Prevention Focus And Its Effect On Approach/Avoidance Behavior

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Abstract

It is human nature to approach pleasure and avoid pain. But what are the underlying mechanisms and strategies? According to Higgins‘ regulatory focus theory (RFT, Higgins, 1997) promotion focus and prevention focus could be key elements to understand those mechanisms. This study concentrates on prevention focus and its effect on approach and avoidance behavior.

Keywords: regulatory focus, regulatory fit, decision behavior, BAS/BIS

Introduction

Imagine the following picture. Two friends (person A and person B) are visiting the Caribbean for holiday. Of course they want to relax and enjoy the sea there, although neither of the two (friends) are eager to get a sunburn. Person A does not use suncream and therefore stays in the shadow, especially during noon when the sun is strongest. In contrast, person B uses suncream with high protective factor and spends time in the blazing sun. Both friends have in common that they want to avoid a bad outcome.

Minimizing negative outcomes and maximizing positive experiences are key characteristics of human striving, but people may differ in how they get there. In the above example, person A avoids getting burned by an avoidance-orientet approach, whereas person B uses a more vigilant approach.

Despite a clear differnece in behavioral strategy, some researchers (Aaker & Lee, 2001) assume that both avoidance and prevention are, in principle, the same mechanisms. But is that so? This study tested whether both approach and avoidance behavior occur in a prevention setting.

Theoretical background

Approach-Avoidance-Dichotomy & Behavorial Approach/Behavorial Inhibition System

The hedonic principle says people approach pleasure and avoid pain. Based on this approach-avoidance dichotomy, Gray (1970, 1978) postulates that whether a person shows approach or avoidance behavior is based on individual biological systems. Therefore Gray's reinforcement theory (RST, see Gray & McNaughten, 2008) differs three independent emotional systems in the central nervous system: (1) the behavorial approach system (BAS), which involves dopaminergic pathways (Gray, 1978), (2) the behavorial inhibition system (BIS), which consists of the septohippocampal system and its neocortical projection in the

frontal lobe (Gray, 1978) and (3) the fight-flight-freeze system (FFFS). We now focus more closely on BAS and BIS.

On the one hand BAS is activated by signals and stimuli of reward or relief from punishment, hence reinforces approach behavior. On the other hand BIS is activated by signals and stimuli of punishment, hence reinforces avoidance behavior.

As previous research (Gray, 1970, 1978; Larsen & Ketelaar, 1989, 1991; Watson et al., 1999) has shown each neurological system (BAS/BIS) is linked to specific personality traits such as extraversion/ impulsivity and neuroticism/ anxiety for BAS and BIS, respectively. According to Gray (1970, 1978) BAS and BIS are related to sensivities rather then actual behavior, therefore personality traits are influencing the way we process information. Traits like extraversion and impulsivity are more likely to process information in a positive way, activating BAS, whereas neuroticism and anxiety are more likely to process information in a negative way, activating BIS. Hence individuals shown approach or avoidance behavior depends on a person's dominant neurological system.

Regulatory Focus Theory (RFT)

Higgins (1997) goes beyond a simple approach-avoidance dichotomy and hedonic principle. According to Higgins (1997) it is important to understand underlying motivation and self-regulation to reach a desired end-state. In his regulatory focus theory (RFT, Higgins 1997) two stratigic principles are introduced: (1) promotion focus and (2) prevention focus.

On the one hand promotion focus relates to needs, strong ideals and gain/non-gain situations. A person with promotion focus is eager to improve oneself and/or wants to experience as much positive rewards as possible.

On the other hand prevention focus relates to security needs, strong oughts and non-loss/loss situations. Therefore a person with prevention focus either wants to insure a status quo or prevent negative outcomes.

Furthermore strategic tendencies insure certain outcomes or insure agaist certain other as *„promotion focus should be to insure hits and insure against errors of omission, whereas in a prevention focus, they should be to insure correct rejections and insure against errors of commission (see Figure 1)“* (Higgins, 1997, p. 1285).

These foci can be chronical or induced by specific situations, depending of its activation of promotion concerns or prevention concerns (Molden, Lee, & Higgins, 2008). This implies that approach or avoidance behavior can occur in both promotion and prevention focused situations.

Recent studies (Förster, Grant, Idson, & Higgins, 2001) focused strongly on correlation between promotion focus-approach behavior and prevention focus-avoidance behavior, respectively and was commonly simplified, concerning our key question, whether prevention focus means avoidance.

This study in accordance with Higgins‘ RFT (Higgins, 1997) aims to demonstrate that a person’s motivation to show approach or avoidance behavior depends on different concerns within promotion focus settings as well as prevention focus settings. In particular this study concentrates only on prevention focus and the appereance of approach or avoidance behavior.

Therefore, as shown in figure 11.1, I postulate H_1: prevention focus related to non-losses (losses) activates significantly more approach (avoidance) behavior than avoidance (approach) behavior.

Method

Design

The experiment was created as a one-factorial between-subjects design. The t-test was used to explore differences in both groups.

For sample size planning, an a priori power analysis was performed using the G * Power 3.1 computer program. This showed, assuming a mean effect size (d) of .5, a significance level (alpha) of .05 and a test strength (1-beta) of .80, 102 participants (51 participants per group) should be recruited to obtain adequate power.

The assignment of the participants to the non-loss and loss conditions was randomized.

Participants

Recruitment took place at the University of Vienna. Potential participants were noticed to this study via email message (sent to existing univie.ac.at-addresses) and leaflets on the notice board at the university.

Both email and leaflet were written identical (also a low-res pdf of the leaflet was attached to the mail). The mail and leaflet, respectively, written in brief and plain words, described the study's meaning and what participants would be asked to do.

Individuals wanting to participate were asked to contact the researchers under provided contact details on the leaflet or given in the email. An incentive of an amazon voucher worth €10,- was provided for participation. Only participants with written consent were included in this study.

Each participant was tested individually at the University of Vienna and had been assigned to one of two groups (group 1: non-loss condition or group 2: loss condition) randomly.

Materials and Measurements

To activate a prevention focus a cover story about a survey on an enterprise in business with environmental protection was given. Therefore an A4-leaflet (enterprise's image broschure) and a questionnaire were handed out to the participants. The image broschure described the use and porpose of the start-up enterprise. The start-up's topic about ensuring enviromental protection was chosen to prime prevention focus in general through key elements as protection and safety.

The questionnaire consisted of 20 feedback statements (e.g., „How do you like the mentioned principles of the company?“) regarding the broschure. Participants were asked for agreement on a 5 point scale (1: totally disagree and 5: totally agree). To fill in the feedback form was introduced as a filling task.

To manipulate the non-loss/loss condition an anagram test consisting of 15 anagrams with more than one solution was used. Each anagram was presented for 120 seconds. A reminder appeared 30 seconds and 10 seconds before the next anagram would be presented on the screen. There were two trial rounds before a notice appeared on the screen, framing prevention focus: „You have to solve more than 70% of all anagrams to keep the full amount of the amazon voucher, otherwise it will be reduced by € 2,-. Please press „enter“ to begin.“ After completing the anagram test (false) feedback was given to group 1/ non-loss condition: „You passed the 70% mark and and will keep to full amount of money.“, and to group 2/ loss-condition: „Unfortunately you did not pass the required 70% mark and receive only € 8,-.“.

To test approach versus avoidance behavior a one-shot dictator game was played. Bargaining or negotiation games are used in behavioral economic research as models for economic action in real situations. The two most famous of such games are the Ultimatum Game (UG) and the Dictator Game (DG). In the US, a player, the Proposer, receives a certain

sum of money and can divide it between himself and another player, the Responder. The responder then decides whether to accept the offer, whereupon both will receive the money allocated in each case, or if he refuses, in which case both players will be empty. The DG is similar, except that the responder can not decide whether to accept or decline, the amount of money will in any case be distributed as proposed by the Proposer or "Dictator." Game-theoretic models in the sense of the Homo Oeconomic approach predicts that the Proposer in the UG should ideally offer the smallest possible amount of money greater than zero, and that the Responder should accept it in any case. In the DG, the "dictator" should keep the entire amount of money to himself. However, empirical studies show that gaming behavior usually deviates from these model assumptions. 40% to 50% of the money is spent in the basement and offers below 20% are rejected (Camerer 2011, Güth & Tietz, 1990). On average, the DG offers between 20% and 30% (for example, Forsythe, Horowitz, Savin, & Sefton, 1994). This suggests that individuals act upen social oughts and therfore fits in with prevention focus. To my knowledge, it is the first time that a DG is used in this context. However, since this study concerns shown behavior and the DG is used in behavorial economic science in this context, I think that it is an appropriate tool.

Thus, participants were provided with 11 monetary units (MU‘s). One MU was worth as much as € 10,-. An unequal number of MU’s was given to each individual to force a decision and prevent equal distribution. The dependent variable would be the amount of MU’s given to the other person.

Therefore I suggest that the more MU’s given by the participant the more the participant shows approach behavior.

Procedure

First, participants were greated upon arrival and led to a test room containing a table with a computer on it. Before starting the experiment the participants were told the cover story as introduction as follows: „As mentioned in the email and on the leaflets the actual propuse is to participate on a feedback questionnaire about a start-up enterprise and, while conducting this study in cooperation with the economic & cognitive department, two „cognitive tasks“ will follow the survey. There will be a five minute break between the tasks.“

Next, participants also received full written instructions about what they were asked to do in each task (survey, anagram test & one-shot dictator game, DG). For survey: „You will be handed a start-up‘s image broschure which engages in enviromental protection. Please read the folder as carefully as possible and fill in the feedback form immediately afterwards as truthfully as possible.“ For anagram test: „An anagram is a sequence of letters that is formed from a different sequence of letters only by permutation of the letters (additionally an example was provided).“ DG: Please divide all 11 monetary units (MU’s) as you like between you and another male/female student.“ Finally each participant was asked if he or she fully understood the instruction, and when answered „yes“ started the experiment.

Then, starting with the survey, participants were handed over one image folder and one feedback form. They were again instructed to read the broschure carefully and fill in the form afterwards.

After a five minute break participants were placed in front of the computer screen. A short instruction appeared on the screen giving explanation in how to proceed on the anagram test. Neutral feedback was given after every five anagrams. After completing all 15 anagrams (false) feedback was given immediately to the participants. Those (false) feedbacks were different for both groups, concerning whether the non-loss or loss condition.

Finally a 20 second countdown appeared on the screen informing the participant to get ready for the final task. After the countdown was finished the DG-notice appeared on the screen reading: „You are given 11 monetary units (each equals € 10,- in cash) placed in the center of the screen. Please divid all MU's between you and *male or female name (depending on participant's sex to match)*. Please use all MU's provided. There is a piggy bank icon on the left side (marked „me") and on the right side (marked „*according name*") of the screen. Divid the MU's (using one MU at a time) per drag and drop using the mouse. Please press „continue" zu procced with the task and when finished dividing press „enter"."

After finishing the one-shot dictator game participants were thanked, asked about the true purpose of the study and debriefed. In addition all participants were provided with contact details if further information was needed (e.g. questions, concerns). Participants who recognized the true aim of the study were excluded from data analysis.

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