# Psychologická terminologie a dokumentace

## Seminární práce zpracování článku „Keeping Doors Open: The Effect of Unavailability on Incentives to Keep Options Viable“

### Vyznačení primárních, sekundárních a terciárních informací v úvodu a diskuzi článku

Barevně jsem zde vyznačil primární a sekundární informace.

#### Introduction

Imagine a student who is uncertain about whether he wants to become a computer programmer or a poet. If he wants to keep both options available, he has to keep taking classes in both majors. On the other hand, keeping both options open has its own cost. Double majoring implies that the student has to divide his time and effort and take classes in both fields—leading him to become proficient in both, but an expert in neither. Along similar lines, consider a person pursuing two potential relationships. As long as this romantic decision maker spends sufficient time with each of her potential romantic partners, she can keep them both as viable future relationships. However, once she starts spending more time with one and neglecting the other, the neglected party is likely to move on and become unavailable. Given the possible loss of the second romantic option, our enthusiastic dater might try to spend at least some of her time with her less-preferred partner, largely to maintain the viability of the relationship. However, much like the student with the double major, “keeping doors open” has its costs, drawing valuable time and energy away from the more promising relationship. Double majoring and dating are just two examples of cases where one must invest extra time and effort to keep options available. The main questions asked here are whether the threat of future unavailability makes less-desirable options seem more appealing and whether this causes individuals to overinvest in these options. In other words, do doors that threaten to close appear more attractive than doors that remain open? And if so, will individuals overinvest just to keep them open?

From a naive, rational perspective, one could expect that the value of an option (having the ability to make

a choice) would be based solely on the expected utility of the outcomes it represents. From a psychological

perspective, however, there are two primary reasons why the subjective value of an option can exceed its

expected value: a desire for flexibility and aversion to loss.

Initial evidence for the value of flexibility was proposed by Brehm (1956), who showed that people are willing to sacrifice consumption pleasure to increase freedom of choice (see also Simonson 1990, Gilbert and Ebert 2002). The desire for flexibility is not limited to humans; even pigeons exhibit it (Catania 1975). Such preference for flexibility implies that individuals can get utility (pleasure) from simply “having the right to choose” (keeping options open) prior to making a final choice.

Evidence for aversion to loss dates back to Kahneman and Tversky (1979).1 The most relevant application of this aversion to loss is the case of endowment effect (Kahneman et al. 1990, 1991; Bar-Hillel and Neter 1996; Carmon and Ariely 2000), showing that ownership, or even deliberation (Carmon et al. 2003), can increase attachment and hence valuations. Support for aversion to loss was also provided in the context of risky choice, in particular the rejection of a pair of mixed gambles (Markowitz 1952, Williams 1966). Although options for items are very different from the items themselves—for example, the possibility of dating a person is a very different experience from actually dating that person—and although it is not possible to own an option in the same way it is to own an item, losing an option (opportunity loss) is closely related to the loss of an item. Namely, the loss of an option also implies the loss of the item. Based on this similarity in terms of loss and the large influence of loss on decision making (Tversky and Kahneman 1991), it can be argued that individuals will also experience the general aversion to loss and a pseudo-endowment effect for options. The general aversion to loss implies that the utility that individuals get from simply having the “right to choose” (keeping options open) is not a utility, but rather disutility or pain that can accompany the loss of options.

In summary, the current work asks two questions: First, whether the threat of unavailability increases the perceived value of an option; and second, if so, whether the higher valuation comes from a desire for flexibility or from aversion to loss. Four experiments were designed to provide initial answers to these questions.

#### General Discussion

The current work examines a basic aspect of human behavior that extends from interpersonal relationships to abstract monetary options—valuations of options. The experiments attempted to shed some light on how individual decision makers evaluate options by examining how the threat of option unavailability influences the value of the options.

Experiment 1 demonstrated that the possibility that the options will become unavailable in the future increases investments in them to keep them from disappearing. Experiment 2 tested whether this effect can be due to information, and, in addition, added three more fine-grained measures (pecking, click investment, and elimination point) to test whether the effort respondents expanded to maintain options open can be rationally explained; it cannot. Experiment 3 tested whether the distinction between implicit and explicit cost is the reason that our respondents overinvested in keeping doors open; it was not. Finally, Experiment 4 contrasted two psychological theories— flexibility and aversion to loss—as possible mechanisms for the overinvestment in keeping options open. The results from this experiment point to aversion to loss as being the more powerful of the two (at least in our set-up).

In a further test of aversion to loss, we created a new measure aiming at examining whether the room that respondents “gave up on” first (elimination point) was one for which they had more or less information about compared with the one they “gave up on” second (second elimination point). We argue that from an informational point of view, subjects should abandon a room they have more information about, because the amount of information indicates their certainty in the quality of the room. On the other hand, from an aversion to loss perspective, a room that had attracted more clicks might also have a higher attachment associated with it, thus leading to a lower tendency to abandon such a room. Analyzing this measure in Experiment 2 revealed that the respondents were four times more likely to first abandon rooms they have less information about, thus supporting the attachment and aversion to loss ideas. Moreover, the increased impact of availability on the practice-information condition in Experiment 2 strongly supported the aversion to loss explanation (Figure 3). The experience of actual feeling of the losses of the options during the practice trials seemed to cause respondents to be even more resistant to experiencing more losses during the actual trial.

In summary, the experimental evidence presented suggests that individuals value options in a way that

is different from the expected value of these options, and, in particular, that decision makers overvalue their options and are willing to overinvest to keep these options from disappearing. Based on the results of Experiment 4, we believe that the desirability of keeping options open is a kind of disutility from loss rather than utility from “having more options to choose from.

In a world where maintaining options has no cost, such a tendency would have been nonconsequential. However, we believe that in most day-to-day cases, there is substantial cost to keeping options open, which would lead to erroneous behavior. There are many situations in which decision makers encounter trade-offs between the future availability of options and their maintenance costs. We have already mentioned dating and choosing a major in college. Other examples include trade-offs between focusing on one’s current work and looking for new employment elsewhere; whether to specialize in a way that suits one’s current employer or instead to invest in skills that are valued by other potential employers. These results might also shed light on one of life’s greater mysteries: Why do some people channel surf rather than, for example, enjoy a single movie? The answer might be the fear of losing other options. These results might also be generalized to one-shot cases. For example, when buying a new computer, consumers face the dilemma of deciding whether to buy a system that suits their current needs or purchase an expandable system (e.g., more slots for cards, and more memory) that is more expensive but could better fit their uncertain future needs. In this case, the main source of the dilemma is the uncertainty as to whether future expansion will be needed, compared with the current additional cost. Our computer buyer is faced with a situation that is analogous to the door game one click before a door disappears. She can také a costly action at purchasing time to ensure that the expansion option remains available to her whether she subsequently decides to expand or not. Other examples in which consumers face “disappearing” options are deciding whether to purchase an extended warranty when buying a new electronic product and deciding whether to buy pictures of oneself on whitewater rafting trips. In such cases, consumers are given the opportunity to act on the options (the warranty or the pictures), while realizing this is their only opportunity to take this action, and that not acting on the options is irreversible and may cause the “pain” of losing these options. We suspect that the effectiveness of such tactics is based on the option’s nonavailability in the future, which would cause these options to be perceived more favorably and to be acted on more frequently. There remain numerous unanswered questions. For example, what are the mechanisms that underlie the fear of losing options? What is the relationship between keeping options open and indecision, particularly when deciding means committing to one out of a multitude of other possibilities (see also Amir 2004)? What is the impact of options’ prospective lifetime and unavailability on their subjective value? Faced with a large number of options, would decision makers still value options (Iyengar and Lepper 2000)? What is the number of options people would like to keep? Finally, under what conditions will individuals want to actively eliminate options? We keep these research opportunities open for the future.

### Dohledání tří zdrojů citovaných v článku

Vybral jsem si tyto tři články:

#### Catania, A. C. (1975). Freedom and Knowledge: An Experimental Analysis of Preference in Pigeons. *Journal of the Experimental Analysis of Behavior 24*, 89-106.

Text z článku: „*...pigeons preferred free to fixed choices...*“.

Na tomto článku mě zajímal hlavně příspěvek studia holubů ke studia člověka a metodologie studie. Po prohledání několika multioborových databází, kde jsem článek nenašel, jsem dohledat stránky časopisu, kde jsem si mohl přečíst pouze abstrakt. Metodologie je v něm popsána dostatečně, zobecnitelnost na lidskou populaci se v něm neřeší.

Původní tvrzení v článku odkazující na tuto studii („The desire for flexibility is not limited to humans; even pigeons exhibit it...“) se mi zdá lehce zavádějící, protože původní článek nezmiňuje flexibilitu, ale možnost volby. Flexibilita jako psychický fenomén by se nejspíše také obtížně studoval na subhumánní úrovni.

#### Carmon, Z., Wertenbroch, K., Zeelenberb, M. (2003). Option Attachment: When Deliberating Makes Choosing Feel Like Losing. *Journal of Consumer Research 30*(1), 15-29.

Text z článku: „*As a result of deliberating, consumers become attached to the options before selecting among them, developing a sense of prefactuai ownership of the options.*“

Název tohoto článku mě upoutal použitím slova „deliberate“ a zajímalo mě, v jakém smyslu je zde použito.

Pročtení původního článku mi pomohlo ke zjištění, že existuje vztah, v němž s rostoucím úsilím věnovaným rozhodování mezi jednotlivými možnostmi stoupá připoutanost k těmto možnostem a potenciální pocit ztráty následkem výběru jedné možnosti a zamítnutí ostatních. Připoutanost vzniká z pocitu vlastnění během procesu rozhodování.

#### Markowitz, H. (1952). The Utility of Wealth. J*ournal of Political Economy 60*, 151-158.

V textu původního článku byla řeč o „mixed gambles“, což mne zaujalo, proto jsem se pro tento článek rozhodl.

Článek Markowitze (1952) „mixed gambles“ nezmiňuje, hledal jsem proto na internetu význam tohoto spojení. Podle několika zdrojů se termínu používá pro situaci, kdy se člověk rozhoduje, zda přijmou či nepřijmout možnost buďto ztratit nebo získat určitou výhodu, často peněžní.

Mám dojem, že tato citace není zcela korektní; jednak Markowitz v závěru zmiňuje spíše spekulativní povahu a neprůkaznost svých hypotéz (spolu se zamýšleným účelem inspirovat další výzkum) a jednak se tento článek nezabývá tím, jestli lidé obecně odmítají riziko ztráty, nýbrž návrhem matematické funkce, kdy takové riziko ještě přijímají v závislosti na vlastním současném bohatství.

### Popularizační článek

#### Jsme nerozumně nerozhodní? Čtyři experimentální situace naznačují, že jsme ochotni investovat mnohé, aby se nám nezavřely dveře.

Autoři Shin a Ariely z MIT uskutečnili čtyři varianty experimentu na počítačích s průměrným počtem 109 lidí na experiment. (velký skok, nenavazuje na předchozí větu)Jak dlouho bude dívka chodit na rande s dvěma potencionálními partnery zároveň, jen proto, aby neztratila možnost partnerství s tím méně atraktivním? Budeme raději studovat dvě vysoké školy, než abychom zavrhli jeden obor, který nás zajímá? – na tomto místě to zní, jako by to byly hlavní výzkumné otázky experimentu

Pokusné osoby klikaly 50 až 100 krát na jedny ze tří dveří, za nimiž na ně čekala variabilní finanční odměna, přičemž v experimentální skupině dveře, na které osoba neklikla, pomalu mizely. Po první volbě měly osoby možnost zůstat za těmito dveřmi, nebo přejít do dveří jiných. V různých experimentálních variantách za tyto přechody lidé platili kliknutími, odečtením částky z vyhraných peněz, případně si mohli celý program vyzkoušet dopředu.

Postupně se během probíhajících experimentů potvrdilo, že lidé mají tendenci investovat do zachování otevřených možností, ani ne proto, že by potřebovali získat více informací, ani ne proto, že by si nebyli jistí, kolik za toto zachování platí, ale z averze vůči ztrátě.

Článek je čtivě napsán, obsahuje dostatečné množství názorných grafů a výsledků statistických analýz. Na závěr se pokouší odpovědět na otázky souběžných potencionálních partnerství a navrhuje další možné aplikace nových poznatků, jako například v personalistice, marketingu a prodeji. Chcete-li se (**vyhnout)** nástrahám, které na vás vinou **????**autorů tohoto článku budou čekat v obchodech i na úřadech, neváhejte a článek si celý přečtěte.

Citace článku: Shin, J. & Ariely, D. (2004). Keeping Doors Open: The Effect of Unavailability on Incentives to Keep Options Viable. *Management Science 50*(5), 575-586. doi:10.1287/mnsc.1030.0148

ZPĚTNÁ VAZBA:

1. Není mi jasné, proč některé pasáže textu nejsou nijak barevně označené – je to primární, sekundární nebo terciární informace?
2. Na tomto odkazu je k dispozici plný text prvního článku (asi je potřeba být přihlášen přes vzdálený přístup):

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1333385/>

Z vašeho komentáře je patrné, že jste články četl a zamyslel se nad nimi. Ještě by bylo dobré najít přesné citace, které Shin a Ariely parafrázovali ve svém článku.

1. Nadpis popularizačního článku je dost kostrbatý a je v něm několik záporů. Článek by mohl být delší. Podle mě v článku došlo na několika místech k posunutí významu (něco jsem barevně označila). Z prvního (a posledního) odstavce to vypadá, že se autoři článku zabývali partnerskými vztahy více podrobně. Dalo by se to vylepšit tím, že byste více popsal, co bylo cílem experimentu, dizajn počítačové hry, co měli hráči za úkol.