

# A psychological theory of indecisiveness

Eric Rassin\*

Decision-making and choosing is not always easy. Thus, indecisiveness seems to be a widespread phenomenon. However, the scientific literature on indecisiveness is rather limited. Indeed, even a clear definition of indecisiveness is lacking, let alone a model in which various indecisiveness-related concepts are integrated. The present article aims at developing an indecisiveness model. Within this model, indecisiveness refers to the experience of decision problems (i.e., lack of information, valuation difficulty, and outcome uncertainty) resulting in overt choice-related behaviours such as delay, tunnel vision, and post-decision dysfunctional behaviour (e.g., worry). Existing knowledge is discussed within the context of this model, and it is argued that the model may serve as a guideline for future research on indecisiveness. (*Netherlands Journal of Psychology*, 63, 2-13.)

In the prologue of his book 'The paradox of choice', Schwartz (2004) described how he once went out to buy a pair of jeans. He entered the jeans shop knowing that his size was 32-28. Although he thought that he was sufficiently prepared, he soon found out he was mistaken. The salesman offered choices that Schwartz had never heard before: fits like slim, easy, relaxed, baggy, and extra baggy; regular, stonewashed, or acidwashed finishing; and of course button or zipper fly. The author found himself faced with so many choices that choosing and ultimately buying the pair of jeans became quite difficult.

\* Faculty of Social Sciences and Faculty of Law, Erasmus University Rotterdam  
Correspondence to: Eric Rassin, Faculty of Social Sciences (Institute of Psychology), Erasmus University Rotterdam, PO Box 1738, NL 3000 DR Rotterdam.  
E-mail: rassin@fsw.eur.nl  
Submitted 1 June 2006; accepted 9 October 2006.

Like Schwartz (2004), many people may have difficulties with making decisions. It seems plausible that there are individual differences in the extent to which people experience such decision difficulties. It is important to note that people may suffer from decision difficulties in a specific area. For example, there are studies indicating that career choices are perceived as difficult by individuals who have no decision difficulties in general (e.g., Germeijs & de Boeck, 2002). Difficulty in choosing and decision-making in one specific area is referred to as indecision. In contrast, some people experience decision difficulties in more than one area. For those individuals, being indecisive is somewhat like a trait. This general tendency to experience decision difficulties is referred to as indecisiveness (Germeijs & de Boeck, 2002).

Even though indecisiveness, intuitively, seems to be a widespread phenomenon, very little research has been devoted to this concept. The first purpose of this article is to summarise the psy-

chological indecisiveness literature to date. Second, in the course of reviewing the literature, a model of indecisiveness will be proposed, in which predispositions, perceptions, and behavioural consequences are included. Clinical relevance of the indecisiveness concept will also be addressed. Lastly, proposals for future research will be discussed.

### What is indecisiveness?

Individuals may be called indecisive for various reasons. Germeijs and de Boeck (2002) distinguish the following eleven descriptors of indecisiveness: 1) Deciding takes a long time, 2) deciding is perceived as difficult, 3) not knowing how to decide, 4) feeling uncertain during deciding, 5) delaying decisions, 6) avoiding decisions, 7) leaving decisions to others, 8) changing decisions, 9) worrying about decisions made, 10) regretting decisions made, and 11) simply calling oneself indecisive. Whereas these descriptors deliver a substantive view of what indecisiveness is, they can hardly be construed as a clear definition. Notably, the descriptors pertain to behaviours (e.g., numbers 1 and 8), cognitions (e.g., numbers 2 and 3), and emotions (e.g., numbers 4 and 10). Indeed, a solid definition of indecisiveness does not exist in scientific literature. In one of the most influential articles on indecisiveness (cited 40 times), Frost and Shows came no closer to defining indecisiveness than stating that 'obsessionals hesitate to act (i.e., are indecisive) because they aren't certain their actions will be correct or mistake-free' (1993, p. 683).

The lack of a clear definition of indecisiveness is unfortunate, because it may hamper theoretical progress. While indecisiveness is characterised by various overt behaviours (from delaying decisions to changing previously made choices; see above), it seems logical to define indecisiveness in terms of its experiences. Germeijs and de Boeck (2003) discuss various perceptions crucial to career indecision. These perceptions may also well serve as core features of indecisiveness in general. Building on a classic career decision study by Pitz and Harren (1980), Germeijs and de Boeck (2003) argue that there are three defining perceptions of indecision: perceived lack of information, valuation problems, and outcome uncertainty. The authors composed 17 items tapping these three factors with respect to choosing college courses. Six items pertained to lack of information (e.g., 'I have no idea of the differences between the alternatives'), six items addressed valuation problems (e.g., 'The alternatives are equally attractive'), and five addressed outcome uncertainty (e.g., 'I don't know what the end result of choosing an alternative will be'). The items were answered by 174 high school students who were about to graduate and choose their next career move. Confirmatory factor

analysis indicated that the three-factor model had significantly better fit indices than the model in which all items constituted one factor. Hence, the authors concluded that there is indeed reason to differentiate between lack of information, valuation problems, and outcome uncertainty. They also hypothesised that the first factor is particularly important at the beginning of the decision process, whereas the last two are crucial during the whole process of decision-making. As mentioned before, the data from Germeijs and de Boeck (2003) are specifically related to career indecision. However, the authors tentatively propose that the three factors may 'provide a framework for describing the structure of decision problems in general' (p. 24).

Although the three factors are obviously related, they are indeed distinguishable and they represent different fields of literature. Schwartz (2004) argues that perceived lack of information is in part determined by the individual difference in the desire to make perfect decisions. The author differentiates between satisficers and maximisers. The former group of people generally live by a good-enough rule. That is, they make decisions by searching available options until they encounter an option that satisfies their demands. That particular option will be chosen. In contrast, maximisers strive for perfect choices. Even if they encounter an option that meets their previously set criteria, they will still continue their search for possible alternatives that are even better. Maximisers are unlikely to rest before they have considered all possible options, and all possible information. According to Schwartz (2004), maximising is often counter-productive in that the complete search for all possible information is so hard and time consuming that the pleasure of eventually reaching the best choice (if any) is overshadowed by negative emotions from the start. There is indeed some empirical evidence for the concepts of satisficing and maximising, as well as for the idea that the latter is associated with extensive search for information (Schwartz et al., 2002).

As to valuation problems, several option characteristics have been argued to determine the extent to which comparison is perceived as difficult. For one thing, increasing the number of options results in valuation difficulty. Similarly, if alternatives are more alike, choosing becomes more difficult (Anderson, 2003). In fact, the presence of many similar alternatives does not only make comparison difficult, it can actually lead the individual to repeatedly change his/her preference. Anderson (2003) discusses two mutually exclusive decision processes: compensatory and noncompensatory selection. Imagine buying a new car. If you use various different criteria (e.g., price, exterior, performance, and safety), you are likely to encounter trade-offs. For example, car A is not optimally safe (disadvantage) but it is priced attractively (advantage). In this case, the

consumer has to decide whether he is willing to except the safety-price trade-off. If so, he employs a compensatory selection style. If not, the criteria are absolute, and the selection style is noncompensatory. Anderson (2003) argues that more compensatory selecting results in more valuation difficulties.

The last of the three defining perceptions, outcome uncertainty, has been addressed in two different fields of literature. First, several researchers have argued that people rely on biased criteria when confronted with uncertainty of choice outcome. For example, the precise formulation of the choice problem may, in such cases, become the major determinant of the decision outcome (i.e., the framing bias; Tversky & Kahneman, 1981). As another example, people might erroneously use the ease of imaginability as factual criterion. For example, Tversky and Kahneman (1973) found that people believe that there are more seven character words ending with 'ing', than there are seven character words with an 'i' at the fifth position. This misperception has been referred to as the availability heuristic. In a completely different field of research, uncertainty has been discussed in the light of worrying. In recent models of generalised anxiety disorder (GAD; American Psychiatric Association, 2000) – a syndrome in which extreme worrying is the central complaint – a concept called intolerance of uncertainty plays a crucial role. Intolerance of uncertainty refers to the experience of negative emotions and cognitions when confronted with ambiguous situations (Ladouceur, Talbot, & Dugas, 1997). Intolerance of uncertainty has indeed been found to be associated with worrying, as well as with an inflated need for information, and an increased sensitivity to threat (Dugas et al., 2005). People differ in the extent to which they are (in)tolerant of uncertainty, and such individual differences are likely to reflect differences in the susceptibility to perceive outcome uncertainty.

### The measurement of indecisiveness

Before discussing behavioural characteristics of indecisiveness, its measurement will be addressed briefly. The most thoroughly validated measure of indecisiveness to date is the Indecisiveness Scale (IS) by Frost and Shows (1993). This scale contains 15 items that are answered on a five-point scale (1 = *strongly disagree*; 5 = *strongly agree*). The items of the IS are displayed in table 1. As can be seen in this table, the IS addresses various components of indecisiveness such as cognitions (e.g., number 2), emotions (e.g., number 10), and behaviours (e.g., item number 15). Frost and Shows (1993) conducted three validation studies. In their first study, 112 female undergraduate students completed the IS together with a measure of obsessional complaints (the

Maudsley Obsessional-Compulsive Inventory; MOCI; Rachman & Hodgson, 1977) and the Multidimensional Perfectionism Scale (MPS; Frost, Marten, Lahart, & Rosenblate, 1990). Results indicated that, although indecisiveness did not correlate with the total score of the MOCI, it did correlate significantly with two of its four subscales, namely checking ( $r = 0.41$ ) and doubting ( $r = 0.31$ ). In addition, the IS correlated significantly with the total score on the MPS ( $r = 0.20$ ), as well as with two of the six subscales, namely concerns about mistakes ( $r = 0.23$ ) and doubts about actions ( $r = 0.55$ ). In the second study, 27 participants scoring high on the IS in study 1, and 25 low-scoring participants completed scales about procrastination, and general psychopathological complaints. As expected, individuals high on the IS reported more procrastination and complaints than did low-scoring participants ( $ps < 0.001$ ). In their final study, Frost and Shows (1993) invited 15 high- and 15 low-scoring participants to make 50 choices. That is, participants were instructed to choose 20 favoured pieces of clothing out of 40, 20 college courses out of 40, and 9 leisure activities out of 18. These options were presented in pairs. The final choice was one favourite meal from three restaurant menus. The crucial variable was the amount of time needed to complete all choices. As predicted, indecisive participants took significantly more time (i.e., 837 seconds) than did decisive ones (523 seconds;  $p < 0.05$ ).

Whereas Frost and Shows (1993) limited their validation studies to female participants, Gayton, Clavin, Clavin, and Broida (1994) correlated the IS in a sample of 41 male students. Like Frost and Shows, Gayton et al. (1994) obtained significant correlations between the IS on the one hand, and the checking ( $r = 0.29$ ) and doubting ( $r = 0.31$ ) subscales of the MOCI, and the concerns about mistakes ( $r = 0.55$ ) and doubts about actions ( $r = 0.44$ ) subscales of the MPS. In addition, in this male sample, the correlations with the MOCI total score ( $r = 0.30$ ) and the parental criticism ( $r = 0.43$ ) subscale of the MPS were also statistically significant.

Given the previously discussed difference between indecision and indecisiveness, it is important to recognise that the IS contains four items that actually address domain specific indecision rather than general indecisiveness, namely items 4, 7, 13, and 14 (see Germeijs & de Boeck, 2003). In order to explore whether these four items can be omitted from the IS, Rassin, Muris, Franken, Smit, and Wong (in press) conducted a principal component analysis on the IS ( $n = 291$  undergraduates). Interestingly, three of the four domain-specific items loaded less than 0.40 on the principal component, while item number 13 had a loading of 0.41. Based on these findings, Rassin et al. (in press) argue that the IS should be limited to the remaining 11 items. In a second study, we found the four-week test-retest reliability of the 11-item IS to be satisfactory ( $r =$

Table 1	Items of Frost and Shows' (1993) Indecisiveness Scale.
1.	I try to put off making decisions
2.	I always know exactly what I want
3.	I find it easy to make decisions
4.	I have a hard time planning my free time
5.	I like to be in a position to make decisions
6.	Once I make a decision, I feel fairly confident that it is a good one
7.	When ordering from a menu, I usually find it difficult to decide what to get
8.	I usually make decisions quickly
9.	Once I make a decision, I stop worrying about it
10.	I become anxious when making a decision
11.	I often worry about making the wrong decision
12.	After I have chosen or decided something, I often believe I've made the wrong choice or decision
13.	I do not get assignments done on time because I cannot decide what to do first
14.	I have trouble completing assignments because I can't prioritise what is most important
15.	It seems that deciding on the most trivial thing takes me a long time

Items 2, 3, 5, 6, 8, and 9 are scored in reverse.

0.88,  $p < 0.001$ ). Like the original version, the shortened IS correlated with a scale of obsessional complaints, in this case the Padua Inventory (PI; Sanavio, 1988;  $r = 0.47$ ,  $p < 0.01$ ).

Interestingly, Patalano and Wengrovitz (2006) conducted a cross-cultural study in which the IS was completed by samples of American and Chinese students (both  $n_s = 161$ ). Based on principal component analyses, the authors concluded that in the American sample, the IS consisted of two factors which they termed general indecisiveness and planning indecisiveness. In the Chinese sample, three factors were even observed: planning indecisiveness, anxiety, and confidence. Apparently, indecisiveness is at least in part subject to cultural influences.

In sum, the psychometric properties of Frost and Shows' (1993) IS have been addressed in four publications, which makes this scale the best validated measure of indecisiveness to date (see Germeijs & de Boeck, 2003). Although the IS consists of 15 items, a recent study (Rassin et al., in press) indicates that the shortened version (11 items) has satisfactory psychometric properties.

### Indecisiveness and decision delay

In their crucial IS validation experiment, Frost and Shows (1993) employed decision time as outcome variable. As expected, people high on indecisiveness took longer to make various choices than low-scoring participants. Hence, it can be concluded that prolonged decision times are a hallmark of indecisiveness. Looking closer, the question arises what precisely happens during the prolonged decision times. One possibility is that indecisive individuals do nothing during the extra time they take to come to a decision. They may simply postpone the decision, and not use the extra time thus created. Indeed, there is quite extensive literature on seemingly senseless postponing, also known as procrastination. According to van Eerden (2003), procrastination can be defined as 'a trait or behavioural disposition to postpone or delay performing a task or making a decision' (p. 1402). Crucial to the concept of procrastination is that the individual does have the goal to perform the target behaviour, but subsequently starts stalling, without knowing exactly why (see Anderson, 2003). In spite of the individual's difficulty in verbalising reasons to procrastinate, researchers have identified several causes of procrastination. For ex-

ample, some people are reluctant to start activities, because they are insecure about their capacity to complete them. For these individuals, procrastination is a way to temporarily deal with possible disappointment and blows to self-esteem. Others shift activities because they like or 'need' deadline pressure to perform at their best (Ferrari, Johnson, & McCown, 1995). In her meta-analysis of 121 published articles, van Eerden (2003) found the following correlates of procrastination: Conscientiousness, self-esteem, and self-efficacy correlate negatively with procrastination, whereas neuroticism, anxiety, pessimism, depression, fear of failure, perfectionism, and self-handicapping are positively correlated with procrastination. In addition, the author found evidence for effects of age and gender: age correlates negatively with procrastination, and, contrary to the author's expectation and to the outcomes of individual studies, women are less likely to procrastinate than men. There are at least two reasons to argue that indecisiveness and procrastination are akin. First, the five-item Decisional Procrastination Scale (DPS; originating from Mann, 1982, but published in Ferrari et al., 1995) is said to tap indecision, and is found to correlate with scales measuring behavioural procrastination (Ferrari et al., 1995). Second, in a study of behavioural procrastination, indecision was among the self-reported reasons given in hindsight for procrastinating (Ferrari, 1993). In the pertinent study, Ferrari visited a shopping mall and interviewed samples of shoppers on four different occasions: Four, three, and one week before Christmas, and the weekend immediately prior to Christmas. Participants were invited to complete two procrastination scales, and they were asked several questions, including the reasons for shopping at that particular time. As expected, participants who shopped long before Christmas scored lower on the procrastination scales than those who shopped immediately prior to Christmas. As to the delivered reasons to shop at the last possible weekend, together with dislike of shopping, other commitments and lack of effort, difficulties in deciding which gifts to buy (cf. indecisiveness) was at the top of the list. By comparison, lack of time, sales prices, lack of money, and weather were less frequently given reasons to delay shopping until the last weekend. Apparently, indecision and procrastination are associated with each other. While procrastination has several attributed causes, indecisiveness is likely to be one of them.

Whereas procrastination is defined as a seemingly senseless form of inaction, indecisives may also delay their decisions purposely, hoping that this will result in infinite deferral. Hence, the prolonged decision time is to be construed as an attempt to avoid making a decision at all. According to Anderson (2003), decision avoidance is more common than might be expected, especially in Western culture. In addition, decision

avoidance can be embedded in several other widespread phenomena. For one thing, the principle of conservation of energy may be a driving force behind decision avoidance. Generally, living creatures strive to reach goals as cheaply as possible. Thus, if one does not have to decide, it seems only logical to not make a decision. Related to this is the status quo bias, that is, the tendency to prefer the present situation even if choosing an alternative will be an improvement. The obvious flipside of change is that it implies costs and responsibility. Also related is the omission bias, which refers to the tendency to prefer options that require less behavioural action. Evidently, decision deferral can be a direct result of both the status quo and the omission bias. Interestingly, the omission bias is fuelled by regret aversion, in that people generally experience more regret when an adverse outcome is the result of their action, compared with when it is a result of their inaction. Needless to say, people tend to strive for minimal regret (see Roese & Summerville, 2005). A further reason for decision avoidance is termed 'inaction inertia' and refers to the tendency to refuse to choose a good alternative, if one has previously passed up on an even better alternative (Anderson, 2003). Tversky and Shafir (1992) delivered evidence to suggest that people are more prone to defer their choice if the valuation difficulty increases. In one of their studies, 121 students were instructed to imagine buying a CD player. While they had not made up their mind about any particular brand, they came upon a Sony player on sale for \$ 99, which was well below the list price. When asked whether they would buy this player, 66% of the participants responded affirmatively, and 34% opted to wait and learn more about various brands and models. In a second sample of 124 students, the case vignette was extended in that, in addition to the \$ 99 Sony player, there also was a relatively cheap AIWA player (\$ 159) on sale. In this case, 27% chose for the Sony, 27% for the AIWA, and no less than 46% chose to defer the decision. Hence, waiting for even more and better options seems to be among the reasons to defer decisions indefinitely. In sum, there is ample reason to avoid making decisions, and indecisiveness may in part reflect individual differences in the susceptibility to these reasons. There is one study in which indecisiveness as measured by the IS (Frost & Shows, 1993) was indeed found to foster decision avoidance (Rassin & Muris, 2005a). In that study, 135 undergraduate students completed the IS and several other measures, among which the Fundamental Attitudes Scale (FAS). The FAS consists of 15 rather undifferentiated statements (e.g., 'Suicide is never a rational option'). The respondent has to choose between three answer options: *Agree*, *disagree*, or *do not know*. The hypothesis was that indecisive respondents would more often choose the *do not know* answer option, compared with their more decisive peers. Indeed, the correlation

between the IS and the number of *do not know* answers was significant ( $r = 0.23, p < 0.01$ ). From this it can be concluded that if indecisives can avoid decisions, they are indeed likely to do so.

Next to procrastination and decision avoidance, a third possible reason for the delay in decision time is that indecisives use the extra time to gather additional information. In our validation study of the abbreviated IS, we used the amount of gathered information as behavioural measure of indecisiveness (Rassin et al., in press). Sixty-two healthy volunteers underwent two procedures described by Ladouceur et al. (1997). First, in the 'inference' task, participants were shown a non-transparent bag that contained 100 1-cm pieces of straw. Each straw was either blue or red. The participants were told that the proportion of coloured straws was 85-15. They had to draw straws one by one until they felt confident enough to conclude which proportion was blue and red. Second, there was an 'identification' task, in which participants were shown a different bag, with the instruction that the blue-red proportion was either 50-50, 70-30, or 90-10. Again, participants had to draw individual straws, and guess the real proportion as quickly as possible. In fact, the proportion was always 70-30. In both procedures, the number of straws drawn was the dependent variable. During the inference task, participants drew on average 6.1 straws, while they drew 10.5 straws during the identification task. In both cases, the score on the IS predicted the number of drawn straws (correlations were 0.45 and 0.41, respectively, both  $ps < 0.01$ ). Hence, it can be concluded that indecisiveness indeed fosters the tendency to gather more information. Given that there were no differences in the score on the IS between participants who were correct in their estimation and those who were mistaken, it may even be argued that indecisiveness is associated with the tendency to gather more information than actually needed to reach a valid decision. Bastardi and Shafir (1998) found evidence to suggest that additionally obtained information is not always necessary, but may nonetheless affect the ultimate decision. In one of their experiments, a first sample of participants were given a case vignette about buying a CD player for an attractive price (\$ 120), knowing that they also needed to spend \$ 90 for repair of their amplifier. In this situation, 91% of the respondents chose to purchase the CD player. In a second condition, participants were instructed to imagine that they would learn the next day whether they would have to spend \$ 90 for repair. Under these circumstances, 26% of the respondents chose to buy the CD player immediately, while 69% delayed their choice until they obtained certainty about the repair costs. Once they learnt that the repair was indeed necessary and cost \$ 90, 29% of the participants chose to buy the CD player. These results suggest that in the first condition, 91%

purchased the CD player, while in the delayed condition, ultimately only 55% bought the item. This difference is striking, because in both situations, the repair costs were the same. Apparently, the fact that participants in the second condition had to wait for the information about the repair costs made them perceive this information as more important, resulting in an increased reluctance to buy the CD player, compared with the situation in which there was immediate certainty about the repair costs.

Finally, it is important to note that delaying a decision is not by definition a bad thing. Sometimes, waiting is actually rewarded with additional useful information. Also, new insights may arise with passing of time.

### Indecisiveness and tunnel vision

The three behavioural manifestations of indecisiveness discussed so far (i.e., procrastination, avoidance, and information seeking) pertain to the delay in decision time. However, as Ferrari and Dovidio (2001) note: 'indecision is more than not making timely decisions' (p. 1113). This remark refers to the finding that indecisiveness is associated with some sort of tunnel vision. Ferrari and Dovidio (2000) instructed 130 undergraduate students to choose a favoured college course from a set of two or five, depending on the precise experimental condition. For each course there were either four or six pieces of information (attributes) available (e.g., concerning the time of day during which the course classes took place, instructor quality, career relevance, and peer recommendation). Every piece of information was typed on a separate piece of paper. All pieces of paper (ranging from eight to 30) were placed faced down in an information matrix. Participants were instructed that they might turn as many pieces of paper as they desired in order to choose a course. Participants were classified as indecisive or decisive based on their score on Mann's (1982) DPS. First, it was found that indecisives took significantly longer to reach a decision, compared with decisives, regardless of the number of offered pieces of information. Second, whereas the overall number of consulted pieces of information did not differ between indecisives and decisives, the former group of participants consulted a significantly higher percentage of information about the course they ultimately chose, than did the latter group. Third, indecisives tended to primarily search intradimensionally. That is, they used dimension (e.g., peer recommendation) as starting point to compare various courses. By contrast, decisive participants employed intradimensional and interdimensional (i.e., to take a course as starting point and seek out all information about that course, before turning to the next course) search strategies equally often. In sum,

indecisives narrowed their search in three ways: 1) They ignored various course attributes (e.g., leaving career relevance completely out of the equation), 2) they primarily relied on an intra-dimensional approach, and 3) they did not consult as much information about non-chosen courses as they did about the ultimately chosen one. Hence, the narrowed decision strategy of indecisive participants in this study is reminiscent of what has been called confirmation bias (see Nickerson, 1998).

Rassin and Muris (2005b) found evidence for the idea that the proposed tunnel vision associated with indecisiveness may not be limited to search strategy, but may also affect the eventual content of reached conclusions. Fifty undergraduates completed the IS and the Ambiguous/Unambiguous Situations Diary (AUSD; Davey, Hampton, Farrell, & Davidson, 1992). This measure contains 28 statements that are instructed to be treated as entries into the participant's diary. Fourteen of these entries are ambiguous, in that they can pertain to pleasant and unpleasant situations (e.g., 'I phoned the doctor today and was surprised to hear the result of last week's check-up'). The participant has to indicate whether the entry would be concerning or not. For every ambiguous entry that is labelled as concerning, one point is obtained. Higher scores on the AUSD are thought to reflect worrying, worst case scenario reasoning, or inflated threat perception. Results indicated that the score on the IS significantly correlated with the number of ambiguous situations labelled as concerning ( $r = 0.31, p < 0.05$ ). This may suggest that indecisiveness is associated with a narrowed, threat-oriented decision style.

### **Indecisiveness and post-decision behaviour**

It seems likely that indecisiveness not only affects behaviour before and during decision-making, but also after the decision has been made. For one thing, indecisive individuals may worry about several topics even after they have come to a decision. For example, they may wonder whether their choice was the best possible one. Alternatively, they may worry about their decision-making strategy: Did they do it the right way? Did they take all the necessary steps in the decision process? To date there is little evidence that indecisiveness and worrying are related. Rassin and Muris (2005b), and Rassin et al. (in press) obtained significant correlations between the IS and the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990), respective  $r$ s being 0.36 and 0.43. However, experimental evidence is lacking.

Worrying about one's own decision strategy may lead to checking one's decision behaviour. As with worrying, evidence for an association between indecisiveness and checking is rather

meagre and limited to correlation data. In the previously discussed studies by Frost and Shows (1993), Gayton et al. (1994), and Rassin and Muris (2005a), the IS correlated significantly with checking scales of the MOCI and PI ( $r$ s ranging from 0.25 to 0.41). Frost and Sher (1989) argued that indecisiveness and uncertainty might be the driving force behind their finding that checkers (as identified by the MOCI) took longer to hand in their exam, compared with non-checking students. However, they did not deliver empirical evidence for this hypothesis. Lastly, Ladouceur et al. (1995) determined checking behaviour in their participants by manipulating the importance of their decision. Twenty volunteers sorted 200 pills by colour (there were ten different colours). Twenty participants in the experimental group underwent the same task, but they were additionally instructed that their performance was important, because the researchers were interested in the use of colour as identification criterion. The pills were to be exported to an Asian country where few people could read. Thus, the use of colour to identify different sorts of medication was a serious option, to be studied by the researchers at the request of a pharmaceutical company. Participants in the experimental condition checked their sorting more often, hesitated more frequently, and reported to have been more preoccupied with making mistakes, compared with their peers in the control condition. Admittedly, this study did not pertain to indecisiveness but to perceived responsibility, and illustrates neatly that increased perceived importance of decisions inflates the tendency to check.

A last defining behavioural manifestation of indecisiveness proposed here is decision instability (see Germeijs & de Boeck, 2002). Again, evidence for the hypothesised association between indecisiveness and reconsideration is scarce or even absent. However, it follows convincingly from theories about maximising (Schwartz, 2004), preference uncertainty, and compensatory selection (Anderson, 2003) that individuals who are indecisive may be less convinced of the justness of their conclusion, and may therefore tend to alter it if faced with new information. In addition, avoidance of regret may foster decision instability, because as Anderson (2003) noted: 'Decision-makers might anticipate less regret for decisions that are reversible compared with similar irreversible decisions' (p. 151). While keeping one's options open, and retaining the right to change one's mind appears to be helpful in the process of decision-making, it paradoxically invites more worrying, reconsideration, and possibly even regret (Schwartz, 2004).

To sum up, several behaviours can be identified as manifestations of indecisiveness. The quantity and quality of the evidence for these manifestations differ. First, increased decision time can be dismantled to procrastination (simply stall-

ing), avoidance (hoping to not have to decide), and additional search for information. Second, indecisiveness seems to be associated with tunnel vision regarding both the process of deciding as well as the content of the eventually reached conclusion. Third, indecisiveness may cause specific post-decision behaviours such as worrying, checking, and changing one's mind.

### Clinical relevance

The relevance of indecisiveness is not contained to daily decision-making and consumer behaviour. Inflated indecisiveness seems to play a role in various clinical conditions. In fact, indecisiveness is one of the defining features of depression as well as dependent personality disorder (DPD), according to the DSM-IV-TR (American Psychiatric Association, 2000). In spite of the assumed defining character of indecisiveness for both depression and DPD, there is little literature as to how this concept relates to other features of these disorders. Ward, Lyubomirsky, Sousa, and Nolen-Hoeksema (2003) argue that depressive indecisiveness may be the result of dysfunctional self-oriented rumination, hindering committing to and carrying out plans to relieve depressive symptoms. Further empirical evidence for the link between indecisiveness and depression (i.e., apart from the DSM-IV-TR definition) can be found in the fact that the IS has been observed to correlate with the Beck Depression Inventory (BDI; Beck, 1967). Specifically, Rassin et al. (in press) obtained a correlation of 0.35 ( $p < 0.01$ ). In that study, indecisiveness was also correlated with scales measuring general anxiety ( $r = 0.37$ ), worrying ( $r = 0.43$ ), and obsessive-compulsive complaints ( $r = 0.47$ ).

Results from a study by Frost and Shows (1993) suggest that indecisiveness is associated with a wider range of psychopathological complaints. The authors compared the scores of high and low IS individuals on a short version of the Symptoms Checklist (SCL-90; Derogatis, 1977), a scale that taps eight differential areas of psychological symptoms. As expected, indecisive respondents scored higher on the pathology list than did the more decisive respondents. Jackson, Furnham, and Lawty-Jones (1999) obtained results suggesting that indecisiveness is associated with the general trait of neuroticism. These authors invited 771 individuals from various backgrounds to complete the 440-item Eysenck Personality Profiler (EPP; Eysenck & Wilson, 1991). They employed the number of cannot decide answers as an index of indecisiveness. Their most prominent finding was that in four of the 15 subsamples (ranging from engineers to bikers), the number of cannot decides was correlated significantly with the score on neuroticism. Interestingly, this correlation was observed in

four male samples, but in none of the corresponding female samples.

Much of the clinically oriented literature on indecisiveness paradoxically does not focus on depression or DPD, but rather on obsessive-compulsive disorder (OCD). This is likely due to the fact that Frost and Shows (1993) referred to their IS as a measure of 'compulsive indecisiveness' (p. 683). These authors, Gayton et al. (1994), and Rassin and Muris (2005a) obtained results indicating that the IS is correlated with scales of obsessional-compulsive complaints in various non-clinical samples. Hence, there is indeed reason to believe that indecisiveness is implicated in OCD. Unfortunately, however, to date the IS has not yet been set out in clinical samples. Recently, Thordarson et al. (2004) introduced the successor of the MOCI, called the Vancouver Obsessional Compulsive Inventory (VOCI). This scale contains 55 items divided over six subscales, one of which refers to indecisiveness. In one of the validation studies, OCD patients were found to score significantly higher on the indecisiveness subscale compared with control samples of anxious and depressed patients, community adults, and students. Unfortunately, though, the pertinent subscale is developed exclusively on the basis of factor analyses. As a result, it contains items with poor face validity (e.g., 'I almost always count when doing a routine task').

In sum, whereas indecisiveness is hypothesised to play a role in various psychiatric syndromes, up to the point of being a defining feature of depression and DPD, there is disappointingly little evidence to support this claim. The disorder for which the role of indecisiveness is most thoroughly studied is OCD, but even here, the evidence is still thin.

### A model of indecisiveness

In order to facilitate future systematic research on indecisiveness, an attempt will be made here to integrate the literature discussed above into a model of indecisiveness. Crucial to this proposed model is that it differentiates predispositions, perceptions, moderators, and behaviours (figure 1). To start with the predisposing factors, maximising, compensatory choosing, and intolerance of uncertainty have been argued to affect perceived lack of information, valuation problems, and outcome uncertainty, respectively (see above). As to intolerance of uncertainty, a scale measuring this concept has indeed been found to correlate with the IS (Rassin et al., in press). In addition, research with the IS suggests that perfectionism (which also correlates with maximising; Schwartz et al., 2002) is associated with indecisiveness (e.g., Frost & Shows, 1993). Previous research has also indicated that women tend to be more indecisive than men (but see Patalano &



Wengrovitz, 2006), while indecisiveness decreases with age, at least in a sample of participants aged between 16 and 55 (Rassin & Muris, 2005a; Rassin et al., in press). The perceptions are the core features of the model. The three included perceptions are proposed by Germeijs and de Boeck (2003). The various behavioural manifestations are clustered into delaying behaviours, tunnelling or narrowing behaviours (related to both decision process and content), and post-decision behaviours. The included moderators have not yet been discussed. There is some reason to argue that moderator variables such as time pressure and the perceived importance of the decision at hand, affect perceptions, behaviours, or the interaction between perceptions and behaviours. For example, Milgram and Tenne (2000) argued that 'people will delay more and be more tense making decisions about important matters (e.g., whether to get married) than about unimportant ones (e.g., which restaurant to go to)' (p. 143). The authors asked a sample of undergraduate students several questions about minor and major decisions. As expected, respondents reported to take more time, have more difficulties, and be more tensed about major decisions compared with minor ones. As to time pressure, Dhar and Nowlis (1999) argued that this moderator has various effects on, for example, deferral behaviour. In one of their experiments, participants had to choose a brand of telephones and alike products, while the authors manipulated time pressure (45 seconds vs. unlimited amount of time) and degree of conflict (i.e., equal attractiveness of options vs. inequality). Results indicated that without time pressure, inequality of options led only 22% of the respondents to defer their choice, whereas in

case of equally attractive options, 36% of the respondents chose to defer. Time pressure reduced the 36% to 21%, while it left the deferral rate in the inequality condition unaffected. A second effect observed by Dhar and Nowlis (1999) is that time pressure leads people to focus on differences between options, thus leaving shared characteristics out of the equation. In that sense, time pressure increases efficiency of choosing.

The presented model has several limitations that can serve as good starting points for further research. First, it must be acknowledged that the model focuses on rational factors. Although the described perceptions can be construed as an umbrella for both cognitions and emotions, the emphasis is on the former. Nonetheless, indecisiveness is likely to imply both cognition (cf. decision difficulty) and emotion (e.g., tension; see Milgram & Tenne, 2000). Evidently, the role of emotions such as anxiety, tension, and sadness deserves future study.

Second, the model as presented is unlikely to be complete. For example, several other behaviours might turn out to be related to indecisiveness. As an example, it seems plausible that indecisive individuals are more likely to rely on other people's suggestions because of a lack of own ideas. Hence, indecisiveness may fuel suggestibility (see Gudjonsson, 2003). Third, several possible pathways are yet undifferentiated, especially from perceptions to behaviours. For example, it seems plausible that a perceived lack of information leads primarily to prolonged information search and not so much to a narrowed search. Further unravelling of the included factors warrants future research.

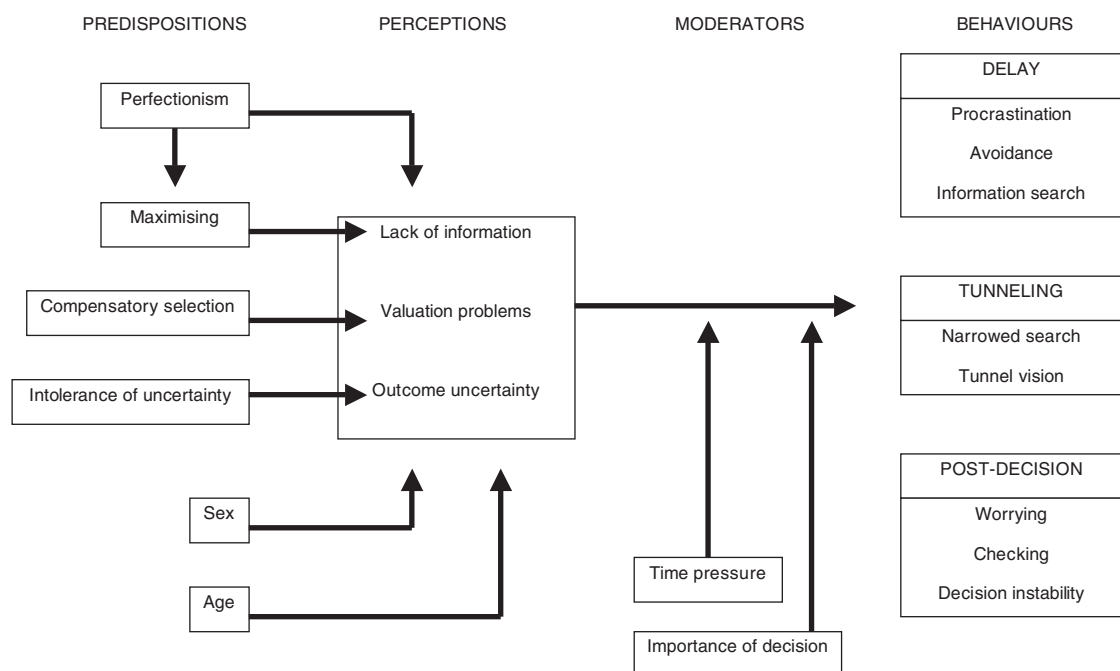


Figure 1  
A model of indecisiveness.

Different research strategies can be considered. Obviously, scores on scales like the IS (Frost & Shows, 1993) can be taken as starting point. That is, it is to be expected that higher scores are associated with the three clusters of hypothesised behaviour. It would be interesting to know which of the three behaviours is most strongly related to indecisiveness as measured by the IS and similar scales. In addition, even though indecisiveness has trait-like qualities, it can be attempted to manipulate the crucial perceptions in order to explore possible behavioural consequences of such altered perceptions. In other words, the manipulation of indecisiveness defining perceptions should result in some kind of state indecisiveness that has consequences for overt behaviour. Hence, this state indecisiveness can serve as a model of actual trait indecisiveness, allowing for experimental study of the latter phenomenon. This approach has already been taken in some previous studies. For example, Iyengar and Lepper (2000) found that increasing options from six to 24 or even 30 resulted in considerable choice conflict. This was found to be true in various contexts such as grocery shopping, and choosing a topic for an essay. Hence, increasing the number of alternatives beyond a certain degree can be construed as a way to manipulate valuation difficulty. As another example, decision-makers can be made aware of outcome uncertainty to a different extent. Thus, it can be examined whether differential awareness of uncertainty affects decision behaviour. In general, given that indecisiveness is defined in negative terms (i.e., being indecisive is not considered to be good), it is expected that the perceptions and behaviours will maintain even if they carry along considerable costs. Particularly in such situations, the disadvantages of indecisiveness become clear.

Meanwhile, the model also provides clues as to how to resolve indecisiveness. For one thing, the crucial perceptions might be altered, by decreasing maximisation, increasing non-compensatory choosing, and learning to tolerate uncertainty. In addition, the automatic link between perceptions and behaviours might be disrupted. For example, people might be taught to make decisions even in the absence of complete information. They should also realise more than they probably do that making mistakes is oftentimes

not so bad. As another example, indecisive individuals should be made to understand that keeping decisions reversible as long as possible has the disadvantage that these decisions will not be completed, and will thus keep on occupying one's mind.

## Conclusion

At the outset of this article, it was stated that the scientific literature on indecisiveness is not extensive. However, it is argued that indecisiveness is related to or even defined in terms of concepts that are extensively discussed in surrounding fields of literature. For example, theories on maximising, (non)compensatory choosing, perceived uncertainty, procrastination, tunnel vision, and time pressure have been invoked in the discussion of indecisiveness. In the proposed model, indecisiveness is defined in terms of three perceptions and three categories of consequential behaviours. Within this model, indecisiveness refers to the experience of decision problems (i.e., lack of information, valuation difficulty, and outcome uncertainty) resulting in overt choice-related behaviours such as delay, tunnel vision, and post-decision dysfunctional behaviour (e.g., worry). The model aims to represent domain-free indecisiveness, and thus strives to be applicable to a wide range of situations, such as general decision-making, consumer behaviour, career planning, and clinical conditions. Whereas there is evidence for some of the proposed relations in the model, the majority of the concepts and the proposed associations between them need future study. Hence, the model should be seen as a starting point for research rather than a proven theory. The relative scarcity of pathways within the model emphasises the need for further research into the precise dynamics of indecisiveness.

## Acknowledgement

This study was sponsored by the Netherlands Organisation for Scientific Research (NWO). Arjan Bos, Ingrid Candel, and an anonymous reviewer are acknowledged for their helpful comments on previous drafts of this paper.

## References

- American Psychiatric Association (APA) (2000). *Diagnostic and Statistical Manual of Mental Disorders*, 4<sup>th</sup> edition, Text Revision (DSM-IV-TR). Washington: APA.
- Anderson, C.J. (2003). The psychology of doing nothing: Forms of decision avoidance result from reason and emotion. *Psychological Bulletin*, 129, 139-167.
- Bastardi, A. & Shafir, E. (1998). On the pursuit and misuse of useless information. *Journal of Personality and Social Psychology*, 75, 19-32.

- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row.
- Davey, G. C. L., Hampton, J., Farrell, J., & Davidson, S. (1992). Some characteristics of worrying: Evidence for worrying and anxiety as separate constructs. *Personality and Individual Differences, 13*, 133-147.
- Derogatis, L. R. (1977). *SCL-90: Administration, scoring and procedures manual-I for the revised version*. Baltimore: Johns Hopkins School of Medicine.
- Dhar, R. & Nowlis, S. M. (1999). The effect of time pressure on consumer choice deferral. *Journal of Consumer Research, 25*, 369-384.
- Dugas, M. J., Hedayati, M., Karavidas, A., Buhr, K., Francis, K., & Philips, N. A. (2005). Intolerance of uncertainty and information processing: Evidence of biased recall and interpretations. *Cognitive Therapy and Research, 29*, 57-70.
- Eysenck, H. J. & Wilson, G. D. (1991) *The Eysenck Personality Profiler*. London: Corporate Assessment Network Ltd.
- Ferrari, J. R. (1993). Christmas and procrastination: Explaining lack of diligence at a 'real-world' task deadline. *Personality and Individual Differences, 14*, 25-33.
- Ferrari, J. R. & Dovidio, J. F. (2000). Examining behavioural processes in indecision: Decisional procrastination and decision-making style. *Journal of Research in Personality, 34*, 127-137.
- Ferrari, J. R., & Dovidio, J. F. (2001). Behavioral information search by indecisives. *Personality and Individual Differences, 30*, 1113-1123.
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and task avoidance: Theory, Research, and Treatment*. London: Plenum press.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.
- Frost, R. O. & Sher, K. J. (1989). Checking behaviour in a threatening situation. *Behaviour Research and Therapy, 27*, 385-389.
- Frost, R. O. & Shows, D. L. (1993). The nature and measurement of compulsive indecisiveness. *Behaviour Research and Therapy, 31*, 683-692.
- Hodgson, R. J. & Rachman, S. (1977). Obsessional-compulsive complaints. *Behaviour Research and Therapy, 15*, 389-395.
- Gayton, W. F., Clavin, R. H., Clavin, S. L., & Broida, J. (1994). Further validation of the indecisiveness scale. *Psychological Reports, 75*, 1631-1634.
- Germeijs, V., & de Boeck, P. (2003). Career indecision: Three factors from decision theory. *Journal of Vocational Behavior, 62*, 11-25.
- Germeijs, V., & de Boeck, P. (2002). A measurement scale for indecisiveness and its relationship to career indecision and other types of indecision. *European Journal of Psychological Assessment, 18*, 113-122.
- Gudjonsson, G. H. (2003). *The Psychology of interrogations and confessions: A handbook*. New York: John Wiley & Sons.
- Iyengar, S. S. & Lepper, M. R. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology, 79*, 995-1006.
- Jackson, C. J., Furnham, A., & Lawty-Jones, M. (1999). Relationship between indecisiveness and neuroticism: The moderating effect of a tough-minded culture. *Personality and Individual Differences, 27*, 789-800.
- Ladouceur, R., Rhéaume, J., Freeston, M. H., Aublet, F., Jean, K., Lachance, S., Langlois, F., & de Pokomandy-Morin, K. (1995). Experimental manipulations of responsibility: An analogue test for models of obsessive-compulsive disorder. *Behaviour Research and Therapy, 33*, 937-946.
- Ladouceur, R., Talbot, F., & Dugas, M. J. (1997). Behavioural expressions of intolerance of uncertainty in worry. *Behavior Modification, 21*, 355-371.
- Mann, L. (1982). *Decision-making questionnaire*. Unpublished inventory. Flinders University of South Australia.
- Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy, 28*, 487-495.
- Milgram, N. N., & Tenne, R. (2000). Personality correlates of decisional and task avoidant procrastination. *European Journal of Personality, 14*, 141-156.
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*, 175-220.
- Patalano, A. L. & Wengrovitz, S. M. (2006). Cross-cultural exploration of the Indecisiveness Scale: A comparison of Chinese and American men and women. *Personality and Individual Differences, 41*, 813-824.
- Pitz, G. F. & Harren, V. A. (1980). An analysis of career decision making from the point of view of information processing and decision theory. *Journal of Vocational Behavior, 16*, 320-346.
- Rassin, E. & Muris, P. (2005b). Indecisiveness and the interpretation of ambiguous situations. *Personality and Individual Differences, 39*, 1285-1291.
- Rassin, E. & Muris, P. (2005a). To be or not to be ... indecisive: Gender differences, correlations with obsessive-compulsive complaints, and behavioural manifestation. *Personality and Individual Differences, 38*, 1175-1181.
- Rassin, E., Muris, P., Franken, I., Smit, M., & Wong, M. (in press). Measuring general indecisiveness. *Journal of Psychopathology and Behavioral Assessment*.
- Roese, N. J. & Summerville, A. (2005). What we regret most ... and why. *Personality and Social Psychology Bulletin, 31*, 1273-1285.
- Sanavio, E. (1988). Obsessions and compulsions: The Padua inventory. *Behaviour Research and Therapy, 26*, 169-177.
- Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: HarperCollins Publishers.
- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology, 83*, 1178-1197.

- Thordarson, D.S., Radomsky, A.S., Rachman, S., Shafran, R., Sawchuk, C.N., & Hakstian, A.R. (2004). The Vancouver Obsessional Compulsive Inventory (VOCI). *Behaviour Research and Therapy*, *42*, 1289-1314.
- Tversky, A. & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Science*, *5*, 207-232.
- Tversky, A. & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, *211*, 453-458.
- Tversky, A. & Shafir, E. (1992). Choice under conflict: The dynamics of deferred decision. *Psychological Science*, *3*, 358-361.
- van Eerden, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences*, *35*, 1401-1418.
- Ward, A., Lyubomirsky, S., Sousa, L., & Nolen-Hoeksema, S. (2003). Can't quite commit: Rumination and uncertainty. *Personality and Social Psychology Bulletin*, *29*, 96-107.