

# NEW PERSPECTIVES ON POLITICAL ECONOMY

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# **NEW PERSPECTIVES ON POLITICAL ECONOMY**

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# Law, Social Utility and Demonstrated Preference

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**R**ozeff (2020) engages in fallacious argumentation based on the fallacy of interpersonal comparisons of utility, as well as that of composition and constancy. The present essay is an attempt to demonstrate that interpersonal comparisons of utility (ICUs) are indeed fallacious and that demonstrated preference, applied to society, is an empty concept and ineffective as a means to prove diminished social welfare following an act of aggression. This is due to the fact that it is in contradiction with methodological individualism. Moreover, we extend this framework to include any kind of state-made legislation. We show how it is not possible to link ICUs to any kind of demonstrated preference, as it is based on dubious social contract theory. It is guilty of an assumption of constancy, unlike a pure market-based determination of principles and procedures of law and conflict resolution, which depend on constant affirmation and renewal.

## Introduction

It is tempting to employ the tools of economic science to demonstrate the immorality of certain actions, with the advantage of not having to cross the is-ought gap. If a given class of behaviors is scientifically found to be detrimental, we are that much closer to a just and fair state of human affairs.

Recently, Michael S. Rozeff has engaged in such a disquisition, trying to avail himself of the notion of social utility (Rozeff, 2020A), and the effect that law-breakers have on it, to bolster the popular condemnation of acts of aggression. His contention is that there is a way in which it can be said that a law being broken always and necessarily negatively influences social utility. We on the other hand, firmly reject this view on strict praxeological grounds. We claim that barring interpersonal comparisons of utility (ICUs), we do not have any instrument at our disposal to make any such claim, and given that ICUs are impossible, Rozeff's argument must be rejected. His

proposal, however, presents us with many interesting insights, and it is worthwhile to consider them at length, especially since he claims that his argument is based upon demonstrated preference.

Our interest lies in the fact that the conclusions we will be able to draw presents us with very valuable insights into the procedures used to collectively determine interpersonal rules and punishments.

Our strategy will be developed in three steps: in the second section we reconstruct Rozeff's stance, highlighting its closeness to much more widespread ideas about collective decision-making processes; in the third section we subject it to scrutiny employing standard Austrian analytical tools, showing its shortcomings; and in the fourth and final one we extend our findings to criticize commonly held views concerning the nature of state-made legislation, showing how it cannot possibly be portrayed as being based upon consent. A more market-based approach would solve the problem of aligning preferences and actions, without invoking social contract theory, assuming constancy or arbitrarily neglecting a certain subset of the population.

## **Rozeff's argument**

First, we need to identify the argumentative core that undergirds the argument with which we are presented. In the words of Rozeff (2020A):

"These proofs do not rely on grounds previously used to support free market conclusions. They do not rely on natural law, natural rights, or argumentation and rationalist ethics. They rely on the existing widespread prohibitions against crimes like theft that are observed in most societies."

As such, his proof rests on demonstrated preference grounds, consistent with Murray Rothbard's strictures about welfare economics (Rothbard, 2011, 289-333). The strength of the argument, then, comes from the fact that no societies, as a matter of fact, condone theft as a general rule. This, in Rozeff's view, means that prohibitions against theft must be regarded not only as a social good, conducive to greater welfare, but as a given society's preference, which their existence reflects, in the same way as an action reveals an individual's. Thus, if such laws are either openly broken or rendered void by a "dishonest" judge, social utility is negatively impacted, given that it contravenes an explicit choice of the electorate - or of the citizenry in general - regarding how property infringements are to be treated.

To counter the objection predicated upon the recognition that any society does, in fact, also exhibit laws that directly contradict the more general prohibition of theft, like subsidies, tariffs, and taxation in general, Rozeff replies that such laws are to be considered unlawful, and as such they lower social utility. The way he justifies his statement is the following (Rozeff, 2020E):

“A law against theft, I argued in 2007, is a social good. It benefits nearly everyone except the class of thieves. Such a law is foundational. A society can’t be founded on systematic thievery. There has to be production and production won’t occur if thievery is allowable. A law against theft is about as close to being endorsed unanimously as any measure one might posit. Furthermore, by being a basic social good with wide and critically important benefits, society has demonstrated its composite preference, its social preference.”

This author is claiming that a law prohibiting theft, being necessary for the existence of any society, can be considered to be supported in effect unanimously. Then, it follows logically that any law that stands in opposition to this foundational one is unlawful, since it cannot possibly be accepted by all members of a society, given that it benefits some at the expense of the rest. This step is crucial, for it allows us to clearly distinguish between lawful and unlawful laws. Let us once again consult Rozeff (2007):

“Then it implies that legitimate laws can be passed that allow theft. And if that is so, it means that law is a synonym for power. But if law rules only because it is power, then law has become arbitrary. But if law is arbitrary, then it is despotic. This means it has no authority beyond force, or that the authority it imposes cannot be justified and is not accepted.”

The argument thus comes full circle: laws against theft are foundational; if they are foundational, they are unanimously accepted; if such laws are unanimously accepted, any law condoning theft contradicts society’s demonstrated preference; if it contradicts demonstrated preference, it lowers social utility. It must be noted that Rozeff’s recourse to unanimity should not be taken literally: what he has in mind is more akin to a *functional* unanimity, reached through a definite and agreed upon procedure, either previous contract or voting (Rozeff, 2020G). In this, he is not particularly distant from the position of James Buchanan, when he employs the notion of relative unanimity as a functional equivalent of full unanimity, relating it to the minimization of costs (Buchanan, 1999, 72-73).

Before moving on toward a critique of this position, it is necessary to further clarify how an unpunished crime is related to a loss in utility, for this is one of the major points that this scholar intends to prove (Rozeff, 2007):

“Each person has expected future benefits from the rule against theft; and the theft if allowed tends to destroy that rule and those benefits. A theft that is allowed raises the chance of a large aggregate loss in utility. It changes a fundamental societal modus operandi. This prospective damage to the social good is large since many possible thefts can occur now and in the future; and the effects of widespread theft on society are to undermine its productive capacity and divert immense resources to protection.”

Rozeff is then asserting that the status of a law against theft is akin to a good whose ownership is widely dispersed, and if its integrity were to be compromised by a lone unpunished transgression, then its value would fall for all the various owners, thus lowering their utility. Such a good, being necessary for the furthering of everyone’s interest, is of utmost importance, and it is thus essential to uphold it at all costs. It then follows that, absent forgiveness from the victim of the theft, condoning robbery on grounds of necessity and duress undermines the gains that a law against theft provides. This is true given that it is possible that it might be disregarded on a whim, and as we have seen, whims cannot possibly have the force of licit law.

## **Difficulties for this position**

What, then, is the problem? Where did Rozeff go wrong? On the surface, the argument appears to be sound. There are, however, many avenues through which one may contest this position. First and foremost, his argument implies the validity of ICUs, and is thus doomed to fail from the start. In line with the traditional treatment of theft, Block (2020B) writes:

“Suppose that Mike is rich and I’m poor. I pull out a gun and aim it at him and demand that he give me \$100 (or I get a law passed to the same effect). He will now be poorer, and me richer, ignoring all other aspects of this “transaction.” In my (Rothbardian) perspective, his utility or welfare decreased, mine increased. But the only way to say that social welfare was thereby reduced is to claim that he lost more utility than I gained.”

and again, Block (2020C):

“Theft is evil. Agreed. But, doesn’t the thief gain (assuming he doesn’t get caught)? Is he no longer part of “society”? If he still is, and I don’t see why he isn’t, then we have to take into account his welfare too. Thus, we cannot unambiguously say that theft reduces social welfare.”

Given our characterization of Rozeff’s position, it would seem that he is immune from such an attack, because his argument hinges on demonstrated preference, and not ICUs. After all, in our reconstruction we felt no need to refer to any concept of utility that was not purely qualitative. We did not need to resort to any ICUs to make the point that the unanimous adoption of a given law somehow necessitates anything of the sort. His argument seems then to be discharged from such an accusation.

There are, however, statements on his part that arouse suspicion warrant closer scrutiny. It is worthwhile to draw attention to this passage (Rozeff, 2020F):

“Bringing everyone into the picture, we know that society has already decided that theft lowers social utility. It has prejudged the case. It did this when it made the law against theft. Therefore, society, because it has this law against theft, is telling us that this or any particular theft lowers its utility, even when an interpersonal transfer occurs within the society. By adopting a rule against theft, society has already compared the utility gain of the thief to the utility loss of the victim and decided that no matter what they may be, its own, society’s own, utility is lower by that judge not enforcing the prohibition.”

This sounds dangerously close to a resort to ICUs as a way to buttress his argument. But such comparisons are simply impossible, and run contrary to the fundamental insights of economic science regarding utility. Rozeff (2007) concedes that it is possible that a free market exchange could, theoretically, negatively impact a third party who deeply resents the commercial interaction of the other two parties. His (2007) attempts to defend this concession is, however, rather clumsy for it does not furnish us with a cogent solution:

“Suppose persons A and B raise their utility through an exchange involving no theft (which is by definition what a free market exchange is), but person C’s utility is indirectly adversely affected. Then the theorem shows that any interference that involves theft (like taking from the gains of A and B to compensate C’s losses) must reduce social utility. Hence, despite C’s loss, society cannot raise social utility by using force to help C. But since A and B’s exchange raised their utility, this means that free market exchanges always increase social utility (ex

ante). If society wishes to help C and raise social utility still further, the appropriate means is voluntary help.”

It is important to note how this conclusion, namely the beneficial effect of the free market, largely considered, does not follow from the premise. Just because a forcible wealth extraction on the part of society cannot *improve* C’s utility, it doesn’t mean that social utility *as a whole* was increased by A’s and B’s exchange. We simply cannot ignore the utility of the thief without making an arbitrary distinction. It is conceivable that C’s utility loss is of such a magnitude that it dwarfs A and B’s gains. It is simply impossible for the economist to know or quantify such a disparity.

Another way to look at this matter is to maintain that all voluntary trade necessarily benefits all market participants, at least in the *ex ante* sense, but to deny that in this case C is a market participant. This strategy is consistent with the insight that action is discrete and not continuous: after all C *demonstrates* nothing, in his complaint about the doings of A and B. Not only could C be lying in his claim to be hurt by the A-B interaction, but since he is not a market participant in that moment, there is no need to consider his inner, emotional state, thus rendering void the necessity of incorporating all individual’s personal reactions in our assessment of the operations of the market. In sharp contrast, both A and B necessarily *reveal* by their voluntary trade that they gain. Otherwise, why would they do so? C’s complaint does not rise anywhere to that level of certainty, let alone relevance, which is what praxeology is all about.

This is the reason that brought Murray Rothbard to sharply limit the field of welfare economics, by restricting it to the twin principles of demonstrated preference and Pareto Superiority (Rothbard, 2011, 320). This effectively circumvents the ICU problem: it simply recognizes that if someone loses, then social utility has not been maximized, unlike what happens on the free market, where Rothbard demonstrates that it benefits all its participants. As a result, welfare economics can become a purely qualitative science, in accordance with the broader Austrian tradition. We are then correct in our rejection of Rozeff’s argument, but only insofar as it is unnecessarily weakened by – and relies on – spurious references to doubtful ICUs. We have seen that such a recourse is not at all warranted if we take a more reasoned and sensible approach to Rozeff’s claim. Unfortunately, his position suffers from other shortcomings, unrelated to the original point of contention between the two authors, Block and Rozeff.

The first flaw of his argument is that it is not at all clear that the concept of demonstrated preference can be coherently applied to “society”. As we know from Ludwig von Mises, action

is always and necessarily that of individual men (Mises, 1998 [1949], 143), and not of collectives. When we say that “the state”, or “the army” did X, we must keep in mind that this is merely a shorthand designed to ease communication, and is not to be taken as an accurate depiction of reality. What we really mean is that certain individuals, who are in a particular relationship with other individuals, performed specific actions (Rothbard, 2009 [2004], 939, n. 53). It is then abundantly clear that, from a praxeological standpoint, *society* cannot possibly demonstrate a preference of any kind. Its existence is purely epiphenomenal: it persists only insofar as a certain group of individuals keeps it alive by acting in concert. As long as the individuals that designate themselves as members of a group act out its rules and live according to those shared customs and beliefs, then that society exists. It does not exist independently of its members.<sup>1</sup> It exists only as a result of their actions, and as such it is constantly in the process of being re-enacted, made and remade. Its existence is, as such, ever precarious and wholly dependent on the actions of the people who make it up. This is a necessary consequence of the principle of methodological individualism, and rules out any possibility of society demonstrating any kind of preference whatever, precisely because it cannot act.

Moreover, even if we were to accept the possibility of a society acting, we fail to see how the acceptance of a law against stealing would “reveal” any – constant, at least – preference. It would appear that Rozeff is committing the fallacy of assuming constancy, while in human action there are no such material constants (Mises, 1998 [1949], 103). It is perfectly conceivable that an individual might support a prohibition of theft at a certain time and reject it a moment later when it suits him, in the classic “rules for thee but not for me” phenomenon.

In fairness to Rozeff, he explicitly states that constancy is, in fact, one of the assumptions of his arguments, and that if one were to reject it, his whole proof would of course amount to nothing; he states (Rozeff, 2020D):

“This prohibition is assumed to be the demonstrated preference of the society. That’s a critical premise of my analysis. That’s an “if” condition. That premise can’t be questioned. It’s not an empirical premise. [...] If a society has a demonstrated preference against theft, then what follows if it passes a statute that compels a wealth transfer? I argue that it causes society to occupy a less-preferred position. In equivalent language, social utility declines.”

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<sup>1</sup> If all of its members depart from the group, there is nothing left. That is, there is no group apart from its constituent elements.

However, even if he admits that he knowingly constructed his argument in such a way to yield the desired outcome, it still would not represent a successful answer to the charge of assuming constancy. When a member of society breaks the law<sup>2</sup>, he effectively contravenes "society's" preference, according to Rozeff. What is to be made of him? This is our challenge: is not the thief still a part of society?<sup>3</sup> Why are we authorized to disregard his own demonstrated preference, namely stealing? We are now, contrary to Rozeff's initial intent, engaged in value laden normative economics, not value free positive economics. This brings us back to Rozeff's claim that society had already prejudged the case by comparing the utility gained by the thief with the loss inflicted on the victim. This, however, invokes an ICU, and in this case Rozeff's argument cannot, no matter how well crafted, be used to mount a defense. The ICU is a necessary and essential part of his proposal.

We have no difficulty with the empirical claim that thievery will tend to reduce the GDP below the level that would otherwise obtain, *ceteris paribus*. But to assert as does Rozeff that social welfare will thereby be reduced is impossible to defend, without resorting to the invalid doctrine of ICU. Yes, the victim of robbery loses. We know this, since he could have donated the money to the thief, but did not chose to do so<sup>4</sup>. But the criminal gains! How does Rozeff know that the loss of the victim is greater than the gain to the robber? He offers no evidence whatsoever to support this contention of his.

The only way around this conclusion would be possible if Rozeff managed to advance a workaround to methodological individualism, but we fail to see how such a defense might be made. It could be conceivable if we were to interpret "society" to be something that transcends the individuals who are part of it, and in that case such a being *could* rank the utility of the thief and that of the victim, and come to a conclusion, as we have seen Rozeff suggest earlier. Such a being would be analogous to the lone Robinson Crusoe, ordering his value scale. Our author, however, has not shown how this could come into existence without committing the fallacy of composition. Rozeff himself, after all, admits that groups do not have any material existence (2020G). We then find ourselves confined to the demonstrated preference of the individuals alone. Moreover, even if Rozeff could rely upon a procedure through which each member of

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2 We are implicitly assuming just laws, not those prohibiting victimless crimes such as the outlawry of drugs, prostitution, between consenting adults.

3 This criminal is not part of the market, to be sure, but this in no way demonstrates he is no longer a part of society.

4 It might be argued that failing to expend a certain amount of resources constitutes "agreement" to being occasionally robbed; this, however, simply does not follow: whether or not an individual hires (enough) protection services is irrelevant and can in no way be construed as an invitation to have his property stolen. Valuing present money more than protection services only reveals that such an individual lowered his demand for those, and nothing more.

society expressed his support for a given law, we still would not be able to ascertain that on demonstrated preference grounds.

The difficulty with this possible solution emerges when we consider the following scenario: a man, when asked whether he prefers Venice or Florence as his favorite tourist destination, states that he prefers Venice, and promises to go there next month; when the time comes, however, he opts for a vacation in Florence. What is the correct explanation for his behavior? We can either say that he changed his mind, and thus changed his preference, or that his real preference was Florence all along and he lied to us. Either way, his earlier act in no way demonstrated a given preference, or at least, not in the same way that a "proper" action – in this case, actually going on vacation - would.

This deals with both issues of composition and constancy: unless the thief is banished from the fold of society, his mere act contradicts the premise of the scenario Rozeff proposes, since by virtue of acting against the law, the thief breaks the constancy that the author stipulated. There is, however, another argument from Rozeff that must be addressed. By likening a concerted act to an orchestral performance, where each individual promises to play his part, he poses the following question: what happens when suddenly one of them doesn't step up to the task and purposely plays the wrong notes? Isn't social utility negatively impacted? Isn't this analogous to the case of the lawbreaker (Rozeff, 2020G)? We must admit that this is a clever argument on his part, but it is nevertheless subject to the aforementioned objections. At a closer look, in fact, this scenario is not significantly different from the previously analyzed ones, where we are still unable to judge the "utility spread" between the players and the saboteur; maybe the satisfaction derived from the saboteur is great enough to surpass the losses of his unfortunate colleagues. Little seems to be gained by substituting the saboteur for the robber, and the other orchestra players for the victim. Also, his comparison of society to any other organization (Rozeff, 2020G) runs afoul of the notion of spontaneous order and the natural tendency of individuals to associate, stimulated by the greater productivity of the division of labor (Mises, 1998 [1949], 157). Unlike a firm or a club, society has no goal. Society is a byproduct, and not the result of a conscious design: the fact that rules of peaceful cooperation emerge after – or are imposed – does not authorize Rozeff to liken it to a wagon trail or a homeowner's association.

What remains to be challenged, now, is the notion that good law is a common good, where every member of a group has a portion of ownership in it. We must confess that we have difficulties visualizing this idea. If law is a good, can it be sold? Can it be moved? Can it be owned? Who are the proprietors of the law against murder? Rape? Or is it more accurate to

describe it as a precondition, like language? Rozeff does assert that both law and language are examples of a common good that serves the whole society furthering *the* common good (Rozeff, 2020C):

“The situation analyzed begins with society having created a social good via its prohibition of theft. [...] Are we to deny that there are social goods or the general good? That position is untenable. Consider language, letters, grammar and words. [...] Likewise, the general good of mankind is increased by laws forbidding theft.”

However, it is difficult to square the notion of aggression with this specific idea of a common good. How, exactly, is this good damaged? Is it possible to show such a thing? The misconception at the heart of the problem stems from an incorrect description of the nature of law. It is true that law – good law, anyway – is a very positive and desirable thing, but its nature is closer to that of society than to that of goods. Its definition is two-fold: as a set of abstract principles, apt to resolve and prevent conflicts, it cannot be said to be something possible of possession, unless we are willing to allow intellectual property (Kinsella, 2001, 2012) and as a “social” good, it is no more than the expectation that all other members of a group will abide by such principles. Given this, it is not at all clear how such a “good” can be “damaged”, strictly speaking. One cannot legitimately “own” an expectation, and thus the “damage” to society must be evaluated in terms of physical aggression against - and between - specific individuals, instead of collectives, in line with the libertarian tradition. Being the victim of “group crimes” does not represent a valid claim to compensation unless a definite transgression can be shown to have existed in the past<sup>5</sup>.

Rozeff accuses economists of being short-sighted when it comes to the effect that a systematic disregard for the law can have on other’s wellbeing. But the fact that such an expectation is shared does not allow us to draw welfare conclusions from it. In fact, there are good reasons to suppose that changes in valuations on the part of others should not be taken into account (Hoppe, 2006, 343), given that they are naturally “arbitrary” acts. Also, and more importantly, this too runs into the issues related to ICUs: can we be sure that the utility lost by society exceeds that gained not only by the lawbreaker, but also from those who regard that act as either justified or laudable, their previous commitment to law notwithstanding, given the fickleness of subjective valuations? If we start delving into the world of personal reactions, we open the gate to all sorts of counterexamples such as these.

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<sup>5</sup> For the case in favor of reparations for slavery, not from all whites to all blacks, but rather on the basis of individual rights violations, see Block, 2002, 2019; Nouveau and Block, 2020.

## **Applications to legislation and law-making**

We have thus far presented a very sharp disconnect between group actions and individual ones, at the level of demonstrated preference. On the surface, it seems to represent a general critique of any manner of collective decision-making process that does not reach a very specific kind of unanimity, mainly, one where every individual abides by the generated rules at all times. This, however, runs contrary to common sense: surely prior consent must count for something. There have been, of course, many attempts to reconcile individual preferences, as they are revealed by actions, with democratic processes, the ones most closely associated with group actions. We have however sharply criticized those, and denied their central thesis, which links prior agreement to preferences.

It is, in fact, of no use to turn to Buchanan's distinction regarding choice between rules and action within those same rules (Buchanan, 1999, 110), for such a conceptual separation would undermine the connection between the preference in question and the action that is supposed to reveal it. To appreciate the problem with this strategy, it is instructive to turn to Bryan Caplan's critique of Rothbardian welfare economics, and in particular to his example concerning the signing of a contract (Caplan, 1999, 833). He rightly notes that it is no way possible, from a strict behaviorist account, to infer an intent to trade from the signature. Even though the answer to Caplan's challenge comes easy, it helps illuminate a relevant shortcoming of the Rozeff-Buchan position: recognizing that it is the actual trade that takes place that signals preference, and not the mere signing, one can draw a parallel between verbally - or in whatever other way - endorsing a rule of behavior and actually observing it in practice. Much like in the case of the tourist, it is the actual behavior exhibited by the thief that must be taken to reveal his support or lack thereof for the law in question. Confining consent to verbal declarations and disregarding behavior severs the link between specific actions and preferences, potentially collapsing the entire edifice of welfare economics.

Buchanan's reasoning fails to solve this problem. Contrary to his position, consent to predetermined rules does not solve the problem (Buchanan, 1999, 95-96), since it assumes the very thing that it sets out to demonstrate, mainly constancy. It is not at all clear why verbal support for a rule in the distant past should overrule its rejection at a later time. Moreover, one can in no way infer that the thief is actually endorsing a no-theft rule: after all, he could simply be trying to convince other individuals to refrain from stealing and thus protect his own property, and nothing more. We can say nothing about his true motives, but we can assert for certain that at the moment of the crime his preference lies elsewhere. Hence, it is also not

possible to say that the thief *really* consents to being punished. This situation is analogous to the anarchist who despises the state, and yet casts his ballot in a general election, hoping to lighten his tax burden. Whether he is voting under duress or only instrumentally, it cannot be said that he is actually demonstrating a preference for democratic government: he can both vote and maintain the immorality of the state without fear of contradiction.

Contrasting these features of political activity concerning legislation with the characteristics of voluntary contractual relationships, we can easily see how such laws can never be said to unambiguously promote the welfare of the entirety of society, criminals included. In the case of contracts, we can readily show how preferences and actions are closely linked, while with legislation the matter is necessarily much more muddled and confused. Contracts, also, only apply to the people who sign it, and do not spill over to third parties. This is unlike state-made laws, concerning which people might not see their interests furthered by any given law, and might wish to employ different rules. Private agreements also provide clear clauses for their termination, and once those are fulfilled, they no longer represent an obligation to the specific individuals. State law is, on the other hand, a constant of one's life regardless of one's wishes<sup>6</sup>, and is, therefore, necessarily aggressive and welfare-reducing. This is a consequence of it being an extra-market phenomenon, which also allows it to be so easily captured by special interests.

We have acknowledged the desirability of shared and precise rules of conflict resolution and avoidance; what we have rejected is them being the preference of individuals, in the case of collectively (politically) made law; can a case be made in defense of a more "natural" and market-based kind of law, like customary and common law? At first glance, it would seem impossible. After all, according to the conclusions we developed, any kind of law is automatically rejected by at least one party at the moment of the crime. There are, however, important differences that allows us to defend the practice of law *discovery*, as opposed to law *making* (Kinsella, 1995).

A decentralized process does not have to devise rules applicable to any and all individuals, since it is concerned with the resolution of a specific problem; this way, its findings are not binding for anyone other than the two parties involved. It merely provides a useful precedent for the rest of society, instead of a procedure that must be followed in all cases. This means that it is not affected by the same problem that plagues central economic planning, namely lacking the

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<sup>6</sup> A case could be made that the bemoaner could leave; this, however, would imply that the state owns his property, be it land or anything else, which is a problematic statement in and of itself. Usually anyway, contracts do not require a total uprooting of one's life to be terminated.

relevant information to accurately reflect the values and preferences of all individuals (Kinsella, 1995, 154-161), since it only needs to provide a single ruling, which is confined to the case at hand. It is important to note that in this way we effectively circumvent the need to postulate an agreement to being punished on the part of the law-breaker, as well as any constancy on the part of all individuals.

## **Conclusions**

These criticisms aside, there is way in which Rozeff's argument, more broadly considered, can be said to ring true. In economics, the term "utility" refers to the satisfaction an actor feels when his ends are realized or his interests are furthered; on the other hand, there is another meaning that can be attached to it, which indicates the material well-being of the actor. It is referring to this second meaning that Ludwig von Mises can call himself a utilitarian without resorting to any ICU (Mises, 2002, 7-13). In the view of Mises, social utility refers to the material condition of society at large, and he correctly identifies laissez-faire as the supreme tool of choice to the furtherance of that end; however, in his writings, he also recognizes that there are many individuals who are plagued by resentment toward those who prosper under a regime of private property (Mises, 2008). Clearly, Mises understands the difference between affluence and utility.

This, however, is a matter of empirical research, not praxeology. This concession aside, we have shown that the conclusions of Rothbardian welfare economics also apply to state-made law, and that the process of law discovery should be left to the market. We have also shown how social contract theory does not stand up to scrutiny when it claims to be able to represent any kind of preference on the part of its supposed signatories, even when very favorable conditions are stipulated. Strict economic logic pushes us to reject any justification for collective decision-making that isn't purely – as opposed to functionally or relatively – unanimous. Most importantly, however, we demonstrate how the concept of demonstrated preference cannot be applied to society without extensive conceptual errors, and might quickly lead to wrong and harmful conclusions.

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# National Defense as a Private Good: Freedom as a Positive Externality

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**N**inov (2017) proposes that the defense of anarcho-capitalist societies should be wholly funded by war reparations imposed on defeated foreign aggressors. In that essay, Ninov objects on both moral and practical grounds to any system in which anarchists are to fund their own defense. The present paper disagrees with his on several counts. First, it rejects the claim that defense is an inherently coercive market and suggests that the proposal may violate the libertarian principle of proportionality. Second, the proposal is impractical as there are insurmountable barriers to imposing the reparations. Third, if implemented, the proposal would undermine anarchist deterrence and defense, reducing military strength to below what the market would bear when defense is funded by the anarchists themselves.

## Introduction

There is an ongoing discussion among economists regarding how military defense might be funded in an anarcho-capitalist society. Tannehill and Tannehill (1970) and Hoppe (2001), for instance, suggest that private defense agencies may emerge and provide military defense to clients for a fee, while Friedman (1973) proposes that a volunteer militia system may be sufficient to defend a free society. A common thread across all proposals is that the anarchists will fund their own defense, voluntarily and in a competitive market. Yet a recent paper by Youliv Ninov (2017) argues that despite the popularity of such proposals, such a system suffers from a litany of ethical and practical problems, even violating the basic tenets of libertarianism. Instead, Ninov offers an alternative, arguing that defense can and should be funded entirely by foreign aggressors. When these aggressors bring war to free lands and are defeated, Ninov calls for war reparations to be imposed on them, generating what will constitute the primary, perhaps only, source of revenue for private defense agencies.

Below, I challenge Ninov's proposal. Three questions arise: Is it proper to shift the costs of defense onto aggressors? Is this workable? Would this support an effective defense? In section 1, I critique the lack of concern for proportionality in Ninov's proposal and his misguided sense of culpability. In the next section, I question whether a properly functioning defense agency could operate in the manner he describes. In section 3, I identify some problems that would arise in the theater of war. I conclude with some final thoughts on his proposal, arguing that the client-funded business model appears to be a superior solution so long as the free-rider problem can be overcome.

## **The Propriety of War Reparations**

I have no objection to the victims of imperialism imposing compensatory or even punitive damages on defeated belligerents as Ninov suggests. However, lacking in his proposal is any discussion of proportionality, a key aspect of the Rothbardian (2002) system of justice. In the paper he only refers to getting a "big" or "really huge" level of compensation necessary to fund the defense forces, which may or may not be in line with what is proportional for any given attack. Shifting the total costs of one's defense apparatus onto the aggressors may greatly exceed what an anarchist court would determine is just.

Ninov (2017, 43) make one particularly outrageous claim in this paper, suggesting that the market for defense is not a free one because it is driven by the fear of being attacked. Justifying this assertion, he writes, "A free market is a market in which none of the transacting parties acts under initiated aggression or a threat thereof," whether the aggression arises from one of the trading parties, or some third party. Since we only want defense because of the existence of aggressors, he argues that the defense market is necessarily coercive. He acknowledges that this approach means that markets for bike locks or firearms are also not free. This represents an Orwellian rewriting of what is meant by a coercive market, which is typically one where government disrupts the free market equilibrium with taxes, subsidies, regulations, price controls, and so on. Libertarians have a different standard for what is considered a coercive market when the third party is a private agent, e.g. private subsidies do not render a market unfree. Criminal behavior can make a market coercive, but only by direct manipulation of the market in such a way that deadweight loss results. There is no deadweight loss in the defense market; instead, the existence of aggressors is manifested only in the form of an increased demand curve.

Ninov goes too far in asserting that people who play a role in shaping demand curves have moral and legal culpability. Just as nobody truly owns their property values or their own reputation,

nobody is responsible for someone else's demand curve. Even in a society where the last act of violent crime was 20 years ago, citizens may still arm themselves just in case. If no more violent crimes occur, who is responsible for the handgun expenditures? In this Hobbesian world it is each individual's responsibility to decide how they will meet various threats with respect to their own risk preferences. The defense market is free from coercion if neither buyers nor sellers engage in force or fraud.<sup>1</sup>

Even in an anarcho-capitalist society, supply curves will be shaped in part by state violence. For instance, imported oranges from Florida will be more expensive because of the various taxes and regulations American orange producers are subjected to. By Ninov's broad definition, the market for oranges in anarchist lands is coercive because government aggression in the producing country is influencing the market.

The near-universal preference for effective military defense results from living among the violent human species. Potential foreign aggressors cannot assume the entire blame for the anarchists having to expend resources on defense forces. Humans are violent in general; this is what makes it worth sacrificing consumption and investment in other industries for the sake of defense. But the threat is represented by all of us; the guilt that Ninov refers to belongs to the entire human species. In building a military, some aggressors will be deterred and thus will never be identified, yet they are partly responsible for having had to build a military. Likewise, the existence of an anarchist military and state militaries drives foreign powers to build defensive forces of their own. Holding worldwide defense contributions per person constant, each individual spends X dollars on his own defense, but by Ninov's logic is also responsible for a fraction of everyone else's combined expenditures equal to X; the exercise is a wash. In a better world, even if war was very rare, it would still be necessary to have some sort of defense in acknowledgment of the possibility of being attacked.

Ninov's expanded understanding of coercion also gives license to attack potential aggressors. Under Ninov's theory it seems that even the powers who drive anarchists to build a successful deterrent have moral culpability and should have to fund their military, but this is clearly not workable as it would transform anarchist defense forces into the same imperialist aggressors that characterize many states.

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<sup>1</sup> Ayn Rand (1967, 24) describes a free market as one "without the use of force, without government assistance or interference," or one lacking "government interference" (ibid, 45). The defining characteristic is "free competition" (ibid, 35).

## **The Practicality of War Reparations**

Ninov argues that it violates libertarian principles for people to have to pay for their own defense. Instead, he calls for war reparations to be imposed on defeated foreign aggressors. However, several practical considerations arise which are likely to impede the realization of this vision. For instance, under the non-aggression principle, consider that the purpose of nuclear weapons is deterrence. So long as the credibility of retaliatory use is maintained, these weapons reduce the chance of war. Nuclear weapons have failed their highest use when they must be launched. Similarly, the measure of success of defense forces is how rarely they must be used. Just as nobody buys car insurance hoping that they will get their money back by totaling their car, the preferred outcome of defense spending is that the armed forces serve as an effective deterrent and are never mobilized for war. As an effective deterrent, anarchist defense forces cannot generate revenue under Ninov's proposal because nobody will attack and there will be nobody to impose war reparations on.

Ninov (2017, 48) does consider the potential problem of who will pay for successful deterrence. He concedes that "it may be the case that wars do not happen often," but adds "when they do, one could obtain a really huge amount of money if successful in them. So huge as to compensate for peacetime losses." In other words, the expected future value of profits over some period of time may be positive even if wars are rare as long as the reparations are large enough and wars are frequent enough. If wars become too infrequent, the expected profits turn negative. Therefore, the greater the expenditures and thus the greater the success of deterrence, the more likely that defense companies will go bankrupt. The optimal number of wars will increase since profitability will be greatest when deterrence fails sometimes.

Ninov (2017, 48) adds, "defense companies, although based in a particular society, could function internationally and thus, would be able to profit from defensive wars abroad." However, the military needs to maintain a significant presence in the territory to be a deterrent, rather than fighting wars elsewhere. Even if defense agencies get involve in multiple conflicts around the world, some of their resources must always be expended on vigilant but idle forces. The notion that the defense forces will stay in business by fighting elsewhere is likely not a workable long-term solution for anarchist defense.

On the matter of restitution for war damage, Ninov (2017, 46-47) notes an important consideration, acknowledging that when private property is destroyed by a state army, it may be difficult or impossible to determine which individuals are guilty of destroying which property. Cataloging the specific acts of aggression perpetrated by each soldier is necessary for proper restitution.

He adds, "if the army is organized by a government, who is to blame? Every soldier separately? All soldiers together? The politicians who sent them? The attacking country as a whole?" He suggests that anarchists who had their property destroyed could perhaps be compensated with appropriated public property from the aggressing country. According to Ninov (2017, 46), "All that belongs to state aggressors would be considered non-owned and thus subject to direct sale/appropriation. The latter could include: war machinery, state-owned buildings, state infrastructure, etc." But public property is just stolen private property and the citizens of the offending country are also victims of the government's aggression and are entitled to the return of their property.

Lastly, if there is a decade of peace and then an invasion at the end of year ten, is the aggressor responsible for funding the target county's defense for the entirety of the previous ten years? Is it some fixed period that is longer or shorter? During periods of peace, where does the funding come from to pay for defense if there are no past or current aggressors to charge? At least Ninov (2017, 51) asserts that starting up is not a problem: investment capital will come from big investors starting new defense companies or buying shares of existing ones. This is probably the starting point whether the military apparatus is funded by the anarchists or through Ninov's system, though client-funded agencies will probably have a more accurate projection of their annual revenues which will help to run a profitable business.

## **The Efficient Military Strategy**

We must consider the unintended consequences that will result under Ninov's proposal, as the incentives of both defense agencies and foreign aggressors will be altered. For defense agencies, becoming dependent on foreign aggressors for revenue will constrain their military strategy and tactics in ways that may force inefficient warfighting that reduces the probability of victory. The objective of hostilities is to bring the enemy under subjugation, and "war is thus an act of force to compel our adversary to do our will" (Clausewitz, 2000, 264). This involves killing soldiers and destroying weapons and other military assets yet profit maximization under Ninov's proposal will require that defense agencies stop far short of the annihilation of belligerent forces. Ninov (2017, 47) notes that

Since their profit will directly depend on how much of the enemy's resources they manage to win, they will be highly motivated to keep these resources as intact as possible, so that they can gain the maximum possible profit from them.

The more successful they are in destroying the enemy, the less likely they are to be compensated, yet the less successful in this endeavor, the more likely they are to be defeated, presenting a strange type of optimization problem in which optimal combat power is below that of a client-funded defense agency. The defense force will impose needless additional constraints on itself, attempting to avoid destroying the enemy as if there is room for a nuanced approach to attrition when defending your own homeland in the fog of war. Even deliberately setting out to achieve the maximum damage possible against enemy forces does not guarantee victory, and each additional constraint only increases the probability of defeat.

Defense agencies may also have a stronger incentive to provoke wars under Ninov's proposal than they would under a client-funded business model. If, as Ninov concedes, there are long periods of peace interrupted by occasional wars, then defense agencies may fabricate a Gulf of Tonkin-type incident as state militaries have so often done. The payoffs to provocation seem to be higher under an aggressor-funded business model than a client-funded one.

Successfully deterring attacks is preferred to successfully defending against them, but deterrence may also be undermined by his proposal. Ninov (2017, 48) writes, "the usage of weapons of mass destruction (atomic bombs for instance) would be in practice non-existent" since annihilating the enemy reduces profits. However, not only can such weapons be vital in war, they serve the important purpose of deterring war by instilling in the enemy the fear of retaliation. Ninov has devised a proposal under which the probability of invasion is increased while simultaneously the probability of successfully repelling one is reduced.

As for foreign aggressors, the objective is to deter them if possible but to defeat them if necessary, at the lowest possible cost. Ninov's proposal may alter their incentives in an undesirable way. It will be no secret that the anarchist defense forces are funded by aggressors. It will be a matter of stated policy and perhaps a matter of precedent than when foreign aggressors are invaded, the anarchist defense forces impose war reparations not only for restitution for war damage but also to fund their formidable defense over a number of years. Such a threat may add to the deterrence value of the defense forces if it is credible, but in cases where deterrence fails, it may lengthen the war, with some enemies preferring to continue fighting rather than pay massive and growing war reparations that the anarchists desperately rely on for survival.

Alternatively, there may be cases where the defense forces would like to negotiate a peace somewhere below unconditional surrender, perhaps even an armistice, but such a truce reduces their bargaining power, probably eliminating any hope for war reparations, incentivizing them

to continue fighting in what may be shaping up to be a losing conflict or a pyrrhic war. In such a scenario, profit maximization may equate to limiting losses, shuttering the defense agency when the anarchists need it most.

## **Final Thoughts**

Ninov (2017) argues that anarchists should fund defense entirely with war reparations to be imposed on aggressors. I counter that there are a number of practical objections to this proposal: In addition to the incorrect notion that the defense market is necessarily a coercive one, the proposal ignores proportionality, would be difficult to implement, and introduces new principal-agent problems to reckon with by creating perverse incentives for defense agencies, increasing the likelihood of war while decreasing the probability of victory in one. I conclude that a system in which anarchists fund their own defense is superior and should be pursued by any emerging anarchist societies.

I object on a deep philosophical level to the use of the term “free” in this paper, as in, “The proposed system will ensure the defense of its citizens against foreign aggression for free, since they will not pay for it” (Ninov, 2017, 53). Every policy involves tradeoffs, with costs often invisible. In this paper I attempt to identify some of the costs, concluding that it is not a workable or desirable system relative to the more commonly held expectation of client-funded defense agencies. It is an idea born of abstraction without consideration of political realities.

Ninov (2017, 41) refers to defense as “a basic human right,” a common justification among political theorists for imposing their policies on others. His proposal is closer in spirit to statism than anarchism, resembling a socialist approach to the problem of national defense provision. Under the non-aggression principle, there are no positive rights and no obligations imposed on others to fund anything; even the poor will have to rely on donations to fund any defense subscription fees. I also suspect that anarchists would prefer to be more active in their influence over the defense forces, rather than to have it simply appear and be beholden to nobody living in the anarchist territory. By what mechanism are defense agencies answerable to the anarchists if not to maintain their patronage?

My objections are not to totally discount the role of war reparations under anarcho-capitalism. War generates significant debt since expenditures rise immediately at the same time that output falls. Even in a stateless society, I expect that defense agencies will issue bonds or impose contractual wartime fees on their clients, both of which will reduce consumption and investment in the remaining economic sectors. Debts can later be paid off with reparations, with

dividends paid out to stockholders or clients. It makes much more sense for clients to pay up front and then later be compensated by aggressors than for defense agencies to run chronic accounting losses with occasional profitable years. If no one attacks, they forfeit what they spent on deterrence but also benefit from never having had to go to war.

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# **An Alternative Theory of Capital From An Austrian Economics Perspective**

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**T**he article introduces an alternative theory of capital. The existence and growth of an economy are described by analogy with a living organism, which exists and develops as a single whole. The parallelism of consumer and durable capital goods production processes in time in space and their complementarity along the whole production chain are introduced as building blocks. Based on the above, a new, graphical structure of an economy, which grows without net saving, is developed. Economic growth, retrogression, and reaction to externally-caused crises under the condition of a fixed monetary supply are described with its help.

## **Introduction**

The Austrian capital theory has a long history and can loosely be described as consisting of two separate/overlapping views. Böhm-Bawerk ([1884, 1889, and 1909] 1959) introduced the multi-stage, time-dependent capital structure from which Hayek ([1935]1967) following Ludwig von Mises ([1912] 1953) developed the first complete Austrian theory of capital. Much later, Garrison (2001) introduced an alternative theory, which still employed Hayek's fundamental ideas, particularly the Hayekian triangle structure.

The present article aims to offer a third, alternative, Austrian view to the ones mentioned above and describe how a free market economy operates. In order to achieve the latter, we will extend/build on the ideas first developed in Ninov (2020).

The structure of the article will be as follows. Chapter 2 will describe how an economy behaves as a single organism and reacts/grows like one. Chapter 3 will discuss the fundamental building ideas that let us shape the economy's overall structure. Examples to illustrate them will be introduced. Chapter 4 will show our newly-suggested graphical representation of the economy and explain its internal workings. Chapter 5 will put the already introduced structure to use. We

will describe the processes of secular economic growth, economic stagnation, retrogression, or reaction to an externally caused economic crisis with its help. Unfortunately, we will have to omit the most important use case of the theory, namely, the reaction of the capital structure to credit expansion. This case is yet to be fully developed and deserves a separate treatment due to its inherent complexity. Finally, chapter 6 will conclude our alternative theory of capital.

## **An alternative Austrian capital theory**

A starting point in building an alternative Austrian capital theory is the observation that an economy is a single entity with an immense number and an infinite complexity of internal dependencies. This means that each part/sector/company in the economy depends on every other one, be it directly or indirectly. Thus a single economic entity (a company, for example) cannot develop without the rest of the economic structure supporting and adjusting to its change. Therefore, the economy must be viewed as a single organism that exists and grows or retrogresses as a single entity, not as separate, disconnected pieces that can change independently from one other.

For an economy to exist and develop as an actual organism does, a regulating mechanism must exist. This regulation is based on a price system and an economy-wide, common rate of profit. The latter is what keeps in balance the different pieces of the economy and guarantees their friction-less interaction. Let us describe what we mean with the help of our typical example of automotive production. For automotive production to run flawlessly, the production of iron ore, its refinement and melting, the steel parts production, and finally, the auto production itself cannot be disjoint processes. The ore-mining companies cannot merely produce iron ore of any quantity and quality and at whatever price. Every car/truck produced requires a precisely determined amount of steel of a pre-determined quality and at an exact price. On its part, the steel requires a precisely determined amount and quality of iron ore and so on. Unless the later requirement is met, the whole automotive production process cannot function since a flaw at any one point in the sequence would make the final production impossible. What makes the production process possible is prices, which transmit information between the different production stages about their individual needs and allow them to adjust to each other. Thus, prices are formed, which are set at such respective levels to keep the whole production sequence synchronized. The price at which the flotation/steel-making companies are buying iron ore guarantees the exact quantity and quality of iron ore to be produced. What regulates the prices is the rate of profit. It must be the same at every stage of production. It is the rate of profit that motivates businessmen to use or not use capital for specific purposes. Thus capital tends to

move from economic projects with a lower to ones with a higher rate of profit. In this way, the rate of profit helps redistribute the available capital along the whole production sequence from ore mining to final automotive production. The capital at every stage is such that the whole production line is synchronized. The rate of profit at every stage is the same. The prices formed between the production line stages are such that precisely the necessary quantity and quality of the product needed for automotive production (e.g., steel) are being created.

We just described a stationary state, where the overall capital was more or less constant. The situation is not different, however, when the economy grows. The rate of profit guarantees the synchronous growth of the whole structure. Thus, from iron ore production to the final automotive assembly, no stage can grow by itself, separated from the rest of the structure. The rate of profit will synchronize the growth along the production line. This is the most crucial observation we reach: growth happens synchronously along the production line, and all stages grow together. The process of growth that we describe is organic because the whole economy grows together, synchronously, as a single organism. It is precisely analogous to the development of the human body from childhood to adulthood. The human body does not grow piece by piece but as a single common structure. The latter observation may look obvious, common sense, and not worth mentioning, but we must contrast it with the capital theory introduced by Hayek and his followers, e.g., Rothbard (2009) and Huerta de Soto (2012). In it, the capital structure grows at the expense of the stages close to the consumer. In this treatment, money and general economic resources get continuously removed from the bottom of the Hayekian triangle and moved up the structure of production for secular economic growth to happen.

Note that mistakes happen regularly in the process of growth, but the price system is promptly correcting them. Thus if an over or under-investment forms temporarily at a particular stage, this will quickly correct itself. For example, let us suppose that over-investment happens at the iron ore production stage. This will lead to more iron ore being produced, and since the later stages have not grown enough to accommodate this newly appeared production, the prices of iron ore will drop significantly, thus lowering the rate of profit disproportionately. The latter will lead to disinvestment and capital movement out of this stage and back to the other stages of production, where this capital is more urgently needed until the rate of profit equalizes again.

At the same time, the introduction of a new, more efficient technology at a particular stage in the line of production will be accommodated with ease. For example, let us presume that a more efficient flotation process is being invented. When the newly introduced technology is a capital-saving one, then a local overproduction will result for some time, similarly to the

over-investment case. This will lead to a drop in the rate of profit, and the capital which is in excess at this stage will start flowing to the other stages (i.e., it will be released and reinvested) until a new production equilibrium is reached along the production chain from iron ore to final auto production. When the rate of profit at all stages equalizes itself, we will reach a new synchronous production line with more production and redistributed capital. The increased capital productivity at a particular stage allowed the released capital to be added to the other productive stages and thus increase the economy's overall productive capacity.

Note that a growing economy produces excess capital, which need not be invested back into automotive production. Instead, it could be used to create or expand another production chain, which, similarly to the automotive production described above, will grow as a single organism. Thus the free capital from the automotive production could create a new oil-production chain, consisting of an oil-drilling stage, oil-refineries, and an oil distribution stage. As explained, these oil production stages will grow synchronously, i.e., as a single organism. Moreover: this oil-production sequence will adjust and grow organically with the automotive production because of the internal dependencies between the two described lines of production.

All that we just described above was a process of economic growth, but the process of retrogression of an economy is very similar, just running in the opposite direction. Thus instead of the automotive production line growing synchronously with all stages growing together, it will retrogress synchronously with all stages shrinking together.

## **Capital structure. Basic building ideas**

In this section, the basic building ideas of how an economy is structured and can be represented will be discussed. This is a prerequisite for creating a graphical description of the economy. The ideas developed in Ninov (2020) will be reintroduced, and new ones will be added.

### **The mixture of capital**

The Austrian economics theory distinguishes three general types of capital: original (land and labor), circular and fixed capital. Still, it is the interaction between them that matters. A production company consists of all these three types together. It hires people (labor), uses available natural resources (land), processes intermediate products (circular goods), and uses machines, buildings, etc. (fixed capital). It is their mutual interaction that makes production possible. When we describe a single company or even a whole economic branch, we mean an

appropriate mixture of these three capital types working jointly and supplementing each other towards the final production.

A consequence of the above view is that we must always bundle the three capital types together when describing parts of an economy. Note that in both mentioned Austrian capital theory views, fixed (durable) capital goods cannot be directly represented, as explicitly acknowledged by Hayek (Repapis 2011). Thus the presence of fixed capital had to be handled only verbally. In the present suggestion, we make the existence of fixed capital explicit.

### **Similarities and commonalities between fixed/durable capital goods and consumer goods**

An existing economy produces not only consumer goods but durable capital goods as well. Thus we need to consider both of them when describing the capital structure of the economy. In addition, however, these types of goods have some similarities and commonalities, which must be considered when we create a graphical representation of the economy. We will discuss them in turn.

Imagine an automotive producer who produces both cars (a typical consumer good) and trucks (a typical capital good). Both types require steel parts for their production. These parts are pretty specific to the product produced, i.e., we need to produce separate parts for cars and trucks. Still, the labor and even machines used for steel part production are similar and sometimes even the same. Both types of parts, however, require steel in order to be produced. Thus steel production is a common technological process for both production lines. Note that, at this level of temporal removal from the final output, steel production is much more unspecific to automotive production, i.e., the same steel may be used alternatively for either car production or truck production. The same melting plant may produce steel for cars and trucks at the same time. When we move earlier in the technological process, we find out that the production of iron ore is not only a common one for both production lines but also that it is entirely unspecific, i.e., a producer of iron ore is not concerned at all with for what his output will be used. With all of the above, we wanted to stress two points. First, both durable capital goods and consumer goods pass through similar production lines and have many processes and intermediate production factors in common. And second, the specificity of the production decreases when we move earlier in the production process. Therefore we can not merely say that a particular intermediate product (such as iron ore) is used for durable capital goods or consumer goods production.

The second similarity between durable capital goods and consumer goods is that they are both improved upon until they reach the final production stage, and then they both begin depreciating (wearing out) with usage (private or industrial). The latter must be taken into consideration when creating a graphical representation of the economy.

The third and most important similarity between durable capital goods and consumer goods is that we cannot differentiate them. To classify a produced good as a capital or a consumer one, we must know how it is being used. Unless we know the latter, we can not say if a particular producer produces capital or consumer goods. Let us take, for example, the car as such. A car can be a consumer good when used for leisure, i.e., transporting our families and personal belongings around the country. At the same time, however, a car can be a capital good when a businessman uses it to transport his workers and equipment to the company's working site. In the same way, a truck is typically a capital good, i.e., it is typically used by businesses to transport their goods, but it can be a consumer good if one decides to use it as a recreational vehicle for his family (unlikely but entirely possible). What is more, the same product can be used alternatively at different times as a consumer or a capital good. Thus a businessman can use his company car to transport his workers, and in his free time, he may use it to go on a trip with his family. What follows from all of the above is that we can not distinguish both types of production. An automotive producer may be a capital goods producer, consumer goods producer, or both. Moreover, even the producer himself can not say what type of goods he produces. The latter depends on his clients and the way they decide to use the products they have bought. We must place consumer goods producers and durable capital goods producers at the same production stage from the just mentioned. The alternative would be to place similar companies or even parts of the same company in different production stages. It could even come to the point that a company (or a part of it) must continuously jump between different stages because its product is used differently (as a durable capital good or as a consumption good).

In conclusion, if we wish to represent actual economic processes truthfully, we have to explicitly show the presence of durable capital and consumer goods production and allow for them to be interchangeable (as in Reisman (1996, ch.16)). In contrast, in the Hayekian triangle, the production of durable capital goods is not explicitly shown but simply implied.

### **Production in time and space**

In our discussed automotive case, the production of durable capital goods takes place concurrently (i.e., parallel) in time to consumer goods production. Let us take another look at our simplified production of cars (consumer goods) and trucks (durable capital goods). First, we see that the ore produced is a joint product (totally unspecific) and that a part of it is being allocated for the production of metal for cars and metal for trucks, respectively. However, both types of ore are being produced simultaneously and most likely by the same iron ore mine. Later the metal is being melted again for both types of production simultaneously (again, a relatively unspecific process). A part of the produced metal is being used for car parts production and another one for truck parts production, but both processes (already distinguishable) run parallel in time. Finally, we assemble cars and trucks (possibly in the same factory) again simultaneously in time. We observe that the production of consumer goods and the production of durable capital goods run parallel in time and are highly correlated in space. Note that the latter is not visible in the traditionally used Hayekian triangle structure.

### **Capital complementarity and capital redistribution processes**

Let us presume that in our automotive setup consumers decide to save money and therefore stop buying as many cars as before. The first direct consequence is that many car producers will have to go bust or downsize while releasing capital in the form of labor, buildings, machinery, and intermediate goods used in production. These car producers have suppliers, however. They will have to cut down production as well since their products in the form of metal parts will simply not be needed and therefore release capital in the same form. However, the car parts producers have suppliers who will also have to release resources since their metal will not be needed. The same will apply to the ore mining companies. The decrease in the consumption of one particular good (cars) affected all branches that produced intermediate products leading towards the final consumer good. These released resources are the ones that can be used for investment later. Let us suppose that the freed resources will be used (invested) into capital goods production in the form of trucks. Thus a part of the released capital will flow into the truck production. People will be hired, and machines will be bought, buildings will be rented/built. However, truck producers need to be supplied with truck parts, so another part of the capital will flow towards them. The same will happen to the metal producers, as they are suppliers of the truck parts producers and later to the ore mining companies. Thus, we saw that the released capital was redistributed from one chain (sequence) to another. The latter process has been described in more detail in Ninov (2020), where an alternative theory of saving and investment has been developed.

Interestingly, in the particular setup described above, a part of the capital will simply stay where it is but be used for different purposes. The reason is that some processes are common ones for both lines of production. The ore mining producers will simply start selling ore to companies producing steel for the truck parts producers. Since iron ore is an unspecific production factor in this particular setup, then the redistribution of ore production will happen implicitly. Thus, the same ore produced before will be sold to different (or the same steel production companies), but this time, it will target truck production. In the same way, the steel mining companies need not change their production methods significantly, but they will start selling their steel to truck parts producing companies. The truck part producing companies will have to change significantly (but not entirely) their production processes to fit the truck producers' needs. As we see, the less specific the production factor, the less the need for adaptation/change. Thus most of the adaptation and physical movement of capital will happen in the lower stages.

We must note that this setup (automotive production) is a particular one, however. It may be the case that the released capital from the line of production leading towards cars will be entirely transferred towards an entirely separate line of production, for instance, towards the production of oil (oil distributors supplied by refineries that get oil from oil-drills, etc.). Thus one line of production will grow at the expense of another one.

Note that the actual economic processes we described above show how saving leads to a release of resources from the bottom to the top (i.e., in all stages/periods of production) and the following redistribution of the released capital in all periods/stages of production. The process of dis-saving is very similar but just runs in the opposite direction. It must be emphasized that when we save, we do not save consumer goods but all resources contributing to the production of the particular consumer goods (Ninov 2020).

Let us contrast the above view with the Hayekian triangle again. In it, the capital complementarity and redistribution due to net saving/dis-saving happen in the vertical, i.e., time dimension.

### **Capital losses**

When economic losses are discussed in the Austrian economics literature, only depreciation (as an economic cost) is considered. A real economy, however, has other inherent losses, such as losses due to environmental disasters (droughts, earthquakes, etc.), losses due to wars, losses due to economic waste (misused money from taxes, for instance), losses due to unsuccessful entrepreneurial projects (companies going bust), etc. Such losses must have been added on top of the depreciation and discussed along with it, but are not, unfortunately (Ninov 2020).

Note that these one-time losses cannot be foreseen or managed somehow and therefore cannot be added to the costs of production. Still, they must be explicitly handled in any capital theory description, and this is what the current one aspires to achieve.

### **Conditions for economic growth**

Here we will present a shortened version of an alternative view of how growth can happen without net saving on the part of the economic agents, as discussed in Ninov (2020). Such a process of growth is first described by George Reisman (1996).

The necessary and sufficient condition for economic growth is for an economy to compensate and overcompensate its losses (typically, only the depreciation is discussed). Taking the latter into consideration, we should note several well-known facts. First, the fixed capital goods depreciate, not the circular goods or the original means of production (land and labor). Second, we established that an economy produces not only consumer goods but also fixed capital goods. Third, the depreciation itself does not depend significantly on what our economy produces, particularly on what mix of capital and consumer goods is produced. And fourth and final, an economy can switch toward producing more capital goods (fixed capital goods in particular) at the expense of consumer goods, i.e., the economic agents can choose how much fixed-capital goods an economy produces.

Considering all of the above, we could reach a condition of economic growth in a straightforward way. Since depreciation (i.e., the loss of fixed capital) does not depend on what we produce, we may put the economy in such a working state that it produces more fixed capital than it loses due to the depreciation. The increase in fixed capital production will happen at the expense of consumer goods production, of course. And if the amount of fixed capital produced surpasses the economic losses, then our economy will grow by definition.

The way to move an economy towards producing more capital goods is by saving. However, once the economy starts producing more fixed capital than it loses, we need not save anymore. In other words, net saving is not a precondition for economic growth. Thus an economy can exist and grow with zero net saving on the part of the economic agents.

In the two prevalent Austrian theories of capital, such a mode of growth is simply missing. In both, net saving is a prerequisite for economic growth. Our suggested economic theory is based entirely on the no net-saving growth model, however. In it, the presence of net saving/dis-saving is treated simply as a case of an economic transition/restructuring.



For example, the ore production stage consists of the sum of the market prices of all labor and land, fixed (machines, buildings, tools, etc.), and circulating capital used to produce iron ore. As discussed earlier, each company and each branch of the economy can be represented as a mix of the three basic types of capital. Note that the fixed capital used at each stage is explicitly included, although it is not being exchanged for money, as is the case with circulating capital or labor. Still, fixed capital (e.g., a machine) has a market-determined price, and we can add it to the monetary value of the respective stage. In a way, we have aggregated the market-determined values of all companies dealing with the respective stage production (e.g., iron ore mining). The fact that we have included the current market prices of fixed capital allows us to consider depreciation as a loss associated with each stage. As fixed capital depreciates, the respective stage loses value. Note that the depreciation loss is not directly shown since it does not include the movement of money. There is no problem whatsoever to represent all possible losses (as discussed earlier) of the economy in the same way as described, but for the time being, we will stick to the traditional way in which this is done in the standard Austrian economics literature; namely, we will consider depreciation as the only loss our economy undergoes.

The structure we describe depicts well how durable and consumer goods production runs in parallel in time and space. We have somewhat arbitrarily separated the lowest stage into cars (i.e., consumer goods) and trucks (i.e., durable capital goods). This separation runs up the graph too, but the higher we go, the more general and unspecific the intermediate products get. Still, it can be seen how iron ore is being produced and processed in parallel for both the consumer goods and durable capital goods branches. We can also see how the complementarity of capital manifests itself at each and every stage. Thus if the economy starts producing more trucks (i.e., durable capital goods), then a part of the iron ore produced, which was targeted previously towards car (i.e., consumer goods) production, will simply be re-targeted towards truck production (i.e., durable capital goods). Since iron ore is completely unspecific, such a change in the structure of the economy will not affect the iron ore production stage since the iron ore production companies do not care at all where and how their product is being used.

We see two feedback loops in the figure, which run from all the stages down to the lower-most one. The left feedback loop represents the money flow generated by the consumers at each stage of the economy when they buy the consumer goods produced. As seen, this money circulates up and down the structure and is simply the demand for consumer goods. The right feedback loop deserves special attention. It represents the demand for durable capital goods that flow back into the productive economy. In this way, they accomplish two things: first, to

compensate for the depreciating fixed capital, and second, if they are in excess, they allow the economy to grow by increasing the monetary value of the capital in all stages. Note that the latter shows how a part of the production of the economy is reserved for capital compensation and capital increase (i.e., growth). This is what is meant under „investment fund,“ as described in Ninov (2020). The investment fund consists of all economic resources at all stages from top to bottom that contribute to the production of durable (fixed) capital goods. One could approximately imagine the latter as the monetary sum of the right sides of all existing stages. As seen, the investment fund permeates the whole economic structure.

The two feedback loops are essential from another point of view as well. As discussed at the beginning of the article, we view the economy as a single organism. Thus, each stage of the economy depends on every other stage, and the feedback loops explicitly depict this relation. They show how it is impossible to change a single stage alone without affecting all the others. Note that in contrast to the standard Austrian theories of capital, where the feedback loops are subsumed but cannot be explicitly shown, we can do the latter explicitly in the suggested one. It is hard to imagine how a Hayekian triangle with feedback loops would look like due to its non-explicit handling of fixed capital goods and durable capital production.

A limitation of this graphical representation is that we cannot explicitly show all details of the capital balancing action caused by the uniformity of profit principle. We can show how capital moves laterally, i.e., within the stage, but the movement of capital between stages in the vertical direction is something we have to handle only verbally.

## **Example usage of the new graphical structure of an economy**

We will describe several examples of how the just-created graphic economic description helps us describe real/existing economic processes. Unfortunately, as discussed earlier, the important case of credit expansion will have to be omitted out of necessity.

### **A stationary economy**

When one speaks of an economy in a stationary state, one means the case when the newly created capital precisely compensates the lost (depreciated) capital. The latter ensures the constantness of the overall capital. Since our description presumed that the depreciation is the only existing loss, then the condition for a stationary economy is given by the durable capital goods produced (trucks) must precisely compensate the depreciated ones. This means that enough resources must be targeted towards producing durable capital goods at every

stage of the graph so that the final product is enough to compensate for the loss. Thus, the right feedback loop redistributes the newly-produced durable capital goods into the respective stages. Since the capital does not grow, we find ourselves in a stationary economy.

As discussed previously, no net saving is necessary for this state of the economy to exist. The depreciation itself (as an economic loss) will be automatically compensated/ included in the costs of production. Depreciation as a regularly occurring and predictable economic loss can be included in the economic calculation of every business company.

### **From a stationary to a progressing economy**

In order for our economy to grow, we need to produce more durable capital goods than in the previous case. The way to do the following is to re-target resources at each stage, which were previously used for consumer goods production towards durable goods production. The latter is accomplished by the consumers when they start saving. Thus, a capital redistribution process is started. Resources at the respective stages that were previously used for consumer goods start being used for durable capital goods production. In graphical terms, the border, which signifies where the production of consumer goods changes into the production of durable capital goods, and which we have shown for simplicity only at the last stage, moves to the left. As a result, the part of the economy that is meant for capital compensation and capital increase (the investment fund) grows. From now on, more durable capital goods will be produced and redistributed through the right feedback loop into the respective economic stages. Note that once we have moved our economy to the new state, consumers need not save any more. They can stop saving, but the economy will grow nevertheless. No further saving will be necessary, as discussed at length in Ninov (2020). The process of growth will be automatic from that point on.

As can be seen, similarly to Garrison (2001), the increase of net saving (or in our case, its appearance) is associated with economic restructuring, but contrary to Garrison's theory, it is not necessary for the existence of secular economic growth. Note that in our and Garrison's views, the economy grows as a single whole, but we have explicitly handled the monetary values while Garrison somehow abstracted away from money altogether.

### **From a stationary to a retrogressing economy**

To move from a stationary to a retrogressing economy, we have to do the opposite of the previous case, i.e., we have to decrease the production of durable capital goods under the level necessary for the depreciation loss compensation. Since depreciation is being compensated as part of the costs a company incurs, i.e., by increasing its sales prices, the only way to go

below this mentioned economic threshold is to start consuming capital. So, to switch from a stationary to a retrogressing economy, companies must start devoting less money for the subsequent production rounds, i.e., to consume a greater part of their revenues than before. A new capital redistribution process will follow because more resources at every stage will be targeted towards the production of consumer goods than before. The investment fund will shrink again. In graphical terms, the already-mentioned border between capital and consumer goods production will move to the right. Less durable capital goods will be distributed through the right feedback loop to the upper stages, and more consumer goods will be bought through the left feedback loop. Even if the capital consumption process stops at this point, the economy will still retrogress further since the quantity of produced durable capital goods will not be enough to replace the depreciated ones. The latter will happen since the percentage of capital used for capital substitution will stay the same independent of how much the overall diminishing capital is. And unless something changes, the process of retrogression can go on until all the accumulated capital in the economy disappears. All that any further capital consumption process can achieve is to steepen the rate of economic decline.

As can be seen from the above, our proposed capital theory enables us to directly relate the depreciation compensation process to the structure of the economy. The latter is hidden from view in the standard theories of capital mentioned.

### **Reaction to an economic crisis not caused by credit expansion**

Let us assume that something adverse happens to our economy. It can be a natural disaster, such as an earthquake, flood, famine, or an external act of economic destruction such as war. We will presume for simplicity that the damage is sustained by only one stage of the economy and see how the whole economy is affected and what its counter-reaction will be.

We will presume that at the level of steel parts production, many plants get damaged/destroyed, with no direct damage to the other stages. As discussed at the beginning of the article, an economy as such behaves as a single organism. If a part of the production process does not function, this affects not only that part but the entire process and, by extension, burdens the whole economy. In our specific case, the following will happen. Since the production of automotive parts will decrease significantly, then the automotive producers will not further produce the same quantity of cars/trucks. Some of them will get bust and others will have to scale back production significantly. At the same time, the flotation stages will be in a crisis too. Nobody will buy their production since the processing capacity necessary (car-part plants) will

not be available. The iron ore production stage will not be able to function either. Since iron ore cannot be used, it will not be bought by the flotation/steel production plants. Thus, the whole economy, from top to bottom, will get into a crisis mode. Due to the infinite number of internal feedback loops, there will be no sector of the economy, which will not be affected in any way.

Since car parts will be in short supply, their prices will soar. The latter will force the already released capital from the other stages to move towards this stage to restore production. Laid-off workers, suitable machines, etc., will move from the rest of the economy towards the car parts production stage. Simultaneously, most of the produced durable capital goods will also be used for/targeted toward capital restoration at the damaged stage. In addition to all of the above, another well-known process will kick in. Since the economy is in a crisis, all the economic agents will start saving due to uncertainty about their future. The latter is a naturally occurring phenomenon. The overall result will be a redistribution of capital towards the investment fund. The redistribution of capital will allow a greater part of the economy to produce durable capital goods and help fix the damage faster. In time the production of car parts will pick up. This will lead to a decrease in their prices, and the flow of capital from the other stages will decrease until, at one point, it stops entirely. The damage will be fixed, and a new redistribution of capital will be established. The economy will restructure itself and be able to grow again since the production will be able to run smoothly.

We must underline the role of consumer saving during a crisis. It is a natural part of the healing process. The fact that in our current fractional reserve monetary system, saving is deemed detrimental shows one point only. Namely, that the fractional reserve has no part in a free-market economy because the natural reactions of the economic agents are simply not suited to it.

In the above discussion, we showed how our suggested system is able to cope with a sudden loss of capital, which is its distinctive characteristic.

## **Conclusion**

A new graphical structure of capital has been developed. It is based on several building ideas. First, each stage/branch of the economy is a mixture of the three base types of capital. Second, consumer goods and durable capital goods are very similar and pass through common production processes. Third, the production of consumer goods and durable capital goods runs parallel in time and space. Fourth, the two types of goods are complementary along the whole production line. Fifth, in particular, capital losses and depreciation are explicitly handled

and shown as a general loss of value associated with each stage. Sixth, economic growth without net saving is subsumed, which is a distinctive feature of our suggested theory.

We have shown how the newly suggested capital structure allows us to describe the cases of economic growth, retrogression, and crisis in the context of invariable money.

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### **Bio**

Youliy Ninov is an independent researcher.

# Two Problems of Regression Theorem

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**F**or Mises ([1912], 1953), it is impossible to explain the objective exchange value of money entirely by reference to its monetary utility. He never applied directly the law of diminishing marginal utility to money, even though it is the diction of the theory of subjective value once we explain the price of goods. He claimed that to explain the purchasing power or price of money is possible only indirectly. This is why he developed the Regression Theorem. The Theorem should overcome the problem with the direct application of the law of diminishing marginal utility to money and should explain the essence of the price of money. It will be shown that in doing so, Mises used the *objectivist approach* per se. The argument will be demonstrated, based on two of Mises's mistakes: first, on the mixing of the use and exchange value of goods, so the non-proper differentiation of the concepts of marketability and moneyness and second, a core mistake, by using past prices as the base concept for the derivation of new prices, money included.

## **Acknowledgment:**

*I take full responsibility for any errors or oversights. The reader should be reminded that this is a third version of the paper. First two versions were declined in different journals. The reader should not consider this as a problem. It is a complicated topic. I would like to express my thanks to all reviewers for their excellent comments, all of which improved the argument.*

## **Introduction**

The Regression Theorem is used within the Austrian School to explain the purchasing power and valuation of money. It will be shown that the explanation of the value of money cannot be resolved by the theorem. The central claim of this work is that the theorem makes an inconsistency within the subjective value theory espoused by the Austrian School. There are two primary reasons for this claim:

- A. By the application of the regression theorem to the problem, we violate the direct application of the law of diminishing marginal utility to explain the formation of a money price, and we insert into the explanation (which should be derived from the evaluations

of the exchange participants) the existing price of the industrial commodity. It doesn't matter that the insertion of the industrial price is illustrative only, i.e., that it was done sometimes in the past, when our predecessors were supposed to be inspired by the industrial price of a commodity, when they were deriving the price of commodity money. It is a matter of fact that the industrial price of a commodity was already derived at that time from a value assessment attributed to the industrial utility of the commodity and not from a value assessment attributed to the monetary functions of the commodity in question. As will be shown, Mises explicitly mixes the concept of marketability with the concept of moneyness.

- B. A key – objectivist – problem, is that Mises derives a value assessment of goods entering an exchange from the past valuations of agents. Mises's insistence on the claim that the past price is inspirational brings objectivism into the theory. He transmits the evaluations of agents performed at the time  $t$  (the price of industrial commodity) to the time  $t_1$  (the price of money).

This isn't, therefore, a typical rejoinder to discussions or criticisms of the applicability / inapplicability of the regression theorem concerning an explanation of the origin of money as seen in the works of Mises ([1912], 1953), Rothbard ([1962] 2004), North (2012), Davidson and Block (2015), or Hansen (2019). The aim is to point out that using regression theorem to explain the dawn of money is incorrect per se; it cannot be part of a sound economic theory unless it is used as a demonstration of a mistake.

We will, therefore, proceed as follows. We need to remind the reader of the use of terms concerning the objective exchange value of goods and money. Then, a subjectivist version of the price theory will be introduced in Section 2 in order to remind the reader what the diction of the theory of subjective value is. We will deal with the problem of the price of money in Section 3 where we will define here presented problem and demonstrate why an explanation of the price of money is complicated. Section 4 will specify problems with regard to the regression theorem and state explicitly the mistakes made by Mises ([1912], 1953 and [1949], 1998). In Section 5, we will provide the conclusions and implications, which will arise if we insist on the validity of the theorem.

### **Use of terms**

Before we start it is necessary to eliminate any confusion with regard to the use of terms, which may be caused by using the terminology "subjective" and "objective". We will use "subjective"

and "subjective valuation" in terms of the valuation derived from the thoughts of a person. Any reference to the term "objective" will be used here to refer to something that exists in reality, such as the *outcome* of the actions of human beings (e.g., the price *per se*) or existing reality. The Austrian School theory of value uses two kinds of values as a terminological base: so-called, *use value* and *exchange value*. We will refer to these meanings as used in Menger (2007); it must be stressed that both values are derived from the valuation of the actions of individuals! This is a crucial point. Both valuations are based on personal needs. It would be also useful to remind the reader how Mises ([1912], 1953) uses the terms "*objective exchange value of good*" and "*objective exchange value of money*". We will proceed by using these terms as Mises did. By an "*objective exchange value of good*" Mises ([1912], 1953, p. 101) means that: "*If the objective exchange value of a good is its power to command a certain quantity of other goods in exchange, its price is the actual quantity of other goods;*" and by an "*objective exchange of value of money*" (ibid. p.101) he means: that "*by 'the objective exchange value of money' we are accordingly to understand the possibility of obtaining a certain quantity of other economic goods in exchange for a given quantity of money, and by „the price of money" this actual quantity of other goods. It is possible to express the exchange value of a unit of money in units of any other commodity and speak of the commodity price of money; but, in actual life, this phraseology and the concept it expresses are unknown. For nowadays money is the sole indicator of prices*". Mises also stressed (ibid, p. 101): "*... that the concepts of price and objective exchange value are by no means identical*". It is possible to state that *objective exchange value* is an *essence (power to command)* of the possibility of exchanging goods which is derived from the valuations of agents. These terms are crucial for any further consideration of the problem.

## **The Price Theory; Use and Exchange Value of Goods**

The Austrian School price theory, which is based on the subjective theory of value argues that prices are derived from the subjective attribution of the value of goods which we exchange. We derive the value of goods in the very context of our needs (ends); we perceive our needs (ends) and scale them. As O'Driscoll and Rizzo (1996, p. 45-46) show, the process of pursuing ends and their actual fulfillment by goods (means) is not a simple process. First, there is the decision with regard to what need is actually perceived as something with the highest urgency or priority. However, what results in the action that meets the need in question is based on the projection of future need satisfaction, knowledge of the need-satisfying potential, and other possibilities available in order to acquire the goods in question. Mises ([1949] 1998, p.13-14) has a similar

claim when he defines the prerequisite to action as a feeling of uneasiness, imagining a more satisfactory state and expectations that the action will eliminate that feeling of uneasiness.

It means that a person's decision-making process causes that person to create their subjective scale of needs-goods. Very simply put, they will create a list of priorities when the needs-goods relationship is connected by action. The scale implies that we perceive a specific good as more desirable (followed by something less desirable); the desirability of that specific good is arrived at through the subjective assessment of the need to be gratified by the most appropriate good we subsequently demand or prefer.

The causal relationship concerning needs-goods logically results in the formulation of the law of diminishing marginal utility. The law is interpreted today as follows: "*the marginal utility of each homogeneous unit decreases as the supply of units increases (and vice versa); second, that the marginal utility of a larger-sized unit is greater than the marginal utility of a smaller unit (and vice versa)*" (Polleit 2011). The law establishes that an additional unit of a homogeneous product or a larger-sized unit satisfies the most urgently perceived need less and less, until there is a state of full elimination of the uneasiness caused by the satisfaction of the most urgent need in question. This causes a person to begin preferring another product, which starts to eliminate the uneasiness caused by the second urgent need, and so on. Demand for goods is then derived based on this argument.

The valuation enables us to assign to goods so-called *use value* and *exchange value*. The theory states that the use value is assigned to goods based on some knowledge of some given characteristic of goods; e.g., we know that water quenches thirst. However, we also assign an *exchange value* to goods. If I am more thirsty than hungry, and I have a pear, and if there is someone who has water and wants my pear, I can exchange the pear for water (and vice versa, from the point of the other person). I thus attribute an *exchange value* to the pear which I own. The *exchange value* is deducted by the Austrian School theory since someone else desires the pear, that it derives it from the *use value* attributed to the pear by the other person in the exchange. That's why I can exchange the pear for the water I demand. Therefore, the pear acquires the *exchange value* from the perspective of the owner of the pear when it is exchanged for water, and water acquires the *exchange value* from the perspective of another person when it is exchanged for a pear.

The price is then created as an *outcome* of the act of exchange between individuals who demand goods based on their subjective valuation while they are informed by the law of diminishing

marginal utility. Therefore, the price is always *the outcome* of the inverse valuation process of the needs-goods relationship by individuals who, after this valuation process, enter the exchange, which creates the price – an exchange ratio of commodities. The line of reasoning with regard to the exchange and formation of the price is:

1. The valuation and scaling of needs
2. The goods in someone's personal possession (a person possesses goods because he/she attributes use and/or exchange value to the goods to eliminate his/her uneasiness)
3. The individual "preparation" process before an exchange (an application of the law of diminishing marginal utility to the goods in possession and the creation of a vision of demanded goods as part of the possessions of a person)
4. Action as an act of exchange (particular inverse attributions of use and exchange values to objects of exchange by parties of exchange)
5. The price as an exchange ratio of goods (as economic outcome; objective fact).

It must be stressed that from the subjective perspective, some lower/higher price or exchange ratio of one commodity to another commodity is never a motivation factor to buy/sell the commodities being considered. The exchange ratio is always *the outcome* of the subjective valuation of a need-goods relationship, the perceived uneasiness influenced by the law of diminishing marginal utility, and the preference for an obtained commodity to a disposed of commodity and vice versa, from the point of view of another one..

## **The Price of Money**

The above description of the pricing is not problematic in terms of any other goods except money. Why? Because we do not demand money since we assign a *use value* to it. We need it because we can make exchanges through it. It means that I can exchange my pear for money and then I can buy water for money. The Austrian School theory of value and money claims that money has an *exchange value* only, or that the subjective use-value and the subjective exchange value coincide, based on the objective exchange value of money. And here comes *the* problem. How can we derive an *exchange value* of goods when we cannot perceive its *use value* as it was presented in the above example with the water and pear? Why then do we demand money? It is clear that money deals with the practical problem of what we call *the coincidence of wants*. The practical use of money still does not answer the following question: "How do we

all assign to money *only an objective exchange value?*" In other words, we have to explain the existence of the bid-ask spread between money and any other goods in question. The problem is introduced by Mises ([1912], 1953, pp. 93 - 100) in the following way (emphasis added):

„The central element in the economic problem of money is the objective exchange value of money, popularly called its purchasing power. This is the necessary starting point of all discussion; for *it is only in connection with its objective exchange value* that those *peculiar properties of money that have differentiated it from commodities are conspicuous.*" (p.93)

...

„In the case of money, *subjective use-value*, and *subjective exchange value coincide. Both are derived from objective exchange value*, for money has no utility other than that arising from the possibility of obtaining other economic goods in exchange for it." (p.97)

...

„The *objective exchange value of goods is their objective significance in exchange*, or, in other words, their capacity in given circumstances to procure a specific quantity of other goods as an equivalent in exchange." (p.100)

The objective *exchange value* of money and the price of money are very connected; it is as follows: there is no objective *exchange value* of money without the price of money, and there is no price of money without the objective *exchange value* of money. It is very precisely defined by Rothbard, who claims that money, without assuming its price, or purchasing power, cannot even be regarded as money. Rothbard ([1962] 2004, p.765) writes (emphasis added):

„... without a *price or an objective exchange-value*, any other good would be snapped up as a welcome free gift; but *money, without a price*, would not be used at all, since its entire use consists in its command of other goods on the market. *The sole use of money is to be exchanged for goods, and if it had no price and therefore no exchange-value, it could not be exchanged and would no longer be used.*"

We face a non-trivial problem here as is described by Mises ([1912], 1953, pp. 108-123)<sup>1</sup>. As we stated above, we need to explain the price of money based on its subjective valuation, its need-

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<sup>1</sup> However, it is interesting to read further that Mises did not consider this part of the problem as the most troublesome. Mises ([1912], 1953, p. 123, his emphasis) states: "Now, the first part of the problem of the value of money having been solved, ...

goods relationship, the elimination of subjective uneasiness, the law of diminishing marginal utility, and its valuation by two or more individuals. This is what the theory of pricing requires of us based on the subjective value theory and the law of diminishing marginal utility. We also consider all these concepts as universally valid, failing which, we do not have a coherent theory. However, let's look at how Mises ([1912], 1953, p. 120, emphasis added) describes it; he writes:

*"It is true that valuation of monetary unit by the individual is possible only on the assumption that an exchange ratio already exists in the market between the money and other economic goods. Nevertheless, it is erroneous to deduce from this that a complete and satisfactory explanation of the determination of the objective exchange value of money cannot be provided by the marginal utility theory. The fact that this theory is unable to explain the objective exchange value of money entirely by reference to its monetary utility; that to complete its explanation, as we were able to show, it is obliged to go back to that original exchange-value which was based not on monetary function at all but on other uses of the object that was to be used as money – this must not in any way be reckoned to the discredit of the theory, for it corresponds exactly to the nature and origin of the particular objective exchange-value under discussion. To demand of a theory of the value of money that it should explain the exchange-ratio between money and commodities solely with reference to the monetary function, and without the assistance of the element of historical continuity in the value of money, is to make demands of it that run quite contrary to its nature and its proper task."*

Mises is quite explicit. According to him, *it is not possible* to explain the monetary usefulness of money-goods *per se*. He asks for *"the assistance of the element of historical continuity"*. But asking for *"the assistance of the element of historical continuity"* is not *"to make demands of it that run quite contrary to its nature and its proper task"*, it is to make demands that run quite contrary to the nature and to the proper task of a theory of subjective value and the law of diminishing marginal utility as described above; meaning here, to explain *the price of money* based on the following lines of reasoning: 1) valuation, 2) goods in possession, 3) action-exchange, 4) price. Mises's solution is clearly a different one, which is dictated by the theory of subjective value and the law of diminishing marginal utility. Mises finds it necessary to proceed in describing the purchasing power of money up to the point where the purchasing power is derived from another function that the given commodity fulfilled (regression theorem), and it is at this point,

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We now have to establish the laws which govern *variations* in existing exchange ratios between money and the other economic goods. ... Of course, this part of the problem is also much more complicated than the first part."

according to him, that all of the above-mentioned concepts are smoothly applied. Mises ([1912], 1953, p. 121, emphasis added) concludes:

“Before it was usual to acquire goods in the market, not for personal consumption, but simply in order to exchange them again for the goods that were really wanted, each individual commodity was only accredited with that value given by the subjective valuations based on its direct utility. It was not until it became customary to acquire certain goods merely in order to use them as media of exchange that people began to esteem them more highly than before, on account of this possibility of using them in indirect exchange. *The individual valued them in the first place because they were useful in the ordinary sense, and then additionally because they could be used as media of exchange.* Both sorts of valuation are subject to the law of marginal utility.”

Mises is explicit. *He did not explain monetary utility.* He only *derives* monetary utility *from another use of the commodity* that was to be used as money. Apart from the fact that Mises imputes valuations (see also a note by Hülsmann 2000, p. 89, footnote 13), which is in direct contradiction to ordinal valuation principle (invented by Mises himself based on Čuhel’s works; Hülsmann 2007, p. 390), Mises also simply failed to directly apply the law of diminishing marginal utility to explain the price of money.

At this point, a potential critic could state the following: “*Yes, Mises knew this. We all know this. This is not new knowledge. He stated this very clearly in his texts. It is impossible to explain monetary utility otherwise. After all, this is the very reason why Mises actually developed the regression theorem. The theorem overcomes unsolvable problems and explains the existence of the objective exchange value of money.*” Mises defends himself in the very same way (see Mises ([1949] 1998, pp. 406-407). This defense is, however, unfortunate. The insistence of this line of reasoning is contrary to the line of reasoning connected with the theory of price, based on the theory of subjective value and the law of diminishing marginal utility as presented above. So, it makes *exemption* within the theory. This implies two possibilities. Either we do not have a coherent theory of subjective value, which can be used generally, i.e., also in the context of the theory of money or Mises made a mistake. I claim that the second is correct. It is possible to show two logical errors, which Mises’s suggested line of argument contains.

## **Regression Theorem – “Solution” outside the Subjective Theory of Value**

Before we start to examine the problem, it has to be stated that author is aware of the fact that money has a peculiar character and that its objective exchange value exists per se. Author

only insists that it is impossible to use the theorem to explain this peculiar status. It is because the theorem is based on the claim that people anticipate the purchasing power of money (its exchangeability) towards the future based on its past price (Mises is very explicit here<sup>2</sup>), and that is why people accept money today. It is this process that is tracked backward by Mises; step by step until there is a condition where the anticipation of the purchasing power of money has been already derived by our predecessors from the industrial price of the commodity that was then further used as money. Author claims that this kind of process cannot be behind the dawn of the phenomenon of money. Although the description of the process is attractive for its simplicity.

Mises made two mistakes in his logic. First, although he carries out a mental exercise related to the anticipation of the price of money, at the end of the regression, he deduces the "objective exchange of the value of money" (for example gold), which must be only and solely the objective exchange value perceived by both participants of the exchange, from the existing perceived "barter-industrial use/exchange value of the good (for example gold) which is perceived from the point of view of one participant of the exchange as a use-value and the perspective of another participant as an exchange value<sup>3</sup>. Second, he used past prices to explain the anticipation of future prices as the principle for the subjectivist consideration of the future.

### **The problem of marketability and moneyness**

Concerning the first mistake, we already know that the Austrian theory of value and money claims that in an exchange at least one individual perceives the "industrial" *use value* of the commodity in question – which is the reason behind the demand for it. At the same time, however, Mises claims that, with regard to money, this "barter-industrial" *use value* is not perceived, or in other words, the subjective *use value* of money coincides with its subjective exchange value. And this is the problem. We have to realize as a matter of fact that money should have a perceived *objective exchange value only* (subjective exchange value and subjective use value must coincide), namely by one or the other individual (or more individuals at once) at the very same time. This is what makes it money. We can name the coincidence phenomenon as

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2 Mises ([1912], 1953, p. 109): "Once an exchange-ratio between money and commodities has been established in the market, it continues to exercise an influence beyond the period during which it is maintained; it provides the basis for the further valuation of money. Thus, the past objective exchange-value of money has a certain significance for its present and future valuation. The money prices of today are linked with those of yesterday and before, and with those of tomorrow and after".

3 Author uses the term "barter-industrial" *use/exchange value of goods* and "money" *objective exchange value (or moneyness)* to emphasize the difference between the attribution of an exchange value to money and the value attribution to industrial commodity. It must be stressed that the "*use/exchange value of goods*" is used because within the barter exchange the use value is attributed by one part of the exchange and the exchange value is attributed by the other part of the exchange to the commodity in question.

*moneyness* in order to differentiate it, and it is necessary to stress again that it is not given to any commodity but must be derived from the valuations of agents. Let's dig into the argument in more depth. Mises claims that people in the past were inspired by the price of an industrial commodity and, on that basis, they set the price of money. Mises ([1949] 1998, p. 406, emphasis added) claimed that:

"If we trace the purchasing power of money back step by step, we finally arrive at the point at which the service of the good concerned as a medium of exchange begins. *At this point, yesterday's exchange value is exclusively determined by the nonmonetary-industrial demand, which is displayed only by those who want to use this good for other employments than that of a medium of exchange.*"

However, let us realize that the industrial price of the good, in order to be inspiring, is based on the fact that one individual assigned an "industrial" *use value* to the good. Let's examine closely. If the entity A exchanges an apple for a pear with the entity B, the apple (owned by A) is assigned the *exchange value* by A and the *use value* is assigned to it by B and the pear (owned by B) is assigned the *exchange value* by B and the *use value* by A. We have to be clear once again that it is not the apple which has a value! It is from the point of view of the entities A and B from which the apple's/pear's *use/exchange value* is derived. From the point of view of a particular individual, the goods in question are then attributed either to *use value* or only to an *exchange value*. In this way, the industrial price (the *industrial exchange ratio*) is derived. However, for an objective exchange value of money which is fully dependent on the purchasing power of money or the price of money, we need both entities A and B to be assigned to the commodity, for example, a pear (if the pear is used as money), only (!) an *exchange value*. This enables us to differentiate between an apple, a pear, and, for example, a pear as money, if the pear is used in some community as money. Money (i.e., pear if it is used as money) has been attributed only its moneyness – everyone considers it to be money, or more precisely, any member of the economic community attributes to money only its objective exchange value. However, it is different for apple and pear as industrial commodities. They are attributed a use value and an exchange value, which depends, of course, on the view of the owners of the apple and pear.

Using regression theorem to explain moneyness, Mises is mixing two kinds of valuation processes at the same time. At that crucial and particular point of time when according to him the objective exchange value of money is raised when yesterday's exchange value was "*exclusively determined by the nonmonetary-industrial demand*" he actually presupposes (implicitly) that one of the

two actors in the exchange (owner of apples in our example) attributes *both* values (use and exchange) *to the commodity* in question (pear) to make the coincidence of values possible. Mises simply claims that there were many, many exchanges of apples and pears (let's forget about gold for a moment) in some economic community, and one day, an owner of apples had acquired pears based on his usual intention to eat them and at the same time to exchange them in the future to make it money. This is the logic behind his argument; otherwise, why to be inspired by industrial price which is based on a different value process of pricing? Not only this does not make any sense, it is also not possible because of choice; it is different to exchange money compared to exchanging industrial commodities. Inspiration by industrial price is simply illogical because of different value character of the process behind it.

If we claim that people value the object for some industrial use, we cannot claim that they value the object for monetary use at the same time; unless we illogically mix two concepts together or if we presuppose that it is the object itself that contains both features at once. Valuations of an object of reality are always derived, never given, or presupposed. It does not matter that it could be that one day (one moment) we used, say, silver as an industrial commodity and the day after that (moments later) as money, and it doesn't matter that silver could have the same price whether an industrial or a monetary one, in terms of both days (both moments in time). When we used it, we used it exclusively based on the choice – either in terms of money or as an industrial commodity, not both. Both are logically impossible. It is only from a psychological point of view that an economic commodity can be attributed by use and exchange value; a person can *consider or think about* both value options when he/she considers what to do with the goods<sup>4</sup>. However, one of the values will eventually become dominant, depending on how the economic goods satisfy the person's needs. Logically, within the choice, the person eventually assigns a use or exchange value to the goods, not to both at once.

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4 We can only speculate if Mises ([1912], 1953) might be inspired by Menger (2007, p. 260, the footnote no.3; see Appendix I pp. 312 – 314), where Menger describes the etymological origin of the word of "money". Menger describes it from an etymological point of view. People used double-meaning terms to describe money; for example, they used similar terms to describe cattle, as well as money. Mises's mistake may be also caused by Menger's vagueness when Menger explains the use value and exchange value (2007, p. 230-231). It could be that this led Mises to formulate the derivation of a monetary exchange value from an industrial exchange value.

It could also be that Mises adopted the Mengerian concept of the inner exchange value of money, Hülsmann (2012, p. 7) in the footnote 17 explains: "In the English edition the distinction between inner and outer exchange value was completely dropped. In a footnote (on p. C146) Batson explains: "Since this distinction has not been usual in English terminology, it has been omitted from the present version; and, in what follows, wherever 'the objective exchange value of money' is referred to, it is the innere exchange value that is meant unless the contrary is explicitly stated."

It is possible to realize this problem once we provide the differentiation for the concept of marketability and the concept of moneyness and use some secondary literature on the topic in the context of Davidson and Block (2015) or Hansen (2019). The marketability (of a commodity) precedes the potential moneyness (of the commodity). Mises's theory implies that the moneyness is then derived from the marketability once the marketability (of a commodity) reaches ultimate maximum. This is the crux for his explanation of what happened in theoretical terms. To explain the problem, we can use Hansen (2019). He writes (p. 40):

"... it is expected future prices that determine the present demand for money, such expectations must have a starting point. If this starting point is not based on prior exchange value, whatever array of prices the actor assumes is completely arbitrary. But the demand for money is precisely not arbitrary, so the value of money must be traced back in time to the point when acting man first demanded a given good for its services as a medium of exchange based on his appraisal of the good's already existing objective exchange value as determined by demand based on its use value and his judgment as to its expected higher marketability."

Hansen (2019, pp. 40-41) then explains marketability in accordance with Hoppe's (2006) point of view. It depends on the unequal demand for goods because of "*the plurality of goods which serve different needs*". So far so good. Logically, the marketability of goods precedes the moneyness<sup>5</sup>. It is also logical that the moneyness must have some starting point because the demand for money is not arbitrary. But the question is how do we "jump" from the marketability to the moneyness.

It has to be stressed that in essence, these are different; meaning here that the "*power to command*" is different. The marketability is derived from a different attribution of *use value* to goods by agents however moneyness is not. Moneyness has a different essence, which is exclusively based on the *coincidence* of subjective exchange value and subjective use value, both of which are derived from an objective exchange value that depends on the price of money (all together). This is a *new feature of economic reality, a new emergent economic phenomenon*. It is the structure of the relationships in question that is different. While concerning the marketability, the structure of relationships is defined or derived by the attribution of *use value*

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5 This is also the answer to a very good point given by one review of this text that he/she is "not aware of any good which, on the free market, had become money before having been traded as a good/ commodity". It is natural because marketability is a basic phenomenon. The reason why some commodity was finally chosen for money was empirical in nature. However, it must hold, in terms of the theory, that the chosen commodity somehow reflected a new phenomenon of moneyness. The empirical decision to use some commodity as money per se is not the explanation of moneyness; it is a consequence.

*from a subjective point of view.* However, the structure of relationships concerning moneyness is exclusively *intersubjective* from the dawn of this phenomenon. In other words, the marketability of some industrial commodity is subjective by its nature. And yes, it could be that the range of marketability of some industrial commodity is grasped by only few individuals (e.g., a cup of coffee in my neighborhood) or globally by many individuals (e.g., oil or silver as an industrial commodity); however, it is still subjective by its very nature. On the contrary, the moneyness is different. It is *intersubjective* per se; it is its very nature or essence if the reader will allow me to use these terms for the benefit of clarity<sup>6</sup>. It means, that the situation around money (e.g., silver, gold or any other commodity used as money) is grasped as *intersubjective* by all individuals at once and in the same way. The impossibility of decomposing moneyness to marketability is given by the nature of different relationships which “stand” behind the phenomena; moneyness is, therefore, an intersubjective phenomenon *de novo* (see e.g., Davidson and Block 2015, p. 318; see e.g., Lawson 2019 who describes certain social phenomena as ontologically new or as we see in e.g., Pavlík 2004, who introduces evolutionary apriorism and principles with regard to how these phenomena emerge). Although it seems to us that individuals attribute the highest marketability to money, it is not the highest marketability. It is moneyness per se (something that is different compared to marketability) because the attribution is based on the coincidence of the values in question, not on the attribution of the use value to goods. It also holds that higher marketability does not in any way mean that the good is somehow closer to the state of affairs to be potentially considered as money. This is also, therefore, a reason why a commodity (e.g., silver or gold) is considered to be money on one occasion, and on another, as an industrial commodity in the same marketplace. It follows also that the question if money must have been attributed with some use value before making them money is illogical as well. It doesn't matter because money cannot arise from industrial use of commodity.

Moneyness cannot be explained based on marketability by using the regression theorem. Moneyness is a different kind of attribution of value. However, Mises argues the opposite. He claims the theorem solves the problem. That leaves us with only one conclusion. Namely, Mises claims that moneyness is a *feature of the commodity* per se because we have to *presuppose* that the commodity already has an objective exchange value assigned. Mises ([1912] 1953, p. 110, emphasis added):

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<sup>6</sup> I use the terms “nature” or “essence” in an auxiliary sense. Author's view is that the nature of moneyness is created on the basis of the relationships of individuals per se. It is the debt relations that provide the structurality and time duration towards the future, based on which we are able to reconstruct phenomenon of money, in principle, as a social order (in Hayek's sense of social order); for proposals of these reconstructions see Pošvanc (2019, 2020b).

"If the objective exchange value of money must always be linked with a preexisting market exchange ratio between money and other economic goods (since otherwise individuals would not be in a position to estimate the value of the money), *it follows that an object cannot be used as money unless, at the moment when its use as money begins, it already possesses an objective exchange value based on some other use.*"

However, it is impossible to claim bold emphasis in citation based on subjectivism or more precisely based on subjective theory of value (as the reader will see in a moment the theory enables to discuss the existence of some inter-subjective value features). The object of reality as such does not have any moneyness, which we track back to a particular time in history and derive it from an industrial price which depends on the industrial usage of the commodity. Everything, in value terms, must be derived from an individual's valuation; moneyness included. When Mises states that "*it already possesses an objective exchange value based on some other use*" he explicitly abandons subjectivism, he puts between an individual's subject's valuation and the object of reality a superfluous explanation in terms of the theory of subjective value, i.e., the "*possession of an objective exchange value based on some other [industrial] use*". This is incorrect. The moneyness must be explained *based directly on the valuation of individuals* – this is a diction of the law of marginal diminishing utility; otherwise, we have "a hole" in the theory of money and value.

Concerning the problem of special valuation of money, we can state the following correct questions<sup>7</sup>: "*Why couldn't means of exchange or money have a peculiar status (including objective elements) in a true theory of value?*" Author thinks that money has a really peculiar status. It is possible to claim that we perceive within the phenomenon of money some, let's call it, *intrinsic (however not objective) exchange value features* and one part of the theory of subjective value is about some value phenomena, which exists per se, and these phenomena are created by interaction of valuation processes of different persons living together closely or within some (economic, cultural or similar) community.

Concerning the *intrinsic value* there is a correct statement of Mises ([1949], 1998, p. 96), who claims that: "*Value is not intrinsic, it is not in things. It is within us; it is the way in which man reacts to the conditions of his environment.*" Parts of reality do not have any value<sup>8</sup>! But although there

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7 This was given to author by an anonymous reviewer in previous attempts to publish the paper.

8 It's interesting that monetary economists use the term intrinsic worth with reference to non-monetary value. There is no value in goods as is correctly put by Mises but compare with Luther (2018, p. 4) "By intrinsic worth, they [monetary economists] merely mean non-monetary value or, value apart from any role the item might play as a medium of exchange.

is no intrinsic value in goods, the value is within us. If the value is within us, is there any room for some attributed *value features*,<sup>9</sup> which are attributed to some goods and which become as if intrinsic for goods, meaning here that it is possible to grasp them existing as such? Why not and why is money not merely a very profound example?

Let's think about a simpler example than money, e.g., a picture of two lovers, which has some (*from their love derived*) value features for them because it reminds them of their love<sup>10</sup>. It can be seen that the picture is valued by both lovers individually, however, and because love is intersubjective in its nature, the picture is also attributed with commonly created value features per se, derived from their common inter-related valuation (their mutual love), and this way it happens that it has this inter-subjective kind of intrinsic value feature. The feature doesn't exist without owners who are lovers. However, it is possible to communicate this feature to others, and maybe their children will value the picture because of their parents' love, so this feature can also last in time. The example of the connection of lovers and picture is a very simple one but it can show the modus operandi behind the existence of an *intrinsic value features* of some goods. Money is not about love, of course, but it is also based on the inter-valuation process of many individuals; otherwise, it would not be exchangeable over time. However, the main point is that these phenomena cannot be presupposed and cannot be derived from anything else than direct valuations of individuals. So, the answer to the above-stated questions is, yes, correct value theory needs not to be *absolutely* subjective and can enable specific goods a specific, non-uniform, treatment.

However, and this is the main point concerning here-presented arguments, the specific value status of money has to be derived and explained within the valid subjective theory of value. And this is precisely the point which shows that the regression theorem is an invalid solution and that the description of the situation by Mises is improper. When Mises (1953, pp. 108-109) states

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All value is subjective. But there is one's subjective valuation of an item's usefulness as a medium of exchange and one's subjective valuation of an item's usefulness apart from any role it might play as a medium of exchange. One need not reject the fundamental principle of subjective value to make a distinction between monetary and non-monetary uses."

Author thinks that it is questionable to call *intrinsic worth* as "*value apart from any role the item might play as a medium of exchange*". Author fully understands the necessity for differentiation of monetary and "industrial" (attributed by use value) phenomena; however, using of the term this way is quite confusing in the context of Misesian understanding of intrinsic value.

<sup>9</sup> It is not the task of this paper to come up with a new and proper terminology. However, it is sufficient to make the point. Author will very probably prepare a different text concerning the problem of intrinsic value features later to make some re-joinder to the discussion of intrinsic value as described by Zimmerman and Bradley (2019). Author thinks that we are looking at some intersubjectively created value thought structures (phenomena) which are then attributed to something or which commands our actions; see also footnote 11.

<sup>10</sup> Notice that this is possible to describe only by terms as „their“, „them“, „together“, „mutual“;

*"the subjective use-value of money, which coincides with its subjective exchange value, is nothing but the anticipated use-value of the things that are to be bought with it"*, it is an imputation of values, meaning here that Mises states we prefer money (we should value it ordinally) based on the use value we attribute to things we bought with money later (see also Hülsmann 2000, p.89 footnote 13). The point is that although we perceive the money-situation in the light of future purchases, the valuation of money must be explained also within the theory of subjective value, which is based on the attribution of value to goods in the *ordinal mode* as less or more preferred; in the case of money, based on continuing objective exchange value features per se. In other words, imputation of values is not welcomed. We need to describe the phenomenon in ordinal mode. And this very feature of money is not possible to be derived from the previous industrial price of commodity used as money; industrial valuation process is subjective (as we have shown above) and the *power to command* or *objective exchange value of money* is *purely* a profound intersubjective value phenomenon; created de-novo. It is necessary to explain how it happens that objective exchange value features are outcomes of the valuation process of men.

Put simply, for greater coherence in terms of the Austrian School's theory of value and money we need to identify suitable „needs-means“ dichotomy concerning money with the very condition that a need in question is common to all of the members of the economic community and is met by the same mean; this means we call money<sup>11</sup>. Once the needs-means dichotomy is described it will enable us to explain a direct application of the law of diminishing marginal utility to money and consequently to adjust the explanation of the formation of a money price to the diction of the Austrian price theory. I believe that this may be the only way by which it might be possible to have a coherent theory of subjective value and money. This way, we can explain the moneyness or the asked coincidences of values while we are also able to explain the different structural existence of this phenomenon per se (very probably as a kind of social – Hayekian – order<sup>12</sup>). We must also explain actions and processes which create this different structure of relations, and it is useful to think about it in terms of a new (higher) level of economic relations compared to (barter) industrial exchange relations<sup>13</sup>.

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11 What kind of need could be purely common to all of us? It has to be usable in time and general for all humans. It has to be some kind of a mind construct from the area of Misesian Verstehen or the Hayekian Sensory order; Pošvanc (2020b) claims it is an abstract need "to fulfill obligation" or more simply to "repay a debt" per se; once created, the obligation provides suitable structurality which lasts in time, it is possible to be inter-connected in time with newly created obligations and inter-connected and transmitted also to different individuals which makes it possible to think about these interconnections in terms of building of some structure per se.

12 The description of the concept of "order-ness" developed by Hayek, see e.g., in Caldwell (2000) or Lewis and Lewin (2015); concerning money, it would be some sub-social-order of the general market order.

13 For a suggestion of the description of this process and structure see some attempts in Pošvanc (2019, 2020b). It has to be stressed that these are not "fully colored" descriptions; they are rather some outlines because we are dealing here with

## The Past is Gone

We must also remind ourselves about Mises's third mistake. In my opinion, it is an obvious mistake. Nonetheless, the claim that it is a mistake is very controversial. Mises's claims about inspiration in terms of past prices, which he uses not only for money but also for other goods within his system, is not consistent with his other claims. Specifically, with the claim that actions are always focused on the future and the past valuations, which created past prices which are now forever lost. And since the past is lost, it cannot be used for any derivation or inspiration for the price creation of any good, including money. Past prices reflect past valuations and past conditions, which people already perceived. They cannot be connected in any way with present-day valuations based on present-day anticipated conditions, solely focused on the future elimination of perceived uneasiness<sup>14</sup>.

The past price is for the regression theorem crucial. Davidson and Block (2015, p. 317) write: "*the subjective exchange value of money (to hold) today takes place using as a starting point the objective exchange value of yesterday. This is the crux of the theorem.*" From a psychological point of view, it may seem to us that past prices somehow inspire us to think about future prices. However, it is a psychological mirage. Concerning individuals, it is always the free will that is decisive. Free will is our driving force. So even if we think that we consider past prices in terms of some psychological process of consideration, i.e., we think about the past price and some past conditions and try to find some connection, we will always consider the past in the mode of free will, the mode that is the future-oriented flow<sup>15</sup>. So, the psychological consideration of past prices or thinking about the past is still a consideration of the new state of affairs. The past is simply lost. It is not determinative; it is a matter of fact that we must deal with. The past was and is no longer. So, logically, we *cannot* be inspired by past prices; we cannot coordinate our activities based on past prices. It is a matter of fact that we make decisions subjectively, but decisions aren't based on the past prices as Mises suggests<sup>16</sup>. We can only interpret past actions, interpret capital structures created on the basis of past actions, on past prices, and on

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complex and spontaneous order phenomena.

14 We can recall Mises ([1957], 1985) here, with reference to the chapter on *Determinism and Materialism*, in which Mises explains the problems of determinism and the free will doctrine. It is here where he explains his position about the impact of the past on our future decisions and introduces the concept of so-called *activistic determinism*. Mises is not a determinist; however, his suggested solutions are based on the influence of the past on our decisions. The criticism of this concept is evident in Pošvanc (2020a).

15 Even any reflection of the past itself has this character. We can always think of the past only in the mode of free will. We cannot think of the past in the context of the past state of our will. The past is lost.

16 One of the previous referees of this paper reminded me that Mises's decision making description is subjectivist and not necessarily based on past prices. It is correct. However, it is a matter of fact that Mises ([1920] 1990 and [1949], 1998) has too many references in his system to the fact that the process of calculation is based on the inspiration by past prices. Therefore, author thinks it is proper to state that Mises thought that we decide subjectively based on past prices; see also Pošvanc (2020a).

a past economic coordination within the new framework of our future expectations and plans. This is only possible within our expectations towards the future. It could be that past actions, capital structures, supplied goods, are all interpreted as fully-not-satisfactory today. However, tomorrow it could be only partially satisfactory, and the day after tomorrow, it could be fully satisfactory. Everything depends on the perspective of an actor and his future oriented actions.

Setting a benchmark for our decisions by using past prices is also quite problematic from a practical point of the view. We face here the general empirical question of which point in time shall we pick as our inspiration/starting point? The last price? And what is the last price? Is it the price a few seconds or minutes ago or a month ago? How far in the past should we go for the price to truly be the benchmark? Or is it any past price? Deriving new prices by using past prices is quite problematic from a logical point of view because perhaps there was not any past price. After all, the commodities in question had never yet been exchanged. This second mistake is not, therefore, just connected with the problem of money. It has been an inherent part of Mises's system of reasoning since Mises ([1920], 1990), where he addresses the problem of economic calculation.

The problem is solved in greater detail in Pošvanc (2019) where he addresses the Austrian calculation debate triggered by Salerno (1990); due to the scope of this paper we can address here only some remarks. Pošvanc (2019) starts the explanation with a statement that Mises ([1920] 1990) realizes the problem of the subjective perception of the value which creates the problem of the mutual understanding of men. Mises claims that although the valuation is subjective, within an act of exchange during which two subjective valuations are communicated to another party of exchange, it produces the objective outcome – the price. Due to the objective characteristics of the price, it is possible to perceive this ratio per se by two and more people compared to only subjective valuations per se. For Mises, it is then the price which (as part of the *Verstehen* concept) enables the possibility of a mutual economic “communication” of subjectively perceived ends, which people satisfy through the exchanged means. The past price is, therefore for Mises, the starting point of a new individual calculation process and an individual economic assessment of a new situation. Although the proposed solution is attractive due to its simplicity, Pošvanc (2019) shows it is illogical. Apart from the above-mentioned reasons, if the calculation process is based on previous prices and previous prices are the outcome of calculations, how then is the previous calculation even possible? Mises's solution leads into the endless regress by definition. And although Hülsmann (1997) explains that the past price cannot bear any relevant information for an entrepreneur when he criticizes the Hayek-Kirzner

knowledge concept based on price coordination, we have to remind ourselves that Shackle claims that it is also too late for the present to be applicable; because it is already happening. The criticism of Pošovanc (2019) is therefore *mutatis mutandis* applicable to Hülsmann (1997) as well<sup>17</sup>.

Pošovanc (2019) proposes a different attempt to explain the problem of economic calculation which is applicable on the monetary as well as the non-monetary economy without any need to focus on past or present non-monetary or monetary prices. The proposed solution is based on his modification of the theory of subjective value and the concept of the portfolio. He claims that the valuation process is not based on the need-good dichotomy which is problematic to use over time because of possible different value contexts humans face over time (see also in more detail in Pošovanc 2021a, 2021b). Modification is based on the dichotomy of valuation of *combination or sum* of needs which are met by *combination or sum* of goods (portfolio). The modification enables to show the valuation process in its time continuity because conceptually the combination and sum of needs and combination and sum of goods (portfolio) is from the formal point of view the same over time; it brings some needed homogeneity into the valuation process. Pošovanc (2019) claims that the calculation is then based on the assessment of the structural change of the portfolio over time. Imagine it as follows: A person assesses the state of his/her existing portfolio, impoverished by goods offered in exchange for the state of the potential (the acquired) portfolio, enriched by the goods offered by the second participant of the exchange and vice versa, from the point of view of the other one. The argument holds, *mutatis mutandis*, for personal action when a person assesses personal costs and gains within his/her decision making with regard to some production or appropriation activities. The solution proposal is applicable over time and the proposal holds that it is future oriented *per se* as the diction of action requires.

The possibility to calculate (in non-monetary as well as monetary terms) is given by the fact that the portfolio is a relational concept. It follows that a person perceives a cardinal change of some portfolio (the portfolio is a subjective denominator of calculation, usable in time) and

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17 Hülsmann (1997, p. 47) presents a modified Misesian approach; he writes: "Let us recall that *ex ante* calculation does not consist of computation based on past market prices; it is a judgment in quantitative terms that relies on an expectation of future prices. However, ..., calculation is the source of present market prices as they are continually formed in the market process. Present prices are starting point of our estimates. Considering the intervening changes of these conditions we form, by *Verstehen*, a judgment upon the prices of the future. Without the basis provided by present money prices, this procedure would be impossible. It is indirectly that present prices permit calculation and thus the selection of most value - productive technology under prevailing conditions. They can have no communicative function because they are only the, if indispensable, starting point for our understanding of the future."

at the very same time the concept of the portfolio enables an ordinal assessment of the whole personal situation as the Čuhel-Mises diction of valuation asks for (we prefer a higher over a lower satisfaction which provides us with a constructed portfolio). Pošvanc (2019) shows that money calculation is only a more precise form of this process, which also enables interpersonal comparisons of subjective calculations.

Nevertheless, it is not the past that is decisive in terms of a consideration of our satisfactory or unsatisfactory states of uneasiness, it is the agent and his future orientation for removing uneasiness. Considering the problem presented here, that the money has to have some starting point because the demand for money is not arbitrary, no past price can be used as the starting point to moneyness. The starting point of money must be the valuations of agents and their (equally abstract) needs because moneyness has an intersubjective character. It has to be some kind of lasting, ordered intersubjective structure or, metaphorically speaking, some kind of layer of forward oriented economic relations, not some individual particular and different past needs of man, reflected by a past price structure. Thus, also the element of the continuity of money prices, which Mises ([1912], 1953, pp. 108 - 123) emphasizes and which we empirically see when dealing with money, meaning here a continual existence of money prices as the inverse price level of money expressed in other commodities, is the question that has to be once again explained and not presupposed as a condition for explaining the price of money.

## **Concluding Remarks**

The persistence in following the line of Mises's argumentation causes a clear inconsistency within the theory of subjective value and price theory based on the law of diminishing marginal utility. The argument of the regression theorem implies an exception from the theory of subjective value. Indeed, in the context of the theory of subjective value, prices of all (other) goods are derived from the valuation of individuals and the subsequent exchange of less preferred goods for more preferred goods. These subjective preferences, demonstrated within the exchange, create the price. In the case of money evaluation, however, it should be the price of money, i.e., the purchasing power, which determines and influences the evaluation of money. If the purchasing power changes, based on the different number of units of money in circulation, it changes the approach to evaluating the monetary unit in question. In other words, the attribution of value to money depends on what we can buy for the money. This line of reasoning is clearly very opposite to the line of reasoning which explains the prices of other goods. What we can buy for money is actually the price of money, and the price is the result of the attribution of value to the goods in question and the resulting exchange of money for another commodity; it is not an

assumption of the price. If we accept this line of reasoning, it must also be implied that the law of diminishing marginal utility cannot be universally valid because it is not possible to use it to explain the price of money. The law is the law of action. And when we use money, we definitely act. The law must, therefore, be applied *directly* to money. If it is not, the law of diminishing marginal utility would not be a generally applicable law of action. Both the phraseology with regard to the universal validity of the theory of subjective value and of the law of diminishing marginal utility require us to explain money based on these theories. The regression theorem must be declined as a solution. It is proper to admit that Mises did not solve the problem connected with his explanation of the purchasing power of money. It is an important piece of knowledge for us. Without a relevant explanation for how the price of money arises, it is not possible to present correct conclusions in the field of money theory and directly related areas such as calculation theory, banking theory, capital theory, or the business cycle theory; basically, the whole of economic theory.

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