies, social problem solving tasks, and discussing personal assumptions).

There are some reasons why there was no or only little change within the implicit theories. Brooks, Brooks, and Goldstein (2012, p. 558) have pointed out that in order that implicit theories (they have used the term "mindsets") become an effective basis for acting, it is necessary that they are associated with the "3Cs": Commitment, challenge, and control. That means that interventions on love should stimulate the assumption that love is something that needs responsibility, sensibility, and personal effort. It would also be important in such interventions to stress that love is something that is not too easy but also not too difficult so that it becomes a challenge with a good chance for success. Finally, instructions on love should deliver the message that love is to a large degree under personal control and not only depending on the good will of others. For our human developmental model on love and related interventions, it seems to be necessary to not only instruct people about love and the changing of it, but also to implement the "3Cs" as general instructional design principles. For example, interventions on the human developmental model on love should be based on relationship problem solving tasks that a) show what would happen without responsible acting (commitment), b) make it necessary to combine a few but not too many strategies (a challenge at a medium level of difficulty), and c) contain realistic scenarios in personal daily life situations (control).

Also, according to Anderson and Lindsay (1998, p. 20), it can be assumed that implicit theories originate, change, and become resistant to change based on complex direct or indirect learning as well as causal thinking. Sufficient time, available cognitive resources, or the motivation to change behavior affects such processes. All these features have not been analyzed within the given study although they represent important frameworks for educational activities related to our human developmental model. Future research activities must consider in more detail conditions under which implicit theories of love can be changed effectively.

As a next step in research, experiences from content analysis will be used to develop a questionnaire for measuring developmental steps and related instructional strategies on a behavioral basis. This is important because the same implicit theories can lead to different love related behaviors. When trying to establish an educational intervention on love, the correspondence between implicit theories (a more or less rational basis) and real behavior (on an often emotional basis) are important, because in the field of romantic love, the missing of such a correspondence often represents the main cause for relationship problems and a source for resistance against positive transformation (e.g., Leahy, 2001).

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Table 1

Percentages of Developmental Steps and Instructional Strategies in Implicit Theories about Love (n=52)

Categories	First Analysis	Second Analysis	*Test statistics* (X^2, *df=1*)	Exact *p* (2-sided)
Awareness	25.0	11.5	2,769	.092
Establishing knowledge-based interactions	21.2	50.0	8,522	.003
Acquiring emotional intelligence	15.4	7.7	0,900	.344
Allowing positive bias	9.6	9.6	0,000	1
Acceptance	28.8	36.5	0,409	.523
Expressing high meaning	1.9	1.9	0,000	1
Searching for similarities and complementarities	28.8	34.6	0,235	.629
Promoting tolerance	34.6	21.2	1,895	.167
Care	17.3	23.1	0,308	.581
Expanding others	23.1	15.4	0,562	.454
Achieving compassionate goals	19.2	34.6	2,722	.096
Doing perspective-taking	3.8	15.4	3,125	.070
Trust	63.5	51.9	1,250	.263
Being positive and open	15.4	11.5	0,100	.754
Negotiating identities	11.5	34.6	6,050	.012
Keeping balance	15.4	30.8	2,227	.134
Love	38.5	65.4	7,042	.007
Realizing togetherness, passionate emotions, and defending	23.1	17.3	0,267	.607
Communicating love	13.5	5.8	1,125	.289
Maintaining novelty	7.7	15.4	0,750	.388
Others				
Socialization		30.8		
Biochemical processes		38.5		
Crisis situations		34.6		

Figure 1. *A Human Developmental Model on Fostering Love* (see Astleitner, 2014, p. 39)

Developmental Steps	Learning Mechanisms	Instructional Strategies
Awareness	**Elements** Goals, knowledge, experiences	(1) Establishing knowledge-based interactions (2) Acquiring emotional intelligence (3) Allowing positive bias
Acceptance	**Focus** Self, other **Type of processing** Cognitive, fuzzy, emotional, unconscious	(4) Expressing high meaning (5) Searching for similarities and complementarities (6) Promoting tolerance
Care		(7) Expanding others (8) Achieving compassionate goals (9) Doing perspective taking
Trust	**Learning support** Activation, Demonstration, Application, Integration	(10) Being positive and open (11) Negotiating identities (12) Keeping balance
Love		(13) Realizing togetherness, passionate emotions, and defending (14) Communicating love (15) Maintaining novelty