Justifying Rational Choice: the role of success

Abstract

Pragmatic foundationalism is the view that success is both necessary and sufficient for the rational acceptability of a procedure of choice. This essay investigates the plausibility of this claim in the context of decision-making over time against the background of three different standards of success. It argues, first, that success is not sufficient to accept a procedure of choice. Secondly, that success is not necessary since cases could be constructed where there is no clear, unambiguous notion of pragmatic success available yet a rational course of action is open to the agent. It depends on the complete description of the situation what is a rationally superior choice procedure. Therefore, success does not determine the rational procedure of choice. However, this does not mean that pragmatic considerations are altogether irrelevant. The essay concludes with some remarks about the proper role of success in the justification of a choice procedure.

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§1 Introduction

The theory of rational choice can be interpreted in several ways. First, one can regard the theory as a representation of the choices of agents. The theory is interpreted as an empirical hypothesis for further research. Alternatively, one can regard the theory as an axiomatic modeling assumption for social theory. However, in this essay I will not discuss these descriptive and predictive interpretations of the theory. Instead, I will be concerned with a particular normative interpretation of the theory. On this interpretation the theory of rational choice is a systematic account of how agents ought to choose given their relevant attitudes, such as beliefs and desires, so as to realize their goals. The theory of rational choice is regarded as an outline of the deliberative procedure that the agent ought to follow. The theory is instrumentalist; it is neutral with regards to the goals of the agent. It takes these as a given input for its recommendations.

So far, I have been talking as if there is one uncontested account of how to choose. However, as we shall see, that is not the case. There are several competing proposals for the rational procedure of choice. How do we determine which one is correct? Since the theory is supposed to be instrumentalist and neutral, it is only natural to assume that the actions recommended by the rational choice procedure should be successful; successful,
that is, in terms of the goals and ends of the agent. If a procedure fails to produce successful choices, it cannot be the correct procedure of choice. And if a choice is successful then the procedure that recommends it is ipso facto rational.² This gives us two related claims about the role of success in the justification of a choice procedure. First, success is necessary to establish the rational acceptability of a procedure of choice. Secondly, success is sufficient to establish the rationality of the proposed procedure of choice.

These two claims together form the doctrine of pragmatic foundationalism.³ In this essay, I argue against pragmatic foundationalism. Success is neither sufficient nor necessary to establish the rational acceptability of a choice procedure. Authors such as David Gauthier and Edward McClennen have advocated pragmatic foundationalism.⁴ Both Gauthier and McClennen have used pragmatic arguments against the standard theory of rational choice. Gauthier has attacked standard game theory and McClennen has criticized standard decision theory. They did this by showing that there are situations where agents do worse than they would on their alternative theories (constraint maximization and resolute choice respectively), thus using success as a necessary condition. Moreover, in defending their own views, they claim that since their alternative theory is more successful than the standard theory, this shows the rational superiority of resolute choice and constraint maximization. Therefore, they treat success as a sufficient criterion for rational acceptability.

Appeals to claims of pragmatic foundationalism are found not only in the periphery of rational choice literature, but also in several generally accepted arguments in rational choice theory. For example, the first claim – that success is necessary – is used to argue against intransitive preferences in the so-called money pump argument. This argument

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² Both these conclusions are a bit too fast. See my qualifications below.
³ This term is coined by Edward McClennen in [McClennen, 1990 #472, p. 4-5].
demonstrates that agents with such orderings are exploitable: they could be offered a series of acceptable choices, which nevertheless result in failure. A similar argument, the Dutch book argument, is used to demonstrate that the agent will display self-defeating behavior if her probability assignments do not satisfy the standard rules of Bayesian probability calculus.\[^{5}\]

The remainder of this essay is organized as follows. After making a few qualifications to the pragmatist claim (section 2), I proceed arguing against it in three steps. First, I will demonstrate that we have a choice between alternative procedures for rational choice (sections 3 and 4). Secondly, I discuss a very general argument against pragmatic foundationalism (section 5 and 6). Arguing from an analogy between theoretical and practical reason, it shows that success – not matter how it is interpreted – is neither sufficient nor necessary for identifying a rational choice procedure. Finally, I introduce three concrete examples that illustrate that success is neither necessary nor sufficient for establishing a rational procedure of choice (sections 7 and 8). I conclude with some general remarks on the role of success in identifying a rational choice procedure (section 9).

§2 Two qualifications

In describing the claims of pragmatic foundationalism above, I have glossed over an important qualification. Pragmatic foundationalism claims that actual success is necessary and sufficient. However, it only makes this claim in the context of so-called normal form decision problems under certainty. In such contexts the agent has to make just one initial choice to realize the successful outcome and chance does not play a role at all. In such a

\[^{4}\] [Gauthier, 1986 #4; Gauthier, 1994 #232; Gauthier, 1997 #591] and [McClennen, 1990 #472].

\[^{5}\] Whether these arguments do show what they are supposed to show is a much-debated matter. See [Hampton, 1998 #293], [Schick, 1986 #1153] and [Rabinowicz, 2000 #1523].
situation, pragmatic foundationalism claims that if the choice procedure does not recommend the best or one of the best outcomes, it fails as a rational procedure. Similarly, if X is a successful outcome, and there is a procedure that recommends X, that procedure must be a rational one.

However, things become more complicated when we introduce probabilities and uncertainty. In such situations the relation between success and the rationality of a choice procedure is not as straightforward as it is under certainty. For example, suppose the agent faces a choice between $1 for sure and a lottery that pays $100 with probability .1. Assuming the agent cares only about money and has a neutral attitude towards risk (i.e., her utilities are a positive linear function of money), it is not self-evident which recommendation a rational procedure of choice would give. If the procedure recommends accepting the lottery the agent might end up with nothing. Is that sufficient to reject the procedure as a rational procedure? Many would be inclined to deny this. It would be a case of bad luck. Arguing that the recommendation is wrong if the lottery does not pay is committing the ‘bad-outcomes-bad-decision-fallacy’.

Therefore, in contexts where chance plays a significant role a successful outcome can be absent even though the action is rational. Actual success is not necessary to establish the rationality of the action or the procedure that recommends it.

On the other hand, suppose that the lottery does happen to pay. Arguing that the recommendation made by the choice procedure is rational in such cases is committing the conjoint ‘good-outcomes-good-decision-fallacy’. Therefore, the presence of a successful outcome is not sufficient to guarantee the rationality of the action in choice under uncertainty. Actual success is not sufficient to establish the rationality of the action or the procedure that recommends it.

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6 [Frank, 1988 #8, p. 72-75]
Most pragmatic foundationalists would agree. In choice under uncertainty it is not actual success that determines the rationality of a choice procedure but rather the expectation of success. This introduces the question which expectations matter and how the agent should deliberate with regards to them. The orthodox answer is that the expectations of the agent must comply with standard expected utility theory – an answer is strongly contested by critics of this theory. Be that as it may, pragmatic foundationalism claims to give an answer the question as to how we should deliberate in the face of uncertainty: a deliberative procedure is rational if and only if it leads to choices which are expected to be successful.

At this point, I need to introduce another qualification that will come back in the arguments of sections 6 and 7. Until this point I have assumed that for pragmatists there is a clear sense of what counts as pragmatic success. A choice is successful if and only if it is successful from the agent’s own perspective. Until now I have assumed that this perspective is identical to the agent’s actual preferences. Indeed, this is the underlying assumption of many influential pragmatic arguments such as the money pump and the Dutch book. However, it is not necessary to accept this assumption. The more so since one of the main proponents of the pragmatic view, David Gauthier, does not accept that assumption. In his writings, David Gauthier has subscribed to at least two alternatives to the ‘actual preference’ view of success from the perspective of the agent.

One is that of considered preferences. In *Morals by Agreement*, Gauthier characterizes considered preferences as those preferences one would come to have after sufficient reflection and experience. A preference meets the first condition, if it reflects all that the

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7 This complication is not just a problem for discussions about rational decision procedures. The problem described here forms the core of a fundamental discussion the relation between the right and the good. See the discussion in [Broome, 1991 #818, p. 122-131].

8 A good overview of the alternatives, as well as an insightful discussion as to what is at stake is [Machina, 1989 #237].
agent knows and believes about the objects of her preference. A preference reflects experience, if the agent comes to this preference as a result of having experienced the object of preference. Gauthier’s example is that of the tourist in France who orders a bottle of Nuits-St.-Georges (a heavy red wine) with his sole meuniere (sole fried in flour and butter). After realizing what he has ordered and finding out that he does not like heavy red wine with this subtle fish, he will no longer choose this particular combination. Considered preferences, therefore, are the preferences that the agent would have if she had thought about what to prefer in the light of what she believes to be the case and these beliefs are the result of experience. Note that Gauthier does not require that the entire corpus of the agents’ beliefs be true or even rational.

The second alternative conception of success is formulated in Assure and Threaten. There Gauthier stipulates that the aim of a procedure of rational choice is that one’s life go as well as possible. Success is defined accordingly:

I shall label this as ‘success’: an action is successful if and only if at the time of performance it is part of a life that goes as well as possible for the agent. (p. 700).

This conception of success is vaguer than success in terms of considered preferences and it is hard to fix its exact meaning. This much is clear: it is up to the agent, her attitudes and circumstances, whether her life is going as well as possible. Furthermore, the formulation strongly suggests that success is a long-term consideration. I propose we interpret the above criterion of success as giving equal weight to current and future preferences from

9 [Gauthier, 1986 #4, p. 29-32].
10 [Gauthier, 1994 #232].
11 I suspect that Gauthier formulated this notion of ‘success’ as a place-holder for a whole range of possible views, which include everything from the actual preference view to all proposals for ‘laundered preferences’ (including among others the considered preference view).
the time of performance onwards. That is, I propose we think of this conception as a conception of prudence.\textsuperscript{12}

I will address both considered preferences and prudence in sections six and seven, as not all of my conclusions about success as ‘actually preferred’ carry over to this conception.

§3 Conditions of planning

Usually, the discussion about the appropriateness of choice procedures is conducted against the background of contexts where the agent has to make just one choice before achieving the intended outcome. In this essay, however, I will concentrate on situations in which the agent is required to make a series of decisions before reaching a final result. As we will see, there are special problems for decision making over time which are absent from the one-shot case. These problems cast a new light on the idea that success is part and parcel of the justification of a choice procedure.

In order to evaluate the various proposals that have been made for the rational procedure of choosing over time, we first need to introduce the candidates. Edward McClennen has formulated three intuitively plausible requirements of rational choice over time that enable us to characterize the different procedures of choosing over time available to the agent. These can be illustrated with the aid of figures 1 and 2. Suppose an agent faces the choice between three outcomes A, B, and C. However, these outcomes are not all directly available. That is, she could either choose B directly at $t=1$, or make another choice, to be faced with the choice between A and C at $t=2$ (see figure 1).

\textsuperscript{12} Gauthier does not give us any reason to assume that he wants to give equal weight to present and future preferences. In the context of his discussion of considered preferences he explicitly denies that it is rationally required. It may, therefore, not be the best interpretation of what Gauthier had in mind when he formulated
A plan is a detailed specification of how to choose at each choice point that can be reached by the application of the plan. Thus, if a plan calls upon the agent to go ‘across’ at t=1, the plan will prescribe how she should continue at t=2. It seems plausible to require that a rationally acceptable plan remain acceptable during its execution. In other words, if a plan is acceptable at t=1 its continuation at t=2 should be acceptable as well. An acceptable plan consists of acceptable plan continuations. This is the first requirement of rational plan. A rational plan should satisfy dynamic consistency (DC).\(^13\)

Secondly, the number of decisions or the sequence of the decisions should not determine whether a plan is acceptable or not. A rational agent should plan to realize the same outcome whether the situation is such that she has to make just one choice or several to execute the plan.\(^14\) More precisely, the rationally acceptable plans in the extensive-form and the normal form have the same outcome. This is the requirement of normal and extensive form coincidence (NEC).\(^15\) Thus, a rational agent would select a plan in figure 1 if and only if she would plan for the same outcome in figure 2.

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\(^{13}\) [McClennen, 1990 #472, p. 120]. Dynamic consistency is plausible only if there is no (unforeseen) change of information between t=1 and t=2. If there is such a change, a plan continuation that seemed acceptable at t=1 might no longer be acceptable because the agent would not have adopted such a plan in the first place had she known what she knows now.

\(^{14}\) This assumes that the process of decision making itself does not alter the (value of the) outcomes in any way. This need not be the case. However, it seems a plausible assumption in the ‘small’ choice problem we are considering in figures 1 and 2.

\(^{15}\) [McClennen, 1990 #472, p. 115].
Since an acceptable plan is supposed to consist of acceptable plan continuations, we need to determine what counts as an acceptable continuation. A rational agent is concerned about the outcomes of her choices. Therefore, each plan continuation should be consistent with this forward-looking nature of deliberation. This brings us to the third and last of the requirements, the requirement of *separability* (SEP). A continuation is acceptable if and only if it is acceptable as a brand new plan from that choice point onward. In other words, the acceptable plan continuation in figure 1 at $t=2$ should correspond to the acceptable plan in the situation where the agent where to find herself facing just A and C.

\[ \text{Figure 2} \]

§4 A pragmatic argument for resolute choice

Standard expected utility theory assumes that the preferences of the agent are ‘consistent’. One of the conditions of consistency is the so-called *alpha* condition. It requires that the preference order remains stable when the set of available outcomes becomes smaller. More precisely, if the agent prefers A to B when the available set of

16 [McClennen, 1990 #472, p. 122].
17 ‘Consistent’ because the consistency requirements that are formulated in expected utility theory go beyond the usual requirements of classical propositional calculus. Therefore, it is an open question whether the requirements of expected utility theory indeed do express an intuitively unassailable sense of consistency as it is understood in other areas of philosophy.
18 [Sen, 1970 #135]. Sen formulated alpha in the context of choice functions rather than preference orderings. In this essay I ignore this complication, since the revealed preference theorems suggest that we can reconstruct the preference order of the agent by investigating the range of the agent’s choice function.
outcomes contains A, B and C, a rational agent is expected to prefer A to B if C is not available.

More often than not one needs to make a series of choices before realizing the preferred outcome. In the course of such a series, the set of available outcomes usually becomes smaller. What was an available outcome at t=1 need no longer be available at t=2 because of the choice(s) one has made. Suppose that my preference ordering over outcomes satisfies all the requirements of expected utility theory, including the requirement that it is stable. In that case I can simply choose at each time the move leading to the most preferred outcome among the outcomes still available while being sure that I will end up with my ex ante most preferred outcome. Following my present preference guarantees an optimal choice in the sense that classic decision theory recommends.

What if preferences are not stable? In such cases it is possible that following one’s present preference leads to sub-optimal outcomes. Classic decision theory cannot tell us anything except that one should avoid having such preferences. Many authors have argued that in circumstances such as these a rational agent should plan her choices. Rather than simply following her preferences at each and every point in time a choice needs to be made, a rational agent should carefully reflect in advance about her course of action and plan how she will choose should she reach a certain decision. This raises the question how the agent ought to plan. In other words, we need to know the rationally required planning procedure.

for each subset of the set of options. The alpha condition allows the theorist to reconstruct the preference ordering of the agent by a complete pair-wise comparison of all available outcomes.

19 For example, [Rabinowicz, 1995 #666]. These might not be the only circumstances in which a rational agent ought to opt for a plan. [Bratman, 1987 #1174] has argued forcefully that constraints on information and information processing as well as instances of indifference all warrant the formation of a plan. In this paper I abstract from these complications.

20 There are clear links between these discussions in decision theory and recent developments in action theory, especially [Bratman, 1987 #1174], who analyzes intentions as (part of) plans for future action. I will not go into these connections in this essay. However, I believe this is one of the most promising developments for the integration of the two dominant (types of) theories of human action, i.e., rational choice theory and action theory.
Using the three conditions identified in section two, we can characterize alternative planning procedures. If and only if the agent’s preferences satisfy the requirements of classic decision theory, including the requirement of stability, her planning will satisfy NEC, DC and SEP.\textsuperscript{21} Therefore, if an agent’s preferences are not stable, it is to be expected that not all conditions can be met. Indeed this is the case. Suppose that an agent finds herself in the situation of figure 1. Suppose that her preferences are unstable. That is, suppose that if the set of outcomes consists of A, B, and C, she chooses A. However, she selects C if the options are limited to just A and C. If she were to face all three alternatives in the normal form (as in figure 2) she would choose the plan leading to A. Since NEC requires that her choice in figure 2 corresponds to how she would chose in figure 1 she should adopt the plan to go ‘across’ at $t=1$, planning to go ‘across’ again at $t=2$.

However, at $t=2$ the set of available options for her is reduced to just A and C. Separability requires that she selects the plan continuation that leads to C, instead of A. Therefore, her planning does not conform to dynamic consistency. Her unstable preferences lead her to accept a plan that contains an unacceptable continuation. Such plans are \textit{myopic}.\textsuperscript{22} Most authors agree that myopic planning is a bad idea.\textsuperscript{23} The main reason is that myopia can result in self-defeating choices. We can see why this is the case in figure 1. Myopia makes that the agent ends up with C, the worst option. Therefore, there seem to be good pragmatic reasons to avoid myopia.

\textsuperscript{21}For a formal proof, see [McClennen, 1990 #472, p. 129].

\textsuperscript{22} The phrase is that of [Strotz, 1956 #55]. David Gauthier pointed out to me that one could question whether myopia should be characterized as a planning procedure at all, since the concept of planning seems to imply a commitment to its execution. A myopic agent, as she is characterized here, does plan in the sense of deliberating and accepting a plan of action. However, it is characteristic of myopia that one need not follow through with a plan even if there is no change of information during the execution of the plan. I decided to present myopia as a planning procedure here because, as I will argue below, there could be circumstances where myopia is the most rational way of going about things even if the agent has unstable preferences.

\textsuperscript{23} To name but a few: [Strotz, 1956 #55], [McClennen, 1990 #472] and [Rabinowicz, 1995 #666].
Several authors have argued that instead of being myopic, the agent should be sophisticated in her plans.\textsuperscript{24} That is, the agent in figure 1 should anticipate that at $t=2$ she no longer will opt for A, but choose C instead. Therefore, so the argument goes, A is not a feasible plan, or as Włodek Rabinowicz puts it, A is not performable. A plan is performable if the agent does not have a reason to deviate from the plan after she has started its execution.\textsuperscript{25} In figure 1 the agent has only two performable plans: the plan leading to B and the plan leading to C. Since at $t=1$ B is preferred to C the only acceptable plan is the plan leading to B. This way of planning satisfies DC (be it trivially in this case, as there is no separate continuation after the first move). However, it violates NEC, because in figure 1 this agent would select the plan leading to B, whereas in figure 2 she would select A. Therefore, pragmatic considerations seem to counsel sophistication in situations such as these. Sophisticated planning gives the agent B, her second best outcome overall but the best available outcome under the circumstances.

However, we have to ask the question why the plan leading to A is not performable. It seems that this is due to a commitment to separability. Separability requires the agent to consider her options at each choice point as if she faces them for the very first time. Were the agent to violate separability, the plan leading to A might again become performable. Some might question this conclusion. If it really is true that A is preferred from A, B and C, whereas C is preferred when the agent faces A and C, then it still is the case that at $t=2$ the agent faces the choice between A and C. Why would the recognition of the fact that she reached $t=2$ through a choice at $t=1$ make a difference? In other words, why would violation of separability make it possible to plan for A if the agent knows that she will prefer C at $t=2$? The answer is that the planning conditions constrain the rational

\textsuperscript{24} For example, [Strotz, 1956 #55], [Elster, 1979 #48] and [Levi, 1992 #201].

\textsuperscript{25} [Rabinowicz, 1995 #666]. The notion of performability is closely related to the idea of backward induction. Indeed, the whole idea of sophisticated choice can be regarded as an implication of backward induction.
acceptability of a plan, which the agent formulates at the beginning of the tree. That is, a rational agent is expected to plan her choices and executes her plan. Violating separability does not imply that one no longer prefers A from the pair A and C. It simply implies that one does not evaluate the plan continuation at t=2 as a choice de novo. That is, violating separability implies that the preference order of A and C does not determine which continuation is acceptable.26

Since A is the best outcome, pragmatic considerations seem to indicate that SEP should be rejected as a requirement of planning. The agent should plan to choose A and resolutely pursue that option at t=2. Notice that a resolute agent seems to do better than the sophisticated agent in contexts such as these. Whereas the best the latter can do is B, only the former can realize the optimal outcome A. It may seem arbitrary to regard A as more successful than C in this context. However, this is not so arbitrary when one recalls that the agent has to determine her plan at t=1. At that time A is better than C and B. In other words, there is good reason to accept the initial preferences at t=1 as authoritative for evaluating the merits of the plan. 27

Note that the argument above is valid whether the conception of success that is employed is that of actual preference, considered preference, or life-going-as-well-as-possible. For if one’s actual preferences are unstable in the way described above, resoluteness leads to the best result. Similarly, if one’s considered preferences are unstable – and I do not see any reason to assume they would not be – resoluteness leads to the best result viewed from the point of decision-making. Finally, if the relevant standard of success is that one’s life should go as well as possible, the agent’s judgment about this may be

26 I would like to thank the anonymous referee for pressing me on this point.
27 Furthermore, examples can be constructed where the ex ante and ex post evaluation of outcomes is identical even though the various forms of planning lead to different results, for example, [McClenen, 1990 #472, p.6-11]. Such examples, however, are relatively complex and assume different evaluations of expectations of outcomes. Since I wish to abstract from many of the complications that the consideration of
unstable as well. What would be the best life for an agent if three alternative life-plans are available may not be the best life if one of the other life-plans (as result of past choices) no longer is available. It seems then that success determines the rationally acceptable planning procedure. It is both necessary and sufficient to identify the rational planning procedure. An agent with non-standard preferences (in this case, preferences that violate alpha) should plan resolutely. We have a pragmatic justification for resoluteness.

§5 Two conceptions of justification

However, for many – including me – this conclusion is too fast. In this and the next section I will discuss a general argument as to why success is neither necessary nor sufficient for determining the rationality of a choice procedure. This argument is independent of the particular conception of success one adopts.

In Deciding How to Decide, David Velleman has criticized Gauthier’s argument that success is both necessary and sufficient for determining the rationality of a principle of rational choice. Whereas success is an appropriate requirement of the choice of an action (or in our case that of a plan), according to Velleman, it is not a proper determinant for the choice how to act or plan. This latter choice, the choice for a procedure that identifies the rational choice or the rational plan, cannot be guided by considerations of success. This latter choice is not the object of practical reasoning but of theoretical reasoning. Therefore, success is the wrong sort of criterion for assessing the correctness of this choice.

For suppose it were. That is, suppose that the correct procedure of rational planning is not something we discover, but something that is object of practical deliberation much in the

uncertainty introduces in this context, I have decided to stick to the simple case that if flawed at least has the merit of clarity.

28 I will discuss an example of just this sort in §7.
same way as we deliberate about the choice of plan. That would mean that the evaluation of a proposed procedure of rational choice (i.e., the correct procedure for rational planning) is itself an instance of rational choice, which is supposedly constrained by the same procedure. This, so Velleman argues, begs the question of the rationality of that procedure. Consequently, demonstrating that the adoption of a particular procedure of rational planning (whether it is myopia, sophistication or resoluteness) brings success is irrelevant for establishing the rationality of that procedure itself.

I hesitate to endorse Velleman’s conclusions. I share his intuition that the problem of identifying the correct procedure of rational planning is a matter of theoretical reasoning and not a practical choice. However, the claim that a pragmatic justification is question begging is acceptable only if one shares that intuition. Let me explain. Let us assume that the argument in favor of resoluteness is valid. That is, for pragmatic reasons one should choose a resolute planning procedure. Why would one accept this as an argument in favor of resoluteness? The answer the pragmatist gives us is that acceptance brings success. Suppose a critic would not be satisfied and would demand to know why success is a proper criterion for acceptance of resoluteness. The pragmatist cannot and would not give any other answer: acceptance brings success – period. This is question begging only if one thinks that the acceptance of an argument is a matter of belief, that is, if one thinks that such acceptance is a matter of truth. And this is exactly what many pragmatists, most notably Gauthier, will deny in this context. For them the proper ground for acceptance of a choice procedure is not whether it is appropriate but whether acceptance will bring success.30

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30 [Velleman, 1997 #829].
30 Wlodek Rabinowicz suggested an alternative reply to Velleman’s objection (personal communication). I think it fails to answer Velleman, but I mention it anyway, for it clarifies the position of the pragmatic foundationalist somewhat. Rabinowicz suggested that even though success is the necessary and sufficient criterion for the rationality of a choice procedure, this need not imply that the choice for a particular procedure is practical rather than theoretical in nature. That is, the choice for a particular procedure should
It may seem that there is no difference between a procedure bringing success or it being appropriate given the background of instrumental rationality. However, things start to look very different if we look at situations where the procedure for deciding itself has consequences other than the choice it recommends. A good example is Newcomb’s Problem. In this thought experiment a (nearly) perfect predictor puts two boxes in front of you, an opaque one and a transparent one. The transparent one contains $1000, clearly visible. He then tells you that he will offer you a choice. Either you take the contents of both boxes or you take the content of the opaque box. He then informs you that he has made a prediction about your choice. If his prediction was that you would opt for the contents of both boxes, he has not put any money in the opaque box. However, if his prediction was that you would choose just the contents of the opaque box, he will have put $100,000 in the box. Given that more money is better than less and that you have no reason to doubt the awesome predictive powers of this creature, what would you choose?

Note that dominance reasoning informs you to take both boxes. If the predictor has put $100,000 in the opaque box you will end up with $101,000 instead of $1000. Should the predictor have predicted this, you will still have $1000 as opposed to $0. However, the predictor, by assumption, foresees this and will not put any money in the opaque box, thus you can expect only $1000 from this plan. On the other hand, adopting the plan of choosing one box in such situations, will induce the predictor to put $100,000 in the

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be based on the theoretical consideration that success is the justifying ground for such procedures even if the actual choice for this particular procedure will be disastrous. (Imagine an evil demon who punishes anyone who decides on theoretical grounds to adopt this particular procedure.) According to Rabinowicz, this would not be a reason to reject the procedure. It is hard to reconcile such a position with the central claims of pragmatic foundationalism. Because if disastrous results are not necessarily a reason to reject the choice procedure, it seems that we have additional criteria to determine when and what 'source' of success is relevant for the justification of a choice procedure. On Rabinowicz' proposal, success alone is not necessary (as in the evil demon case), nor sufficient (it has to have to right source). I doubt then that we should characterize it as pragmatic foundationalism in the way I defined it in section one. Rabinowicz's suggestion amounts to introducing criteria in addition to success to the doctrine or pragmatic foundationalism. It may be a reasonable option, but in this essay I stick to discussing the strong view, to wit that success is necessary and sufficient to rationalize a choice procedure. (See also my remarks on autonomous effects in the next section.)

31 [Nozick, 1969 #411].
opaque box. Adopting this plan (and carrying it out) will therefore result in $100,000. A myopic chooser might form the plan but the predictor will recognize that the plans of a myopic chooser are not worth the paper they are written on and will not fill the opaque box. A sophisticated chooser will realize that she cannot but choose the contents of both boxes and therefore adopt the plan to be a two-boxer. Only a resolute one-boxer will be able to induce the predictor to put $100,000 in the opaque box. Thus resoluteness pays here. However, it pays in this case because resoluteness itself is beneficial – not because the actual choice for one box is successful. Resoluteness has, in Kavka’s terminology, autonomous effects.32 Thus there are two ways in which a resolute choice procedure might be successful: because of the choice it dictates or because of its autonomous effect, (i.e., the effect of having adopted that procedure in the first place). This autonomous effect is also relevant for its justification according to the pragmatist. His critic, however, will argue that this it amounts to arguing that if it ‘pays’ to believe that resoluteness is rational you should believe it. It seems that this is not the right sort of criterion for belief acceptance.

What emerges here is that the pragmatist has an alternative picture of what a successful justification of a rational planning procedure should look like. Whereas the critic of the pragmatist position will accept a planning procedure if she believes such a procedure to be appropriate, the pragmatist will accept such a procedure only if doing so will bring success. How should we decide between these two rival conceptions of justification?

§6 Rational choice procedures: imperfect, perfect or pure?

The different picture of justification is not the only thing that divides the pragmatist and her critic. There is a further difference in how they regard the status of the justified

32 [Kavka, 1983 #100].
procedure of planning. This becomes apparent once we look at some of the characteristics of pragmatic justifications. First, any argument that demonstrates that the proposed principle in question systematically leads to sub-optimal results provides sufficient grounds for the pragmatist to reject that principle. Therefore, a successful pragmatic justification should be *self-supporting*. The application of a justified planning procedure should not have results that undermine the reasons for accepting it in the first place. A good example of failure on this count is the argument against myopia in the previous section. Another example that brings out the difference between the pragmatist and their opponents is the following. Imagine that a student, taking a multiple-choice exam in Critical Thinking, applies predicate logic to answer the questions, rather than trusting her intuitions. Unfortunately, the person sitting next to her hums and makes distracting noises whenever she writes out formulas to evaluate the validity of a statement (this person just hates any smart ass and goes out of his way to make such people unsuccessful in life). As a result she is so distracted that she answers the questions incorrectly. Clearly, applying predicate calculus to pass this exam is not self-supporting: the application of the procedure leads to unsuccessful results (she fails). For the pragmatist, this is sufficient ground to reject predicate calculus as the appropriate procedure for answering multiple-choice exams in critical thinking for this student. His non-pragmatic counterpart is not committed to such a conclusion. According to her, predicate calculus is the correct procedure for evaluating the validity of arguments in Critical Thinking exams even though the consequences of its application are unsuccessful.

The second characteristic is that self-support is extended to the acceptance of the theory. Any argument that demonstrates that the acceptance of a principle of choice itself is unsuccessful would count against that principle from the point of view of the pragmatist. Whereas the first type of consideration operates at the level of the *application* of the proposed procedure of choice, this consideration operates at the level of *acceptance* of the
proposed procedure of choice. Thus, when the demon punishes you for adopting a two-box policy in Newcomb’s Problem, this is sufficient reason not to accept such a policy and refrain from applying dominance in your dealings with the demon.  

In short, a successful pragmatic justification for a planning procedure needs to demonstrate that both the application and the acceptance of the theory will lead to success. This is all that such a justification needs to establish. There are no further questions as to why success would count as the proper criterion. Therefore, according to the pragmatist, rationally acceptable decision procedures are *perfect* procedures. A procedure is perfect when following it is a guarantee for the achievement of some externally specified goal.  

Following the procedure is sufficient for realizing success.  

The non-pragmatist has a completely different idea about the status of the justified planning procedure. A critic of pragmatic justifications, like Velleman, assumes a parallel between action and belief. To believe X implies that one believes X is true. However, whether it is rational to believe X depends on the procedures through which one came to the conviction that X. Although such procedures aim for the truth they are typically fallible in that respect. Therefore, the procedure for belief acceptance is an *imperfect* procedure. Following the procedure is neither necessary nor sufficient for the belief to be true. Similarly, the fact that X happens to be true is neither necessary nor sufficient for the

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33 See also my remarks in note 28.

34 The distinction between perfect, imperfect and pure procedures is that of [Rawls, 1971 #116, §14]. [Velleman, 1997 #829] argues that, unless one has specified exactly what ‘success’ is, there are numerous candidates for principles or procedures which are self-supporting in this way. Almost any principle can provide the required self-support. For example, a principle which calls for unconditional cooperation in a prisoners’ dilemma will be self-supporting if ‘success’ is defined as ‘an effort at cooperation’¹. Both the application and the acceptance of this principle will lead to efforts to cooperate. It might be objected that ‘an effort at cooperation’ is an implausible notion of success. However, strictly speaking this type of objection is not open for the pragmatist since the fact that it does provide a self-supporting principle of choice is sufficient to establish the rationality of that principle of choice.

35 David Gauthier seems to go even further. He claims that if the procedure is rational, the choices resulting from that procedure are *ipso facto* rational. See [Gauthier, 1986 #4, p. 184-187], especially the remarks on the rationality of carrying out threats. This suggests that for Gauthier, rationally acceptable choice procedures are *pure* procedures. Following such procedures are sufficient for achieving success, where there is no externally formulated standard of success. Following the procedure is what makes the resulting choice rational.
rationality of the belief that X. One can arrive at a true belief using a completely spurious procedure.

Velleman’s argument presupposes that the relation between the rationality of an action and that action having success is analogous to the relation between rational belief and truth. Whether or not a plan is rational depends on the procedure. However, whether or not the procedure is rationally acceptable is not determined by the success of the plans it recommends. If this is a correct way of thinking about the relation between rationality and pragmatic success, we have reasons to doubt that pragmatic success is necessary (let alone sufficient) to establish the rationality of a particular planning procedure. Just as a belief can be rational without being true, a plan can be rational without bringing pragmatic success.

So we do not just have rival conceptions of justification, we also have different pictures of the status of justifiable procedures of planning. Whereas the pragmatist thinks of these latter as perfect procedures, her critic thinks of them as imperfect procedures.\(^{36}\) These differences are related. If one has the intuition that success is the proper criterion for acceptance of a planning procedure, then one will characterize such a procedure as a perfect procedure. This gives us a way to settle one issue between the pragmatist and non-pragmatist. Above, I suggested that it is just an intuition whether or not success is the proper criterion for accepting a decision procedure. We now have the tools to throw some light on this issue. For if it is true that belief and action are analogous, the critic has an important argument for the claim that rational planning procedures are imperfect procedures. If that is correct, then (\textit{modus tollens}) it cannot be the case that the proper criterion for acceptance of a planning procedure is whether or not doing so will have success. Therefore, the question to answer is whether there is such an analogy between belief and action as Velleman has suggested.

\(^{36}\) A similar distinction shows up in David Lewis’ discussion of the question whether evidential decision theory is self-defeating [Lewis, 1981 #1551].
As we saw above, a pragmatist is required to reject this analogy between belief and action. David Gauthier argues for this rejection as follows:

A person’s life may go better if he forms a belief that is not well supported by procedures directed at truth, and he may sometimes be in a position to recognize this. Although life may go better if he performs an action that is not well supported by the procedures directed at success, he cannot be in a position to recognize this at the time of performance and so cannot suppose it rational to eschew such procedures on that account. [Gauthier, 1994 #232, p. 700].

Stated in this way there is a disanalogy between the rationality of belief and that of action. For example, Galileo’s life might have gone better if he had believed that Ptolemaic astronomy, which places the Earth at the center of the universe, was correct. This remains so even after his (telescopic) observation that the planet Venus has phases, just like the moon, which can only be explained if Venus orbits the sun instead of the Earth. Nevertheless, Galileo would have avoided several nasty exchanges with the Inquisition.

However, the same is not true for action. A person might perform an action that is irrational though her life will actually go better as a result of it. For example, a person’s life might go better if she were to buy a ticket in the national lottery in which the expected benefits are marginal in comparison to the cost of the ticket, if it turns out that it is in fact a winning ticket. However, she cannot be in a position where she realizes that this is the case (i.e., that it is in fact a winning ticket) and it not being rational to buy the ticket. Therefore, rationality in belief and rationality in action do not stand in the same relation to one’s life going better. Gauthier concludes from this that the analogy between the rationality of belief and that of action does not hold. It follows, so he would argue, that there is no reason to suppose that rational planning procedures are imperfect procedures.

However, Gauthier does not state the requisite analogy correctly. The question should be whether success (i.e., one’s life going better) plays the same role for the rationality of an action, as truth for the rationality of a belief. In the first line of the passage quoted above,
Gauthier talks about a person’s life going better if he were to form an irrational belief. Further down he compares this with a person’s life going better if he were to perform an irrational action. Unfortunately, that is not the proper analogy. There are two ways in which success and truth can be compared.

First, one could compare ‘life going better’ to ‘forming a true belief’. Thus, we could compare the question whether one can arrive at a true belief if one ignores the procedures directed at truth with the question whether one’s life could go better if one ignores the procedures directed at pragmatic success. If we state the analogy this way, there is a clear parallel between action and belief. It might be the case that one will form a true belief if one ignores the procedures directed at the truth in some particular case, but, just as is the case with action, one cannot be in a position to recognize this when one forms the belief. One cannot because such recognition will, in any plausible procedure for belief acceptance, play a deciding role.\(^\text{37}\)

For example, it may be that ignoring the available evidence for the relation between mass and the gravitational acceleration of the Earth will lead Galileo to come to believe a truth, for example, that this acceleration is constant. However, Galileo cannot be in a position where he realizes that the gravitational acceleration is constant (e.g., through observation after dropping the linked cannon balls) and eschew the scientific method as a result because the scientific method will endorse his conclusions after this observation. The relevant parallel between action and belief is, therefore, not threatened by Gauthier’s point as long as we assume plausible procedures for belief acceptance.

Alternatively, we could compare ‘life going better’ with the ‘totality of one’s true beliefs’. ‘Life going better’ here is interpreted holistically, as one’s entire life. The corresponding interpretation of truth should be ‘the totality of true beliefs’, rather than
forming an individual true belief. Thus stated, the analogy between belief and choice is more complex. Perhaps it could be the case that not following procedures directed at the truth in a particular instance will lead to a greater number of true beliefs. Similarly, one can be in the situation that performing an action that is not supported by procedures directed at life going better, will lead to a better life overall. The question now is, whether you can believe that you are in such a situation and believe it rational to accept the belief or perform the action respectively.

At this point the analogy becomes more complex. So much so, that we can wonder whether it helps us to answer the question that motivated the inquiry of this analogy in the first place. Let me explain. It can be perfectly rational to bring some sacrifice now in order to reap the benefits tomorrow. Believing that you are in such a position does not put pressure either on your belief in the rationality of the action or in the acceptability of the procedure through which you arrived at this decision. However, this is too fast, for, as we have seen there are two ways in which some sacrifice now can lead to future benefits and thus be successful. First, it could be the case the act of sacrificing causally leads to future benefits. For example, saving money now for a rainy day means foregoing certain benefits now, but it leads to have those benefits at a later day. Here it seems perfectly straightforward that one can believe it rational to bring the sacrifice to reap the benefits at a later date. The realization that this single act, considered individually, reduces success, does not put pressure on the belief in the rationality of the act, since this cost is outweighed by the future benefits. Secondly, it could be the case that the future benefits are autonomous effects of the decision to bring a sacrifice. For example, the decision to open only one box in Newcomb’s problem will result in receiving lots of money from the demon-predictor. Here it is far from clear whether the belief that one is in this position

37 Furthermore, just as one cannot believe it is rational to do something that one believes will be disastrous, one cannot believe it is rational to accept a belief that one believes is false. The rationality of belief and the
rationalizes the decision to opt for one box. In fact, this is in a way, the very issue that needs to be decided! So there are two possible ways in which you can believe that the action you are considering is costly and believe that it is rational at the same time. In the first of these, contrary to Gauthier’s suggestion, it can be rational to perform an act that one believes to be sub-optimal (in the short run). In the second of these, it is an open question whether one can believe it rational to decide to bring the sacrifice when deciding so will lead to more benefits.

How about belief? To keep the analogy intact, we need to have two ways in which accepting a false belief might lead to more true beliefs and one knows this to be the case. First, the ‘proper’ way in which new beliefs result from accepting a false belief. Usually, the acceptance of new beliefs is the result of observation or ratiocination against a background of already accepted beliefs. Is there a situation where the agent plausibly could realize that the belief to be accepted is false and at the same time sincerely believe that it would lead to more truths? I doubt there is such a situation. I certainly cannot think of any example. So here we do not have the relevant belief-counterpart of the rationality of choice. The analogy breaks down but not because it is false, but because the relevant object to which the rationality of the sacrifice is to be compared does not exist. That is, one cannot draw the analogy. So what about the second way in which new beliefs result from accepting a false belief? How about a situation where the additional true beliefs are the autonomous effects of accepting the false belief? Imagine a demon who will disclose many otherwise not-believed truths if you accept something that is plainly false. In this case, it is not obviously rational (and probably irrational) to accept the false belief. Note that in this case our doubts mirror those of the analogous case of the rationality of choice. There, just as here, it is at best an open debate whether one can believe it rational perform an action
because the decision to do so, rather than the act, will lead to more benefits. We can conclude, therefore, that when we compare ‘life going better’ with the ‘totality of one’s true beliefs’, the analogy between choice and belief – in so far as it is applicable – is intact.

We can conclude then that, depending on which of the two comparisons is correct, we have reason to believe that the rationality of belief and that of action are not fundamentally different in nature. Therefore, we a good reason to believe that the rationally justified planning procedure is an imperfect procedure, just like rationally justified procedures for belief acceptance.\textsuperscript{38} Success is neither necessary nor sufficient for establishing the rationality of a planning procedure. The pragmatist conception of justification is incorrect unless there is a different argument to the effect that rational choice procedures are perfect. I am not aware that such an argument exists.

If this is correct, pragmatic arguments are indeterminate. Following the rationally superior procedure is neither necessary nor sufficient for attaining success. Establishing that following a certain procedure leads one inevitably to success is not enough to demonstrate the rational acceptability of that procedure even if all alternatives are less successful. We need additional arguments to demonstrate the rational superiority of resoluteness or indeed any of the other planning procedures.

\section{The inapplicability of pragmatic arguments to unstable orderings}

In order to assess the plausibility of the complex, general and abstract observations of the last two paragraphs I propose that we look into the argument of section 4 again. There it was claimed that in the example of figure 1 the agent with unstable preferences realizes the

\textsuperscript{38} This is not a conclusive argument in favor of this particular parallel between the rationality of action and belief. All I have done is debunk an argument to the contrary. However, as far as I am aware, it is the only
most successful overall outcome (A) by being resolute. However, this conclusion is too fast. What warrants the assumption that A is the most successful outcome?

Consider, first, the actual preference view of success – the view that what counts as ‘successful’ is determined by what the agent actually prefers. Given the preference ordering of the agent we know that of all the three alternatives A is the most successful. However, once we restrict the domain of outcomes from \{A, B, C\} to \{A, C\}, A no longer is the preferred option. This is all we know. It is insufficient proof for the claim that A is the most successful outcome.\(^3^9\)

However, some might object to the actual preference view and instead defend the view that success is determined if the agent has ‘correct’ or ‘true’ preferences. There are a multitude of views like these.\(^4^0\) In the next section, I will consider only one of those, namely, David Gauthier’s view that only ‘considered preferences’ are of value and, therefore, determine what is successful. If there is a context where A is the considered preferred outcome from \{A, B, C\} whereas C is that of \{A, C\}, we have again no reason to assume A is the successful outcome. In the next section, I give an example of how considered preferences can be unstable.

Finally, one might argue that the considered preference view, just like the actual preference view, is flawed. Instead such a critic – perhaps David Gauthier – might claim that the proper view of success is determined by what makes life ‘go as well as possible’. In section 2, I proposed that we interpret this to mean that the agent is supposed to give equal

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\(^3^9\) In this connection it should be noted that the main advocate of resolute choice, Edward McClennen, would not endorse the conclusion that A is the best outcome in our example. McClennen claims that an outcome is best if and only if the ex ante self and the post ante self can agree as to what is best. In those cases, and only in those cases, one can claim the superiority of resolute choice. I disagree with McClennen that these are the only contexts of choice where resoluteness is rational. In the next section I give an example of the rationality of resoluteness in the absence of a best outcome. Furthermore, I am not convinced that in all cases where there is a clear best outcome resoluteness is required.

\(^4^0\) To name but a few, [Frankfurt, 1971 #336], [Griffin, 1986 #1572], [Smith, 1994 #675], and [Sumner, 1996 #1580].
weight to his current and future preferences at the time of performance. For brevity's sake, let's refer to this notion as 'prudence', keeping in mind that it is but one interpretation of economic prudence. If there is a context where A is the prudent outcome from \{A, B, C\} whereas C that of \{A, C\}, we have no reason to assume A is the most successful outcome. However, it is quite challenging to construct an example of this nature. In the next section, I present my best effort so far.

There are three reasons why A may not be the most successful outcome in this case, whether this is determined by actual preferences, considered preferences or prudence. First, it could be the case that success is intransitive. That is, A is more successful than B and B is more successful than C but C is more successful than A. Note that this particular ordering of the alternatives is compatible with the information we have about the agent's ordering. If her (actual, considered or prudent) preferences are intransitive there is no most successful outcome because there is always another outcome that is more successful in a pair-wise comparison. In other words, in this situation there is no successful outcome. If there is no successful outcome pragmatic arguments are inconclusive because they simply do not apply.

Secondly, we could doubt that A is the most successful outcome without it being the case that success for the agent is intransitive. Strictly speaking, transitivity requires that if A is more successful than B and B is more successful than C then A is more successful than C. One can satisfy this conditional while denying the antecedent. Thus it may be the case that A and B are incommensurable. An ordering of this type does not violate transitivity. However, it is not complete. Again, we have reason to doubt that there is a straightforward best solution.

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41 See also my remarks in note 11.
Finally, it could be the case that the ordering is complete (all alternative outcomes are commensurable) and that it satisfies transitivity whereas it still is unstable. That is, it could be the case that A is more successful than B and B is more successful than C and A is more successful than C but that C is the most successful outcome when all three are considered. In such a case the manner of valuation does not generate an unambiguous most successful outcome if we just look at the ordering. 42

It seems then that we can dismiss the pragmatic argument for resoluteness in our example. We have formal reasons to doubt its applicability because we cannot be sure that there is a successful outcome in the first place. The presence of such an outcome is essential for establishing the rationality of one of the three planning procedures if pragmatic considerations are necessary to establish the superiority of any of the procedures. If this is correct, we may have identified a class of examples of unstable preference orderings in which success is not a necessary condition for the rationally acceptable planning procedure. This tentative conclusion is only valid if there is at least one rationally superior planning procedure in cases like this. I believe we can often identify intuitively acceptable planning procedures in the absence of a successful outcome. Which procedure is rational depends on the complete, ‘thick’ description of the situation rather than its formal choice-theoretic characteristics.

§8 Three cases of instability

In this section I discuss each of the three proposals for ‘success’. I will give three examples – one for each of these proposals – which have the formal structure of figure 1. In each of these examples, there is not a successful outcome on the proposal under discussion. I will

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42 See also the discussion in [Hampton, 1998 #293, p. 260-261, 276-278].
show that in each example, though there is not a successful outcome, there is a rational plan available. I will also show that each of the three proposed planning procedures could be justified.

Example 1: actual preferences and the minimax regret chooser. Suppose that we settle on the actual preference view as the correct account of what is successful for the agent. Then, consider an agent who orders her prospects so as to minimize her possible regret. She considers for each prospect what could have happened under the same conditioning event had she chosen otherwise. Suppose this person faces a decision tree like that of figure 1. Suppose moreover that outcome A is a lottery which, depending on certain events (E₁, E₂ or E₃), will either give her $5, $2 or $10. B stands for a lottery that gives $10, $5 or $1 under the same conditioning events. C, finally, will give $0, $10 or $4 under those events. Suppose this agent lacks all knowledge of the likelihood of any of these states. In such a case she decides to take that course of action that will minimize her maximal regret. 43 In order to determine this she looks at what she could have had under the conditioning event had she chosen otherwise. The maximum difference between what she actually got and what she could have had given the conditioning event is the amount of regret of that particular prize. She does this for each prize and each event and then she determines the maximum possible regret. Next, she opts for the lottery with the smallest maximal regret.

If we compare A, B and C in a table we can calculate the maximum possible regret (see figure 3). We see that the pattern described in section three repeats itself here. When comparing A, B, and C, A is the most preferred option. However, if we limit the range of comparison to just A and C, as will be the case at t=2, C is preferred over A (see figure 4).

43 [Savage, 1972 #271, ch. 9].
Note that the reason this agent has unstable actual preferences in this case, is because she has intransitive preferences. A brings less maximal regret than B; B less than C, but C less than A in each pair-wise comparison.44

So how should we decide which is overall the rational plan? Inspection of the preference ordering does not help us: for each outcome there is a more preferred outcome. That is, there is not a successful outcome on the actual preference view. However, there is a sense in which A is the rational outcome in this situation. A is the only choiceworthy outcome in the set of three outcomes that are accessible at the outset of the decision problem – accessible in the weak sense of being terminal points of some sequences of moves. To say that A is choiceworthy in \{A, B, C\} does not mean that A is actually preferred to any other outcome in that set, nor even that there are no alternatives that are preferred to A (C is preferred to A). However, the fact remains that when this agent considers all outcomes, A stands out. So we have a reason to opt for A in this situation. Not because A is the most preferred and, therefore, on the account under consideration
the most successful, but because it is the only choiceworthy outcome when we look at all outcomes.

The intuition that the choiceworthiness of A gives a reason for regarding it as the rational outcome is strengthened when we reflect on the nature of the standard of evaluation that generates this agent's preferences, i.e., the avoidance of regret. One regrets one's choices when one realizes that one would have done better if one had chosen differently given what happened. Regret, therefore, is a holistic way of evaluating outcomes that takes on board information of the entire choice set. Each outcome is judged against the background of what would have been the case had the agent chosen otherwise. At t=1, the background of what would be the case encompasses B and C, whereas at t=2, this background consist of C only. The choiceworthiness of A is determined against a richer background than the choiceworthiness of C. That is to say, A is choiceworthy when there is more information about available alternatives. The choice for A reflects all the information that the agent has available, whereas the choice for C at t=2 ignores some of it. Given that the quality of a decision improves the more information it reflects, we have an additional consideration in favor of regarding A uniquely choice worthy. A reflects more relevant information, given the agent's standard of evaluation than C. Therefore, this agent should plan to realize A and stick to that plan. Resoluteness then is the most rational way of planning in this case.

Several things should be noted about this conclusion. First, we arrived at this conclusion only after closer inspection of the situation. The preference ordering alone did not supply us with enough information about the best way of planning. We needed to know why the agent ordered the outcomes the way she did. This ‘thick’ description of the

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44An example of an alpha violation that does not imply intransitivity is the following. Let A have as prizes $10, $5 and $6; B has $10, $0 and $10; C, finally, has $7, $2 and $7. Now C comes out best when comparing all three lotteries, whereas A≻B, B≽C and A≽C and transitivity is, therefore, maintained.
context of choice led us to use choiceworthiness to determine resoluteness as the appropriate planning procedure.

Secondly, one may be tempted to argue that this closer inspection of the thick description of the situation resulted in a re-description of the outcomes. That is, at $t=1$ the agent does not face a choice between these three lotteries, but between these three lotteries plus their accompanying maximum regret. In other words, once we learned about the standard of evaluation of the agent, we implicitly re-described the outcomes such that A was the most successful. As a result we were still reasoning as pragmatic foundationalists, using success to identify the correct decision procedure in this situation. However, this is not correct. Even if we allow for these re-descriptions, we do not have a clear and unambiguous most successful outcome, because these re-descriptions do not remain constant throughout the tree. Once B is no longer available at $t=2$, the outcomes A and C change. One could reply that, therefore, figure 1 is not an adequate representation of the choice problem. However, that does not challenge the solution that I have defended above. My argument there is independent of the exact shape of the tree. Regardless of what the correct model of the situation is, if minimizing the maximum regret determines the agent’s actual preferences, the rational choice procedure considers all available alternatives, all available information, in determining the rational course of action. In conclusion then we can say that if we interpret pragmatic success in terms of the actual preferences of the agent, we have identified a case where such success is neither necessary nor sufficient to identify the rational choice procedure.

However, one might argue that this example just shows how implausible the actual preference view of success is. For example, it is unclear whether this way of determining

45 There are some serious methodological concerns about such re-descriptions. Here we see one of these illustrated. A choice problem should be described such that it is independent of its solution. Otherwise, analysis is not really possible. If we allow for re-descriptions along the line suggested, the choice problem
‘regret’ would pass the test of being ‘considered’. In fact, one could argue that I appealed to the standard of considered preferences, since I argued that the resolute way is the only way which reflects all that the agents believes about the case at hand, which is one characteristic of considered preferences. So my case against success as a necessary or sufficient criterion for establishing the rationality of resoluteness is good against the actual preference view of success.

Example 2: Considered preferences and the procrastinating professor.\textsuperscript{46} Suppose then that, instead of actual preferences, we use considered preferences as our standard of success. A professor is asked to review a book for a philosophical journal. She is excellently placed to do the job. She is an authority on the subject and she has some interesting things to say about the book. At the moment she has no other commitments that conflict with taking on the review. She is currently writing a book, but, unlike the review, there are no deadlines for this other project. All these things considered, this professor prefers at t=1 that she write the review. Let us assume, what seems reasonable in this case, that the professor’s preferences pass the test of being considered. They reflect what she knows and believes as well as her experience with writing reviews.

However, the professor also knows that, come the time that the review has to be written, she will be so engrossed in her book project that she will want to give the book priority. This has happened before and she has no reason to believe it will not happen this time. Her preferences at t=1 as well as those at t=2 are considered (the idea of considered preferences does not imply that they be stable!). She knows that once she is working on the book it will be hard to drop it and concentrate on the review instead and it would take some time to get back into it. Finally, let us assume that, \textit{ceteris paribus}, the professor prefers changes depending on whether we choose ‘down’ or ‘across’ at t=1. See also \cite{Broome1991#1524, Broome1993#310, Hampton1998#293, 268-281} and \cite{Verbeek2001#836}. 

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– again upon consideration – not to renege on her commitments. (It is bad for one’s reputation, creates ill feeling from respected colleagues and is unfair to the review editor.) Suppose that in figure 1 A stands for accepting the commitment and writing the review at $t=2$; B stands for declining to do the review and work on her book at $t=2$ instead, while C stands for accepting the commitment but work on her book at $t=2$. What should this professor do?

The first thing to observe is that there is not a most successful outcome on the considered preference view. At $t=1$, A is the most preferred upon consideration, but at $t=2$, C is the most preferred upon consideration. The professor will change her mind about the relative importance of the review in a completely predictable way. However, one thing remains constant: her (relatively weak) considered preference not to renege on commitments. So, B, not committing herself in the first place, is better than C (accepting the review and renege). The rational course of action for our professor will be to anticipate on her change in considered preferences at $t=2$ and avoid the ‘cost’ of reneging on her commitment. Therefore, the professor should deliberate in a sophisticated manner and choose B at $t=1$.

At this point, it might be objected that this just is what a pragmatic foundationalist would recommend: under the circumstances B is the most successful outcome. I disagree. First, the consideration that points to sophistication as the rational planning procedure is not a pragmatic consideration. After all, B is the only outcome that is not preferred upon consideration either at $t=1$ or $t=2$. Furthermore, note that the argument here is not like the usual arguments in favor of sophistication that involve anticipated (temporary) lapses in rationality (e.g., Ulysses and the sirens, the unwilling addict, etc., etc.). In those cases, the defender of sophistication argues that the most successful outcome is not feasible: one can

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46 The example is slightly different than that of [Jackson, 1986 #1587].
predict it will not come about. However, in the case at hand it is not the case that A is not feasible at t=2. The professor could very well drop her book project and take the time to write the review. It is not her ability to do A that is an issue. However, she foresees that upon consideration her preference for writing the review will change. She also foresees that this change is not irrational as it reflects her knowledge and experience with book reviews on the one hand and the excitement of making advances in one’s own projects on the other. Sophistication, in this case, is the most reasonable way of avoiding the potential costs of such reasonable and foreseeable changes in her evaluation.

At this point, it might be objected that there is not a most successful outcome for the procrastinating professor if either actual or considered preferences are our standard of success. However, it clearly is prudent to be sophisticated in this situation. If prudence determines what is successful here, not accepting the review is the most successful outcome. This satisfies the preferences of the agent at the time of performance best and the corresponding choice procedure is – on the pragmatist criterion – rationally acceptable. So, we can read this case as an objection to the considered preference view of success, rather than an objection against pragmatic foundationalism for we still have not used the proper standard of success.

Example 3: Prudence and pious Mark. That leaves us with prudence as the standard of success. Mark is a young man with a strong faith. His main aspiration in life is to become a priest. Currently, he is enrolled in a relatively liberal Catholic seminary, located in a large city. The seminary encourages its students to ‘go out into the world’ and engage in social work in addition to the more traditional courses in Aramaic and classical theology. Mark observes that, though many freshmen in the seminary share his aspirations and aim to enter the priesthood, quite a lot drop out in later years, as a result of their experiences ‘in the world’. They lose their faith and enter other professions. Although he does not
appreciate their grounds for rejecting their vocation, he fully expects that if he stays in the big city environment he will undergo a similar change of heart and – probably – become a banker. However, there is an alternative! Mark could enroll in a strict, orthodox seminary in a remote area of the country, where he will not undergo these ‘corrupting’ experiences. He will be kept on the seminaries premises, spending his days studying theology, etc. He would not enjoy this move to the countryside far away from friends and family, but it is a sacrifice he would be willing to make in order to avoid the loss of his vocation.

Note that Mark’s predicament corresponds to the shifts of figure 1. At time $t=1$, staying in the large city and entering the priesthood (A) seems the best possible life for him. This is clearly better than moving to the orthodox seminary (B). However, at time $t=2$, a career as a businessman (C) looks like the best course of life. So we need to be able to rank the life as a priest vis-à-vis the life of a banker in order to determine which is the most prudent, and therefore, successful outcome. In terms of prudence, we cannot determine which course of action is best. At the time of performance B will satisfy both his present and future preferences, but then again so will C. Note, furthermore, that in terms of prudence B and C are incomparable. It is not the case that a life as a priest is better, worse, or as good as life as a banker. These careers are incommensurable, even though both are prudent in the sense that they satisfy both present and future preferences. Thus, in this situation there is no most successful outcome.

What should Mark do? Should Mark be resolute and stay in the big city before entering the priesthood? Should he doubt his ability to do so and transfer to the provincial orthodox college far away from his family and friends? It seems to me that Mark should do neither, but stay in the big city and – predictably – become a banker. That is, myopia seems to be a reasonable planning procedure in this case. The anticipated shift in his preferences...
over time reflects a change in his values (or rather, in his standards of evaluation). This is nothing to be afraid of. It comes with becoming a mature person that one’s values change. Reconsideration of one’s religious convictions is an important part of that. Planning in order to avoid the consequences of such changing values reflects an irrational fear for a perfectly natural development on one’s life.

Note that this is not a pragmatic argument. There is no reason to assume that the life of a banker is more prudent than that of a priest. They are incommensurably different lives. The reason why myopic deliberation seems rationally acceptable in this case is derived from broad considerations that have to do with the nature of the anticipated shifts and a certain outlook on the value of those shifts.

From all of this we can conclude the following. First, success is not sufficient in any of the three cases to determine the rationally acceptable way of planning since we need additional arguments for this determination. Secondly, pragmatic considerations of a sort do play a role but we are unable to assess whether this role is a necessary one. Third, in so far as success, however conceived, is part of the argument in favor of a planning procedure in these three examples it is compatible with all three procedures (including myopia) identified in section 3. Therefore, pragmatic justifications (if indeed we can characterize the discussion in these examples as such) are indeterminate. Finally, success does play some role in all the examples. However, we were unable to test the necessity of success. This raises the question how we should understand its role.

47 This sets this example apart from the example of the minimax regret chooser. The latter maintained the same values (even though her preferences shifted), whereas Mark’s values change.
The role of pragmatic success in defending a conception of rationality

In the previous sections I argued against the view that pragmatic considerations are both necessary and sufficient for justifying the rationality of a planning procedure. However, we also saw that such considerations are relevant in justifying the rational planning procedure. How should we think of the role of success in defending rational choice?

One proposal is that we can formulate a weaker criterion than success for justifying a planning procedure that is in the spirit of pragmatic foundationalism. This condition would state that rather than success we should consider choice procedures in terms of non-failure. Non-failure could be seen on this proposal as a sufficient condition or a necessary condition. Thus, if a choice procedure does not fail to bring success then it must be justified (non-failure is sufficient). Vice versa, if a planning procedure is rational then it does not fail to bring success (non-failure is necessary). If this suggestion is going to work at all we should be careful and not identify non-failure with success. (For in that case the sufficiency of non-failure just is the sufficiency of success whereas the necessity of non-failure is the necessity of success). Tertium datur, therefore.

Let us start with the first suggestion. Non-failure could be sufficient for the rationality of a choice procedure. Since there is no formal characterization of success available in the cases above, none of the procedures fail. That would imply that all three procedures are appropriate in each case. Since I have demonstrated that this is not true, non-failure is not sufficient to establish the rationality of a choice procedure.

The second suggestion is that non-failure is necessary for the justification of a choice procedure. This seems right. It is applicable in all three cases that were discussed in section six. There we saw that all three choice procedures do not fail. We also saw that further considerations were needed to identify the appropriate choice procedure in each case.
Perhaps this gives us the proper understanding of the role of success. It explains why non-failure alone does not tell us very much about the justified choice procedure. Moreover, it does capture part of the intuition that success is relevant in a rational choice procedure.

However, I believe this is still too strong. If our characterization of rational choice procedures as imperfect procedures is correct we cannot claim that non-failure is necessary for a procedure to be rational. We can expect that rational choice procedures sometimes will fail. The very most we can claim is that we should have the justified belief that our choice procedures will not fail in the richly described circumstances.

Can we say something more general about the justification a choice procedure other than that ‘it depends on the circumstances’? In what follows I can only briefly speculate about this and state my intuitions. Why would one believe that success is both necessary and sufficient for justifying a rational procedure of choice? I suspect that there are two reasons for this conviction. First, there is the view that a successful justification must be a foundationalist one. Foundationalism in this connection is the view that a successful justification of a procedure of choice is based on a firm and unproblematic fundamental assumption. The foundation in this case is the consequentialist intuition that rationality makes one’s life go better.

As we have seen, this is not a sufficient basis to justify a procedure of choice. Moreover, I suspect one will never be able to point out one alternative, absolute foundation that is sufficient to carry all the justificatory weight. For this reason I am more optimistic about the chances of a coherentist form of justification. In such a justification success is but one of the many considerations that can be introduced to support a particular procedure of rational planning.

48 This was suggested to me by Michael Ridge.
The second reason why people might be inclined to think that pragmatic success is the bedrock of a theory if rational planning is the idea that there is at most one truly rational planning procedure. As the discussion of the examples in section seven has shown, this is not the case. If there is indeed only one rationally acceptable planning procedure it is a maximally permissive one that is compatible with any of the three procedures of planning depending on the situation.

Such a maximally permissive planning procedure again suggests a coherentist model rather than a foundationalist one because a coherentist account is more responsive to all the different and subtle considerations that could make a difference in specific situations.

Obviously this is not the occasion to spell out such a coherentist justification or to delineate the exact content of a maximally permissive theory of choice. I hope to have shown, however, that we need other ideas than the notion of pragmatic success alone to pull off that project.

References

49 [Radzik, 1999 #838] formulates an attractive coherentist model of justification of a theory of practical reason. As for the content of the desirable theory of choice, the proposal of [Rabinowicz, 1995 #666] for a theory of wise choice may be a good starting point since it rejects both NEC and SEP. However, more thinking is needed as to how wise choice would fare in the type of cases that I have described here, in particular, in the case of example 3.