HOW TO CONDUCT RESEARCH ON INTERPERSONAL ATTRACTION USING THE TWO-DIMENSIONAL MODEL OF ATTRACTION

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Brief description

The two-dimensional model of attraction (TDMA) considers the attraction process from initial exposure to subjective experience to enacted behavior. The link between exposure (or salience) and subjective experience (i.e., affective attraction) is dominated by the same two cognitive appraisals that regulate the person perception process: willingness and ability. Specifically, the subjective experience of attraction (i.e., affective and behavioral attraction) is determined by willingness (perception of the target person's willingness to facilitate the perceiver's interests) and ability (perception of the target person's ability to facilitate/hinder the perceiver's interests). As a general rule, with a more positive willingness and/or ability appraisal, the more affective and behavioral attraction that results. However, fun and interesting effects (e.g., high affective attraction but low behavioral attraction) may result when one of many processes are present (e.g., fear of rejection) that affect the willingness appraisal more than the ability appraisal. A complete description of this section of the model is described in Montoya and Horton (2014).

The link between the subjective experience and enacted behavior is determined primarily by (a) social exchange considerations and (b) situational constraints. Specifically, TDMA considers attraction an emotion, the behavioral expression of which is designed to increase the degree of interdependence via the communication of cues to trust. Given that the expression of trust leaves one vulnerable to exploitation and the ability to exploit someone else, the degree to which the subjective experience and the behavioral expression of attraction align is affected.
strongly by fear of exploitation, instrumental considerations, and situational factors. With respect to fear of exploitation, to play off a stereotype, a female dater may not express her liking for her male date to reduce the chances that her date will exploit that knowledge for sex. With respect to instrumental considerations, people will make eye contact, smile, and laugh—not necessarily as a reflection of their internal state—but to get the other person to like/trust them (i.e., flirting, brown-nosing). Situational factors include external forces that may facilitate or augment the behavioral expression of attraction, including injunctive and descriptive norms (working in a workplace that is highly sexualized), pluralistic ignorance, or evaluative apprehension. A complete description of this section is described in Montoya, Kershaw, and Prosser (2018).

A summary of the attraction process can be described as follows:

The goal of this document is to provide: (a) an overview of the TDMA, (b) a description of how popular attraction phenomenon "work" given TDMA, (c) an informal evaluation of some popular measures as they relate to TDMA, and (d) a discussion of a few issues important to testing attraction given this framework.

NOTE: Please do not cite this document. It is intended to be an informal description of some of the issues that face attraction research using TDMA. As one will note, this document includes my personal views on some topics. I am currently in the process of writing several papers that more clearly and completely describe the ideas contained within. If you feel the *need* to cite this document, feel free to e-mail me, and I’ll see whether I’ve got a better citation/paper for you.

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Components of the TDMA

Willingness

What is it? Refers to the degree to which the target person is evaluated as willing to facilitate the participant's interests/goals

How is it measured?

a. Assessment of "benevolent intent"/trust/willingness: Assessed with a questionnaire that taps into the degree to which the participant believes that the target person will facilitate his/her interests/goals.
b. Assessment of perceived acceptance: There is a pretty good correlation between "perceived acceptance" (i.e., the degree to which the participant believes the target person likes/accepts him/her) and benevolent intent/trust/willingness. In my mind, perceived acceptance is the best and easiest "real world" operationalization of willingness.

Ability

What is it? Refers to the degree to which the target person is evaluated as possessing the qualities necessary to facilitate (or hinder) the participant's (potentially) domain-specific goals/interests.

How is it measured?

a. The most tricky assessment to measure. This is a domain-specific assessment that should relate to the relevant assessment given the demands of the task.

Behavioral attraction

What is it? Reflects the participant's preference to act in an affiliation-oriented fashion toward the target person

How is it measured?

a. Self-report questions (most commonly): The questions focus on the participant's preference to act in an affiliation-oriented fashion toward the target person.

Affective attraction

What is it? Reflects the quality of the participant's positive subjective experience regarding the target person

How is it measured?

a. Self-report questions (most commonly): Questions focus on the participant's positive emotional response to the target person

Affiliative behavior

What is it? Enacted behavior associated with the production, maintenance, or restoration of interpersonal trust/rapport.

How is it measured?

a. Commonly measured using coded/videotaped behaviors, including eye contact, smiling, laughter, mimicry, and the like. I would submit that cooperation, compliance, and conformity may also fall into this category.
Popular Manipulations of Attraction
What do they do?

"I just want to get participants to like each other. Does it matter how I do that?" Yes! Not all manipulations of attraction are the same. Some act to grow attraction via willingness, others work via ability, and others work via both! The manipulation the researcher selects should be determined by a theoretically informed decision about why the participant will respond to the target person. If what is of interest is that the participants respond to the target person in a particular way because s/he believes that the target person is "quality person," then a manipulation of ability is apt. But if trust is of interest, manipulate willingness. The type of manipulation matters. A trustworthy salesperson (willingness) will inspire more sales than would a physically attractive (ability) salesperson. Most are more willing to affiliate with someone they know likes them versus someone who is "physically attractive" (e.g., Moore & Butler, 1989).

Physical attractiveness
What is it? People like those who are physically attractive. In the lab, this is done by manipulating the physical attractiveness of the person the participant will evaluate/meet/interact.

According to TDMA, how does it work? Technically, a manipulation of ability, but it may produce rather strong reductions in willingness when self-threat is present (e.g., expected future interaction which may cause rejection).

Intelligence or other domain-relevant dimension
What is it? See above, but replace "physical attractiveness" with intelligence or whatnot.

According to TDMA, how does it work? Technically, a manipulation of ability. But remember that the same issues may apply here as they do for physical attractiveness, as many will fear rejection (i.e., lower willingness) when interacting with someone "too" good.

The similarity effect
What is it? People like those who they believe are similar to themselves with respect to attitudes, personality traits, and/or values. In the laboratory, the most common manipulation uses Byrne's (1971) technique, in which participants are led to believe that another participant shares his/her views on a series of important attitudes (e.g., attitude toward war, abortion, discotheques, etc...). A full description of Byrne's method can be in Byrne (1971), and a review of research can be found in Montoya, Horton, and Kirchner (2008) and Sunnafrank (1991).

According to TDMA, how does it work? Similarity operates via both willingness and ability. Because of this, I consider it a rather "messy" manipulation and should be used rarely.

Reciprocity of liking
What is it? People like those who like them. In the laboratory, this is most commonly manipulated by making participants believe that their "interaction partner" is prone to accept or "like" them, or not. For a more complete description of this manipulation, see Montoya and Insko (2008), who adapted a procedure from McWhirter and Jecker (1967).

According to TDMA, how does it work? A manipulation of willingness.

A full theoretical description for each of these manipulations (and many more!!) are found in Montoya and Horton (2014) and Montoya (in prep)
Existing Measures of Attraction and TDMA Assessments
How do they jibe with the TDMA and are the measures any good?

This section provides some informal commentary on frequently-used measures of attraction, ability, and willingness. You will note that I have issues with nearly all of the measures (even my own)! In this way, this section could be considered a way of communicating the relevant issues when creating/modifying TDMA-related items rather than me anointing a scale as "good."

Byrne's (1971) Interpersonal Judgment Scale (IJS)
1. To what degree is the target person:
   a. intelligence
   b. morality
   c. knowledge of current events
   d. adjustment
2. How much do you think you will like this person?
3. How much would you want to work with this person?

Attraction is measured using the sum of the final two items. It is commonly preceded by four "filler" items (that comprise what I'd say is an ability assessment). Note that one of the attraction items is affective (i.e., "How much do you think you will like this person?") and the second is behavioral (i.e., "How much would you want to work with this person?"). It is "OK" to use the IJS (although I wouldn't advise it), but keep two things in mind:
1. Because one item is affective and one behavioral, only use the IJS in "no-threat" tasks (e.g., person perception tasks) when there is not the expectation that behavioral attraction will differ from affective attraction.
2. Attraction responds more dramatically to attraction phenomena when the attraction items are preceded by the four "filler" items (Montoya & Horton, 2004, 2013). This is likely because the "filler" items prime a salient assessment that then cause the relevant manipulation to produce more or less liking.

Rubin's (1974) liking scale
1. I think that _____ is unusually well-adjusted.
2. I would highly recommend _____ for a responsible job.
3. I have great confidence in _____'s good judgment.
4. I think that _____ is one of those people who quickly wins respect.

From the perspective of the TDMA, this is a measure of ability, not attraction, and should not be used to measure attraction. But if the researcher was interested in measuring ability, it could work. It would only work during a person perception task in which the overall, general and "undifferentiated" (an odd choice of word, no?) ability assessment is of interest (i.e., should be not be used, for example, during a dating study when physical attractiveness is important).
McCroskey and McCain's (1974) measure of interpersonal attraction
1. I think s/he could be a friend of mine.
2. It would be difficult to meet and talk with him/her.
3. S/He just wouldn't fit into my circle of friends.
4. We could never establish a personal friendship with each other.
5. I would like to have a friendly chat with him/her.
6. I think s/he is quite handsome (pretty).
7. S/He is very sexy looking.
8. I find him/her very attractive physically.
9. I don't like the way s/he looks.
10. S/He is somewhat ugly.
11. S/He is a typical goof-off when assigned a job to do.
12. I have confidence in his/her ability to get the job done.
13. If I wanted to get things done, I could probably depend on him/her.
14. I couldn't get anything accomplished with him/her.
15. S/He would be a poor problem solver.

From the perspective of TDMA, the social attraction subscale (Questions 1-5) is a measure of behavioral attraction, the physical attraction subscale (Questions 6-10) is a measure of ability (and should only be used in contexts in which physical attractiveness is a relevant assessment), and task attraction (Questions 11-15) is a measure of ability (and again, should only be used in contexts in which generalized task performance is relevant).

Montoya and Insko's (2008) measure of affective attraction
1. How unpleasant/pleasant do you feel about your partner?
2. How cold/warm do you feel about your partner?
3. How positive/negative do you feel about your partner?
4. How friendly/unfriendly do you feel toward your partner?
5. How distant/close do you feel to your partner?

I'm pretty sure I co-opted these from Herbst, Gaertner, and Insko (2003). I could see using this measure of affective attraction again. If I recall correctly, that fifth item was tricky (it reliability was a bit iffy) and might have to be dropped.

Montoya and Horton's (2004) measure of cognitive evaluation
1. My future interaction partner is probably well-respected.
2. My future interaction partner is probably good at everything that s/he does.
3. In general, how good a person do you think your partner is?
4. My future interaction partner will probably be successful in life.
5. My future interaction partner probably achieves all of his/her goals.
6. My future interaction partner could help me accomplish my goals.
7. I think that my future interaction partner would make a good leader.

What a terrible measure of "cognitive evaluation" (which I would now call an "ability" assessment). It has been trashed in a published paper and rightly so. I don't like it and I would never use it again. It is too narrow, "leader-y," and "achievement-oriented" for my taste.
Singh, Simons, Young, Sim, Chai, Singh, & Chiou's (2009) measure of attraction and trust

**Attraction**
1. I would like to meet my interaction partner.
2. I will probably like my interaction partner.
3. I look forward to meeting my interaction partner.
4. I would enjoy discussing controversial topics with my interaction partner.
5. I would like to get to know this person better.

**Trust**
1. In any upcoming task, my partner would act benevolently toward me.
2. If given the opportunity, this partner would probably exploit me.
3. My partner would take advantage of me.
4. This interaction partner would make me feel secure.
5. I would expect this interaction partner to play fair with me.

The measure of attraction is primarily a measure of behavioral attraction. Some of the items were adapted from Montoya and Horton (2004), and as noted in my description below, I don't like some of those items. With respect to the trust measure, I like it better than my 2008 measure (Montoya & Insko, 2008), and this version may have better reliability.

Montoya and Insko's (2008) benevolent intent assessment
1. If given the opportunity, my partner would probably exploit my trust in him/her.
2. I believe that my partner will look out for my interests.
3. During the upcoming interaction with my partner, I believe that my partner will act benevolently.
4. If my partner were placed in a situation where s/he could gain at my expense, I believe that my partner would do so.

When I used this measure back in 2008, I found strong reliability among all of the items. When I last used it, I found much poorer reliability (I believe the middle two items correlated highly and the outside items correlated highly). I still like all of the individual items, though. The measure, apparently, could use some tweaking.

Campbell's (1999) measure of romantic attraction
1. How attractive do you find this person?
2. How desirable would you find this person as a dating partner?
3. How much would you actually like to date this person?
4. How would you feel about yourself if you were dating this person?
5. How do you think your friends would feel about you if you were dating this person?

Two of the items focus on living up to one's own or another's standards for behavior (Questions #4 and #5). The other three items are a mix of affective and behavioral attraction items. Overall, I wouldn't advise its use, but if one insisted on using it, only use it when (a) self-threat is absent (because of the mix of affective and behavioral items) and (b) behavioral attraction is generally sanctioned (e.g., don't use it when assessing same-sex relationships because you would be measuring behavioral attraction after it has been affected by norm/standard alignment).
Montoya and Horton's (2004) measure of interpersonal attraction
1. I would like to meet my future interaction partner.
2. To what extent do you want to work on the upcoming task with your partner?
3. I would probably dislike talking with my future interaction partner at a party.
4. I would enjoy discussing controversial topics with my future interaction partner.
5. My future interaction partner would probably not make a good friend to me.
6. How much do you think you will like your partner?
7. I would like to get to know this person better.
8. I think I would enjoy my future interaction partner's company.
9. To what extent are you looking forward to meeting your partner?

A bit long, but still an acceptable measure of behavioral attraction. I could see using specific items from this measure again in a study in which I assessed behavioral attraction to a target person during a laboratory study (although #6 is now looking a bit like affective attraction. And #7? I wouldn't use that again...).

Whitchurch, Wilson, and Gilbert's (2010) measure of romantic attraction
1. How much do you like this person?
2. How much would you like to work with this person on a class project?
3. How similar are you to this person?
   I might be interested in him/her as:
4. …a casual acquaintance
5. …a friend
6. …someone I would hook-up with
7. …a potential boyfriend/girlfriend

From the perspective of the TDMA, this is not an advisable measure of attraction, affective, behavioral, romantic, or otherwise. Of the six questions, one is behavioral (interest in class project), one is affective (how much do you like), and one is a precursor to attraction (perception of similarity). Second, if the difference between "romantic attraction" and "interpersonal attraction" is an interest in a romantic relationship (rather than as a friend or teammate), then two questions about the target person as a casual acquaintance and friend do not belong.
Frequently asked questions

1. In what order should I measure affective attraction, behavioral attraction, cognitive appraisals, and affiliative behavior?

There are several relevant considerations. First, to maintain the ability to test for mediation (of affective/behavioral attraction by willingness/ability), one must measure the mediator(s) before the dependent measure. Second, as is mentioned elsewhere in this document, the effects of attraction phenomena have a more powerful effect on attraction when the attraction assessment is preceded by the assessment of willingness/ability. Third, alignment between affective/behavioral attraction and affiliative behavior is greater (albeit only descriptively) when the assessment of affective/behavioral attraction preceded the assessment of affiliative behavior.

2. I found that neither willingness nor ability mediated the relation between a manipulation of similarity/reciprocit/whatever and attraction. What gives?

The first question I would ask is, "Did you measure ability and willingness 'correctly'"? In other words, did the measure of ability capture the relevant dimension given your manipulation? For example, in a laboratory-based study on selecting teammates for a basketball team, I would expect the ability assessment to include an assessment of the target person's basketball skills.

3. Why did not behavioral attraction differ from affective attraction like the TDMA predicted they would?

Sometimes I find a nice differentiation between the components when I predict it (e.g., Montoya & Insko, 2008) and sometimes I don't. One is less likely to find the differentiation when the affective and behavioral attraction items are intermixed on a single questionnaire, as consistency and acquiescence biases are likely an issue. Moreover, if threat (as a possible cause of differentiation) is not sufficiently powerful or believable (e.g., participants may not believe that they might actually meet the tens of people they just rated on a computer screen) the effect may not appear.

4. I'm cool if I just use a measure of behavioral attraction to assess "attraction," right?

Iffy! Just because a participant expresses a desire to affiliate with the target person does not necessarily mean that the person "likes" the target person more. The desire to affiliate can be motivated by many different causes, including curiosity, need for information (are they really as good as they seem?), desire to reduce uncertainty (e.g., "I just want to know whether s/he likes me!"), among others (for a discussion, see Montoya, Faiella, Lynch, Thomas, & DeLuca, 2015). Moreover, behavioral attraction is more affected by self-threat than is affective attraction.
5. I'm interested in dating and mate choice. Should I measure "romantic attraction" rather than "interpersonal attraction"?

I strongly recommend against ever measuring "romantic attraction." I buy Diamond's (2003) reasoning that concludes that love and sexual desire are orthogonal. So, if "attraction" was measured using, "I would like to go on a date with this person," does this question measure sexual desire or affective attraction? If your interest is in attraction in the dating realm, measure affective attraction, behavioral attraction, affiliative behavior, and sexual desire.

6. I do not need to measure affiliative behavior, right? It is too time consuming and effortful!

At present, I am almost to the point where I would say that all attraction research must include a measurement of enacted behavior before it is considered publishable. The meta-analytic correlation between affiliative behavior and affective attraction is ~.20, suggesting that little is known about the attraction process by assessing only up to the "feeling" part.
References


