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Do Self-Committers Mind Other-Imposed Commitment? An Experiment on Weak Paternalism*

Abstract:

This experiment investigates whether protégés judge paternalism by means of its consequences or on principled grounds. Subjects receive a payment for showing up early the next morning. The later they show up the less they get. Protégés can self-commit to a specific show-up time or maintain spontaneity. By making this binary choice, protégés express their preference for liberty. Simultaneously, their patron is either paternalistic or liberal by making this choice on their behalf. We investigate whether self-committers' willingness to restrict their own freedom predicts their attitudes toward paternalism.

1. Introduction

Personal experience as well as anecdotes (as can be found in Elster 2000) suggest that people, for instance, place their alarm clock out of reach to get out of bed or restrict their liquidity to prevent excessive shopping. In employing strategies of rational self-management (see Schelling 1978; 1984) they are willing to commit their future selves to their plans. If these people were pure consequentialists, it should not matter to them whether someone else, for instance, placed the alarm clock out of reach or restricted their liquidity temporarily. However, such forms of weak paternalism may be problematic not only from the external point of view of economists and philosophers but possibly from the point of view of those who would choose self-commitment. This issue has so far been unduly neglected in an otherwise broad discussion in economics on commitment, on the one hand, and paternalism, on the other.

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By means of an incentivized economic experiment this article addresses the question if it makes a difference whether commitment is self-imposed or other-imposed. In particular, it is scrutinized whether protégés' willingness to self-restrict their freedom of choice predicts their attitudes toward weak paternalism.

The remainder of this article is organized as follows. In *section 2* we will give an overview of the theoretical background and the experimental literature concerning related issues. *Section 3* describes the experimental design, hypotheses are derived in *section 4*. *Section 5* discusses the experimental results while *section 6* concludes.

2. Background

2.1 Theoretical Background

There are two strands of argument which have to be taken into account: First, the literature on self-commitment, and, second, the literature on paternalism, the former relating chiefly to economics, the latter to philosophy.

In a seminal article, Strotz (1956) discusses self-commitment as the method a rational weak-willed decision maker will use to stick to her plan and overcome her anticipated time inconsistency.¹ Alternative formulations of the problem have been discussed (see, e.g., Thaler and Shefrin 1981; Laibson 1997; Gul and Pesendorfer 2001; Fudenberg and Levine 2006). If a decision maker is expected either to lack this “sophistication” (Hammond 1976) or have no self-commitment devices at her disposal, others may decide to act on her behalf and in her interest. This infringes on her autonomy and leads to issues of paternalism (see, for instance, Thaler and Sunstein 1993; 2008; Glaeser 2006; Scoccia 2008).

Dworkin (2010) defines paternalism as follows: “[. . .] X acts paternalistically towards Y by doing (omitting) Z:

1. Z (or its omission) interferes with the liberty or autonomy of Y.
2. X does so without the consent of Y.

¹ In “A Treatise of Human Nature”, this time inconsistency has been ingeniously described by Hume (1978, 536): “In reflecting on any action, which I am to perform a twelve-month hence, I always resolve to prefer the greater good, whether at that time it will be more contiguous or remote; nor does any difference in that particular make a difference in my present intentions and resolutions. My distance from the final determination makes all those minute differences vanish, nor am I affected by any thing, but the general and more discernable qualities of good and evil. But on my nearer approach, those circumstances, which I at first over-look'd, begin to appear, and have an influence on my conduct and affections. A new inclination to the present good springs up, and makes it difficult for me to adhere inflexibly to my first purpose and resolution. This natural infirmity I may very much regret, and I may endeavour, by all possible means, to free my self from it. I may have recourse to study and reflexion within myself; to the advice of friends; to frequent meditation, and repeated resolution: And having experienc'd how ineffectual all these are, I may embrace with pleasure any other expedient, by which I may impose a restraint upon myself, and guard against this weakness.”

3. X does so just because Z will improve the welfare of Y (where this includes preventing his welfare from diminishing), or in some way promote the interests, values, or good of Y.”

He emphasizes that the second condition has to be read as distinct from acting *against* the consent of the protégé. She may in fact consent but this may not be known to the paternalist. Furthermore, we will focus on what Dworkin (2010) calls weak as opposed to strong paternalism:

“A weak paternalist believes that it is legitimate to interfere with the means that agents choose to achieve their ends, if those means are likely to defeat those ends. [...] A strong paternalist believes that people may be mistaken or confused about their ends and it is legitimate to interfere to prevent them from achieving those ends. [...] Another way of putting this: we may interfere with mistakes about the facts but not mistakes about values.”

According to the first criterion, paternalism is characterized by a patron’s interference with the liberty or autonomy of her protégé. A weak paternalist takes her protégé’s ends for granted and commits her to her self-determined plan. Technically, this commitment restricts the protégé’s future choice set and therefore her spontaneity. In the same vein, a weak paternalist will assure that her protégé does not spoil her own plan by succumbing to distractions along the way. For someone whose goal is to maximize her life span but who is too lazy to fasten the seatbelt, mandatory seatbelt wearing is only weakly paternalistic because that person has been committed to observing safety rules.

Thus, weak paternalism, as defined by us in line with the philosophical literature, fulfills the same goal as self-commitment. It commits a decision maker to a plan she has chosen herself at one point in time. A weak paternalist helps the decision maker to pursue her plan, even though the former may not necessarily agree with its ends.

It is worthwhile to stress the difference between the weak paternalism we discuss here and the concept of libertarian paternalism. Recently, the latter receives major attention from political observers (see, e.g., The Economist 2006 or Harkin 2006). One of its main proponents, Cass Sunstein, has become an influential advisor of the U.S. government (Weisman and Bravin 2009). Libertarian paternalists claim that “people lack clear, stable, or well-ordered preferences” (Sunstein and Thaler 2003, 1161). Thus, libertarian paternalists propagate that experts should make the “right” choice on people’s behalf without restricting their freedom, e.g., by the use of default rules as opposed to prohibitions. Instead of being coerced, subjects are “nudged” (Thaler and Sunstein 2008) to make this “right” choice. Therefore, libertarian paternalism may well be considered strong paternalism in the sense of the contrastive pairs “strong” versus “weak” as discussed above. In contrast to libertarian paternalism, weak paternalism may well rely on coercive mechanisms in order to commit people to their own ends. In fact, the paternalistic commitment we use in our experimental design is coercive.

Furthermore, the question of agency raised by us should be isolated from the discussion on the intrinsic value of freedom of choice, claiming that freedom has a value beyond being a means to achieve other ends (see, e.g., Arrow 1995).² Several attempts to measure this intrinsic value have been proposed (see Sen 1988; Sugden 1998; 2001; Bavetta and Guala 2003). Our investigation focuses on a different problem. A self-committer has already opted against freedom of choice at some future time despite its instrumental and intrinsic value and may still refute other-imposed commitment.

2.2 Experimental Background

Ariely and Wertenbroch (2002) conducted a field experiment that gave students the opportunity to set binding deadlines for handing in three course works. The individually chosen deadlines were ambitious and actually enhanced grade-wise performance. However, the authors compare grades of these students with those of students in a control group with evenly spread deadlines. The students in the control group performed better than those with self-imposed deadlines, letting the authors conclude that self-commitment devices are used if available but used ineffectively.

Ashraf et al. (2006) designed a commitment savings product for a Philippine bank. The product restricted the customers' access to their savings and was offered to a randomly chosen subset of present and former clients of the bank. Almost 30 % of clients actually chose to open the respective account.

A similar fraction of self-committers could be observed when a larger but deferred money payment was offered in a laboratory experiment (Casari 2009). The subjects took the possibility to reduce or eliminate a smaller but sooner money reward, which they could choose alternatively once it was within reach and which they considered a temptation.

When analyzing consumer habits of U.S. health club members, DellaVigna and Malmendier (2006) identified a widespread inclination to self-commit to work-out activities. This was shown by the fact that members chose a flat-fee contract or long-term membership. Then again, self-commitment often turned out to be ineffective. Even though monthly members had to pay higher cancellation fees than yearly members, the former stayed enrolled longer. Moreover, flat-fee members paid higher prices per expected visit than pay-per-visit customers, given their actual average attendance. The authors establish that consumers mispredict their own future preferences.

² An example for the merely instrumental value of freedom of choice in economics is given in Amador et al. 2006. Here, for a sophisticated planner, uncertainty may outweigh the advantages of self-commitment. The authors model the decision maker's trade-off when confronted with her own weak will and exogenous uncertainty at the same time. Tied to the mast, Ulysses is prevented from giving in to the Sirens but it necessarily leaves him incapable of reacting to a sudden storm. In an intrapersonal principal-agent problem, the principal's optimization is a maneuver between the Scylla of a weak-willed agent and the Charybdis of an externally endangered agent in restraint. For Sen (1988, 294) "[t]he foundational importance of freedom may well be the most far-reaching substantive problem neglected in standard economics".

Although the problem of paternalism is not addressed explicitly in the aforementioned experiments, Ariely and Wertenbroch (2002) as well as DellaVigna and Malmendier (2006) observed that subjects' inability to predict their own behavior caused ineffective self-commitment. In Ariely and Wertenbroch (2002), the superior performance of students with externally imposed deadlines is emphasized. Besides the naiveté of weak-willed decision makers who blindly step into the inconsistency trap and the nonavailability of self-commitment devices, ineffective self-commitment may be another reason for outside intervention. Students' attitudes toward the paternalistic intervention were not elicited, however.

3. Experimental Design

3.1 Methodology

The real effort was designed to come across as natural and familiar as possible to subjects. Furthermore, we aimed to maximize the likelihood of weak will while using an ethically justifiable procedure. According to our design, subjects received the more money the earlier they showed up at the laboratory. They were asked to announce their show-up time in advance. The temptation which we expected them to anticipate was to procrastinate getting up at the cost of losing money.

The experiment consisted of two sessions that took place on two consecutive days. In the first session, all relevant choices were made and collected, while the second session only served to make payments. We used the strategy vector method (Selten 1967) to collect subjects' choices. For the purpose of eliciting protégés' attitudes toward their patrons' policy style, each subject had to make a reward choice for both possible cases. Since we were interested in moral as opposed to emotional judgments we were explicitly interested in cold choices. In this way, we doubled observations and did not rely on patrons' actual choices as we obtained information also for the counterfactual case. The order of choices was the same for all subjects.

The upcoming task was not known to subjects when they arrived at the first session. The invitation contained only exact information about the date and the time of the first session. It also stated that the second session would take place the next morning but that details could not be given until the first session. Students were therefore supposed to register for the experiment only if they had no important appointments before noon on the day of the second session.

When designing the experiment, we made a special effort to fulfill Dworkin's criteria (see *section 2*): If a patron chooses to commit her protégé to her plan, she will actually interfere with her liberty or autonomy of decision making. This is accomplished by the commitment choice, which eliminates alternative options from the protégé's choice set (criterion 1). The patron also makes her choice of policy style without knowing the protégé's preferences for liberty. In particular,

no information about choice of self-commitment or self-liberation made by her counterpart is provided. Thus, if a patron chooses commitment, she restricts her protégé's liberty without the latter's explicit or implicit consent (criterion 2). Since patrons' payments are solely influenced by protégés' reciprocation to patrons' choices of policy style, patrons will try to anticipate protégés' judgments of their policy style. If a money maximizing patron chooses commitment, she expects an a posteriori consent via positive reciprocation. The design feature of later reciprocation is common knowledge from the beginning. A protégé thus knows that a money maximizing patron is trying to promote her interests (criterion 3).

Ultimately, the paternalist does not prescribe a specific goal but commit the protégé to a show-up time which she has decided herself. Strong paternalism in our design would have meant to alter the protégé's plan and commit her to an earlier time slot to make her earn more money. We assume that a patron could be confident about the serious intention of her protégé to show up in the chosen time slot. The reason is that irrespective of her own preference for liberty, the protégé knew that she might possibly be committed to showing up in this particular time slot by her patron. By interfering, the patron actually implements this possibility to prevent the protégé from spoiling her own plan by getting up too late. This makes the patron a weak paternalist.

A few more comments should be made concerning protégés' reciprocation.³ Other-regarding preferences could influence protégés' choices to reward or punish a patron. If other-regarding preferences and weakness of will interacted, the interpretation of our results would be aggravated. Assume, for example, self-liberators are generally more altruistic than self-committers. Differences in both groups' rewards would then be a compound of their differences in altruism and their different attitudes toward both policy styles. However, to the best of our knowledge, there is no strong evidence to justify such a theoretical prior. Furthermore, other-regarding preferences should not disturb a comparison of the judgments toward both policy styles within subjects. Patrons may, of course, also have strong preferences over the policy style itself. This causes an interpretation problem if a protégé believes in a patron's malevolent intention. In this case, monetary reciprocation should at least weaken this belief. Finally, a protégé's reciprocation choice is also likely to be time dependent. We elicit the attitudes of the protégés at the planning stage. A protégé who rewards a paternalist may desire to punish her at the moment where she has to carry the consequences and actually get up. Similarly, a protégé who has punished the paternalist in the planning stage may want to reward her after having successfully arrived early. This issue of "attitude reversals" is an interesting topic for future research.

³ The author thanks an anonymous referee for pointing out the following issues.

3.2 Before the First Choice

In the first session, before instructions were distributed, subjects were asked to answer six preexperimental questions (see appendix 1). These questions were about their daily habits and student life. All questions had to be answered with “yes” or “no”. The fifth question read “Are you often angry that you do not manage to get up as early as planned?” It was “hidden” among others of heterogeneous kind to prevent strategic answers. Later on, subjects were informed that their counterpart would be provided with their answer to this question. A strong correlation between the answer “yes” and choosing self-commitment would give additional support for protégés’ belief in a committing patron’s benevolent intentions. However, the question was merely hypothetical and not incentivized. Instructions were then distributed (see appendix 2), and subjects were asked to read them carefully. Every upcoming choice was explained extensively before the first choice had to be made.

Subjects were first matched with a counterpart. Only at the very end of the experiment, subjects were randomly assigned one of two roles whereby one subject was assigned one role and her counterpart the other. Therefore, each subject made all five decisions before knowing her role. In the following, we refer to these roles as patron and protégé, although they were called role A and role B in the instructions.⁴ Choices which were made in the other role were later irrelevant for subjects. Patrons could not show up for the second session and accordingly received a payment only for the first session. Protégés could also show up for the second session and received an additional payment where appropriate. For the first session, all subjects received a show-up fee of 2.50 € and an initial endowment (see paragraph 3.3.4).

3.3 The Five Choices

3.3.1 Choice 1: Time Slot

Subjects’ first choice applied only if they were assigned the role of protégé in the end. They were asked to choose a time slot t_i , where $i = \{1, 2, \dots, 10\}$, in which they would show up for the second session to collect their payment. The time when they crossed the threshold to the computer lab was decisive because it was measured by a radio-controlled clock. Payments decreased linearly according to the time payment scheme in Table 1.

Subjects chose their time slot under the following consideration. If they came earlier, they would have to wait until their chosen time slot started and would then only receive the payment corresponding to the chosen time slot.⁵

Simultaneously, each subject’s counterpart chose her own time slot in the role of protégé.

⁴ While the labels we introduce here are descriptive, we used neutral ones in the instructions to avoid emotional connotations caused by mere names.

⁵ As will become clear later, this was done to prevent that subjects preferring liberty would simply choose the final time slot, thus maintaining full flexibility while preventing paternalistic commitment.

Time slot	Earliest arrival (a.m.)	Latest arrival (a.m.)	Payment (€)
t_1	6.00	6.15	17.50
t_2	6.15	6.30	16.00
t_3	6.30	6.45	14.50
t_4	6.45	7.00	13.00
t_5	7.00	7.15	11.50
t_6	7.15	7.30	10.00
t_7	7.30	7.45	8.50
t_8	7.45	8.00	7.00
t_9	8.00	8.15	5.50
t_{10}	8.15	9.00	4.00

Table 1: Time Payment Scheme

3.3.2 Choice 2: Self-Liberation or Self-Commitment

Subjects' second choice also applied only if they were assigned the role of protégé in the end. Each subject decided for herself between two alternatives. These were liberty and commitment.

Liberty meant that the protégé could decide spontaneously to show up the next morning in the chosen time slot or a later time slot she preferred. If she showed up later, the protégé would only receive the payment corresponding to the time slot in which she actually showed up.

Commitment meant that the protégé could only show up in the chosen time slot. If she showed up later, she would not receive anything. This was the case for all but the final time slot since coming later was not possible after that. It was emphasized that, apart from forgoing the payment, not showing up at the second session would not have any negative consequences for a protégé such as exclusion from further experiments, etc.

Simultaneously, each subject's counterpart made an analogous choice in the role of protégé. Since subjects made a choice between the two alternatives for themselves, we refer to them as self-liberation and self-commitment.

3.3.3 Choice 3: Liberalism or Paternalism

Subjects' third choice was the only one that applied if they were assigned the role of patron in the end. Subjects decided between liberty and commitment for their counterpart.

Liberty meant that the protégé could decide spontaneously to show up the next morning in the chosen time slot or a later time slot she preferred. She would only receive the payment corresponding to the time slot in which she actually showed up.

Commitment meant that the protégé would not receive anything if she showed up in a later time slot than the one that she had chosen. If her coun-

terpart had picked the latest time slot, the subject in the role of patron was informed since, in that case, a choice between the two alternatives would become redundant.

Simultaneously, subjects' counterparts made an analogous choice in the role of patron. Before making their choice, subjects were informed about their counterparts' answer to the preexperimental question. Since these choices between the two alternatives were made on behalf of subjects' counterparts, we refer to these as liberalism and paternalism.

If a subject was assigned the role of protégé in the end, there were two choices which could, but need not, coincide. The first was made by the protégé for herself, the second was made by the patron for the protégé. The protégé's choice was implemented with 25 % probability while her patron's choice was implemented with 75 % probability. Probabilities were asymmetric to render the patron's choice more important.

3.3.4 Choices 4 and 5: Attribution of Praise or Blame

Subjects' last two choices concerned our variable of interest and applied only if they were assigned the role of protégé in the end. Our aim was to investigate the attitudes of protégés toward their patrons' policy style by reward choices. Since the elicitation of attitudes is crucial to answer our research question, special emphasis was placed on making the respective choices substantial. Therefore, protégés' choices had payoff consequences for patrons as well as protégés.

Protégés were endowed with 0.50 €, patrons with 5.00 €. Protégés could vary their patron's endowment by increasing or reducing it. In either direction, this could be done in steps of 0.50 €, up to a maximum variation of 2.50 €, by paying 0.10 € of their own endowment for each step. Protégés could also leave it unchanged, which did not cause any costs. The patron's reward depended exclusively on the protégé's choice. All positive and negative reward possibilities can be seen in Table 2.

Since subjects did not know their counterpart's choice of policy style, they had to make a reward choice for both possible cases: being assigned the role of protégé and facing a liberal patron and being assigned the role of protégé and facing a paternalistic patron. Simultaneously, subjects' counterparts made two analogous choices in the role of protégé.

3.4 After the Last Choice

After all choices were made, half of the subjects were assigned the role of protégé and the other half the role of patron by a random mechanism. For protégés a second random draw determined whether their own or their patron's liberty-or-commitment choice was implemented. All subjects were then informed about their role. Patrons were informed about the reward choice of their protégé pertaining to the case that applied to them and their final payment. Protégés were informed about their patron's choice and the result of the random draw that determined whether their patron's or their own choice was relevant. The program

Patron initially (€)	Variation (€)	Patron new (€)	Costs (€)
5.00	+ 2.50	7.50	0.50
5.00	+ 2.00	7.00	0.40
5.00	+ 1.50	6.50	0.30
5.00	+ 1.00	6.00	0.20
5.00	+ 0.50	5.50	0.10
5.00	+ 0.00	5.00	0.00
5.00	- 0.50	4.50	0.10
5.00	- 1.00	4.00	0.20
5.00	- 1.50	3.50	0.30
5.00	- 2.00	3.00	0.40
5.00	- 2.50	2.50	0.50

Table 2: Reward Scheme

then stated when to show up for the second session and under which conditions. Finally, they were informed about their payment for the first session depending on their reward choice, given the decision of their patron. Payments for the first session were then made in private.

In the second session, protégés arrived to collect their payment. When they showed up, it was checked whether they had been committed to showing up in an earlier time slot, in which case they received no payment. If they were too early, they had to wait until the beginning of their chosen time slot. Otherwise, they received their payment.

4. Hypotheses

We classify subjects according to their liberty-or-commitment choice. Protégés are either self-committers or self-liberators. Furthermore, we call patrons who chose commitment for their protégé paternalists and those who chose liberty for their protégé liberals.

Table 3 shows four possible matching constellations. The rows specify the choice of the protégé for herself while the columns specify her patron’s choice, i.e., her patron’s policy style. Accordingly, self-committers either face a paternalist (a) or a liberal (b), and self-liberators also either face a paternalist (c) or a liberal (d).

Table 3 suggests that we investigate self-committers’ judgments toward paternalism from two perspectives.

First, we compare self-committers’ rewards for each policy style with the rewards paid by self-liberators. Here, we consider self-liberators as the benchmark and are interested in whether self-committers’ judgments differ systematically.

	Paternalist	Liberal
Self-committer	a	b
Self-liberator	c	d

Table 3: Possible Matching Constellations

This is addressed by Hypothesis 1.

Hypothesis 1: *Self-committers reward paternalists more and liberals less than self-liberators.*

If self-committers express a purely deontological aversion against paternalism, we expect no systematic difference in judgments between the two groups. If the refusal of paternalism is driven by its undesired consequences rather than by the fact that it is an intervention from the outside, we expect a systematic difference in rewarding. According to our consequentialistic hypothesis, we expect higher rewards in cell a than cell c as well as in cell d than cell b.

Second, we can compare self-committers' rewards for both policy styles directly. This is addressed by Hypothesis 2.

Hypothesis 2: *Self-committers reward paternalists more than liberals.*

If self-committers reject paternalism on principled grounds, rewards in cell b should be higher than in cell a. If self-committers judge purely consequentialistically as Hypothesis 2 suggests, they will prefer paternalists to liberals. This should be reflected in higher rewards in cell a than cell b.

In addition to analyzing reward choices, we can perform a correlation check between choices made in the role of protégé and in the role of patron. This is addressed by Hypothesis 3.

Hypothesis 3: *Choices made in the role of protégé are positively correlated with choices made in the role of patron.*

It is plausible to assume that subjects project their understanding of the context onto others at least to a certain degree (see, e.g., Ross et al. 1977). In this respect, positive consequences of commitment should be more salient for self-committers. However, if self-committers abstain deontologically from paternalizing, they should be no more likely than self-liberators to act paternalistically. Accordingly, if self-committers think consequentialistically, they should be more likely than self-liberators to act paternalistically, as stated in Hypothesis 3.

5. Results

The experiment was conducted in January and February 2010 with 190 students from various disciplines of the Friedrich Schiller University in Jena, Germany. It was programmed with z-Tree (Fischbacher 2007), and subjects were recruited with the ORSEE software (Greiner 2004).

Out of 190 subjects two chose the last time slot and were excluded from the analysis since they could not be classified as self-committers or self-liberators. Of the remaining 188 subjects in the role of protégé, 55 (29.3 %) chose self-commitment while 133 (70.7 %) chose self-liberation. This propensity resembles that reported by other experiments (see *section 2.2*). In the role of patron, 44 (23.7 %) chose to be paternalistic while 142 (76.3 %) chose to be liberal.⁶ A comparable propensity has not been elicited in previous experiments. An overview is given in Table 4.

	Protégé	Patron
Commitment	55 (29.3 %)	44 (23.7 %)
Liberty	133 (70.7 %)	142 (76.3 %)
All	188 (100 %)	186 (100 %)

Table 4: Choices of Subjects in the Role of Protégé and Patron

Twenty-six out of 55 (47.3 %) self-committers acted paternalistically in the role of patron while 29 out of 55 (52.7 %) in the same role acted liberally. Compared with this, 18 out of 131 (13.7 %) self-liberators acted paternalistically in the role of patron while 113 out of 131 (86.3 %) in the same role acted liberally.

We expected a significant correlation between the answer to the preexperimental question and liberty-or-commitment choices. We presumed protégés who had answered “yes” to be more likely to choose self-commitment than protégés who had answered “no”. Analogously, we expected patrons to be more likely to commit their protégés to their plan if they had received the answer “yes” as a signal of the latter’s weak will. For protégés who said “yes”, it would have underlined the benevolent intention of a patron choosing commitment. Surprisingly, there is no correlation between protégés’ answers to the question and their commitment choices ($\phi = 0.06, p = 0.41$). In addition, there is no correlation between patrons’ signals and their choices of policy style ($\phi = 0.00, p = 0.96$). This may, of course, be due to the fact that the preexperimental questions were not incentivized and that subjects did not take them seriously. Patrons obviously understood that and ignored the signal.

Let us now consider self-committers’ incentivized reward choices regarding the policy style of their patron. Two-sided Mann-Whitney U-tests confirm a significant difference in the rewarding of paternalists between self-committers and

⁶ This only sums up to 186 subjects because of the 188 analyzed subjects two did not make choices in the role of patron since their counterparts chose the last time slot.

self-liberators ($U = 4524.0, p = 0.005$) (see Table 5). This means that paternalism is, on average, rewarded more by self-committers than by self-liberators. A further significant difference can be stated with respect to the rewarding of liberals between self-committers and self-liberators ($U = 2872.5, p = 0.014$) (see Table 6). Liberalism is, on average, rewarded less by self-committers than by self-liberators. Self-committers' judgments of policy style differ therefore systematically from those of self-liberators' in ways one would expect under a consequentialist interpretation. Hypothesis 1 is thereby supported.

	Mean	Median	Std.Dev.		
Self-Committers	0.49	0.00	1.19	$U = 4524.0$	$p = 0.005$
Self-Liberators	-0.06	0.00	1.29		

Table 5: Rewards of Paternalism by Self-Committers vs. Self-Liberators

	Mean	Median	Std.Dev.		
Self-Committers	0.64	0.00	1.24	$U = 2872.5$	$p = 0.014$
Self-Liberators	1.12	1.00	1.25		

Table 6: Rewards of Liberalism by Self-Committers vs. Self-Liberators

Two-sided Wilcoxon signed rank tests do not find a significant difference in self-committers' rewards for paternalists and liberals ($W = 57.0, p = 0.367$) (see Table 7). The null hypothesis that there is no difference between self-committers' judgments toward paternalists and liberals cannot be refuted. Hypothesis 2 can therefore not be confirmed.

	Mean	Median	Std.Dev.		
Paternalists	0.49	0.00	1.19	$W = 57.0$	$p = 0.367$
Liberals	0.64	0.00	1.24		

Table 7: Self-Committers Rewarding Paternalists vs. Liberals

By using a phi correlation check, we observe a positive correlation ($\phi = 0.36, p = 0.000$) between subjects' choices in the role of protégés and of patrons. Subjects who practice self-commitment are more likely to also commit others. This correlation is rather weak, however. Hypothesis 3 is still supported.

6. Conclusion

It is highly intuitive that self-liberators reject weak paternalism. By contrast, self-committers are much more intriguing in this respect. If freedom restriction is judged from a strictly consequentialistic position, it should not matter who imposed it if it leads to the same desired consequences. Consequentialists should endorse weak paternalism, i.e., being committed by a patron to their own plan, if they would self-commit to it anyway. If, on the other hand, paternalistic acts are considered to be interfering and objectionable per se, a preference for self-commitment does not mean that being committed by a patron need to be accepted as well. Individuals with—in the wider sense—“procedural” preferences of a deontological rather than consequentialistic nature may even reject paternalism on principled grounds, i.e., regardless of the consequences of the paternalistic act. They consider it intrinsically wrong or as Kant (1991, 83) said, as the worst form of despotism.

Do self-committers mind other-imposed commitment? Self-committers’ judgments of policy styles deviate systematically from those of self-liberators in the way we would expect under a consequentialistic interpretation. Paternalism is valued more while liberalism is valued less by self-committers than by self-liberators. We find that self-committers reward paternalists in absolute terms, whereas self-liberators punish them. This indicates that their judgments are not driven by an aversion against interference per se. However, self-committers do not express an explicit gratitude to paternalists in terms of paying them higher rewards than liberals. These rewards do not significantly differ. In line with these results, it is difficult to predict how a given self-committer will behave in the role of a patron. The correlation of choices made in the roles of protégé and patron is weak. Roughly half of all self-committers chose to paternalize their counterpart while the other half decided to act liberally. In comparison, almost nine out of ten self-liberators acted liberally.

The evidence on reward choices and the heterogeneity of their choices of policy style indicates that self-committers are no pure consequentialists. The antithetical conjecture that self-committers may be as averse to paternalism as self-liberators can also be clearly rejected though. While self-liberators value liberalism, self-committers do not mind paternalism. The judgment of a paternalistic act will indeed critically depend on whether the addressee is a self-committer or a self-liberator. However, a paternalist should not expect special credit, not even from those who are clearly willing to self-restrict their freedom of choice.

One might have assumed that sophisticated weak willed subjects, i.e., those who admit to their self-control problems and self-commit to their goals, would cherish a strong iron hand. This is, however, not the case. Policy makers should excogitate the fact that the appraisal of the two policy styles is clearly asymmetric. If paternalistic policies are to be implemented, they could potentially cause defensive reactions for their mere intrusiveness. Therefore, the approach of libertarian paternalism with its subtle method of influencing people’s behavior is likely to provoke less resistance. A default rule is probably perceived as a

natural background rather than an intervention (a feature that makes it even more dangerous according to some critics, see, e.g., Scoccia 2008).

In this study, we find a general contemptuousness of weak paternalism combined with a widespread use of self-commitment devices. This evidence suggests that the provision of such devices to sophisticated individuals provides a true alternative to paternalism. Institutionalizing the commitment question promotes their self-management abilities without pushing them in a specific direction. This is certainly much more innocent than any kind of paternalism. Instead of having to opt out, people are asked to reflect on their own preferences which often already does the trick.

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Appendix 1: Pre-experimental Questionnaire (translated)

Please answer the following six questions truthfully with “Yes” or “No” by ticking the respective boxes. Your data will only be analyzed for scientific reasons and treated confidentially.

Do you use a notebook computer/laptop to create your lecture notes?

- Yes No

Have you ever considered aborting your studies or changing your field of studies over frustration?

- Yes No

Do you read more than three books a year?

- Yes No

Do you live in a shared apartment?

- Yes No

Are you often angry that you do not manage to get up as early as planned?

- Yes No

Do you regularly attend football matches?

- Yes No

Appendix 2: Instructions (translated from German)

INSTRUCTIONS

Welcome and thank you for your participation in this experiment! Please switch off your mobile phone and stow away any reading and writing materials. Please do not talk to other participants since this will lead to an abortion of this session without any payments.

This experiment consists of two sessions. This is the first session. The second will take place tomorrow morning. In today's session you will be randomly matched with another participant. At the end of this session you will either be in role A and the participant matched with you will be in role B, or you will be in role B and the participant matched with you will be in role A. In role A, you will have the opportunity to show up for tomorrow's second session and earn additional money. In this case, you will receive a note with your identification number at the end of this session, which you are required to bring to tomorrow's session. In role B, the experiment will already be over for you after today's session. Your role will be determined by a random draw at the end of this session. For today's session you receive a compensation of 2.50 € as well as a role dependent initial endowment of money. Details about this initial endowment will follow shortly.

You have to make all five choices of this session *before* you are informed about your role. Eventually, the only relevant choices are those you have made for the role you have actually been assigned.

FIRST CHOICE

You make your first choice for the case of being assigned role A. You have to select a time slot from a list of time slots in which you would like to show up at the computer lab tomorrow morning to collect your payment. The entrance "Schillerstraße" of the Goethe-Galerie (coming from the direction of the Löbdergraben) will be open from 5.30 a.m. on. Crossing the threshold to the computer lab is decisive for the time measurement which will be taken by us manually with a radio-controlled clock. A list of all time slots with their corresponding payments can be found in the following table:

When choosing your time slot, please consider the following. After you have chosen a time slot you cannot spontaneously show up at the lab at an earlier time slot tomorrow morning and collect the corresponding higher payment. For instance, if you choose the time slot from 6.30 a.m. to 6.45 a.m. and show up earlier than 6.30 a.m., you will have to wait until 6.30 a.m. and receive only the respective payment of 14.50 €. Furthermore, please consider that, subsequently, it may also happen that you are not allowed to come later. Non-appearance at tomorrow's session will have no negative consequences for you, except for the fact that you will receive no additional payment.

Begin time slot (a.m.)	End time slot (a.m.)	Payment (€)
6.00	6.15	17.50
6.15	6.30	16.00
6.30	6.45	14.50
6.45	7.00	13.00
7.00	7.15	11.50
7.15	7.30	10.00
7.30	7.45	8.50
7.45	8.00	7.00
8.00	8.15	5.50
8.15	9.00	4.00

SECOND CHOICE

You make your second choice also for the case of being assigned role A. This relates directly to the time slot you have just chosen. You have the choice between two alternatives. Alternative 1 means you may show up in the chosen time slot or spontaneously in any later time slot. You will always receive the amount of money which corresponds to the time slot in which you actually show up. Alternative 2 means you may only show up tomorrow morning in the chosen time slot. If you show up in this time slot, you will receive the corresponding payment. But if you show up in a later time slot, you will not receive any payment. In case you choose the last time slot, you will not have to choose between alternatives because a later appearance is not possible. Simultaneously, the participant matched with you makes an analogous choice for herself, i.e., for the case that she is assigned role A.

THIRD CHOICE

You make your third choice for the case of being assigned role B. You also have to choose between two alternatives for the participant matched with you, who will then be in role A. Alternative 1 means that the participant matched with you may show up in the chosen time slot or spontaneously in any later time slot. She always receives the payment which corresponds to the time slot in which she actually shows up. Alternative 2 means that she may only show up tomorrow morning in the time slot she chose herself. If she shows up in a later time slot, she will not receive any payment. (If she has chosen the last time slot, you will be informed accordingly since a choice between both alternatives is redundant.) Before making your choice, you will not know which alternative the participant matched with you has chosen for herself. But you will be informed whether she has answered the preexperimental question “Are you often angry that you do not manage to get up as early as planned?” with “yes” or with “no”. Knowing your

answer to this question, the participant matched with you makes an analogous choice for you, i.e., for the case that she will be assigned role B.

If you are assigned role A later, there will be two choices between the alternatives at hand which might apply to you. These may, but need not, coincide. The alternative you have chosen for yourself will be implemented with a 25 % probability while the alternative the participant matched with you has chosen for you will be implemented with a 75 % probability. Accordingly, your choice concerning the participant matched with you will be implemented with a 75 % probability while his own choice will be implemented with a 25 % probability.

FOURTH AND FIFTH CHOICE

You make your final two choices again for the case of being assigned role A. You receive an initial endowment of 0.50 € while the participant matched with you, who will accordingly be assigned role B, receives an initial endowment of 5.00 €. You may now increase or decrease the initial endowment of the participant matched with you, depending on which alternative she has chosen for you. You may increase or decrease the initial endowment of the participant matched with you in (maximally five) steps of 0.50 € each by paying 0.10 € of your own initial endowment for each step. According to your choice, her and your final endowment will result. The payment of the participant matched with you, who will accordingly be assigned role B, depends exclusively on this choice. If her initial endowment remains unchanged, it does not cost you anything. The participant matched with you makes an analogous choice for you at the same time, i.e., for the case that she is assigned role A. All possibilities to alter the payment of the participant matched with you and the costs are shown in the two tables below. The first applies if you choose to increase her initial endowment, the second if you choose to decrease it.

Initial endowment of other participant (€)	Increase of other participant (€)	Final endowment of other participant (€)	Your costs (€)
5.00	0.00	5.00	0.00
5.00	0.50	5.50	0.10
5.00	1.00	6.00	0.20
5.00	1.50	6.50	0.30
5.00	2.00	7.00	0.40
5.00	2.50	7.50	0.50

Please note that you have to make this decision *before* you know the alternative the participant matched with you has chosen for you. Accordingly, you have to make two choices about a potential increase or decrease of the payment of the participant you are matched with: one for the case that she has chosen alternative 1 for you, and one for the case that she has chosen alternative 2 for you. (If

Initial endowment of other participant (€)	Decrease of other participant (€)	Final endowment of other participant (€)	Your costs (€)
5.00	0.00	5.00	0.00
5.00	0.50	4.50	0.10
5.00	1.00	4.00	0.20
5.00	1.50	3.50	0.30
5.00	2.00	3.00	0.40
5.00	2.50	2.50	0.50

you happen to choose the last time slot, you will not have to choose at all.) If you are assigned role A, your choice about the increase or decrease concerning the alternative she actually chose will be implemented. This will happen irrespectively of whose choice between the alternatives the random device eventually implements.

Please remain quiet till the experiment begins. If you have any questions, please raise your hand. If you have read the instructions completely and understood them, please click "OK".