What Can Design Thinking Learn from Behavior Group Therapy?

Julia von Thienen, Christine Noweski, Christoph Meinel, Sabine Lang, Claudia Nicolai, and Andreas Bartz

Abstract Some widely-used approaches in Behavior Group Therapy bear a striking resemblance to Design Thinking. They invoke almost identical process-models and share central maxims like "defer judgement" or "go for quantity". Heuristics for composing groups (mixed!) and preferred group sizes (4–6) are very much alike as well. Also, the roles ascribed to therapists are quite similar to that of Design Thinking coaches. Given these obvious analogies, it is most natural to ask what the two traditions can learn from one another – and why it is that they are so strikingly alike. This article ultimately hopes to inspire further investigations by giving examples of how Design Thinking may profit from taking a look at Behavior Group Therapy. We will discuss (a) new techniques for coaches to detect and treat personal dissonances that impede project work, (b) new methods for teams to upgrade empathy, find crucial needs or test prototypes and (c) theoretical insights regarding what happens in the process.

The fact that Design Thinking and some widely-used approaches in Behavior Group Therapy are so strikingly similar that one could almost pass for the other may seem peculiar. In any case, it is a wonderful opportunity to learn from one another.

Part I of this article gives a short synopsis of what is actually so similar in Behavior Group Therapy, from the point of view of Design Thinking. *Part II* introduces several techniques widely used in Behavior Group Therapy which may be of value for design thinkers. *Part III* borrows analytic means common in Behavior Therapy to nourish Design Thinking theory.

J. von Thienen • C. Noweski • C. Meinel (✉) • S. Lang • C. Nicolai • A. Bartz
Hasso-Plattner-Institut (HPI), für Softwaresystemtechnik GmbH,
Prof.-Dr.-Helmert-Street 2-3, Potsdam 14482, Germany
e-mail: meinel@hpi.uni-potsdam.de

Due to limited pages and the overarching subject of this volume, our investigation unfortunately will remain one-sided. The complementary question of what Behavior Group Therapy can learn from Design Thinking is certainly just as auspicious, and we hope to pursue it elsewhere. Suffice it to say here that, as a general impression, Design Thinking appears more straightforward and polished than its sibling procedure in Group Therapy. Design Thinking could almost pass off as the advertisement or movie version of an otherwise common story. Its core ideas have been prepared to reach an unmatched degree of clarity. Every heuristic is carried out with a unique determination to be consistent up to final details, the pace is dizzying and the whole enterprise tends to come across as strikingly entertaining. These qualities surely are desirable in other domains too, such as in Behavior Group Therapy.

1   Part I: What Design Thinking and Basic Approaches in Behavior Group Therapy Have in Common

When saying that "basic approaches" in Behavior Group Therapy bear a striking resemblance to Design Thinking, the likely question to follow is: Which therapeutic approaches are we talking about?

In Behavior Therapy, there are generally two types of groups. In one case, the group runs through a pre-specified program, e.g., a program to improve social skills, self-control or stress management. In the second case, there is no pre-specified program and people with varying problems may attend. How these latter groups work is what we will be talking about.

1.1   The Process

All in all, Behavior Therapy is highly problem-oriented. The process of identifying a problem that client and therapist agree to work on and then trying to solve it is omnipresent in Behavior Therapy. Of course, just like design thinkers structure their problem solving process, behavior therapists too have more on offer than a fishing expedition into the blue. "'Typically behavior therapy' was and is, that behavior therapists work according to the pattern of a structured problem-solving process" (Fiedler 1996, p. 48, o.t.[1]).

This process comprises a number of distinct phases that build on one another. To solve a problem, you go through one phase after the other. Or you return to an earlier phase and iterate if results don't seem satisfactory yet.

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[1] Here and in what follows the abbreviation o.t. means "our translation".

Design thinkers know how time can bring a multiplicity of process formulations, differing in the number of phases differentiated and in the names given to them. Yet, what the diverse models ask you to do remains basically the same. Why should things be all that different in Behavior Therapy?

> Even though several models exist which invoke a varying number of phases in the problem solving process, their content is typically very similar. Over the years, a unified model has emerged. Since the early 1980s, proceeding according to a process with six phases is regarded as necessary and sufficient for therapeutic problem solving. (Fiedler 1996, p. 48, o.t.)

Figure 1 gives an overview, comparing the model of problem solving used in Behavior Group Therapy to a common model of Design Thinking.

In Behavior Group Therapy, this is what you do in the six phases of problem solving. . .

1. **Phase I:** In the beginning, you collect as much information as you can regarding the domain where something is at odds somewhere. The exploration should yield a panoramic overview and it should allow you to take on different perspectives when looking at the domain of interest. Eventually, the aim of phase I is to develop a sense of what the problem actually is, at its core.
   In Behavior Group Therapy, one client (the "focus client") contributes a personal problem that the whole group will work on afterwards. Typically, the problem domain is explored by interviewing the focus client; the other group members do the interviewing. Another common tool is role-playing: Problematic situations are staged in the therapy setting. Sometimes the problem is "materialized" by setting up a sculpture. For example, the client arranges his group mates to represent important others (spouse, boss, colleagues. . .) in whatever respects are important (emotions, demands they make, conflicts. . .).
2. **Phase II:** Now that the problem has been understood, it is time to put it in a nutshell: Name it! Since there are typically alternative options, choose a focus that is worth pursuing.
3. **Phase III:** The next step is to generate multiple options for solving the problem. Typically, this is done via brainstorming. Of course, this means going for quantity and deferring judgment. Osborn's (1953) classical brainstorming rules are alive and well.
   In Behavior Group Therapy, it is common to have the rest of the group brainstorm while the focus client is asked to debark in this stage of process (Bartz 2011), thus yielding something like a split between "design team" and "user".
4. **Phase IV:** One possible approach is picked out to be pursued further.
   In contrast to Design Thinking, it is often the focus client (the user), not the brainstorming team who picks an option.
5. **Phase V:** The chosen approach is tried out.
   In Behavior Group Therapy, this phase generally includes staging a role-play: The focus client tries out how things evolve with the approach chosen for testing. Or someone else takes on his role so that he can watch. If time allows and the
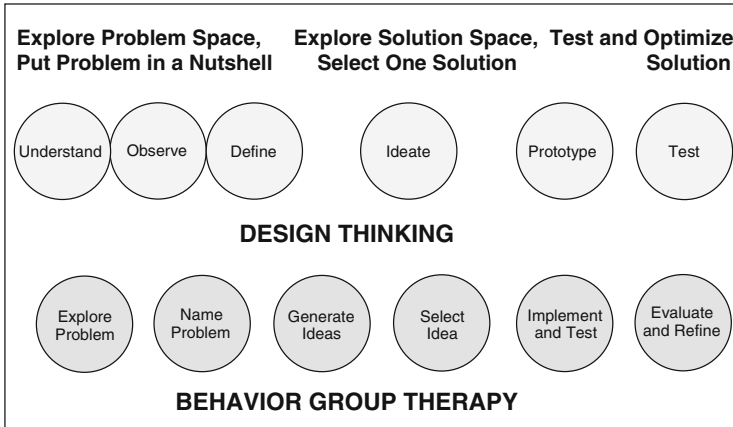
Fig. 1 Comparing the problem solving processes of Design Thinking and Behavior Group Therapy

solution seems promising, the focus client will test his solution in real life as well.

Sometimes it is not easy for the focus client to realize an approach immediately. Then, it is usual to schedule a number of tests with increasing levels of difficulty. This technique is called "hierarchization". Occasionally, it has the positive side-effect that the focus client develops more self-confidence and loosens up considerably. He may even become so courageous as to decide on testing "a wild idea" which is generally considered promising by everyone, but which the focus client himself did not dare to try earlier on.

6. **Phase VI:** Does the approach make things better? Is the solution *subjectively satisfying* for the focus client? Phase VI schedules an evaluation of test results. If insufficiencies become apparent, you go through the problem solving cycle once again, or partially so: Return to whatever phase seems suitable.

Obviously, the process used in Behavior Group Therapy is highly similar to the one used in Design Thinking. Historically, this is probably the case because both traditions allowed themselves to be inspired by the same models or theories of problem solving which became so popular in the early 1960s. In psychology, they received further fine-tuning by the Psychology of Though Processes in the 1960s and 1970s and were adapted early on by Behavior Group Therapy (see Fiedler 1996, for a historic overview).

But **WHY** should Design Thinking and Behavior Group Therapy both have an interest in using this kind of a process? The coincidence may seem less surprising, in fact even logical, when considering the common aim that is at stake. In both cases we do not only want to solve problems, but problems of a particular kind – which have come to be called "wicked" in technical literature (Rittel and Webber 1973). There are several common characteristics of these problems, which are readily identifiable in most problems of Design Thinking or Behavior Group Therapy.

Typically, in the beginning it is unclear what the crux of the matter actually is. Moreover, there is no single correct statement of what the problem is. Rather, one may consider quite different outlooks on the problem. Alternative problem statements are not true or false, they just seem to be more or less fortunate starting points for creating solutions.

For instance, in Behavior Group Therapy a client may complain about her husband who is mostly away from home due to his workload. When he is at home, he is too tired to participate in family life and refuses to consider his wife's arguments, which she articulates whenever he is available for her. What's the problem? Does he need a family life that feels more like being on holidays than like working at a grievance hotline? That is, should family life become so attractive and easy to access that even the overworked husband will happily participate? And/ or does the client need to feel good about her life regardless of what her spouse does? Perhaps she needs an effective way to change her husband . . . or to find a better one? Obviously, there is ample scope for framing the problem. And another central characteristic of wicked problems comes into play: The way you decide to phrase your problem predetermines to a large extent what kinds of solutions you will end up with, e.g., means to involve or get rid of the husband.

1.2 Team Size and Composition

Here is another issue that makes Design Thinking and Behavior Group Therapy something like sibling endeavors: In both cases you set up groups or "teams" who will explore a problem and develop solutions. So you will have to decide how many people go in one group and how to mix the teams. Thus, it is not surprising that in both traditions there has been quite a bit of research on issues regarding sensible group setups. Fiedler (1996) gives an overview of research results from Behavior Group Therapy, Bartz (2011) includes comments on the current practice.

Just as in Design Thinking, in Behavior Group Therapy small teams of about four to six people are considered favorable; ten would be an absolute maximum. In addition, it is recommended to adjust the number of group members to the expected intensity of the exchange and the privateness of issues: The more intense and private the expected exchange, the smaller the groups should be.

When it comes to selecting members for a group, the go-for-heterogeneity-rule is a common maxim in Behavior Group Therapy, just as it is in Design Thinking. Notedly, diversity is aspired regarding (a) age, (b) gender, (c) profession and (d) educational background – since these typically go along with certain perspectives which all should inform the group's panoramic view on problems (Bartz 2011).

But there are two noted exceptions to the heterogeneity-rule as well: interest and mental or verbal ability (Bartz 2011). Everyone should be interested in pursuing the group work with the given challenges that there are. For example, when a client has already endured ten meetings of a mental illness group but he himself wants to work on the subject of drug addiction better put him in an addiction group than in another

mental illness one if there is a choice. Also: The mental or verbal abilities of participants should make it possible to discuss the subjects that come up in the group. Thus, it is difficult to integrate people who have a hard time even understanding everyday conversations.

But these are all just rules of thumb. In the light of our present-day knowledge, the literature seems to indicate that investing time and effort into balancing-out teams meticulously is rather unwarranted (Bartz 2011).

1.3   The Role of a Therapist or Coach

Design Thinking and Behavior Group Therapy use the same kind of process to gain a fresh outlook on problems and arrive at gratifying solutions. They use similar heuristics for compiling groups. And there is a third commonality which calls for lively exchange: In both traditions the groups enjoy the support of a facilitator. In Design Thinking, that is a teacher or coach. In Behavior Group Therapy it is the therapist.

In all cases, the facilitator appears as an expert of method, not as an expert of ready solutions. He introduces the process model, provides structure and keeps time – but all along he tries hard to avoid doing the team's work for them. The team needs to understand that a certain problem view with its corresponding solution space is actually *theirs*.

One responsibility that is unequally present in the two traditions concerns group dynamics. In Behavior Group Therapy, it is an important job of the facilitator to monitor group dynamics constantly and to come up with stabilizing interventions if needed. While this difference in liability is hardly surprising given the respective clientele, it leaves ample room for design thinkers to check if certain therapeutic techniques might be useful tools for coaches or teachers as well.

2   Part II: What Techniques Design Thinking May Pick Up from Therapeutic Settings

Having explored some of their outstanding commonalities, how can Design Thinking profit from looking at Behavior Group Therapy? We will quickly go through a few techniques which may enrich the Design Thinking method case, starting with techniques for facilitators and then proceeding to techniques for teams.

2.1   Interventions for Facilitators to Stabilize Teams

Having said that, it is considered an important responsibility of the therapist to monitor group dynamics and intervene supportively, it is a matter of course that behavior therapists know reams of stabilizing interventions.

WHY might it be a good idea to have the facilitators stabilize teams in Design Thinking? Oftentimes, design thinkers may be able to stabilize each other in the case of disturbances. If this is the case – great! But if teams don't stabilize themselves, interventions by the facilitators may be crucial: Every team member should be able to save his skin in Design Thinking. Also, it may be easier for external observers to recognize disturbances than for the involved team members themselves. And interventions may be less critical when they come from a neutral person.

Here is a small selection of stabilizing interventions taken from Behavior Group Therapy:

HOW to detect disturbances early on?
There is a strategy that may seem trivial, but it is highly effective: Monitor emotions! All the time! Once negative emotions towards other team members appear, a disturbance is building up.

HOW to intervene in case of dysfunctional group dynamics?
The autonomy of a team needs to be respected. If you feel an intervention is necessary: Ask for permission! For instance: *May I share a personal impression?* ... Await positive reply ... *It seems to me there is something bothering the team that has little to do with the challenge* ... Then, it may help to elucidate needs. People often request or argue against certain concrete measures which they feel are crucial to personal needs. But there may be alternative measures to secure the needs at stake. Teams can proceed more purposefully once crucial needs have been communicated. For example, there may be many reasons why a team member rebels against taking on a certain job. He may feel passed over and wish for more control of his own agenda. He may feel pessimistic about the outcome, needing more certainty that his efforts will have some pay-off. Or he may simply be afraid of visiting certain places or people. As always, solutions vary with the need that is at stake. Try throwing a suggestion into the ring ... *Maybe there is something you need that should be allowed for(?)*.

HOW to handle problematic demands?
Sometimes team members make requests that overstep legitimate boundaries of others. For instance, someone may invoke his need for being in charge of his own agenda, thus trying to claim for himself a decision-making authority which trumps that of his team mates. In this case, a careful intervention is to split your personal view. On the one hand: Validate the need that is at stake – make clear that you consider it an important and justified need. On the other hand: Name the problematic side of the explicated demand. (For example, as follows: *On the one hand, I can certainly understand that you want to be in charge of your own agenda. On the other hand, it seems to me the request we are talking about interferes with the autonomy of others. Maybe there is a procedure that unequivocally grants the same rights to all team members...*)

HOW to bolster team members in case of major offences?

When emotions boil high, sometimes things are said that seriously threaten someone's well-being. In this case, there is a small kind of intervention that often has a major stabilizing effect. You can turn to the offended person and ask a question of the following kind: *Can you bear that … [name] … just articulated a view which disagrees with yours?* Thus, you indirectly present a stop sign to the rest of the group saying: Careful, what is going on is hardly bearable for one of you. Secondly, by asking the offended team member if he can bear the situation you take his agony seriously. That typically has a great relieving effect on its own. Finally, a neutralizing description of what happens makes it easier for the team to find a productive and calm way of continuing the discourse. Just imagine you would have decided on a pejorative formulation of the original question: *… can you bear that … [name] … just showed his lack of social competences once again and lost himself in complete nonsense?*

HOW to handle "weak" team members?

Sometimes, there is a "weak" team member who might drift off into the role of an outsider, gadfly or scapegoat. Ample research has been carried out about how such dynamics typically affect groups. And the implications are clear: It is a cardinal mistake to let someone become an outsider, gadfly or scapegoat! If that happens, it is not only tragic for the person concerned but for the whole group. Everyone learns: This is not a safe place! Be cautious or otherwise you too may fall through the cracks! Thus, people will censor themselves much more rigorously then they otherwise would. They will tend to avoid self-disclosures, refrain from taking risks or even try to secure themselves by cliquism. If you are a facilitator, your maxim needs to be: Always support weak team members! Avail yourself of all the techniques mentioned thus far! And, in particular, help weak team members in case of major offences!

Most of the mentioned techniques have been adopted from Roedinger (2011) who is extremely rich in these kind of suggestions – thus a good source for everyone whose interest has been sparked.

2.2   Plan Analysis: A Technique to Carve Out Basic Needs

Having considered techniques for facilitators, what is there to pick up for teams?

A tool that may be interesting for many reasons is *plan analysis* which is something like an elaborate version of why-how laddering. Generally, it is a technique to upgrade empathy.

WHY use plan analysis? Because it helps …

- To find out why a person behaves and feels the way he or she does,
- What her ultimate needs are,

- Where there are conflicts between needs and reality or between several aims a person has and
- What alternative behaviors (which the person does not show yet) would be viable for her.
- Last but not least, it is a technique that sharpens an investigator's empathy to a degree where it becomes almost analytic.

To understand how plan analysis works, a concrete example will be helpful. So let's return to the client from Behavior Group Therapy who complains about her neglectful husband: He is hardly ever at home. He does not participate in what remains of their family life. But the charges uttered by our client trail off unheard, or so it seems.

HOW to perform a plan analysis? You spell out a hierarchy of strategies: At the lowest level, you name concrete behaviors, formulated in the indicative. Above that, you place ever more general maxims, strategies or plans, phrased in the imperative. Ultimately, such plans point to basic needs that are at stake for the person.

The woman who complains about her husband may follow a superordinate plan saying: "Avoid being alone!", because she feels helpless when she is on her own. To sidestep this dreaded situation, she may have acquired a subordinate plan like: "Create obligations!". This she may try to achieve by following the plans "Be married!" and "Claim support!". In consequence, when her husband is present she typically enumerates his obligations and blusters when he fails to provide the expected support (see Fig. 2).

Unfortunately for the client, the effects of her behavior are adverse to her superordinate plan "Avoid being alone/helpless!". Rather, by enumerating obligations and blustering she drives her husband further and further away.

The conflict between aims or plans and real-life-behavior-consequences is indicated by grey flash lines in Fig. 2. (Using such flash lines is not common in plan analysis so far, but we feel it is a useful amendment.)

As always, what is one person's poison may be another one's meat. While the client is unhappy, both therapist and design thinker have identified needs that could provide worthy starting points for problem-solving: There are unsatisfied needs of feeling integrated, safe and in control.

It is worth noting that concrete behaviors alone hardly reveal what needs and plans are at stake. Thus, the very same client, blustering and reproachful as she is, could very well follow quite different plans to those just spelled out for her. And if her plan-need couples were different, surely a design challenge would have to take another turn too. Imagine: It could well be that the client basically tries to get somewhere in life. Everyone including herself is supposed to see how she made it. Her life is supposed to be like a fairy tale come true. Thus, she feels she needs a rich husband, a big house, plenty of kids and, of course, happy family get-togethers. What a different design challenge that would make! Thus, Fig. 3 shows quite a different plan structure. Maybe this is what makes our blustering, unhappy woman tick.
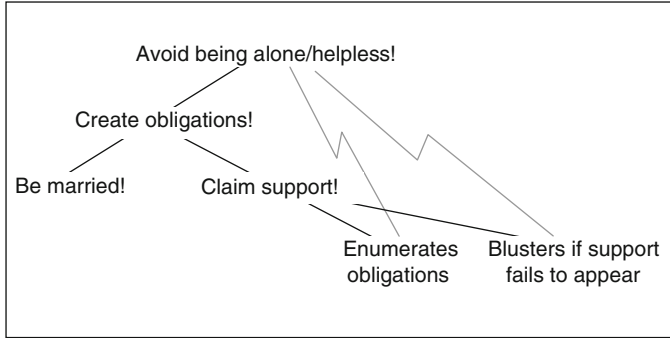
Fig. 2 Plan analysis for blustering woman: "Avoid being alone/helpless!"
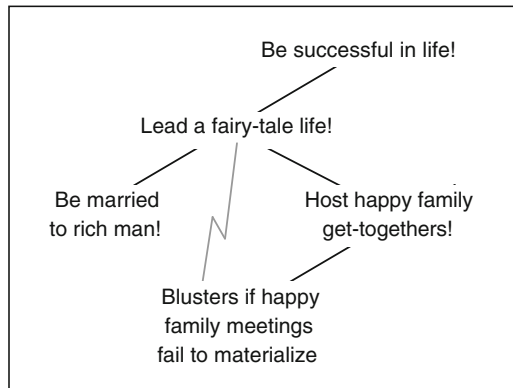

Fig. 3 Plan analysis for blustering woman: "Be successful in life!"

Obviously, observing behaviors alone does not suffice to work out plan structures. Here comes the point where design thinkers may upgrade their empathy. Plan analysis comes with tools which help you broaden and focus your observations when trying to understand someone. These tools are questions which you bare in mind when dealing with a person.

HOW to figure out what plans people follow, what needs they have? Answer the following five questions!

1. **Which emotions and impressions does he/she elicit in me?**
   In the case of our blustering woman, imagine how she would come across differently depending on whether (a) she wants to create obligations to avoid the helplessness of being alone or (b) she wants to come across as a fairy tale queen.
   When dealing with the support-yearning women, you probably feel absorbed, pressurized or overstrained and this may create anger. The fairy tale queen,

however, may appear outstandingly dressy or she might act as a particularly loving mother with stunningly well-turned-out beautiful children. Depending on your own preferences you might marvel or pity her.

2. **How does he/she want me to behave?**
   The helpless woman probably wants you to be supportive and reliable. The fairy tale queen wants to sell her success, she may want you to admire, celebrate or envy her.

3. **Which behavior tendencies does he/she actually elicit in me? How am I inclined to behave towards him/her?**
   In case of the support-yearning woman you might want to withdraw in the face of her effervescent demands. In case of the fairy tale queen you might wish to have a serious word with her.

4. **What image of himself/herself does he/she try to convey?**
   In the first case, the woman wants to come across as being entitled to raise claims. In the second case, well, she wants to come across as successful, as a fairy tale queen.

5. **Which behavior on my part is he/she trying to avoid?**
   If the woman wants help, she probably would not want you to question her right to claim support. And she would try to avoid that you leave her alone. If the woman wants to feel successful, she would try to avoid that you think she is just anybody, insignificant, a loser, someone you can forget about.

Thus, depending on the plans people follow and the needs they have the five questions will be answered differently – even if immediate behaviors seems very similar. So the questions help to carve out plans and arrive at crucial needs.

If you want to learn more about plan analysis, take a look at Caspar (2007).

2.3   Chair Dialogue: A Technique for Testing Prototypes

A second technique that may be of interest for design thinkers is the *chair dialogue* to test prototypes.

WHY use the chair dialogue? Because sometimes a user is uncertain, ambivalent or hesitant regarding a prototype – but he has a hard time explicating his impressions. In this case, the chair dialogue may help him to deliver clear and capacious thoughts.

HOW to carry out a chair dialogue? Arrange two empty chairs for the user. One chair, you explain, belongs to the sceptic or opposer of the prototype. The other chair belongs to the supporter of the tested approach. Then, you let the person say what comes to his mind as he sits on one chair after the other and takes on the corresponding roles. Additionally, the members of the design team can engage both opposer and supporter of the idea into a conversation or interview.

Of course, members of the design team can also sit on the two chairs and empathically take on the roles of a user doubting or loving the solution. This may help you sharpen your understanding of what is valuable, repelling or missing in a prototype.

3 Part III: How Therapeutic Theory May Inspire Design Thinking Theory

Now that the look at Behavior Group Therapy has yielded a couple of ideas that may (or may not) be of interest for facilitators and design thinkers, what does Behavior Group Therapy have to offer for Design Thinking researchers?

Indeed, the prospects for expanding on Design Thinking theory are good: Next to the sweeping parallels in practical procedures, Behavior Therapy brings along an elaborate corpus of theoretical reflections.

Here are some bits and pieces of theory we consider particularly interesting because...

- They provide frugal means to make sense of variegated practices in Design Thinking,
- They may help to invent new valuable practices and
- They may be useful for students to make sense of the "Design Thinking universe" they newly encounter.

3.1 Analyzing Settings: Security as a Basis for Innovation

For many decades, research has shown how there is an immediate link between feeling secure on the one hand and explorative behavior or contributing something creative to the world on the other hand (Bowlby 1988; Holmes 1993; Maslow 1954).

In a therapeutic process, a lot is to be innovated. People generally will acquire a new outlook on old problems. In addition, they will have to try out completely new strategies to ultimately reach new and workable solutions.

At the same time, great uncertainty may prevail – and it can be quite bothersome. Oftentimes, clients don't know what to expect. They have no idea what insights await them regarding the problem. They can't tell whether a viable solution will indeed be found in the end and what it will demand of them personally.

Such a degree of uncertainty is not only scary for clients in therapy; it is scary for basically everyone. So there is a tension between insecurity on the one hand and a need for innovation on the other.

WHY does insecurity impede innovation? When people feel insecure they will tend to stick with the familiar because it provides a sense of safety. Thus, insecurity is a powerful blocker of innovation.

HOW to overcome familiarity-clinging, how to make innovation possible? You provide a setting which is so safe, it is almost artificial. There, people can engage with change. Key factors are (a) social relations which need to be reliable and supportive, (b) powerful means to tame draw-backs or criticism and (c) bolstered convictions regarding oneself: that one can actually handle the challenges no matter what comes.

Surely, the accordance with schools of Design Thinking is obvious. Here too students may be bothered by uncertainties. But fortunately for them and the innovations to come, their learning environment is an enormously safe setting in many regards. But let's consider one issue at a time, comparing the therapeutic setting to schools of Design Thinking.

Social Support. With respect to social relations, in Behavior Group Therapy it is the job of the therapist to reliably support every group member, particularly when a person is needy, and to ensure that conversations in the room take a constructive turn. In Grawe's (2004) words, the process is best supported if the therapist comes across as "sensitive-empathic, understanding and accepting, engaged in the well-being of the client, as trustworthy and dependable, as warm and supportive and as competent" (p. 404, o.t.). In addition, the therapy setting induces dependability as the meetings will takes place predictably within a known period of time.

Clearly, there are analogies to schools of Design Thinking which go far beyond predictable schedules. Here too the facilitators establish a culture of conduct which is characterized by mutual benevolence, respect, curiosity, approval and support. For example, there are rituals of clapping warm-ups to boost exchange and to help build on each other's ideas, there are non-competitive presentations with constructive feedback sessions etc. Obviously, schools of Design Thinking are set up in such a way as to be socially very safe places.

Failure. Crucial factors that may all too easily destabilize a person's sense of security and wellness are "criticism" and "draw-backs". To secure readiness for change, experiences of that kind need to be tamed and they need to become bearable. Both in Design Thinking and in Behavior Group Therapy it is a likely manoeuvre to shed light on their constructive side. In Design Thinking, there are multiple strategies for doing this. Mottos like "fail early and often" emphasize the positive force of personally challenging experiences. Common formats such as "I-wish-I-like" instead of "I-dislike" automatically cast feedback into constructive forms. Notably, negative feedback is not being downplayed or discredited this way. Quite the contrary, it is being embraced – by asking what value it contains. Thus, negative experiences are being tamed. They can be handled and learned from. People just need the strength to confront them without impermeable shields of self-defense.

Self-efficacy. Finally, both people in Behavior Group Therapy and in Design Thinking need a healthy sense of self-efficacy to fully engage in their challenges. If

they doubted success was possible for them, why should they engage? But even for the halting minds self-efficacy is easily gained either in Behavior Group Therapy or in Design Thinking. First, there is the rock-solid confidence on the part of the facilitators who obviously believe that something worthy can be reached. Then, there are good experiences with the process: Even if you don't know where the process will lead you while you are on the way, time after time things seem to turn out well in the end. And if they don't, you can always go back and iterate the process until you are satisfied.

3.2 Mindset Analysis

Now that settings have been analyzed in an important regard – they need to be socially safe places to allow for innovation – let's approach the people who populate it and try to take a trip right into their minds. Behavior Therapy comes with a tool to *analyze mindsets* that may be quite valuable for Design Thinking research. And it may help to see how these mindsets, just like the interpersonal settings, convey a notion of safety needed for innovation.

WHY analyze mindsets? Because mindsets govern variegated behaviors and emotions. Thus you can explain, predict and generate a lot (of behaviors or emotions) with a little (mindset analysis).

HOW to analyze mindsets? You spell out central cognitions in the form of belief-sentences.

A mindset which is pretty much the opposite of what one would attribute to a design thinker was described by Beck (1976). Regarding behaviors and emotion, it is associated with a lack of engagement and a lack of joy: the mindset of a depressed person. It is characterized by negative convictions regarding...

1. The self (e.g., "I am incompetent.")
2. The world or environment (e.g., "The word is a hostile place.") and
3. The future (e.g., "Nothing will ever change for the better.").

Obviously, it makes little sense to engage if one is incompetent anyway and if nothing will ever change for the better, regardless of what one does.

In contrast, the mindset of a design thinker needs to bias towards action. Accordingly, belief-sentences will express a high degree of self-efficacy. Central cognitions could be:

1. **Oneself**
   "I can make a change for the better."
2. **The Future**
   "The future is up to me (us)."
3. **The World**
   "The world is like an extended living room."

This last formulation picks up one of our earlier research findings: "Being in one's living room with friends" is a situation that feels much like "being at a d. school" (von Thienen et al. 2012). The latter is a place where you learn and practice Design Thinking. What the two situations have in common is...

- That you are in a relatively safe place,
- Not alone, but with others
- You will have to take their needs into account,
- The others will generally be friendly and inclined to co-operate;
- You can have a good time together.
- Another important issue is that your surroundings are configurable: You can arrange the place according to your wishes and taste, as long as the needs of others are respected as well.
- And as long as your resources last (there are constraints).
- Adjusting your surroundings in a way that makes sense is not some far-fetched possibility but something to be taken for granted;
- You are responsible for how your living room looks and what happens in it together with others.

Thus, "the world is like an extended living room" seems to be a belief-statement which captures many crucial aspects of a Design Thinking world view.

Clearly, "others" are an essential part of the Design Thinking world. Important convictions regarding fellow human beings which may likely be strengthened by Design Thinking education could be...

4. **People**
   "People are a source of cooperation on equal grounds."
   "People are understandable. There are reasons for how they act."

Then, there need to be convictions which help to confront the new and handle obstacles. These may be convictions such as the following:

5. **Otherness**
   "Otherness is promising." ...instead of the rather prevalent conviction...
   "Otherness is threatening."
6. **Obstacles**
   "Problems are welcome occasions."
   "Failure is productive feedback."
7. **Uncertainty**
   "Oftentimes, uncertainty paves the way of beautiful options."

In addition, Design Thinking seems to generate convictions which ease life by being anti-perfectionist, anti-rigid and learning-oriented. They reduce the inhibition threshold to become active in the first place, thus strengthening the bias towards action even more. These could be convictions such as:

8. **Endings**
   "All we ever do is prototyping."

   Thus, there hardly is an ultimate end. If some prototype turns out to be lacking, you just go over it again. So, you don't have to avoid getting started in the first place, considering how likely you may fail in face of your own perfectionist expectations.
   There may be another important conviction which helps you get going:

9. **Waste**
   "Waste is important."
   "It is a good idea to head for overspill and selection, overspill and selection."

   If your first trial had to be perfect, you would probably waver and deliberate and hesitate. If waste is okay, then what is stopping you? Get going!
   Last but not least, there seem to be rather unique convictions regarding games, joy and fun which are quite typical of Design Thinking.

10. **Fun**
    "Fun is an important engine of success." ... instead of an otherwise common belief: "Fun is when you are away from work."

    Whether indeed these are crucial cognitions for design thinkers, further research and collegial exchange have yet to show. But if so, one could try to be even more comprehensive in the explication of mottos (such as "fail early and often") or in other means to make the Design Thinking mindset "tangible" and easy to adopt for those who enter a d.school.

3.3   How to Survive with a Design-Thinking-Mindset?

After featuring some therapeutic techniques and theory bites, to ultimately inspire further research in this regard and help widen the Design Thinking universe let us finish with a question. We ask it with respect to Design Thinking, but an analogue consideration also could pertain to Behavior Group Therapy. It could well be a domain of common pondering or best practice exchange.
   The question, which may seem provocative, is: How are students to survive with a design-thinking-mindset?

WHY is survival a challenge for design thinkers? Just think about it! The mindset people seem to acquire in Design Thinking is pretty optimistic. ("I can make a change for the better.") A hostile world might all too easily frustrate someone with this kind of optimism and verve. Imagine a design thinker at a place where people
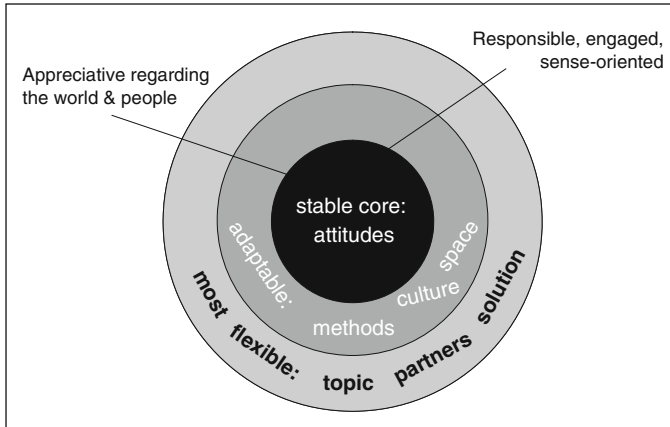
Fig. 4 Cognitive-behavioral model of a design thinker: stable, adaptable and most flexible elements of a well endowment

are supposed to obey orders without expressing their own opinion – a highly traditional company for instance.

What a design thinker is supposed to accomplish seems almost super-human. On the one hand, he is supposed to be optimistic enough to engage with verve in new and unpredictable projects. On the other hand, he is supposed to leave the d.school some time or other. Then he has to leave his almost artificially safe "homeland" where confidence is stabilized by variegated measures. What if the design thinker takes on a problem that happens to be situated in an environment which does not welcome much interference or change?

Obviously, students who learn Design Thinking need to be equipped with some insulation which protects their acquired optimistic outlook from being frustrated or even overridden by "hostile" environments.

We think schools of Design Thinking are already offering much in that regard – and it is illuminating to see it this way, as shown in Figure 4. In between a mindset (which is supposed to be stable) and the concrete action of a design thinker (which is supposed to be highly flexible) comes a protective belt (which is neither completely fixed nor highly flexible; it is adaptable). So here is our suggestion:

HOW to protect the verve and optimism of a design thinker? Provide him with a protective belt that includes methods, culture and habits of using space.

Methods. If you learn and practice how to approach people (e.g., conduct interviews in an inviting manner), chances are people will co-operate and not rebuff you time and again.

Culture. The Design Thinking community entertains a rich culture with many rituals (such as clapping), formats (I-wish-I-like etc.), model arrangements (work with music, games, food. . .), codes of conduct (such as "defer judgment") and a lot more that may be adopted and reproduced. Thus, when students encounter a

"hostile" environment they may apply a two-step-strategy. First: Phase in a culture that is Design Thinking friendly! Then: Practice Design Thinking!

Space. In Design Thinking, you are encouraged emphatically to use and adapt the space that there is. While this certainly has many positive effects (e.g., rigidities of thinking may be transgressed, the focus on needs and the bias towards action is promoted anew) it may also be a strategy to survive as a design thinker. Once again, all too often the big, wide world may require a two step process. First: Create the space you need! Then: Live Design Thinking!

With these considerations we hope to have piqued some curiosity regarding what else there is for design thinkers and behavior group therapists to learn from one another. Obviously, we share many central concerns such as solving wicked problems in heterogeneous small groups of 4–6 members by following a common process model. Behavior Group Therapy and Design Thinking have developed a bulk of similar techniques including warm-ups, role-playing, why-how laddering or plan analysis and many more. We share interests in understanding how the process works and what it demands, such as a thorough sense of safety and a mindset that biases towards action, which is supposed to survive even in "hostile" environments. All these common concerns, techniques and research questions – vociferously – call for further exchange.

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