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Why is the Teleological Argument so Popular?

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Abstract:

Why are teleological arguments based on biological phenomena so popular? My explanation is that teleological properties are presented in our experiences of biological phenomena. I contrast this with the view that the attribution of teleological properties to biological phenomena takes place at an intellectual level – via inference, and as belief or similar propositional attitude. I suggest five ways in which the experiential view is the better explanation for the popularity of such teleological arguments. Experiential attributions are more *easy*, *impactful*, and *implastic*. The experiential view accommodates cases of conflicting attributions, and it makes sense of the readiness with which we follow such teleological arguments. I respond to objections and explain how my view builds on existing answers to this question found in the philosophical literature.

Keywords: high-level perception, philosophy of perception, teleological argument, teleology, William Paley.

1. Introduction

This essay seeks to explain why teleological arguments that base themselves on the teleological properties of biological organisms are so popular. I begin by showing that such teleological arguments are popular, and indeed unduly popular. I then outline two potential competing explanations of this popularity. On one view, our attribution of teleological properties to biological organisms is the result of intellection (cognition, *dianoia*) – using inference, we arrive at a belief or similar propositional attitude. On another view, our attribution of teleological properties to biological organisms occurs non-inferentially within experience (perception, *aisthesis*). Next, I suggest 5 ways in which the experiential view is a better explanation for the popularity of such teleological arguments, appealing primarily to

some differences between intellection and experience. Lastly, I respond to several objections, and show how my account builds on existing discussions of the popularity of the teleological argument and the nature of teleological attributions, made by Helen de Cruz, Johan De Smed, Doren Recker, and Del Ratzsch.

Although the goal of the paper is to explain the popularity of teleological arguments, my discussion may also be of interest to philosophers of perception because it functions as an argument for the claim that teleological properties are presented in experience, as the best explanation for the popularity of teleological arguments.

I briefly characterize two of the key terms. I take teleological properties to include function, purpose, goal, intention, desire, or being designed – any “forness,” any “that for the sake of which a thing is” [1, 1013b 3], whether intrinsic to a biological kind (“that which has the function of pumping blood is a heart”), or featuring in an explanation of its existence (“the heart was designed to pump blood,” “the heart evolved because of its fitness-enhancing function; pumping blood”). By teleological arguments I will mean those arguments that make an inference from the existence of teleological properties in biological phenomena to the existence of any ‘non-naturalistic’ ultimate reality (Plato’s demiurge, Aristotle’s unmoved mover, the God of classical theism, a panpsychist world-soul, etc.). This includes inferring from design to a designer – a deity who assembles biological phenomena as one might assemble flatpack furniture. This also includes inferring from less explicitly agential teleological properties to some non-naturalistic ultimate reality, e.g., that living things have the goal of reproducing because in this way they “partake of the everlasting and the divine” [2, 415b 1-5], that the teloi of living things aim toward the ground of being, that living things are images of the cosmic drama. My discussion does not concern arguments for non-naturalistic ultimate realities that draw on data other than the teleological properties of biological organisms – e.g., the orderliness of the universe [38, pp. 153-166], or fine-tuning arguments about how the laws of physics permit ‘complex matter’ or ‘embodied moral agents’ rather than biological phenomena *per se* [8].

2. Explanandum: the Popularity of Teleological Arguments

Teleological arguments are popular in that they are ancient, cross-cultural, and widely-employed. Teleological arguments are offered by philosophers from a variety of civilizations and religious traditions; Christian and Islamic [14, p. 226], Hindu [7], Chinese [21, p. 9], and Hellenic [42, Bk1 Sec4, Bk4 Sec3]. Similarly, many polytheistic religious traditions posit deities who “cooperate in creating and maintaining the world” [3, p. 18]. Again, in animistic religious traditions, some ultramundane force or agency is posited as a constitutive aspect of living things [15, p. 99]. Among contemporary philosophers, teleological arguments continue to be popular [31].

It is hard to say how popular teleological arguments, of some rudimentary kind, are among the contemporary general public. The best available proximate evidence suggests that they are popular. Making teleological attributions about biological phenomena, including that they are intentionally designed, is very common even among the irreligious [18]. Around the world many people believe that human beings have always existed in their present form, or that their evolution was guided by God. Large minorities, and in some cases majorities, affirm the former in Latin America [26, p. 99] and the Muslim world [28, p. 132]. Around 35% of British people do not endorse a naturalistic evolutionary view [43], nor do 67% of Americans [27, p. 9]. In the single large-scale study conducted on this question in India, 68.5% of participants affirmed evolution, though the study did not further distinguish naturalistic evolution and non-naturalistic evolution¹. In my experience, teleological arguments are offered more commonly, by non-philosophers, than most other theistic arguments – the teleological argument seems to ‘occur’ to most people in a way that, say, the ontological argument does not.

A straightforward explanation for the popularity of teleological arguments would be that they are rationally persuasive. Granting that this is a part of the explanation (I am unsure), it cannot be the

whole explanation. Most people in most societies are not in an epistemic position to accept that teleological arguments are rationally persuasive; they are widely regarded as untenable, and primarily for a reason with which most people are familiar, or which they know to be the position of the relevant experts – the success of Darwinian evolution as a debunker. Moreover, the datum on which teleological arguments draw has a certain attraction even for those who explicitly reject it. Francis Crick notes that, “Biologists must constantly keep in mind that what they see was not designed, but rather evolved” [9, p. 138]. By contrast, say, geologists do not have to constantly keep in mind that what they see is not designed. Richard Dawkins coins the term “Designoid objects” for those biological phenomena that “look designed” or which “impress us” as designed [10, pp. 6, 10].

3. Teleological Attributions to Biological Phenomena

Teleological arguments infer from the teleological properties of biological phenomena to some non-naturalistic ultimate reality. On the intellectual view, we have to infer the existence of these properties, whereas on the experiential view we are aware of these properties non-inferentially. The difference between these two views is about the loci at which attributions of teleological properties emerge.

3.1 *The Intellectual View*

My purpose in this section is not to provide a piece of Paley scholarship. Rather, I give what I take to be a plausible reading of Paley’s teleological argument as an example of how, on the intellectual view of teleological arguments, we come to attribute teleological properties to biological phenomena.

Paley’s teleological argument is an inference to the best explanation, supported by an analogy between artefacts and biological organisms [11, p. 667]. Paley notes that artefacts and biological organisms share certain properties. In the source-domain of the analogy, artefacts, we best explain the occurrence of these properties by appeal to design; we know that these properties occur because of design. So, when we map on to the target-domain of the analogy, biological organisms, and find the same properties, it is reasonable to infer that biological organisms are also designed. What are these properties? Using the famous example of a watch, Paley notes that:

if the several parts had been differently shaped from what they are, of a different size from what they are, or placed after any other manner, or in any other order, than that in which they are placed, either no motion at all would have been carried on in the machine, or none which would have answered the use, that is now served by it [25, p. 7].

We can identify in Paley’s remarks three properties of the watch: (i) a complex arrangement of parts, (ii) a benefit yielded by this complex arrangement, and (iii) a close counterfactual dependence of the benefit yielded upon the complex arrangement of parts. From these three properties we are to infer that the watch has the property of being designed. The co-occurrence of these three properties is unlikely on alternative hypotheses such as chance, mere causal-efficient mechanism, or some vaguely conceived principle of order. So, these hypotheses cannot be credited by “any man in his senses” [25, p. 9]. Paley suggests that in biological organisms we very often find the same three properties as in the watch. So, we should infer that biological organisms are designed.

Throughout *Natural Theology* Paley styles his case in terms of understanding, inference, and analogy – strongly intellectual terms. As I read him, Paley’s teleological argument is that, having recognized these three properties, we use our faculties of reasoning (in this case, inference to the best explanation) and of imagination (analogy) to form the belief (or similar propositional attitude – opinion, judgment) that biological phenomena are designed. On this view, we attribute teleological properties to organisms on the basis of inferences, we are led to make such attributions by arguments.

3.2 *The Experiential View*

I spend a moment characterizing what it means for a property to be presented in experience, and then relate this characterization to teleological arguments.

Something is intentional if it is “about” something else, if it “points toward” something beyond itself. For example, books and thermometers are intentional artefacts; the book is about a war, the thermometer indicates the temperature. Within the intentional, some things are presentational in that they “show” something, making it present to us, making it available for various kinds of interaction. My imaginative mental states about my friend Margaret make her present to me, the photograph of Margaret presents her to me; allows me to admire her, desire her, honor her, insult her, etc. In contrast to the presentational is the representational, which “tells” us about something, making it present to us at a certain remove – e.g., propositions about Margaret.

It seems that every day sensory experience is presentational; it makes properties present to us, it shows them to us. For example, I am having a visual experience that presents my desk as having the property of being brown, I am having a tactile experience that presents my jumper as having the property of being soft. As in the case of the photograph of Margaret, our everyday sensory experience is presentational in that it only makes things present to us in a limited mode; the photograph is not Margaret ‘in-herself,’ my experience of the orange peel is not the orange peel in-itself.

Experience is a term pertaining to phenomenology, of “what it is like.” As a phenomenological term, to say that an experience presents to me that there is a chartreuse splotch on my desk is not to make the metaphysical assertion that there really are such things as color-properties, or that splotches are a natural kind – it is only to describe how things seem in my experiences.

When properties are presented in experience, their being so presented does not come about due to any process of inference, understanding inference as a process that is minimally cognitively accessible. When experience presents that there is a chair in front of me, the chair is presented in experience non-inferentially – I have no sense of having to go through a conscious, deliberate, or rational process to experience the chair; I do not infer that there is a chair present to me due to the presence of certain properties of shape and colour; I am not able to semantically formulate the configurations of properties to which I attribute the property “chair.” This is not to deny that, at some sub-inferential level, our thoughts penetrate our experiences [12] or that our experiences are coloured by past inferences (e.g., at some point I learned what Rubik’s Cubes are, and now find Rubik’s Cubes presented by experience, rather than only seeing an assemblage of coloured squares and inferring that it is a Rubik’s Cube).

The experiential interpretation of teleological arguments, then, is that when we look at biological phenomena, our experiences present them as having teleological properties. Looking at the shoot of cress, I see that it is striving toward the light. Looking at the claw, I see that it is for grasping. Looking at the Venus Fly Trap, it seems designed. On the experiential interpretation, the attribution of teleological properties to biological phenomena is not made by inference from some other properties. Rather, the appearance of teleological properties in experience is the basic empirical premise, the data, that teleological arguments then make inferences from. In the case of design, the inference will be quite simple; ‘design, therefore designer’ – for other teleological properties, the inferences may be more complex.

As in the case of “chair,” the presentation of teleological properties may supervene upon – may depend upon, may require, may emerge out of – the presentation of shape properties and the like, but is not the result of inference from them. In this way, the experiential view of teleological arguments is an instance of a wider tendency within the philosophy of perception to say that experience is rich, that it contains “high-level properties” – that we experience causal properties, moral properties, the mental states of others, etc. – rather than only “low-level properties” such as shape and colour [16].

4. Five Ways in Which the Experiential View is a Better Explanans for the Popularity of Teleological Arguments

4.1 *Ease*

On the experiential interpretation, the attribution of teleological properties arises with ease, meaning a readiness or facility in the occurrence of an attribution. All else being equal, an attribution that can be made with ease will occur more frequently. On the view that teleological properties are presented in experience, we have a very straightforward explanation of why it is that people easily and often attribute teleological properties to organisms; they just experience them as having these properties.

By contrast, on the intellectual interpretation, inferential operations have to be undertaken for an attribution of teleological properties to occur. These can be quite abstract and demanding. In the case of Paley's argument, it is no small procedure to note that things in some domain have three given properties, that these properties are also found in some other domain, that the best explanation for them is that they are designed, and so forth. That an attribution occurs via inference makes its occurrence less easy. On the intellectual interpretation, one has to make inferences of some kind to even arrive at the basic datum of teleological arguments; so, the experiential interpretation better explains their popularity.

The experiential view is bolstered when we note that Paley's argument seems to radically underestimate the constellations of lower-level properties to which we attribute teleological properties. Suppose that you pitch your foot on a perfect sphere of stone, rather than a watch. Plausibly, one might attribute being designed to the stone. Yet, the stone apparently does not have a complex arrangement of parts, nor yield any benefit, nor exhibit a close counter-factual relation between these two. This strengthens the case for supposing that teleological attributions arise in experience, rather than that they result from inferences from an indefinite morass of properties. Suppose that someone attributes teleological properties to the trunk-like nose of the Saiga Antelope. They might imagine that they make this attribution because they have inferred these teleological properties from the complex arrangement of the nose's parts, the benefits yielded, and the counterfactual dependence of the latter on the former. They are then presented with a perfectly spherical stone, lacking all of these properties, but nevertheless immediately attribute being design to it. This undermines the claim that, in the case of the Saiga Antelope's nose, such a person is going through the intellectual process of inferring the existence of teleological properties from certain other properties.

4.2 *Impact*

The experiential interpretation better accounts for the popularity of teleological arguments by making the attributions on which they draw more impactful. By impact I mean the effect one mental state has on other mental states; causing related mental states, shaping other mental states around itself, inhibiting other mental states, etc. For example, when I imagine something disgusting and then find that my desire to eat has disappeared, my imagining has impacted my desire. Again, when my emotion of sadness leads me to ruminate on all sorts of negative incidents from the past, this affective state is impactful with respect to my memory and imagination. Again, when my desire brings about wishful beliefs, my desire is unduly impactful. The idea of impact draws on Michael Tye's idea of "poise" – poised mental states are ones which "stand ready and available to make a direct impact" [40, p. 62] on other mental states.

Typically, beliefs (or similar intellectual states reached via inference) are less impactful than experiences. If I believe that there is a gunman near me, I will feel terror and decide to run toward the exit. Yet, if I am having a visual experience of the gunman I will feel even greater terror and find my body involuntarily launching itself toward the exit. If our attributions of teleological properties to

biological phenomena are experiential, then this predicts the popularity of teleological arguments, since such arguments will draw on attributions that are impactful with respect to our other mental contents; ingressing themselves deeper into our mental life; more thoroughly ordering our emotions, evaluations, imaginings, beliefs, etc.

4.3 Implasticity

The experiential interpretation helps account for the popularity and undue popularity of teleological arguments by making the attributions on which they draw implastic. Implasticity denotes the way in which an attribution continues to be made, does not weaken, in the presence of countervailing factors, whether these factors are properly evidential in nature or more broadly psychological: counter-arguments, awareness of what is normatively acceptable in one's society or peer-group, appeals to authority, cajoling, and so forth [5, pp. 123-124].

Plausibly, experience is by no means completely implastic: with respect to what it is that we pay attention to, and what properties we experience, there are instances in which evidential and more broadly psychological factors are influential at some margin. Similarly, belief is by no means completely plastic – human beings suffer from a plethora of cognitive biases, many of which involve holding on to beliefs in spite of contrary evidence. Nevertheless, in general, experience is more implastic than belief. Many people can convince themselves to believe in ghosts, but relatively few can convince themselves to experience ghosts.

In this vein, there is empirical evidence suggesting that our tendency to make teleological attributions about biological phenomena is implastic. For example, it seems that educational efforts intended to prevent people from making such teleological claims have only limited success: in one American study, high school biology students, students in lower-level college physiology classes, and students in higher-level college physiology classes, all endorsed teleological explanations of human biological processes at approximately the same rates, circa 60% [33, see also 37, 39]. Under speeded conditions teleological attributions about biological phenomena significantly increase, even among atheists [18], and professional physical scientists [20]. Such teleological attributions increase among those suffering from Alzheimer's [22], and are ubiquitous cross-culturally in children [19, 34, 35]. Where more intellectual processes cannot squash the attribution of teleological properties to biological organisms, we find it occurring, rather than finding that such attributions depend on intellectual processes. I consider these empirical studies to be very strong evidence against the intellectual view and for the experiential view. If the intellectual view is correct, teleological attributions toward biological phenomena would not be open to the "most ignorant and stupid peasants, nay infants, nay even brute beasts" [17, p. 118], whereas on the experiential view we would expect teleological attributions to be open to all.¹

4.4 Conflicting Attributions

The experiential interpretation better explains cases of conflicting attributions, that is, cases in which people have "mixed-feelings" or "are in two minds" about the teleological properties of biological phenomena. Perhaps when looking at the vine's tendril one attributes a goal to it, but at another time, or even at the same time, one attributes that it does not have a goal. If both attributions are beliefs, then it seems we must impute irrationality to otherwise ordinary people. We should only make such imputations if no other interpretation of their mental life is plausible. The experiential view faces no such difficulty here, since there is no irrationality in experiencing that-X whilst not believing that-X (or vice versa).

The proponent of the intellectual view might note another possibility – that one attribution is a belief whilst the other is some non-belief state, such as an imagining. I think that this suggestion does

not account for the felt-conflict between the two attributions. If I believe that the chair on which I am sat will not levitate, but I imagine it levitating, I find nothing disconcerting or strange in holding the two thoughts at once, nor does anything about my imagining weaken my confidence in my belief. By contrast, when I believe that the phototropism of radish seedlings is caused by a release of hormone indole-3-acetic acid, and other causal-efficient factors, but I also attribute to the seedling a phototropic goal, or that the radish seedling is designed, or that it is in longing, or that it is striving toward the light, I feel a problematic disconnection between the two attributions. Perhaps the latter attribution weakens my confidence in the former (“that can’t be all there is to it!”), or the former makes me feel that I should reject the latter as otiose.

4.5 Readiness in Following Teleological Arguments

The experiential view better explains how we readily follow teleological arguments, such as Paley’s, when they are presented, even if we ultimately reject them. Consider an argument for the claim that dogs feel pain, made by analogy with the case of humans. In the source-domain, we find that humans yelp upon exposure to flames and withdraw their bodies from flames. In the source-domain, these behaviours are explained, or accompanied, by a feeling of pain. In the target-domain of dogs, we find the same behaviours, and so we have reason to hold that dogs also feel pain. We follow this analogy quite easily and are quite inclined to grant its conclusion. Now consider an analogy for the claim that robots exhibiting the same behaviours feel pain. I expect we find the analogy harder to follow and are much less inclined to grant its conclusion. How can this be, given that precisely the same grounds of analogy have been offered? Plausibly, the difference is that in the case of dogs, but not robots, we already attribute sentience and a capacity to feel pain to them, prior to any arguments being advanced. Likewise, the experiential interpretation readily explains the ease we find in following teleological arguments such as Paley’s, since it says that we already attribute teleological properties to biological phenomena before such arguments are offered. On the intellectual interpretation, this readiness in following is harder to account for. In this way, the experiential interpretation again better accounts for the popularity of teleological arguments. I now turn to answering objections.

5. Objections Answered

5.1 “Don’t Other Factors Help Explain the Popularity of Teleological Arguments?”

There are surely factors aside from the nature of the attributions involved that help explain the popularity of teleological arguments. Helen de Cruz and Johan De Smed argue that our assessments of teleological arguments are heavily dependent on the prior probabilities that we place on the hypotheses that might account for apparent design. If we already believe in a designer-God, the occurrence of apparent design will be regarded as offering further evidence for the designer-God, will be explained as actual design. By contrast, if we think that the existence of a designer-God is very unlikely then practically any naturalistic explanation of apparent design will be preferred [11, p. 678]. It seems right that assessments of these prior probabilities matter a lot in one’s assessment of teleological arguments. However, this sort of explanation concerns the inference from apparent design to actual design; it does not touch on why it is that people attribute teleological properties to biological phenomena in the first place, why design is ‘apparent’ in the first place. Any empirical phenomena could in principle be referred for its explanation immediately to a designer-God, but it is with respect to biological phenomena that this tendency is very pronounced, seemingly because we attribute teleological properties to biological phenomena before we start considering what to make of this in light of our prior probabilities. Although other factors can do some of the work in explaining the popularity of teleological arguments, they leave out a very important part of the explanation.

5.2 “Are There Other Views of the Attributions Involved in Teleological Arguments?”

Doren Recker suggests that the popularity of teleological arguments is to be explained by the power of the metaphor between artefacts and biological organisms. Recker elaborates the idea of “metaphorical reasoning” as involving “associative mappings from object to object and domain to domain” [32, p. 657], and the tendency for this mapping to morph imperceptibly from a comparative relation to an identity relation, from “*as if* a machine... [to]... *is* a machine” [32, p. 653]. Invoking dual process theory, Recker identifies metaphorical reasoning with System 1 reasoning and notes that its use is not surprising since in many contexts it “delivers results that usually are reliable” [32, p. 657]. The metaphor account provides an intellectual view of the nature of the attribution of teleological properties. Metaphorical reasoning, even though it is not always done consciously and semantically, is minimally cognitively accessible; one can reconstruct its reasoning process.

The flaw in Recker’s view is that it does not explain why we should find the artefact-organism metaphor appealing. Metaphors illuminate already-existing similarities between domains, rather than generating them. Recker emphasizes cultural factors, mentioning the way in which “all biology texts overflow with machine metaphors and analogies... This is partly why so many people find design arguments stressing machine metaphors so persuasive... Machine metaphors are among our most pervasive cultural icons” [32, p. 652]. However, it seems that we do not want to say that the influence of such cultural factors entirely accounts for the appeal of the artefact-organism metaphor, that the choice of metaphor is arbitrary, that some other metaphor could just as well have been chosen. This view is also weakened in that teleological arguments date to cultures that were not familiar with complex mechanisms like watches. Arguably, the artefact-organism metaphor is a distinctively early-modern form of teleological argument [32, p. 653], with the organism-world metaphor being more ancient [29, 508b].

Del Ratzsch advances the view that our attributions of teleological properties to biological phenomena, though beliefs, are caused by certain sensations or experiences. Ratzsch draws on Thomas Reid to suggest that “certain experiential situations, specific sensory, phenomenological content triggers particular cognitive states – *de re* beliefs, conceptions, etc. – which do not *follow* inferentially from that content” [30, p. 126]. Ratzsch’s view is intermediate between the intellectual interpretation and my own experiential interpretation. It diverges from the intellectual interpretation by saying that the attribution of teleological properties does not result from inference but arises from, is caused by, our having certain sensations or experiences. However, it diverges from the experiential interpretation by affirming that the attributions that arise are indeed intellectual states such as beliefs; on seeing some object, “we simply find that a belief in its designedness happens to us” [30, p. 132].

Ratzsch’s view is able to accommodate some of the five factors noted in the previous section, but not others. It seems able to accommodate ease of attribution, and the readiness with which we follow teleological arguments. However, since the attribution of teleological properties that arises on this view is a belief or judgment, it does not match with the impact or implasticity of these attributions. It also implies that those who have conflicting attributions about the teleological properties of biological organisms hold contradictory beliefs about this matter. Yet, it is surely not the case that everyone who looks at the Venus Fly Trap and represents it as being designed has this belief about it. As well as the imputation of irrationality, I take it that this view over-predicts felt-conflict between the two attributions, or predicts felt-conflict of the wrong sort. The felt-conflict we experience when we represent that some organism has teleological properties and that it does not, although real enough, seems more akin to the conflict we feel when we first see visual illusions like the Müller-Lyer lines – a feeling of puzzlement, of being “at sea,” of their being a disconnection or incongruous juxtaposition in our attributions, rather than a full-blown case of cognitive dissonance in which we have two contradictory beliefs.

5.3 “Given the Vagueness of the Explanandum, it is Hard to Evaluate Your Explanans”

For one thing, it is worth noting that the explanandum admits of being empirically clarified in the future to some degree: the experiential interpretation predicts that people who reject teleological arguments will exhibit certain sorts of residual attraction to it, and that people will be especially reticent to reject teleological arguments in the first place as compared with arguments that draw on more thoroughly non-experiential attributions. These are empirically investigable predictions.

Further, it is not too troubling that the explanandum is vague because there are many similar companions in guilt about which we ordinarily accept similar explanations. For instance, someone might explain the popularity and the persistence of various forms of sectarian or racial prejudice by describing them as being primarily affective dispositions, rather than being primarily beliefs. The explanandum here, that sectarian prejudice is “popular” or “persistent” or “persistent beyond its rational grounds,” is extremely vague and cannot be quantified in many respects, but nevertheless it seems that we commonly take it to be better explained by the affective disposition theory than the belief theory. Although my argument is only an inference to the best explanation, it nevertheless provides a net evidential positive for the experiential interpretation of teleological arguments.

5.4 “I Grant That We Experience Some Teleological Properties When Looking at Biological Phenomena, But Not the Property of Being Designed. It Seems That an Attribution of Design is What is Needed for Teleological Arguments to be Either Good or Popular Arguments”

For one thing, not all teleological arguments take design as their data; as noted, an Aristotelian-style teleological argument takes as its data that biological organisms have functions. Moreover, there are grounds for thinking that the property of being designed is presented in experience. Teleological properties are a diverse bunch. Likewise, it has been noted that causal properties are a diverse bunch – there is “pushing, pulling, lifting, stopping, moving, supporting, hanging from, and preventing something from happening” [36, p. 520]. The same could be said of other higher-level properties that have been suggested to be presented in experience, such as modal properties [24] or natural kinds [6]. It seems unlikely that “teleological property” is like “grue” [13] in collecting together disparate properties that together do not cut nature (or experience) at the joints. Rather, perhaps there is some family resemblance between teleological properties, or perhaps they are all variations on some ur-teleological property. Insofar as one thinks that “teleological property” is unlike “grue,” then that some sorts of teleological properties can be presented in experience supports the case for thinking that other sorts of teleological properties can. By analogy, if one allows that “pushing” can be presented in experience, it would be bizarre to think that “pulling” cannot. If it seems to you that a pitcher plant’s lid can be presented in experience as having a function it would be strange to think that it cannot be presented in experience as being designed.

Plausibly, the special resistance to thinking that the property of being designed is presented in experience is due to the conviction that whereas biological phenomena having other teleological properties is naturalistically acceptable, non-“spooky,” their being designed is spooky. These are metaphysical worries about what properties there are in the world, different than our present question about the contents of experience.

In any case, the presentation in experience of teleological properties other than design would be ample to explain the popularity of teleological arguments. Often, we do not have a clear understanding of what properties are presented in our experiences because we lack the concepts for delineating and distinguishing these experiences. By analogy, as a child one might not have understood whether one was properly feeling resentment or indignation or pique or scorn because one did not have the semantic concepts for delineating these affective states. Likewise, precisely which teleological properties it is that are presented in our experiences can be unclear because we lack clear distinctions between design,

function, purpose, goal, and so forth. Compounding this, we lack a clear grasp of which if any of these properties invites a non-naturalistic explanation. In this muddle, the basic “forness” of biological phenomena conveyed by our experiences invites the sort of explanations offered by teleological arguments – purposive forces or minds that ground or arrange the manifold forness.

Conclusion

I have argued that the hypothesis that teleological properties are presented in experience is the best explanation of the popularity of teleological arguments based on biological phenomena. I made this case by reflecting on certain features of experiential presentations – their *ease*, *impact*, and *implasticity* – and by the way in which the experiential view allows for cases of conflicting attributions, and explains the readiness with which we follow teleological arguments.

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Notes

1. In discussing the experiments of Deborah Kelemen et al., Hans van Eyghen remarks that “Adults seem to abandon teleological explanations when they learn scientific, material explanations for the phenomena under investigation.... The tendency towards teleological explanations thus appears to recede when children acquire beliefs about the causal mechanisms of what was perceived as designed” [41, pp. 28-29]. As an alternative to Eyghen’s remark, I would suggest that causal-efficient explanations and teleological explanations are not explanatory schemas that are in conflict or competition with one another; they are just different explanatory schemas. In a related domain, understanding the causal-efficient explanations of significant life-events did not displace attributing them to “God” or “fate” or the like – people regularly make “conjunctive attributions” employing both schemas [23]. In this vein, in one study Kelemen reports that “humanities scholars’ performance [in making teleological attributions] did not differ from physical scientists’ performance in either the speeded or unspeeded condition” even though “scientists had significantly greater scientific content knowledge” [20, p. 1080].

***Black Forest Melody:
Between Philosophical Kitsch and Identitarian Ideology:
Heidegger's Pastoral World-View in the Memorial Address.
Trial on a Classification***

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Abstract:

Martin Heidegger is still subject to controversial discussions about his political views. The question in the centre of the discussions is not if he was politically on the far right, but how far right he was, and also how far right his philosophy is. However, the details of Heidegger's political approaches in his work are largely disguised and hidden behind Heidegger's typical writing style, which has remained undefined for so long. There is a short essay in Heidegger's work that may shed light on the roots and details of his ethnic-identity thinking: "Memorial Address".

Keywords: Heidegger, nazism, Memorial Address, Heidegger's worldview, identitarian ideology.

*We are plants which~—whether we like to admit it to ourselves or
not—must with our roots rise out of the earth in order to bloom
in the ether and to bear fruit.*

Johann Peter Hebel [12, p. 57]

*They always fill me with a certain horror.
It is my belief, Watson, founded upon my experience, that the lowest and vilest alleys in
London do not present a more dreadful record of sin than does the smiling and beautiful
countryside.*

Sherlock Holmes [8]

Among experts, Martin Heidegger's *Memorial Address* [12] has neither found the consideration nor the appreciation his main works have enjoyed. One reason for that may be seen in the fact that it is a small work of just 14 pages. Another reason may be seen in the circumstance that the *Memorial Address* is not strictly an academic text, and it was presented to average village people in the market square of Heidegger's home village. Despite these facts, adding the *Memorial Address* to the complete edition of his published works was extremely valuable for it contributes to a better understanding of his political attitudes – that may have carried his philosophical work all along. The editorial history of the *Memorial Address* as an insignificant public speech¹ keeps as nebulous as Heidegger's general political approaches – but both the issues have in common that there are *events* and concomitant circumstances connected to them that may bring light into the question how far Heidegger's thinking roots in an *identarian blood & soil ideology* of the past – that has returned again in present times.

As much as especially Heidegger's practical politics at academia during his time as university rector in Freiburg and the connected rector's speech [13] may explain his fundamental motivation in the early days of the Nazi-regime, his philosophical work has been usually enjoying the reputation to be as unpolitical as Heidegger always had announced it to be.

The simple fact is that the *Memorial Address* – as a public and not academic speech – was published during his lifetime due to his will and with his permission indicates that he found it worth to be released as part of his philosophical work. At the occasion of the 175th birthday of a local composer, the *Memorial Address* was presented on the 30th of October 1955 in Messkirch, a little village in the rural Black Forrest Region where Heidegger was born. It is noteworthy that the speech deals with many issues – but ironically, it is not at all about the composer the speech is dedicated to. Generally, the speech deals with the exemplification of the rural lifestyle of the region from which both, the composer whose birthday is commemorated, and Heidegger originate from, and how pastoral customs get elevated to a philosophical world-view. Heidegger's opening complaint that the world of today is *thoughtless* and “man today is in flight from thinking” [12, p. 45] refers to the modern world in which science and technology are ruling, and in which man allegedly gets unrooted and alienated from his origin and himself.

The alternative, the opposing image, Heidegger draws in contrast to the modern world of unrest is a rural world where man is still in the place he belongs to – a kind of “home is where the heart is.” Heidegger's alternate universe is a provincial, romanticized version of the preindustrial eon in which man – *like a plant* – grows best only in the “native soil” [12, pp. 47-48] of the *homeland*.² Is that just folkloristic Kitsch on home (“Heimatkitsch”), as it was so popular in Germany of the 1950s that even a special film-genre was founded in that decade, called “Heimatifilm,” or is it an innuendo to or connection point with the blood & soil ideology of the Nazis?

Lately since the publication of the *Black Notebooks* [16] it seems finally fully to be proven how close basic approaches of the person Heidegger were to Nazi-ideology. The question, if the same proposition is true, not for the person but for the philosopher Heidegger seems to be as open as the general question whether person and philosopher can be seen separated from each other.³ They cannot be seen separated.

Heidegger's name is also the name for his philosophy, a kind of trademark he himself used all his life for successful self-marketing. Secondly, it is difficult to imagine that personal attitudes do not influence philosophical thinking – on the contrary: the idea that philosophers work unbiased as the ideal researcher in science may be wishful, but it seems to be rather impossible. Nevertheless, referring to man, metaphorically *rooting like a plant* in the soil of the “Heimat,” it may be fetched way too far to recognize in this rather sentimental remark and the following elaboration an innuendo to the “blood-and-soil-motive” of nationalistic ideologies. For such an accusation, Heidegger's remarks on the plant-like man keep way too general, naïve, and rather romantic and bourgeois. The alleged heroic aspect, the Nazis “spiced” the image of the natural life is missed.

On the other hand, a final doubt if Heidegger really was just a romanticists keeps because the shades of the past are long in *the causa Heidegger* and they root in same ground, the Nazis put

down their roots. Due to Heidegger's – finally failed – fraternization with the Nazi-Regime, it is almost inevitable to claim that any Heideggerian statement on *Germans and soil* do not have a Nazi-reference. As such, the idea of being rooted at home may be unsuspecting – but the idea of Germans rooted in German soil proclaimed by an academic philosopher who was banned from teaching because he did not pass the denazification process till autumn 1951, casts the shadow of doubt on the presumption that Heidegger's speech from 1955 is based on nothing but romanticism.

The next textual element in the *Memorial Address* that may support the impression that Heidegger's speech about man is not just of general philosophical qualities but rather a cloaked nationalist description on the nature of *Germanness*, is his reference to the seven million German refugees from the former Eastern territories. At the example of their displacement and loss of home, Heidegger extends his idyllic, and idealized image of the quasi-natural strong home ties of man. This way he avoids talking about German nationalism when doing philosophy on local attachment.

From the first day of after-war Germany until the German guarantee of the *Oder-Neiße-Line* to be the final German eastern border, the question of the former German eastern territories had been kept alive by veteran Nazis, and also refugee organizations from the same or similar political spectrum. Only politically moderate and left-wing parties have seen the loss of the former eastern territories as losses of a war, Germany had started, meanwhile refugee organizations and the connected political groups always requested a re-occupation of the former eastern territories. This political context could not escape the attention of Heidegger. He talks about the tragic loss of homeland, but he does not speak about how it came to that.

Describing the pitiful de-rootedness of the German refugees as an allegory of modern man, Heidegger's ignorance toward the causes of these losses of German homeland bears a cruel irony: If Nazi-Germany did not try to steal the homelands from peoples in the East of Europe and beyond, perhaps the Germans in the Eastern territories would still root in the soil of their "Heimat." The loss of homeland for about seven million Germans of the former Eastern territories can only be seen against the background of about twenty-three million Russians, seven million Polish and millions of humans of other nationalities who did not lose just the soil of their homeland to root in – they lost their lives by German hands.

Heidegger's *modern man*, he imagines as a plant that has been pulled out together with the roots from their cosy home-setting is not just a lost "eternal walker" like *Ahashver*. What Heidegger claims is way more: that the unrooted man has lost completely his identity. As a central term of political approaches, in our time, "identity" experiences a renaissance [6]. Although the term is used in various political active groups, the most important group is the so-called Identitarian Movement. The concept of the Identitarian Movement that is also very active in conspiracy theories contains – *inter alia* – of xenophobia and ethnopluralism, but a central role in their world-view is precisely the kind of localism, Heidegger described in the *Memorial Address*. The anthropological focus point of the Identitarians is blood & soil. This dichotomy is meant in the same way they Nazis did.

An element that in 1955, Heidegger did not mention is the xenophobic element of "the Great Replacement," originally the conspiracy idea that white European elites are planned to get substituted by non-white people. Joignot analyses that in the eyes of the Identitarians, the modern materialistic society, as well as globalism, have created a "replaceable human, without any national, ethnic or cultural specificity" [18]. In the *Memorial Address*, Heidegger distinguishes "calculative thinking" – as a specific characteristic for modern times, and "meditative thinking" as a pristine way of aboriginal thinking that is due to the nature of man in his quasi natural environment.

The German term for "calculative" used in the German original text is "berechnend." Like in English, also in German this word has two meanings: On the one hand, "calculative" is meant in terms of mathematical numeracy, and on the other hand, this word can also denote someone who is thinking only of his own advantage and benefit. Using that term with its double meaning seems to be no accident but intentional; it expresses exactly his negative evaluation on "modern" times, "modern" thinking, and – Heidegger's adds that one: on science. Calculative thinking is not dedicated to the meaning of the world – that reveals finally itself to the thinker – but it is seeking permanently occasions for utilization and exploitation the world. Mankind, so Heidegger says, gets

lost in this kind of thinking for it is unnatural. In its limitless, thinking the world solely as a reservoir for technological development leads to disasters, catastrophes, and finally to a complete failure, because it contradicts the world as it is, according to Heidegger.⁴ He insists on that *autochthony* as the idea of the aboriginal, indigenous and – so to speak – natural existence of man has become somehow eliminated in modern thinking and times, whereas it should be seen as a quasi-natural way of living. As a man of classic education, Heidegger must have known well the ancient Greek roots of that term.

In opposition to settlers and immigrants coming from the outside, the autochthones were the original inhabitants of a territory, maintaining the pureness of their population [3, pp. 251–275]. Is it really fetched too far, presuming that when Heidegger writes *autochthony* he in fact means racial purity? As mentioned above, in our time, the idea of man growing ideally in native soil as “the natural setting” is one of the core points in the Identitarian ideology, meanwhile in the past this metaphor was a focus point of national fascist movements. Both their anti-modernist, their anti-global, anti-technological, xenophobic and racist approaches root in that one idea of autochthony [23]. And Heidegger says the same. In the *Memorial Address*, and also in Heidegger’s other works, it is apparent that the cosmopolitan idea of a global human community stands opposite to his quasi original definition of the identitarian axiom of the primacy of homogeneous ethno-cultural entities.

Heidegger says that the special challenge for man of modern times is technology. His idea of “the releasement toward things” as the appropriate approach towards technology seems to be an appeal on *coolness*, but what Heidegger expresses with it, is something else: indifference. It is apparent that in his world, technology does not really matter for human being. Technology can be used like any tool, – but it finally shall have neither value for the human being nor does it help in understanding the world – but just in measuring it. One can argue if human civilization is not just another term for technologization that comes along with a lot of negative effects, e.g. the climate change; but ignoring the meaning of technology in daily life is only possible for the one living in a past of romanticized primitivity – or in Heidegger’s remote hut in Todtnauburg.

Releasement toward things is somehow a very special attitude. If it does not stand for a special kind of complete “Entweltlichung” – detachment from the world – it is at least “dwarfing” a world of versatility, cultural and ethnic opulence, and pluralist possibilities. The ideal of passiveness of man in Heideggerian philosophy appears to be contrary to (not only western) ideas of man successively understanding and also forming the world by science and technology. Heidegger’s meditative thinking claims to be the royal route to understanding the entire world – whereas he failed even clarifying the meaning of being. Heidegger’s thinking pretends to be gigantic but actually it remains literally in intellectual provincialism of a special kind that is primarily political. Heidegger’s lifelong hide-and-seek in terms of a clear political classification was almost successful.

It seemed that in his publications, he left many traces but never real evidence for the true nature of his ideology and himself as a *meditative* and inspiring element in the frame of a nationalist fascism. Finally, the black notebooks have delivered more than just strong indications for the political horizon of his entire philosophy, as well as for the meaning of the ethnic kitsch of the *Memorial Address*. And what about his main work? The still *nebulous* central term in his main work *Being and Time* [14]: Dasein – that is nebulous for as such he fails to make it the key for understanding “being” – would makes perfectly sense when “Dasein” was understood as “Volk” – as the central ethnic term of the German National Socialism.⁵ Under the assumption that Heidegger’s “Dasein” is equal to “Volk,” one can claim that *Being and Time* is the fundamental philosophical epos for intellectuals, meanwhile the *Memorial Address* is the popular version for the average man of a political ideology: Nazism.

Henry Drummond: As long as the prerequisite for that shining paradise is ignorance, bigotry and hate, I say the hell with it. *Inherit the Wind* (1960) [17]

II

Henry Drummond: Progress has never been a bargain. You have to pay for it. Sometimes I think there's a man who sits behind a counter and says, "(...) Mister, you may conquer the air, but the birds will lose their wonder and the clouds will smell of gasoline." *Inherit the Wind* (1960) [17]

It is not unproblematic to evaluate long gone but still popular philosophers as unique thinkers representing thought, truths and wisdom of such an outstanding quality that their work has meaning even for the now. Understanding the reasons for the meaning of their work even for today goes hand in hand with respect for the historicity of their works. The "dead avant-garde" of philosophy is perhaps "the giant on whose shoulders" also we today's philosophers stand.

It is pure anachronism, taking directly any work of a historic philosopher as a contribution to contemporary philosophical problems. In philosophy, considering the thoughts of colleagues from before our time can be as helpful as in science. No one needs to do philosophical work starting from the scratch; but it is usually the "fallacy of a fan" to believe that particular philosophical answers of the past are meant to answer even philosophical questions of today.

"Discipleship of a Lord of philosophy" beyond the admiration the students of Socrates showed for their master, is a phenomenon that has accompanied the hype on Heidegger ever since. Partially that Heidegger-hype has even reached quasi-religious levels. What creates this impression is on the one hand the emotional deep veneration for the philosopher among his fans, looking to the other side when it is about "brown spots" in the vita of their idol, and also defending their intellectual leader often enough even beyond facts and truth, and the obvious. On the other hand, his followers fight nails and toes for the alleged pure doctrine of his work as if Heidegger brought down his books from Mount Sinai as testimonies for eternal and universal truths, as if Heidegger's philosophy was a kind of ideology or faith. His work shall be rather seen as a not too little philosophical contribution it was than as a transtemporal philosophy, revealing a perfect timeless insight on the puzzle of being. The person beyond his work must be seen as the author, whose vita may be even the key to understand his work that often drifts willingly into spheres of complicated formulations that pretend – or not – to be specifically deep.

Seen as phenomenon of his time, Heidegger was both, extraordinary and ordinary at the same time. Surely, his cryptic, mystical philosophy hit a nerve in the rather chaotic 1920s in Germany. The ones looking for a strange mixture of conservative ideology with a revolutionary touch were served well already with Heidegger's early work *Being and Time*. He and his philosophy became so much *en vogue* that for all decades that have followed, it has attracted the attention of each the intellectual elite, and that in two ways: be it with almost unlimited admiration for a philosophical work that seemed to be incomparably rich or be it with antipathy against his thoughts as an incomprehensible variation of Dadaism cloaked as philosophy.

Being thoroughly ethnonationalist – in Germany in Heidegger's time till 1945 and even beyond that was generally nothing alien and rather as common as the wide-spread fashion of the squarish moustache, not only Chaplin and Hitler, but also Heidegger wore. The evaluation of this approach has significantly changed over the decades after WWII. Successively, in Germany it has turned from a self-evident approach reaching from conservatism to fascism, to a problematic attitude that at least helped the Nazis to succeed. The view on Heidegger's suspected political approaches and his philosophy seems to have changed parallel to that development.

Against the background of his late shattered relationship to his mentor Husserl, his anti-Jewish approaches were already a topic, as well as it was known that he understood his work as rector of Freiburg University as political work for the Nazi-regime. His temporary ban from academic teaching after WWII and the long denazification process may indicate strongly his entanglement of him in Nazim. Whatsoever, in total it must be said that Heidegger was not an active Nazi in the orbit of the Nazi leaders, he did not commit any crimes, if he intended to become a careerist, then he failed after his rectorships, and for his Nazi-approaches there has been only thin

evidence in his vita. All in all, for a long a time Heidegger's approaches were more a dark immoral shadow over him than clear accusation based on flaws in his life. That Heidegger never clarified his political convictions can have two reasons.⁶ Committing that he was at least a supporter who saw himself being the intellectual pillar of the Nazi-regime would have been rather shameful after all their crimes had become known. The world of philosophy and the public may have not forgiven him that.⁷

The illusion to be philosophically apolitical because fundamental ontology claims to hover over profane ontic politics and daily life may be another reason why he did not find a clarification of his political views necessary. The latter speculative explanation appears to be more apparent, as well as personally comfortable for him – especially since his work follows a quasi-scientific approach,⁸ already his teacher Husserl requested to become standard methodology for philosophy.

We have known this phenomenon from many scientists: Someone believing in discovering and clarifying nothing but (factual) truths, does neither feel nor think that they touch any political or ethical dimensions. Facts are facts, they are what they are and how they are, and anything else that can be said about them is beyond their original nature and just interpretation created in the mind of the observer or user. Heidegger's gigantic approach towards his own contemplative "research" to do something like "the better science on the world," revealing how it really is, is a red line throughout his entire work. The claim to have spoken final wisdom on the world made it hardly possible for him to agree with disagreement towards his work. More than that his far developed self-confidence as the pathfinder of nothing less but being let appear his work above politics and ethics – two downstream issues beyond pure being as such.

Claiming that Heidegger's philosophy is nothing else but political philosophy because it intends to appear completely apolitical is only possible if the allegation that he played intentionally hide-and-seek in this regard can be substantiated with proof or circumstantial evidence. The latter aspect is obviously the case. Misunderstanding the real intentions of the author or not: the question keeps, if it is not too easy to see Heidegger's work as anthropology or philosophy of politics, and not as Ontology.⁹ Disregarding any evaluation on this point, one must say that once Heidegger's work is read as a general description of man, the congruency of his very work and the political ideology of the far-right is indeed striking.

Once, one indulges in this productive (alleged) misunderstanding, one literally can see how the "Germanic-Aryan spirit" and its ideology has been brought on the way to its fundamental description. That impression is way too perfect and complete to be solely coincidental. Heidegger's most works read as a fundamental ontic and not-ontology superposes the clear concept of spirit of "the German race" as the National socialists have propagated it. Therefore, it is not a miracle that till today the new far-right movements adore Heidegger as one of their inspiring spiritual leaders. In his book *Dangerous Minds Nietzsche, Heidegger, and the Return of the Far Right*, Beiner may fail to analyse Nietzsche's philosophy as a fascist ideology but referring to Heidegger his argumentation appears to be flawless, and it ends up with the claim that he was an "apostle of a resurgent fascism" [20]. Nietzsche's term of the "blond beast," and the parts of his work in which he longs for the "Übermensch"¹⁰ are invitations for misunderstandings. The contexts, his works and his statements in letters may speak against the idea of him as a premature mastermind of fascism and the Nazis. Not unlike in the Heidegger case, the question is, however, why a thinker shall not be hold responsible for misunderstanding them due to the missing will or skills to be clear.

What makes both the thinkers attractive to neo-fascism is the alleged inherent extra-morality of their philosophy. Fascism and neo-Fascism obviously never tried to pretend being moral: on the contrary. Seen from a distance, it is the complete absence of morality that creates and justifies the cruelty of fascism, cloaked as total freedom from moral thinking. Instead of values, fascism is built on a few obligations of radical loyalty only. Dedication to the own (usually "race" and "fatherland") and unconditional obedience within a hierarchy that claims to be the natural order. These main elements do not hover in the air, they are derived from the natural, factual state of the individual – as described also in Heidegger's *Memorial Address*. Especially the German fascism has been based on the idea of the origin and rooting of the aboriginal German in his home region where he lives

among his folks, as the natural habitat that deserves total loyalty. The idea of being elitist roots in the conviction that the natural state of being among the own needs to be defended against others. There are always the others. And the others are the enemy in the permanent fight for existence. Fascism also consist of the amazing idea that the strongest and chosen ones is each the own people.¹¹

The point of “life as a permanent fight for existence,” I have to admit that, is an element of fascism that cannot be found in Heidegger’s work. Neither any kind of “survival of the fittest” in social-Darwinist terms nor any aggressive undertones can get derived from his books. Where Heidegger keeps the idea of the romantic, naïve, idyllic and perfect world, the political far-right starts at least to dream about fighting for it. The question is, however, how to establish the nice and clean world Heidegger is talking about. What is necessary to do to make it come true? What about eliminating any “disturbing factors” that stand in the way to paradise? Heidegger’s antipathy against the modern world of towns, the world in which technology rules, and where the German *Heimat* gets flooded by aliens is obvious. He only spares us his fantasies on how the fight for his alternative and naturally neat home may look like. He keeps focused on the fundamental description of the world how it should be at best.

A *paradise on the earth* is always an attractive idea. No idealist philosophy or fantasy has ever revealed the crimes and atrocities that are necessary to reach the state of perfectness. Man of the mind, ambitious enough to think the perfect world, usually keeps it for men of action to realize their idea.¹² Thinking any imaginary idyll without considering the way is like talking about Hitler’s idea of the monumental future German capital *Germania* without mentioning Auschwitz – or to be up-to-date: it is like discussing Putin’s dream of the gigantic Eurasian Empire lead by the Russian avant-garde without mentioning the necessary mass murder in Ukraine to realize his political philosophy. The cosy world of Heidegger’s *Heimat* is a pedigree brainchild without an equivalent in the real world. It does not exist, and it even did never exist the way he described it in the past: Heidegger’s *Eutopia* is *Utopia*.

Defeating the allegedly imperfect reality and realizing the ideal world requires usually a lot of violence. Circumstances do not bow to ideas just because they are nice. Forming reality due to ideological ideas needs ruthless men of action. Action would be “pretty ontic,” and so, action it is a too low level for Heidegger’s ontology; and it would destroy the idyllic impression of his cosy world. That is maybe why he refused to bow down to descriptions of the violent attitude that is necessary for the action to build up his idyll. Focusing on ontology may be also the reason why the proven anti-Semitism in the *Black Notebooks* cannot be found work of Heidegger, published in his lifetime. Where ontology rules, lower ranked issues, although they might be perhaps fundamental for the philosopher himself, are not worth to get clearly mentioned in his work.

The historical and private context of Heidegger’s work is essential for a realistic classification and meaning of his philosophy. Without doubts, e.g. the folkloristic Bavarian regional writer Ludwig Thoma had quite similar ideas referring to the ethnic settings in the *Memorial Address* but although it is probable that he even knew the young Hitler personally, his work and approaches deserve another evaluation. Thoma had died in 1921, 10 years before the Nazis came to power. So, seen in his timeframe, in ideological terms, Thoma may have been at best a trailblazer for the ethnic ideas, the Nazis realized, whereas Heidegger got engaged within the Nazis system, in personal ways, by his intellectual contributions based on a shared world-view. It is not fetched too far, claiming that the after-war *Memorial Address* breathes the very same air than the writings of e.g. *Walther Darré*, who served the Nazis as Reich Ministry of Food and Agriculture (Reichsbauernführer). As the main representative of the Nazi’s ecofascism, in his main works [4], [5], Darré’s thoughts about the “Nordic race” and its relation to “blood & soil” reads as the ontic description Heidegger transposes later to a more abstract level in his *Memorial Address*. There is no direct textual accordance of *Darré* and *Heidegger*, but down to the details, the fundamental idea of the attachment to the native soil is congruent.

As much as for Darré the *peasantisation* of the German society was the supreme goal, Heidegger postulates a rural approach to be the natural way of perfect living, rooted in the

homeland. Darré and Heidegger seem to be “thinkers in arms” also when it comes to their rejections and disgust towards any “unrooted” life. Whereas Darré connects that kind of life to – *inter alia* – Semitic people, Heidegger keeps silent who is meant with them. He focuses on the unnatural and unsteady life in the cities, as the negative alternative concept to a primeval “natural life” as an ideal of the political neo-far-right that nowadays even right-wing terrorists like Brandon Tarrant [19], “Putin’s brain” Alexander Dugin [9], the Alt-Right movement, or white supremacists have picked up.

Conclusion

Like Simone de Beauvoir concerning *de Sade* [7], one must ask now: Must We Burn *Heidegger*? I suppose that an appropriate way to deal with him and with his philosophy is to see it all in the context of his time, his vita, and also in the context of his anti-Semitism, proven in the *Black Notes*. *Heidegger* was a thinker in sync with fundamental Nazi-ideology. He was not the “neutral, unbiased thinker” he tried to represent himself in public and in the philosophy communities. In fact, there is nothing like a “neutral thinker”! That against the obvious entanglements with Nazi ideology, so many professional and academic philosophers have bought that bold claim from Heidegger, to be “neutral”: that is truly amazing.

That Heidegger may have seen himself off any ideology is not surprising. Each ideology does not see itself as just one possibility to see the world among many competing worldviews: every ideology sees itself as the only natural and genuine worldview. Seen from this perspective, any other ideology is always just heresy, and the own ideology is nothing but a clear view on the world as it is – and should be. Heidegger is hedged ideology, and it is up to the specialists in ontology to decide if he ever reached the ontological levels he claimed to have reached.

Did he fail as a philosopher? If it is about success in philosophy in terms of clarifying things: Yes, he failed. If it is about philosophy as permanent trial to think the world: No, he did not fail. He just tried to think, but could not evade and avoid the pitfalls of his approaches and maybe character. Even a big mind like Heidegger could not disconnect himself from his thinking. But is Heidegger a “dangerous mind,” and are his books “too radioactive” to touch? I would finally answer those questions by modifying de Beauvoir’s conclusion on de Sade: “It was not murder that fulfilled Heidegger’s profound thinking; it was philosophy” [7].

Heidegger’s books shall not be burnt, but they shall be taken the way they were meant. And that is anything else but harmless philosophy. The idea that philosophy is harmless must be abandoned. There is no harmlessness in any philosophy. During his lifetime, Heidegger went actually scot-free with his dangerous philosophy. He never really paid for it. Socrates was less lucky...

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Notes

1. Why Heidegger published a rather profane public speech is not known; maybe because he wanted to prove how close indeed, he was to the average man? Anyhow the text is somehow a revelation in terms of his political approaches.
2. In the original German text, the term for homeland is “Heimat” – a word that cannot get translated to English with the rich meaning of the German original term.

Bickle concluded well that “Heimat” has no equivalent in the English language because the term originates from German Romanticism and -nationalism, and it explicitly connotes to German culture, -society, -statehood [2]; and -regionalism: to which *Heidegger* explicitly refers to in the Memorial Address. In Germany, the term of “Heimat” was a most central term, later misused by the Nazis. *Heidegger* may go beyond that back in time and refer to German Romanticism – but he must have known that ten years after WWII, when he gave the Memorial Address, the term “sounds” more like The Third Reich but 19th century.

The remarkable issue that comes along with that term is that although other foreign languages do not have a full equivalent term either, in times of a renaissance of right-wing, and nationalist ideas especially in Eastern European, each the national word for “fatherland” seems to align to the meaning of the German word. One reason for that may be that nationalist and fascist ideologies re-define semantics of crucial terms of their ideology, independently from their nationality.

3. The famous anecdote on *Heidegger*’s lecture on Aristotle, Hannah Arendt reported about [1, p. 184], seems to indicate that *Heidegger* followed Bacon’s and Kant’s motto “De nobis ipsis solimur” – about us we keep silent” when it is about the person of a philosopher. Arendt claims that *Heidegger* opened the lecture with the sole biographic remark “Aristotle was born, worked and died.” Anyhow, this anecdote does not reveal anything about the identity of person and philosophy of a thinker; especially not referring to *Heidegger*. Generally, it keeps an amazing fact that of all people it was especially Hannah Arendt who always kept *Heidegger* in high esteem – ignoring his vita but admiring him as a man and also as a philosopher. Her evaluation on Eichmann was less lenient.

4. The compatibility of *Heidegger*’s idyllic world view with the fundamental ideology of nature conservation of the German Green Party was analysed well by Gumbrecht [11, p. 22]. In his article, Gumbrecht concludes not just that the basic world-view of *Heidegger* and the Greens is the very same: the best for world and man would be an untouched world of nature. En passant, Gumbrecht discovers that nature conservation is not a primarily core element of left-wing ideologies but an issue in full sync with a very conservative world-views, and also with Nazi-ideology. At first glance, this all seems to be pretty absurd, but indeed, in the early years especially of the German Green Party, The Greens were a movement in which also former Nazis and neo-Nazis got active [22]. In their world-view, pureness of race and pureness of nature take the same rail.

5. During the preparations for my Ph.D.-thesis in 1996, in a not fruitful talk about *Heidegger*’s political ideas, Otto Poeggeler claimed that until 1929, for *Heidegger*, Dasein and Volk were synonyms. Being asked for the cryptic remark “until 1929” Poeggeler answered: “You will find out!” I never did.

Although, as Trawny [21] and others have shown, the student notes about a 1933/34 winter semester seminar [15, p. 55] are interesting in this frame but not unproblematic because they are hearsay. *Heidegger*’s alleged sentence that “Das Volk ist das Seiende, dessen Sein der Staat ist” (Freely translated: The people is existing, and what it gives being is the State) indicates strongly that *Heidegger* never gave up thinking about the people and the State in terms of his own philosophical terminology. My question since 1996 has been: Did he transpose his fundamental ontology to a philosophy of a later established national socialist State, or was it the case that in the 1920ies he surprisingly thought to see a congruency between his philosophy and the then upcoming still National socialism? Independently from this question on that detail, the congruency between basic NS-ideas and his philosophy is too clear to be an accident. Even the more speculative question if *Heidegger* agreed or not with the murderous anti-Semitism of the Nazis or not is finally without relevance. It seems to be apparent that an intellectual conformity of his philosophy and the NS-ideology is the case.

6. The idea that in the event of a Freudian repression, after WWII, also *Heidegger* – as well as the entire German people – *prevented the unacceptable fact* that he had been part of the Nazi-system *from entering the conscious mind* [10] is still as popular as it is speculative; too speculative to mention it here as a serious explanation for *Heidegger*’s motives not to talk about his political approaches.

7. In after-war German, for obvious reasons no one came forward publicly with the confession to be a Nazi. “The great silence” of the ones who were with the Nazis has never ended.

8. or more: ...a pseudo-scientific approach!

9. Taken as anthropology or philosophy of politics, the shining glamour that has been created around *Heidegger*’s ontology changes to nothing but blunt profanity.

10. The regular English translation of “Ueberschensch” as “superman” is rather preposterous; the preposition “Ueber-“ (over) indicates a higher development of man above the current stage.

11. The Italian fascism and the German Nazis – that was indeed an amazing brotherhood in arms. Within the Nazi philosophy, logically it cannot get explained why the meridional and pretty little Nordic Italians were accepted as equals; only the fact that Hitler was a fan of Mussolini made this rather strange relationship explainable

12. How much violence is hidden behind beautiful dreams of a perfect world (of what kind ever) is not subject to speculations: in history a lot of examples for that can be found. A rather speculative but nonetheless interesting question is e.g., if Marx would have formulated the idea of a “dictatorship of the proletariat” if he had also the mind power to imagine the terror and millions of murdered people that were necessary even to reach an early step of the later coming real-existing dictatorship of the proletariat. The final dream was never realized.

Response to Hewitt on Abortion

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Abstract:

The defense argument in favor of abortion sees the fetus as an invader, a trespasser, someone against whom violence is justified, since this very young person (the fetus) has initiated violence against his mother. Hewitt [30] rejects this argument. The present paper maintains the justification of this defense argument. My perspective is based on the private property rights of the mother. She owns her person. It is as if her body is her house, and a trespasser has invaded it. Surely, she has the right to evict such a person. This analogy is relatively easy to see in the case of rape. The unwanted fetus, now occupying a part of her body is in effect a intruder. If she really owns her body, which I contend she certainly does, she has a right to expel this person from her property. I also argue that voluntary sexual intercourse does not constitute an “invitation” for the pre-born baby to occupy her premises for nine months.

Keywords: Abortion, property rights, trespass, eviction.

I. Introduction

Hewitt [30]¹ lays out the defense argument in favor of abortion as follows:

1. Any unwanted pregnancy is a serious, nonconsensual use of one person’s body by another.
2. Any serious, nonconsensual use of one person’s body by another justifies lethal self-defense.
3. So, any unwanted pregnancy justifies lethal self-defense.

This is his target. He criticizes it by use of a very important analogy to abortion.

He stipulates that the fetus is a young human being with all the rights of any other person. He likens abortion to the case where A, the bad guy, seizes B and through hypnosis places him in a

position where B can now violate the rights of A through rape, and A claims she can use deadly violence against B to stop this incursion.

My claim is that this analogy fails. There is all the world of difference between creating an entirely new life in a process which places this person in risk of danger, on the one hand and kidnapping an innocent already existing person and placing him in the same risk of danger, on the other hand.

We consider the specifics of the argument in section II and conclude in section II.

II. The Argument

States Hewitt:

The self-defense argument is an argument for a woman's right to abortion on the grounds that it is an exercise of her right to defend her bodily autonomy. Even if we assume that the fetus is an innocent person, it is still the case that he occupies his mother's body in a particularly intimate way and, in an unwanted pregnancy, without her ongoing consent. These facts require us to concede that abortion is an exercise of a woman's right to defend herself from those who would use her body without her consent, regardless of the moral status of the fetus or any of the other facets of the relationship between a woman and her unwanted fetus. If sound, this argument would show that abortion is morally permissible in any case of unwanted pregnancy prior to the viability of the fetus. The self-defense argument is a robust, uncompromising defense of abortion rights,² and ... I ... argue it fails to establish its conclusion...

Our author thus applies "the norms governing intimate bodily contact between normal adults to the mother-fetus relationship." That is, the unwanted fetus is seen as akin to the hypnotized rapist; the mother has the right to remove both, even if this expulsion will result in the death of each of them.

This is all very clear. After all, if we are to assume that the fetus is a full rights-bearing individual, there should be no legal difference between him and anyone else, apart from irrelevancies such as age, or size, or locale. Further, both the rapist hypnotized into engaging in this act and the fetus lack mens rea; each is as innocent as the other.

This philosopher makes it clear that "Abortion, then, is morally permissible, self-defensive killing, or can be justified as such for any unwanted pregnancy prior to the viability of the fetus." He further emphasizes this point, and very properly so: "(Keep in mind that lethal self-defense will only be justified if there are no nonlethal means available, which, in this context, means that the conclusion will only justify abortion that kills the fetus up to the point of viability, after which the use relation can be ended nonlethally.)"

Here, he takes an extreme position, I think, just barely, justifiably so: "A rapist is liable to killing, even if the woman begins a sexual encounter with a man and then changes her mind; if he does not stop, she may use lethal force to stop him, given that no lesser means could."

This is a challenging stance, given that the woman calls a halt to what previously was voluntary sexual intercourse at the very point of ejaculation. It is surely the rare man who would want to comply, but I agree with Hewitt that he should do so; that if he continues, against the wishes of the woman, he really is a rapist. Her body is her body, and if he does not comply with her clearly expressed demands, he is trespassing upon her property, herself, her own person.

The next issue that arises concerns specific performance contracts. Hewitt writes as follows:

Before moving on to assess the self-defense argument, I want to linger a bit on the analogy between sexual assault and unwanted pregnancy. The norms that govern sexual relations between normal adult human beings are not ambiguous. And they imply that no person has

a right to use another person's body sexually. For another person to permissibly use your body in such a way requires your ongoing consent. And if a permissible use of your body by another requires your ongoing consent, that person does not, indeed cannot, have a right to so use your body.

Here, Hewitt and I diverge. Consider the following scenario. I am a tight rope walker. The rope is 100 feet above the ground; if I fall, I die. I hire you to hold a net under me, so as to catch me if I tumble toward the ground. I pay you in advance to do so. Half-way through my act you announce you are quitting. You are willing to repay me the money I already paid you. If Hewitt is correct, I am in trouble. But in my view, a deal is a deal. I paid you to hold that net, and I want that net held; I do not at all want to be repaid the money I advanced to you. In my view, the law should compel you to engage in the specific performance for which you were hired: holding that net. If so, Hewitt is wrong when he opines: "For another person to permissibly use your body in such a way requires your ongoing consent." I no longer have your "ongoing consent" but, still, I should be able, legally speaking, to compel you to continue holding that net.

Consider another scenario. X's child will soon die of a dread disease. It will cost \$10 million for a cure, but X has no such funds. So she makes a deal with Y. She will sell herself to him for that amount of money and become his slave. He gives her the funds; she turns them over to her child's doctor. His life is saved. She then repairs to Y's plantation. Among the services he requires of her is sexual. That was made clear beforehand. Is it now rape when Y requires these services of X? Hewitt would say so, presumably. But, if he is in the right, that child of hers perishes, since we assume that the only way to save his life is with the aid of Y, and this will not be forthcoming under the legal aegis Hewitt supports.³ Again, there is no "ongoing consent" but, still, under the libertarian legal code, there is no rape, either.

Now to return to Hewitt's case. A man hires a prostitute to have sex with him. Halfway through her performance she decides to quit. He is now inside her body, and she demands that he exit. If specific performance contracts are legitimate, and he refuses to depart, but instead compels her to continue her service, Hewitt would characterize this as rape. I would not. In my view, she is a contract breaker, and the solution might be a return of the funds already paid, but it might not be. If the man persisted, it would look like an unwarranted act on his part, e.g., rape. But it would not be anything of the sort at least under these assumptions. I take it that there is no relevant difference between the three cases: holding the net, voluntary slavery, and prostitution.

If so, then Hewitt errs when he opines:

We can see this in the fact that a woman cannot be responsible for a sexual assault in any sense that would give her assailant a right to carry out the assault. There can be no such right. If partisans of the self-defense argument are right about the nature of the relationship between mother and fetus, then the fetus cannot have a right to use his mother's body, no matter what her role in bringing about the pregnancy, or what other relation she might have to the fetus. Much of the appeal of the self-defense argument is that it would dispense with the need to worry about considerations an abortion critic might adduce for the claim that the fetus has acquired a right to use his mother's body. If the rape analogy is apt, there can be no such right. A great deal, then, rides on the analogy, and while there seem to be a number of differences between sexual assault and unwanted pregnancy, partisans of the self-defense argument believe that the differences do not, when properly considered, make a difference.⁴

If anything, the very opposite is the case. In Hewitt's view, rape is per se evil, while trespass is not necessarily so. Given the legitimacy of specific performance contracts, there are indeed cases where the

rapist can be in the right. That is, even though he compels sexual performance, he should not be considered a rapist.⁵ There are no cases where the fetus' trespass is justified, given there is no host mother contract

How about a drugged or hypnotized rapist, who, to be sure, does this evil deed, but totally lacks mens rea. Is it more of a rights violation to be raped or to be bearing an unwanted fetus? This is an unanswerable question. Subjectivism rears its head in this context.

This author and are I once again on the same path when he writes:

everything that follows here should be understood as conditional on the permissibility of killing at least some innocent persons in cases where they pose a threat to life and limb. The philosophers who argue against the permissibility of killing innocent threats do so in the face of intuitively compelling cases where it seems like innocent threats may permissibly be killed. Thomson's expanding baby case is used in just this way, to sway the reader to think that it would be permissible to kill an innocent person whose continued existence is a threat to one's life.

Consider a scenario in support of this insight of Hewitt's. A hides himself behind B and starts shooting at C. All three have guns. A is the criminal, B and C are innocent. B cannot turn around and shoot A. The only way that C can save himself is to shoot A, but in order to do so his bullet must pass through B. B can defend himself against C, but not against A. So who may shoot whom, B or C? The answer that both may fire at each other and may the better shot win is hardly a philosophical response. One possibility is that C would be in the right in spraying bullets at B (his intended target is of course A), since B was the first homesteader of the misery.⁶ If so, we have yet another case where "it would be permissible to kill an innocent person (B) whose continued existence is a threat to one's (C's) life."⁷

Hewitt now launches himself into a fascinating scenario:

I want to adapt the case that Long has given us in the above quote. So, suppose that we have a person, A, who has control of a device—the hypnotizer—by means of which he can control the minds and bodies of other people, thereby robbing them of their agency and making them do what he wishes. A then uses his device to make some innocent person, B, sexually assault another innocent person, C. To avoid any prurient details, call the act that A makes B do to C ϕ and stipulate that ϕ takes place over some period of time, that it involves a part of B's body being in C's body, and that this contact is both serious and sexual. So, for short, we have

Hypnotized Rapist 1 (HR1): A makes B ϕ C.

Long claims that C would be within his rights to kill B, given that that was the only way for C to avoid the ϕ -ing. Notice that, in this case, if there is a rapist here, it is A. B is not raping anyone; he is not doing anything. A is using him as an instrument to torment C. But, by stipulation, C cannot stop the event from happening without killing B, and regrettable as that might be, Long thinks it justified, given the nature of what C will have to endure if B is not killed. And if this is so, then we have a case where one is justified in killing an innocent person to avoid a violation of one's bodily autonomy, which is precisely what the self-defense argument maintains the mother may do to her unwanted fetus.

But even if this is so, the immediate rejoinder will be that while it is permissible for a woman to kill an innocent man who has been hypnotized to 'rape' her, as in Long's case, it would not follow that she is entitled to kill a man if she did the hypnotizing. That is, HR1 is

unlike the typical unwanted pregnancy in that, in the latter, the woman bears responsibility for the use relation that obtains between her and her fetus. And this suggests a different case.

Yes, Hewitt is absolutely correct: if the woman hypnotized the man into raping her, it would be very unjust for her to kill him for so doing. That would be murder, and she the one guilty of this crime. However, it does not logically follow, as Hewitt appears to believe, that once the woman hypnotizes the man into raping her, that she may not change her mind about the rape; that she may not stop the rape without assaulting him; that she may not merely expel him from her body without harming him in the least. For example, she may de-hypnotize him; and he, being a decent sort of person, would cease and desist from the rape. Or, while she still has that hypnotizing machine at her disposal, she may now hypnotize him into stopping the rape of his “own” accord.

Let us now break off from the hypnotist analogy and return to the issue under discussion. Yes, the woman engaged in an activity sexual intercourse that resulted in the creation of her fetus. She may not now kill him, assuming away Thomson’s expanding baby case and all such others. However, she may do what is analogous to getting the hypnotized rapist to stop: she may instead *evict* the fetus from her body. Now, it cannot be denied that if she does so, on the basis of present medical technology, in the first two trimesters, the baby will perish. Here is where the analogy breaks down:⁸ the adult male hypnotized rapist will not die when he no longer ravishes the woman; the fetus will indeed perish, if he is less than 6 months old, if he is no longer able to trespass⁹ upon his mother’s body. Thus, Hewitt cannot fairly be set to have overcome the eviction or ejection scenario.

Further, just because she invited in the “rapist” does not mean she is obligated to allow him to continue his “rape” for 9 months. Indeed, she is not obligated to allow this to continue for as long as 9 seconds.¹⁰

Hewitt continues in this vein:

Keep ϕ the same, and now imagine we have only two people involved: A and B. B is an innocent person, and A again uses the hypnotizer to control B such that B is now ϕ -ing A. Call this Hypnotized Rapist 2 (HR2): A makes B ϕ A. A, with the aid of the hypnotizer, causes B to ϕ A in such a way that during that period of time, the only way for the ϕ -ing to stop is for A, or someone else, to kill B. And during that time, A decides that he does not want the ϕ -ing to continue.

So we have a case where B is “using” A’s body in a serious way and A wants it to stop, but A is not entitled to kill B to stop it. Thus, premise 2 of the self-defense argument is false. It is not the case that A is justified in using lethal force against B, even though the use relation obtains between them: B is in A’s body in a serious way, and A wants him out.

This is problematic. What our author is saying, shorn of the philosophical complications, is that since A, the woman, in effect invited the fetus, B, into her body, she may not now turn around and cancel this invitation. But why not? Just because you invite someone into your home (or your body), does not obligate you to tolerate the “visit” for nine months. Invitations can be rescinded, after all. Nor is it even clear that the woman “invited” her child to locate inside her body. Yes, we may stipulate, she engaged involuntary sexual intercourse, intending to become pregnant.¹¹ But for an “invitation” to occur, there must be at least two parties: the invitee and the inviter.¹² However, at the time of the sexual intercourse, the invitee did not yet exist. It takes some time for the sperm to reach the egg, and I assume, *arguendo*, that the earliest stage of a human being is a fertilized egg.

Hewitt cites Long [40] as follows:

A woman never has an obligation—or at any rate, never has an enforceable obligation—to let herself be raped. That’s moral bedrock if anything is. The notion of an enforceable obligation to let one’s body be used by a rapist is a moral obscenity; and the same holds for the notion of an enforceable obligation to let one’s body be used as an incubator by a fetus, even if the mother is responsible for the fetus’ presence there in the first place.

Not so. There is a large literature in the debate over voluntary slavery.¹³ It can hardly be “moral bedrock” that the woman can have no enforceable obligation to engage in sex against her will given that the philosophical community is sharply divided on this issue. And, if the supporters of voluntary slavery are deemed correct, then not only the moral, but also the legal “bedrock” gets turned around to the very opposite point. That is, it then becomes moral and legal bedrock that this obligation is incumbent upon her.

Hewitt continues:

We should agree that there can be no obligation of any kind to let oneself be raped. But in HR2, A is the rapist. To think that when A changes his mind he has thereby withdrawn his consent to what B is doing to him is absurd. A cannot withdraw his consent to what he is doing, or has done, to himself. B is not involved in the right way for there to be a consent issue in HR2. And so, premise 2.

We should agree that there can be no obligation of any kind to let oneself be raped. But in HR2, A is the rapist. To think that when A changes his mind he has thereby withdrawn his consent to what B is doing to him is absurd. A cannot withdraw his consent to what he is doing, or has done, to himself. B is not involved in the right way for there to be a consent issue in HR2. And so, premise 2 of the self-defense argument is false. It is not the case that any serious, nonconsensual use of one’s body by another justifies lethal self-defense.

Why is A not entitled to use self-defensive force against B? The most obvious reason is that A is responsible for bringing all this about; he has orchestrated this use of his body by B, and he is not licensed to put people into situations where they are a threat to him and then kill them in self-defense. To think otherwise would be to give a license to kill to anyone with the power to put other people in situations where they pose a serious threat.

Hewitt brilliantly demonstrates that his premise 2 (“Any serious, nonconsensual use of one person’s body by another justifies lethal self-defense”) is incorrect. However, he errs when he thinks that this negates the main claim now under discussion, namely, the self-defense argument not for abortion, but, for eviction, is valid. It still is, despite his important contribution to this dialogue. How so? This is because the pregnant woman may still properly, under just law, evict the fetus during the first six months of her pregnancy, and nothing said by Hewitt puts paid to this claim. Why so? This is because there is a disanalogy between the pregnant woman who evicts her fetus before the second trimester is concluded, and the hypnotist who arranges to be raped and then changes her mind. She need not kill this “rapist.” She may not kill him. All she need do is evict him from her body. But that is all the pregnant woman need do. The “rapist” will not die, the fetus will, and that is one important element of the disanalogy. The point is, the evictionist need not rely upon premise two. He can be satisfied with a modification thereof. All that Hewitt has demonstrated is the fallacy of the denial of this claim: “*Some* serious, nonconsensual use of one person’s body by another justifies lethal self-defense.”

But Hewitt is not without a possible response to this criticism; he asserts: He “(A) cannot withdraw his consent to what B is doing to him because B is not doing anything to him. While there is sexual activity

going on and B is involved in it, B is not involved in the right way for this to constitute a violation of A's bodily autonomy by B."

Yes, B is not *doing* anything to A, the hypnotist. B cannot be engaged in human action [43] since he lacks agency, volition. However, after A no longer welcomes B into her body, B is still a trespasser. B is still occupying A's body, against her will. B of course, lacks any vestige of mens rea, in exactly the same manner as the fetus is innocent of any purposeful activity. However, proper law would allow both to be evicted from A's premises; the only divergence is that the less than six-month-old fetus will die, while B can be brought out of the state of hypnotic unconsciousness in which A has placed him, and, presumably, survive this experience.¹⁴

Hewitt himself sees problems in this analogy. He announces that he could

... attempt to make an analogy argument from HR2 to the moral impermissibility of the typical abortion, but this looks like it will be tough going; in fact, the differences between the cases look so stark that it seems bizarre to seriously entertain the comparison. First, in HR2, A harms B by putting B in that intimate bodily relationship with himself, but it is far from clear that a woman harms a fetus by conceiving him. And the harm that A visits upon B is surely relevant to our judgments about what it is permissible for A to do to B in HR2.

Second, one might reasonably doubt that there really is a symmetry in the use relation between the cases. After all, the woman is not using the fetus for anything; it is the fetus that is in the woman's body, and if anyone is using anyone else in the pregnancy relationship, it is the fetus using his mother.¹⁵ This, at least on the face of it, seems different from what is going on in HR2. Third, B in HR2 is a normal human being who will be aware of the harm done to him and will, if he lives, suffer the consequences long after the event itself, whereas a fetus will not be aware of anything. One could argue that this is a morally relevant difference between the cases as well. So, it looks like an analogy between HR2 and the typical pregnancy will not hold together.

But there is still a worry here, and it is generated by the use relation involved in the self-defense argument. If the use relation between mother and fetus is morally akin to intimate, sexual activity, then it is going to matter who puts whom in that relation. In HR2, as I noted above, with B being placed in the situation without his consent, it is B that is suffering a violation of his bodily autonomy. He is the victim. So, any person who puts another person in that use relation without that other person's consent will be violating that person's bodily autonomy. B could, for example, invoke self-defense as a justification for killing A to stop the ϕ -ing, if only he could and killing A was the only way to stop it. And a third party would be justified in doing so on B's behalf. Given this, why is it not the case that a mother violates the fetus's bodily autonomy by putting him in an intimate relationship with her; why is she not guilty of a violation of a kind that A is guilty of? And if she is, why do the same considerations not weigh against the mother's killing her fetus by abortion? After all, she put him in that intimate relationship without his consent and now plans to kill him to end it.

All this shows is that Hewitt is blessed with a creative and inventive mind: according to this logic of his, not only may the mother not kill the fetus¹⁶ but he the fetus, if he were able, and since he is not, a third party may do this for him, is justified in killing her, in self-defense.¹⁷ After all the fetus is in much the same position as B, the victim of the rape-mesmerism. The obvious retort is that there is all the world of difference between the two; well, at least a sufficient philosophical distance between the two cases; there is a disanalogy. But let us try to help Hewitt out a bit. How can we tighten up matters?

Reduce the philosophical distance, repair the analogy? Suppose that after A hypnotizes B, and orders him to rape her, she decides to end the rape. For some reason however, she cannot un-hypnotize the rapist B; the only way she can make him stop would be to kill him. Would she be justified in so doing? No. She is the “bad guy” of the piece. The rapist is an innocent victim. She “started up” with him, not the reverse; she initiated the uninvited rights border crossing. Yes, he is now “raping” her, but the fault for that act is entirely hers.

But this attempt of mine to save the analogy fails. It breaks upon the rock that B was alive, totally innocent, going about his business when A captured him through her hypnosis machine, and compelled him to rape her. She ruined his life.¹⁸ She made him a victim. She worsened his condition. In sharp contrast, before the act of sexual intercourse, there was no fetus.¹⁹ The mother, with a little help from the father, brought this new person into existence for the first time, thus, presumably, bettering his condition,²⁰ not worsening it.

Perhaps Hewitt and I are not that far from each other on these matters. He opines: “When A does what he does, he violates B’s liberty rights and B’s right to bodily autonomy. And this is very different from what the mother does when she becomes pregnant by consensual sex.”

This is precisely my objection to his thesis! Yes, we draw very different conclusions from this; we are 180 degrees apart from each other. He, that the defense argument is invalid, me the very opposite.

Now consider this foray of our author’s:

If instead of A kidnapping B, A simply created him in his garage and then brought him into the bodily contact involved in HR2—or, better yet, it was the case that A could only create B by also making it the case that they were in the same sort of bodily contact described in HR2—it would not be permissible, given that B is an innocent person, for A to perform the act that created B, nor would it be permissible, given that the act already performed, for A to kill B in order to end the bodily contact that A brought about. The very act that brings on conception would be a morally impermissible act, given that the use relation that results is akin to serious sexual activity. Since one cannot obtain a fetus’s consent before the fact, conceiving a fetus will constitute a violation of his bodily autonomy.

Perhaps I misunderstand this further attempt of Hewitt’s to save his rape-birth analogy. But it seems to me it comes perilously close to concluding that pregnancy is a rights violation against the fetus. To the extent this is true, common sense should come to the rescue to reject any such conclusion.

III. Conclusion

It is time to end this fascinating intellectual adventure. What I conclude from it, contrary to Hewitt, is that the argument from defense still remains. The unwanted fetus, no matter how he eventuated, from real rape or from voluntary sexual intercourse, is an invader, a trespasser, a rights violator. Of course, he is also innocent, with no vestige of mens rea to his debit. Nevertheless, he is now occupying territory owned by someone else, and thus may be removed at her discretion. Does this then constitute support for abortion? No. For that is a two-part act: removing or ejecting, plus killing. It only justifies the former, that is, evictionism.

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Notes

1. Unless otherwise indicated, all mention of this author will refer to this one paper of his.
2. Only prior to the viability of the fetus; afterward, solely eviction would be justified. See on this [22].
3. In the view of Boldrin and Levine [24, p. 254]: "Take the case of slavery. Why should people not be allowed to sign private contracts binding them to slavery? In fact economists have consistently argued against slavery – during the 19th century David Ricardo and John Stuart Mill engaged in a heated public debate with literary luminaries such as Charles Dickens, with the economists opposing slavery, and the literary giants arguing in favor." For the case in favor of these types of contracts see [1]; [2]; [3]; [4]; [5]; [6]; [7]; [8]; [9]; [10]; [11]; [12]; [13]; [14]; [15]; [16]; [17]; [18]; [24]; [29]; [31]; [39]; [44]; [45, pp. 58, 283, 331]; [52, pp. 232-233]; [53, pp. 230-244]; [54, pp. 283-284].
4. Our author is also in troubled waters regarding the host mother case. She has agreed to carry the child for nine months. It should be legal to compel her to carry out her part of the bargain even if "ongoing consent" no longer exists.

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5. We have to be very careful here not to be misunderstood. In the ordinary case of prostitution, if the latter changes her mind even *media res*, and the customer persists, he is a criminal rapist and should be jailed. However, if a specific performance contract is signed between the two of them, this does not at all follow logically.
 6. For support of this contention see [19]; [20]; [21].
 7. Ditto if we turned this around and supported, instead, B's right to kill C.
 8. You can only expect so much from an analogy, and the one about the hypnotized rapist served us in good stead for a long while in this analysis.
 9. I place no quotes around this word. I think it accurately depicts the relationship of a mother and an unwanted fetus.
 10. I perhaps speak too quickly here. If a woman changes her mind in the midst of sexual intercourse and demands that her partner remove himself from her body, and he takes 10 seconds to do so, I don't think that would amount to a crime. Just how long should it take him to do so before he becomes a criminal rapist? It is difficult to give a precise answer to this question [23] but it would be a matter of seconds, not minutes.
 11. The case against Hewitt is far stronger if she utilized birth control measures, which failed.
 12. We leave the male parent out of this since the relationship we are now discussing includes, only, A and B, the mother and the child.
 13. For the pro side, see fn. 3; here is the other side of this debate: [2]; [3]; [25]; [26]; [27]; [28]; [32]; [33]; [34]; [35]; [36]; [37]; [38]; [41]; [42]; [46]; [47]; [48, pp. 455f., 634-636]; [49]; [50]; [51]; [55].
 14. If anyone was raped in this scenario, B has a better case for this role than A, given that the latter was the perpetrator. A is guilty of the crime of hypnotizing B against his will. The mother is not guilty of any crime merely for becoming pregnant. This is yet another disanalogy between the two cases.
 15. Should we not say, instead, that this is a two-way street: each is "using" the other, in effect
 16. For example, by evicting him during the first two trimesters, when he will perish outside the womb
 17. This would be a murder suicide, since the fetus, given today's medical technology, cannot survive outside the womb of a live mother, at least not in the first two trimesters.
 18. We suppose he gets no pleasure from raping her; he is totally unaware of what he is doing.
 19. More strictly speaking, the fetus, the fertilized egg, did not come into being until some time after ejaculation. It takes approximately 30 minutes for the sperm to reach the egg: (<https://www.healthline.com/health/pregnancy/how-long-does-it-take-to-get-pregnant-after-sex>). But that is only the first step. It may take another 24 hours for the sperm to actually reach the egg and for the latter to become fertilized (<https://www.novaivffertility.com/fertility-help/how-long-does-it-take-for-a-sperm-to-fertilize-an-egg>). There is no fetus, until the latter period of time has also elapsed.
 20. I make a great philosophical leap here and maintain that existence is preferable to non-existence. Sue me for going out on a limb in that manner.

The Devil's Triangle: Empirical Evidence from Turkey on Growth, Current Account Deficit, and Inflation

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Abstract:

Determining the existence of the relationship between economic growth, current account deficit, and inflation will guide the selection of policies to be implemented. The distortions that may be caused by the policies to be preferred can be minimized by the measures to be taken if the relations are known. From this point of view, this study is a metaphorical study emphasizing *the Bermuda Triangle*, which caused unexplained losses due to the name given to the study. In the study, to determine the existence and direction of the relations between the variables, Turkey's annual growth, current account deficit, and inflation data for the 1974–2020 period were taken and subjected to various analyzes. In this study, carried out from this point of view, to determine the existence and direction of the relations between the variables, the annual growth, current account deficit, and inflation data of Turkey for the 1974–2020 period were taken and subjected to various analyzes. Augmented Dickey-Fuller (ADF) (1979, 1981) and Philips-Perron (PP) Unit Root tests (1988) and Lee-Strazicich Unit Root Test (2003) were used for stationarity tests. Regression was used since the variables were determined to be stationary at the level and cointegration could not be obtained. The current account deficit changed by 0.181812 units in the negative direction as a result of a one-unit rise in growth, according to the regression analysis (GDP). Furthermore, it has been shown that if inflation increases by one unit, the current account deficit moves in the positive direction by 0.042096 units. Toda Yamamoto Causality Analysis (1995) was used to investigate short-term causality links, and as a consequence, a two-way relationship between GDP and inflation, one-way from GDP and inflation to current account deficit was discovered.

Keywords: economic growth, current account deficit, inflation, regression, Toda Yamamoto.

1. Introduction

Many unexplained aircraft and ships were lost in the Bermuda Triangle in the Atlantic Ocean, previously thought to be magnetic, but contrary to popular belief, it was understood to be a natural gas source that emerged with the effect of ocean currents [1]. Bermuda is at one corner of this triangle, and Miami and San Juan (Puerto Rico) are at the other corners [2]. Based on the Bermuda Triangle, an economic devil's triangle was created by placing the important economic variables, economic growth, current account deficit, and inflation, in the corners with a metaphorical approach; it is a fact that there is something lost in this triangle as well. Based on the Bermuda Triangle, an economic devil's triangle was created by placing the important economic variables, economic growth, current account deficit, and inflation, in the corners with a metaphorical approach; it is a fact that there is something lost in this triangle as well. Economic growth, price stability, and current account balance, which constitute the main macro-economic targets aimed at economies, create a paradoxical situation, especially in the short run. Expansionary monetary and fiscal policies should be pursued if economic growth is the goal. However, the current account deficit and inflation rates will rise in this circumstance. This time, actual growth remains below potential growth as a result of the tight monetary and fiscal policies that will be undertaken in the case of targeting the war on inflation and the current account deficit. The existence of a relationship between growth, current account deficit, and inflation will serve as guidance for decision-makers faced with a choice dilemma in the selection of policies to be implemented. Disruptions that may be caused by the policies to be preferred can be minimized with the measures to be taken if the relations are known.

There are four components to this study, which were conducted to determine the presence of a relationship between growth, current account deficit, and inflation, as well as the direction of causality. Following the introduction, the second section will include a literature review, the third section will introduce the model and data to be used in the study, the empirical methods and findings will be presented, and the study will be concluded in the fourth and final section by addressing the discussions and policy implications.

2. Literature Review

In this section, empirical studies on the causal relationships between the variables of the study will be examined in three different categories: (i) Causality relationships between inflation and growth, (ii) Causality relationships between inflation and current account deficit, and (iii) Causality relationships between growth and current account deficit.

i) Causality Relationships Between Inflation-Growth. Ensuring price stability and stable growth are among the main macroeconomic targets. It is a matter of debate whether these two variables affect each other, whether there is a relationship between them, and if there is a relationship, the direction of causality. While some studies have determined that there is no relationship, we see that there are also differences in studies that detect a relationship. While some studies reveal that growth is positively affected by inflation, some studies show the opposite. For example, Tun Wai (1959) [3], Bhatia (1961) [4], Johnson (1967) [5], Bullard and Keating (1995) [6], Chowdhury (2002) [7], Hine (2004) [8], and Vaona (2006) [9] did not find any relationship between inflation and economic growth. Ericsson, Irons, and Tyron (2001) [10] found in their study that there was no long-term relationship between the variables. On the other hand, Lucas (1973) [11], Karras (1993) [12], Black, Dowd, and Keith (2001) [13], Mallik & Chowdhury (2001) [14], Rapach (2003) [15], Benhabib & Spiegel (2006) [16], and Mahmoud (2015) [17] find that there is a positive relationship between growth and inflation. While saying that there is a relationship, Romer (1996) [18] in his

study for the USA found that a 0.1% increase in inflation causes a 1% increase in growth. Yakışık (2007) [19], in his empirical study based on the Kyrgyzstan data, determined that an 11% increase in inflation causes a 1% increase in growth. Similarly, Ahmad & Joyia (2012) [20] found that a 1% increase in inflation increased growth in Pakistan by 0.45%. While all these studies reveal that growth is positively affected by inflation, the opposite is also the case. For example; Edwards (1982) [21], Fischer (1983) [22], Kim & Willett (2000) [23], Faria & Carneiro (2001) [24], Hodge (2006) [25], Karaca (2003) [26], Yapraklı (2007) [27], Taban (2008) [28], and Karacor et al. (2009) [29] demonstrated this situation empirically. In the same vein, Barro (1995) [30], in his study involving 100 countries, found that a 1% increase in inflation reduces GDP per capita by 2-3%. Chari, Lary & Manuelli (1996) [31] found that 10% increase in inflation reduces growth by 0.5%. With his regression study, Karaca (2003) [32] determined that 1 unit increase in inflation causes a 0.37 unit decrease in growth. The results of empirical studies looking at the causal linkages between inflation and economic growth vary as well. The research found *i*) From inflation to growth (Table 1), *ii*) From growth to inflation (Table 2), and *iii*) Bidirectional causality links (Table 3), but no relationship between the variables [33], [34], [35], [36].

Researcher	Period/Country	Method	Result
Karaca (2003) [37]	1987-2002, Turkey	Granger Causality and Regression Analysis	INF→GDP
Berber & Artan (2004) [38]	1987:1-2003:2, Turkey	Granger Causality Analysis	INF→GDP
Tarı & Kumcu (2005) [39]	1983-2003, Turkey	Correlation Analysis	INF→GDP
Türkekul (2007) [40]	1988:1-2007:1, Turkey	Granger Causality and VAR	INF→GDP
Yapraklı (2007) [41]	1987:1-2007:1, Turkey	Granger Causality Analysis	INF→GDP
Göçer & Gerede (2016) [42]	2000:1-2014:4, Turkey	Hacker and Hatemi-J (2012), Based on Toda-Yamamoto (1995) Test Khatami-J (2012) Method	INF→GDP

Table 1. Causality Relationships Between Inflation-Growth (INF→GDP)

Researcher	Period/Country	Method	Result
Uslu (2018) [43]	2003:1–2017:4, Turkey	Granger Causality Analysis	GDP→INF
Karabulut (2019) [44]	2003:1-2018:1, Turkey	Granger Causality Analysis	GDP→INF
Dinçsoy & Dinçsoy (2020) [45]	2004:1-2017:4, Turkey	Johansen Co-integration and VECM Granger Causality Tests	GDP→INF

Table 2. Causality Relationships Between Inflation-Growth (GDP→INF)

Researcher	Period/Country	Method	Result
Uçan&Çebe (2018) [46]	2000-2016, Turkey	ARDL Bounds Testing	INF↔GDP

Table 3. Causality Relationships Between Inflation-Growth (INF↔GDP)

ii) Causality Relationships Between Inflation and Current Account Deficit. Very few studies have

been conducted to question whether there is a relationship between inflation and current account deficit, and the direction of the causal relationship if any. Bozgeyik and Kutlu (2019)[47] found a negative relationship between current account deficit and inflation in their study, which they conducted in 2019 for Turkey (using dynamic conditional correlation coefficients (DCC) obtained from the MV-GARCH model) covering the period 1992 to 2017. In the other three studies that could be detected in the literature review, some findings differ from each other (Table 4).

Researcher	Period/Country	Method	Result
Akçay & Erataş (2012) [48]	1993-2011 Brazil, Russia, India, China, Turkey	Panel Causality Analysis	CAD→INF
Yüksel & Özşarı (2016) [49]	1994:1-2015:3, Turkey	Johansen Cointegration and Toda Yamamoto Causality Analysis	INF↔CAD
Bölükbaş (2019) [50]	2006:1-2018:11, Turkey	VAR (Vector Autoregressive) Analysis, Granger Causality Test	INF→CAD

Table 4. Causality Relationships Between Inflation and Current Account Deficit

iii)Causality Relationships Between Economic Growth and Current Account Deficit. Although Eken (1990) [51] and Morsy (2009) [52] did not find a relationship between economic growth and CAD, studies investigating the causal relationships between growth and current account deficit *i)* From growth to current account deficit (Table 5), *ii)* From current account deficit to growth (Table 6) and *iii)* It is possible to see that it reached three different results, two-way (Table 7) between growth and current account deficit.

Researcher	Period/Country	Method	Result
Kandil & Greene (2002) [53]	1960-2000, USA	Cointegration Test	GDP→CAD
Erkılıç (2006) [54]	1980-2004, Turkey	Granger Causality Analysis and VAR Method	GDP→CAD
Karabulut & Çelikel Danışoğlu (2006) [55]	1991:1-2004:1, Turkey	Cointegration Test, VEC	GDP→CAD
Erbaykal (2007) [56]	1987:1-2006:3, Turkey	Toda and Yamamoto (1995) Causality Analysis	GDP→CAD
Çeviş & Çamurdan (2008) [57]	1990-2006, 18 Countries with Inflation Targeting	Panel Data Analysis	GDP→CAD
Lebe et al. (2009) [58]	1997:2-2007:3, Turkey, Romania	Structural Vector Autoregressive Analysis (SVAR)	GDP→CAD
Telatar & Terzi (2009) [59]	1991:4-2005:4, Turkey	Granger Causality Analysis and VAR Method	GDP→CAD
Sekmen & Çalışır (2011) [60]	1998–2009, Turkey	ARDL Bounds Test	GDP→CAD
Yılmaz & Akıncı (2011) [61]	1980–2010, Turkey	Hansen Cointegration and Granger Causality Tests	GDP→CAD CAD≠GDP
Avcı (2015) [62]	1998:1-2014:1, Turkey	Causality Test and VAR Analysis	GDP→CAD

Yurdakul & Uçar (2015) [63]	1999:1-2014:2, Turkey	Granger Causality and VAR Analysis	GDP→CAD
Göçer & Gerede (2016) [64]	2000:1-2014:4, Turkey	Hatemi-J (2012) Method based on Toda-Yamamoto (1995) Test	GDP→CAD
Duman (2017) [65]	2003-2017, Turkey	VAR, Granger Causality and Impact Response Tests, Variance Decomposition	GDP→CAD
Uçak (2017) [66]	1980-2015, Turkey	VAR, Granger Causality and Impact Response Tests, Variance Decomposition	GDP→CAD
Efeoğlu & Pehlivan (2018) [67]	1987-2016, Turkey	Johansen Cointegration Test, Impulse Response Analysis, Granger and Toda-Yamamoto Causality Tests	GDP→CAD
Çiğdem (2019) [68]	1974-2018, Turkey	Engle Granger and Johansen Cointegration Tests	GDP→CAD
Kızıldere (2020) [69]	1974-2015, Turkey	Granger Causality Analysis	GDP→CAD

Table 5. Causality Relationships Between Growth and Current Account Deficit (GDP→CAD)

Researcher	Period/Country	Method	Result
Tarı & Kumcu (2005) [70]	1983-2003, Turkey	Correlation Analysis	CAD→GDP
Akçay & Erataş (2012) [71]	1993-2011, BRICT (Brazil, Russia, India, China)	Westerlund Error Correction Model (ECM) Cointegration Test	CAD→GDP
Sağlam & Erataş-Sönmez (2019) [72]	1993-2015, Visegrad Quartet (Poland, Czech Republic, Hungary, Slovakia)	Durbin-H Test, Dumitrescu-Hurlin (2012) Causality Test	CAD→GDP

Table 6. Causality Relationships Between Growth and Current Account Deficit (CAD→GDP)

Researcher	Period/Country	Method	Result
Yanar & Kerimoğlu (2011) [73]	1975-2009, Turkey	Johansen Cointegration Test and Vector Error Correction Model	GDP↔CAD
Songur & Yaman (2013) [74]	1981-2010, 10 Developing Countries	Panel VECM Method	GDP↔CAD
Akbaş et al. (2014) [75]	1990-2011, 20 Developing Countries (including Turkey)	Panel Causality Test	GDP↔CAD
Kandemir (2015) [76]	1998-2013, Turkey	Granger Causality Test and Least Squares Method	GDP↔CAD
Erdoğan & Acet (2016) [77]	2003:1-2015:4, Turkey	Causality Test, VAR Model	GDP↔CAD
Şit & Alancıoğlu (2016)	1980-2014, Turkey	VAR Model, Granger Causality	GDP↔CAD

[78]		and Action-Response Tests	
Züngün (2016) [79]	2000-2015, China	Granger Causality Test	GDP↔CAD
Arslan et al. (2017) [80]	1980-2014, OECD Countries	VECM Granger Causality Test	GDP↔CAD
Ersungur et al. (2017) [81]	1998-2014, Turkey	Johansen Cointegration, VECM	GDP↔CAD
Karahan & Akçaçakır (2021) [82]	2003-2019, Turkey	Johansen Cointegration and Granger Causality Tests	GDP↔CAD

Table 7. Causality Relationships Between Growth and Current Account Deficit (CAD↔GDP)

Kostakoğlu and Dibo (2011) [83] found a negative relationship between growth and current account deficit by performing VAR Analysis with the data for the period 1991:1-2010:2 for Turkey. Uysal et al. (2015) [84] applied VAR, Johansen Cointegration, Impact-Response Analysis and Variance Decomposition to the 1980-2012 period data for Turkey and found a long-term relationship between the variables. Kaygısız et al. (2016) [85], on the other hand, found a one-way causality relationship between growth and current account balance by applying Toda-Yamamoto and Granger Causality Tests to Turkey data for the years 1980-2014.

3. Data, Methods and Empirical Results

Regression analysis and Toda Yamamoto Causality Test were used in this study, which was carried out to test the existence of the relationship between growth, current account deficit, and inflation in Turkey and to determine the direction of causality. In this section, first of all, the data set and pre-tests will be given, and then the analysis will be started.

3.1. Data Set

Annual data from the World Bank database, encompassing 47 observations for the period 1974-2020, were used in the analyses. Figure 1 shows timeline graphs showing the trajectory of the variables used in the analyses in Table 8 across the relevant timeframe.

Variables	Data Frequency	Abbreviation	Unit	Database
Current Account Deficit	<i>Annually</i>	<i>CAD</i>	% of GDP	World Bank
Growth	<i>Annually</i>	<i>GDP</i>	%	World Bank
Inflation	<i>Annually</i>	<i>INF</i>	%	World Bank

Table 8. Introduction of Macroeconomic Variables

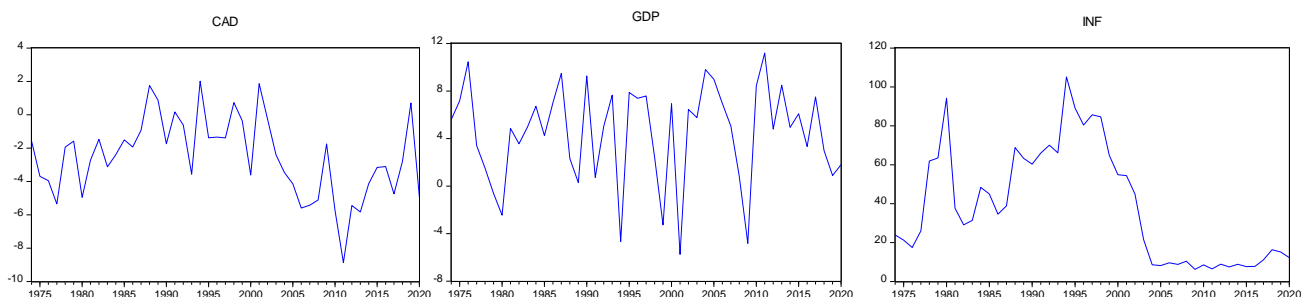


Figure 1. Time Path Plots of Variables

When the graphs created from annual data containing 47 observations used in the analyzes are evaluated together with unit root analysis, it is seen that Turkey provides stability in the current account deficit. As the current account deficit variable, the growth and inflation variables, which are refractory stable (Table 9), are also seen to be stable in terms of instability. The model created is shown in Equation 1;

$$CAD_t = \alpha_0 + \alpha_1 GDP_t + \alpha_2 INF_t + u_t$$

(1)

In the model, CAD: current account deficit, GDP: growth, INF: inflation, and t index is the time series dimension of the variables. α_1 and α_2 are the coefficients, and u is the error term.

3.2. Method and Empirical Findings

Before starting the analysis, Augmented Dickey-Fuller (ADF) (1979) [86] (1981) [87], Phillips-Perron (PP) (1988) [88], and Lee-Strazicich Unit Root Tests (2003) [89] were performed for the stationarity tests, which is the first and mandatory step, and the results are given in Table 9.

GDP					
		% 1	% 5	% 10	NOTE
ADF, Level	-6.455748	-3.581152	-2.926622	-2.601424	
PP, Level	-6.447450	-3.581152	-2.926622	-2.601424	
LS, Level	-8.1909	-6.8630	-6.2680	-5.9560	8,1909> 6.2680 H_0 rejected, Stationary with structural breaks, 2003:01-2009:01
CAD					
		% 1	% 5	% 10	
ADF, Level	-4.181439	-4.170583	-3.510740	-3.185512	
PP, Level	-4.336447	-4.170583	-3.510740	-3.185512	
LS, Level	-7.4883	-6.8210	-6.1660	-5.8320	7,4883>6,1660 , H_0 rejected, Stationary with structural breaks 2003:01-2012:01
INF					
ADF, Level	-2.340864	-4.170583	-3.510740	-3.185512	
ADF, 1st Level	-7.182145	-4.175640	-3.513075	-3.186854	
PP, Level	-2.273895	-4.170583	-3.510740	-3.185512	
PP, 1st Level	-7.309929	-4.175640	-3.513075	-3.186854	
LS, Level	-8.0452	-7.1960	-6.3120	-5.8930	8,0452>6,3120, H_0 rejected, Stationary with structural breaks 1990:01-2002:01

Table 9. The Results of ADF, PP, and Lee Strazicich Unit Root Tests

As can be seen from Table 9, it is seen that all variables are stationary at the level. Since

cointegration could not be achieved, regression was applied. As a result of the analysis, double structural breaks were detected (Table 10).

Variables	Break 1	Break 2
GDP	2003:01	2009:01
CAD	2003:01	2012:01
INF	1990:01	2002:01

Table 10. Structural Breaks

It is clear that the break dates for the variables are related to the 1990 Gulf Crisis, the 22 November 2000 Crisis, the February 2001 Crisis, and the 2008 Global Financial Crisis.

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	-3.370794	0.584355	-5.768396	0.0000
GDP	-0.181812	0.064962	-2.798746	0.0076
INF	0.042096	0.009257	4.547530	0.0000

Table 11. Regression Results

The dependent variable CAD				
Variables	Coefficient	Std. Error	t-Statistics	Prob.
Constant	-3.370794	0.584355	-5.768396	0.0000
GDP	-0.181812	0.064962	-2.798746	0.0076
INF	0.042096	0.009257	4.547530	0.0000
Model Information				
F Statistics	20.35776			
R ²	0.480615			
Diagnostic Tests and Specification Tests			Statistics	Prob.
Breusch-Godfrey Autocorrelation Test			2.489100	0.0829
Breusch-Pagan-Godfrey Test of Differential Variance			0.968571	0.3712
Jarque-Bera Normality Test				0.0760
Ramsey RESET Test				

Table 12. Estimation of Regression Model

In the study, it is seen that the independent variables GDP and INF are statistically significant. The model is significant. According to the results obtained; as a result of a 1 unit increase in GDP, CAD changes in the negative direction by 0.181812 units. If INF increases by 1 unit, CAD increases by 0.042096 units in the positive direction.

Value	Probability	Decision	Direction of Causality
5.763258	0.0560	$001636470 < 0,05$ H_0 rejected, causality exists.	GDP→CAD
12.04205	0.0024	$0,00052014 < 0,05$ H_0 rejected, causality exists.	INF→CAD
2.572833	0.2763	$0,10871288 > 0,05$ H_0 cannot be rejected, no causality.	CAD≠GDP
4.462614	0.1074	$0,03464444 < 0,05$ H_0 rejected, causality exists.	INF→GDP
0.439847	0.8026	$0,50719631 > 0,05$ H_0 cannot be rejected, no causality.	CAD ≠ INF
6.522800	0.0383	$0,01065002 < 0,05$ H_0 rejected, causality exists.	GDP→INF

Table 13. Toda Yamamoto Causality Test Results

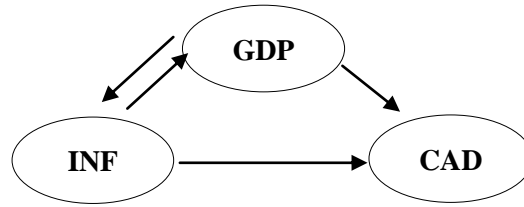


Figure 2. Toda Yamamoto Causality Test Results

As a result of Toda Yamamoto Causality Analysis (1995) [90]; there is a bidirectional relationship between GDP and inflation, and a unidirectional relationship from GDP and inflation to the current account deficit.

4. Conclusion and Discussions

Determining the existence of the relationship between economic growth, current account deficit, and inflation will guide the selection of policies to be implemented. If the relationships are known, the deterioration that may be induced by the recommended policies can be minimized by the steps to be taken. This study was carried out from this point of view. Referring to *the Bermuda Triangle*, which causes unexplained losses, a triangle is formed metaphorically by using growth, current account deficit, and inflation, which causes losses in the Turkish economy. To determine the existence and direction of the relations between the variables forming this triangle, the annual growth, current account deficit, and inflation data of Turkey for the 1974-2020 period were obtained from the World Bank and subjected to various analyzes. Stationarity tests included the Augmented Dickey-Fuller (ADF) (1979) [91], (1981) [92] and Philips-Perron (PP) (1988) [93] Unit Root tests, as well as the Lee-Strazicich Unit Root Test (2003)[94]. Regression was used since the variables were determined to be stationary at the level and cointegration could not be obtained. In the regression analysis, it was determined that the current account deficit changed by 0.181812 units in the negative direction as a result of a 1 unit increase in growth (GDP). In addition, it has been determined that if inflation increases by 1 unit, the current account deficit changes by 0.042096 units in the positive direction. To question the short-term causality relations, Toda Yamamoto Causality Analysis (1995) [95] was applied and as a result, a two-way relationship between GDP and inflation and a one-way relationship from GDP and inflation to the current account deficit was determined.

The results obtained are consistent with the following studies;

- i. Uçan ve Çebe (2018) [96], who found bidirectional causality between inflation and growth,
- ii. Khan & Knight (1983) [97], Milesi-Ferretti & Razin (1998) [98], Bagnai & Manzocchi (1999) [99], Kandil & Greene (2002) [100], Herrmann & Jochem (2005) [101], Erköliç (2006) [102], Karabulut & Çelikel Danişoğlu (2006) [103], Erbaykal (2007) [104], Lebe et al. (2009) [105], Çeviş & Çamurdan (2008) [106], Telatar & Terzi (2009) [107], Sekmen & Çalışır (2011) [108], Yılmaz & Akıncı (2011) [109], Avcı (2015) [110], Yurdakul & Uçar (2015) [111], Göçer & Gerede (2016) [112], Kaygısız, et al. (2016) [113], Duman (2017) [114], Uçak (2017) [115], Efeoğlu & Pehlivan (2018) [116], Bakaç (2019) [117], Çiğdem (2019) [118], Kızıldere (2020) [119], who found one-way causality from GDP to current account deficit,
- iii. Bölükbaş (2019) [120] who found a unidirectional causality relationship from inflation to current account deficit.

This study, besides contributing to the expansion of the typology, is a contribution to the literature, especially since few studies question the existence of a relationship between inflation and the current account deficit and the direction of causality.

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Structure of Labor: Toward a New Theory of Community and Economic Development

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Abstract:

In the United States, the rise in income inequality and downward intergenerational social mobility since the 1970s represent twin problems facing community and economic development today. This paper proposes a *Structure of Labor* theory to apply at the local and regional level to address these development challenges. The objective is to provide a simple local approach to development that maximizes upward economic mobility and enables individuals and communities to achieve their development goals in the 21st century development landscape of the United States. The proposed theory fuses free-enterprise principles with state-planned dirigiste efforts to maximize the best of both theoretical perspectives. After reviewing pertinent literature and articulating the Structure of Labor theory, the latter sections of the paper explicate its implications for community and economic development practice.

Keywords: Community development, economic development, free enterprise, dirigiste planning, labor, capital, land use, public goods, access, mobility.

*An economy consists of people whose performance
determines its material achievement.
Peter Bauer (1977)*

1. Introduction

The origin of this writing is a combination of personal experience, formal pedigree, and genuine concern for the communities that inspired it. It is a development theory proposal with an economic foundation and sociological compass, fusing ideas from those fields and others, into a theory of development *for development*, as its own field of study. It is political in its implications as its conclusions derive values to be used in statecraft and the affairs of the city. In the case of Development as a field, being value free is not so clear, as development is the study of *improving* the material, social and environmental condition of the group and individual. The very definition of development as its

own field implies a value judgment as we are determining the meaning of the word improve. We need to recognize that studying improvements to society will necessarily create political and ethical considerations in our work. This is to be expected. However, such political considerations where they arise, in tandem with observations of objective reality, should always be categorically subordinated to such observations of the real for the sake of meaningful progress, not the illusion of progress by putting normative politics before objective reality in the field of development. That said, the political concern facing the United States today is the problem of power differentials. Where the state grows in tandem with industry both may work together in mutual support knowingly or unknowingly at the expense of the common laborer, or the state may impose its will on the corporatist and the laborer alike at the expense of both, or similarly the corporatist may impose their will on the state and the common laborer. What is clear in the existence of such power differentials, however they may be defined, is that trends in rising income inequality and the decline of intergenerational mobility means laborers are left behind and do not benefit from the current arrangement of power in society. Mass production necessarily implies mass influence and so it is no surprise that capital is the policy focus of almost all development in the United States. Attracting manufacturing as a means to prosperity in municipalities and regions is considered a kind of panacea not only among the population generally but local bureaucrats in the majority of the country. Even where popular political theories purport to enfranchise the laborer it is enfranchisement through the control of capital by labor in contrast to control by corporatists. This focus on capital as the end all be all of prosperity and quality of life requires serious reconsideration in development thinking for the 21st century.

In the world of private property and the three factors of production land, labor and capital we find different socio-economic classes as the driving force behind the implementation of each factor. For Land, it is the rentiers class, those who own the land and decide how it is used. For capital, it is the capitalist who owns the capital and decides how it is used. For labor, it is the worker, those who own their own skills and talents, and decide how they are used in the market. Any individual can be one or all of these at once. The key element is that both rentiers and capitalists originally came out of the factor of labor or pool of workers. This does not ignore generational wealth, as we make the claim in the context of the group. Where generational wealth is responsible for ownership of land or capital, there was at some point an ancestor who acquired it and came from the labor class. Whether such acquisition was by sword or by merit or trade is immaterial *at the moment* for our concept. We shall examine labor as a factor of production and explore the qualities and mechanics associated with it that define its structure.

2. Literature Review

The following literature review comprises works from the fields of economics and sociology. In the first we will examine the text *Capital and its Structure* which *Structure of Labor* theory is built from [29, p. 1]. The second section of the literature review examines constraints and incentives toward action driven by Baumol's rules of the game, the field theory of Wilkinson, and the significance of knowledge and knowledge transference for the community and individual. The third portion of our literature review undertakes how capital relates with and impacts labor. Finally, in section four we examine the significance of inequality and examine the link between job satisfaction and performance which is critical to associating mobility and access with individual and community benefit.

The primary inspiration for this phenomenological theory comes largely from one work, Ludwig Lachmann's *Capital and Its Structure*. *Capital and Its Structure* is an obscure text from the "Austrian School" of Economics. Specifically, *Capital and Its Structure* develops/builds upon two essential theories within its pages. The first is a capital theory predicated on the *heterogeneity of capital* and the necessary implications of this Heterogeneity in a complex *capital structure* and price-based

market economy. The second is a *theory of expectations* and their role in the use, allocation, and creation of capital [29, p. 20].

First, let us define the capital structure, its basic qualities, and why it forms a structure. Lachmann lays out that the type of capital in question is not monetary or cash-flow related but machines or goods used as a means of production, not final consumer goods. The first and most important distinction made is that *capital is heterogeneous*. The heterogeneity that matters for Lachmann is that of use as opposed to physical heterogeneity. The significance of heterogeneity is the constraints it places on the uses of capital. For example, one cannot use a printing press to sew industrial fabric for car manufacturers. *Capital has specialized or limited uses* within narrow ranges; he calls this *multiple specificity* [29, p. 2]. At each moment, capital is put to its best use compared to a limited spectrum of alternative uses. Changing circumstances will change what the best use is through time. These changing circumstances can swap one best use with previous or alternative uses. It can also open up previously unknown uses for capital within the range of its particular multiple specificity. From the entrepreneur's or capital controller's perspective, new uses can be positive or negative, more or less efficient than the original intended use [29, p. 3].

Another quality of capital proposed is that of *complementarity* [29, p. 35]. There are few, if any, pieces of capital that function without the need for either human labor or other capital goods. A simple example is a plow in the production of agricultural goods as final consumption products. The plow tills the soil but relies on a person to direct the depth or an ox to pull the plow. Further, it requires labor or other capital to plant the seeds or harvest the crop when it has come to maturity. Even where the plow may be autonomous, no human nor ox directly needed, this "Tesla Plow" still needs to work with seeding or harvesting capital and labor – further where and how the autonomous plow is being used is still outwardly determined. For Lachmann, this planning reliance means all capital relies on something outward and is thus part of a joint endeavor toward production [29, p. 35]. The reliance of capital on other capital or labor is the essence of the complementarity of capital or those goods used for the means of production.

The union of the qualities of multiple specificity and complementarity implies unique capital combinations. These capital combinations themselves form the capital structure. The difficulty in forming these capital combinations is not forming them to produce, which is relatively easy, but forming them such that they produce *optimally*. The optimal at any one point in time is only temporary as circumstances will change with changing knowledge. Thus, the capital structure is a dynamic shifting morphological phenomenon across a society. An unexpected change in circumstances dissolves some capital combinations and integrates new ones through time. Not everyone benefits from a constantly shifting capital structure. This idea of the old dissolution to make way for new echoes Schumpeter's idea of creative destruction in entrepreneurship work [37, p. 82]. Further, where capital use changes, some capital may be relegated to its second-best use or an alternative use due to change, even where the capital combination as a whole is an improved or newly optimized arrangement.

Multiple Specificity, and complementarity are qualities of capital and its interrelation. The next critical piece to understanding the structure and morphological dynamism are *expectations and plans*. In the text, Lachmann reviews the role of expectations before discussing planning as it relates to forming structures. In this sense, we will 'put the cart before the horse'. The structure, as Lachmann views it, is a series of *consistent* plans across society [29, p. 10]. For example, the production of X feeds Y, which feeds Z, which creates A as a good. Thus, *consistent* plans that require capital combinations form one macro capital structure across society at any one point in time. Change is perennial, and to see the structure (where consistency exists), we also need to see where inconsistency exists, or plans fail. The best analogy of this is looking at the gaps between one's fingers versus the fingers themselves. The structure of labor is similarly given form.

Qualities of labor in our Structure of Labor will mirror these capital qualities to some extent. Second, consistency of plans is what forms the structure of capital. It will be the same for labor. What

is essential is that, like entrepreneurs for Lachmann, labor must be allowed to revise their plans and test their revision based on changes in expectations and knowledge. Where labor is not allowed to do this in the marketplace, or the costs are too high there will be a *structural maladjustment* where laborers and their skills cannot move to where they will be best engaged *ceteris paribus*. For capital, this maladjustment creates changes in capital combinations and plans. For labor, structural maladjustment creates changes in skill application and plans. As labor is self-organizing maladjustment in skill application and plans will shift one away from their preferred skill application resulting in an *excess capacity* of labor or labor not being utilized to its full extent.¹ This excess capacity of labor is then observed as growing stratification and declining intergenerational mobility in the real world.

The following paragraphs review the ideas contained within *Entrepreneurship: Productive, Unproductive, and Destructive* [7]. William Baumol examines the role of societal and institutional “rules of the game” and their effects on productive and unproductive innovation and destructive entrepreneurship. The feel of Baumol’s piece is contextualized in his introductory quote to the work from Hobsbawm and Wrigley that “it is often assumed that an economy of private enterprise has an automatic bias towards innovation, but this is not so. It has a bias only towards profit” [22, p. 18]. Baumol proceeds to explain how things such as cultural norms and institutional incentives create the rules of the game entrepreneurs operate within [7, p. 894]. Not only do the rules of the game allocate entrepreneurial activity generally, but in many cases, they incentivize productive and unproductive entrepreneurship. Baumol lays out qualitative evidence from history offering examples where he applies economic thinking with respect to rent-seeking and how rules incentivize rent-seeking behavior over more productive avenues.

The crux of Baumol’s point is that the reallocation of entrepreneurial effort toward productive versus unproductive entrepreneurship is an important way of affecting significant outcome changes in society. Re-allocation can be done by altering or shaping the rules of the game [7, p. 916]. This is especially of interest to community development. One example of institutional change is simplification of land use law and barriers to entry affecting re-allocation through cost reduction. For a value example one can look at attitudes toward marijuana in the 1960s compared to attitudes today and see the stark example of how value changes shift entrepreneurial allocation [16, p. 3]. Baumol’s proposition is similar to the composition of capital within plans proposed by Lachmann as a response to changing knowledge [29, p. 53]. *Allocation is critical to outcomes*. The Rules of the Game for Baumol are social or institutional incentives in a particular time and place that determine payoffs to some entrepreneurial endeavors over others. He contends

If the rules are such as to impede the earning of much wealth via activity A, or are such as to impose social disgrace on those who engage in it, then, other things being equal, entrepreneurs’ efforts will tend to be channeled to other activities, call them B. But if B contributes less to production or welfare than A, the consequences for society may be considerable [7, p. 898].

Such forces affect the composition of labor in the same way expectations or plans by the entrepreneur affect capital combinations within Lachmann’s capital structure. This idea extended to labor – both within the firm and within the market – implies that just as entrepreneurship can be channeled in productive or unproductive directions, *so can labor*. One medium of these forces that channel action are social fields and the community field of the type proposed by Kenneth Wilkinson [43].

Social field theory for Wilkinson is interaction focused and can be described in the most basic sense as an unbounded process of social action through time, where identification of a particular field is focused on particular actions taken and the interest behind them [43, p. 88]. Action and interest are the foundation of any social field, and while necessary to creating one they are not sufficient for defining a social field. Processes or a sequence of acts displaying *unity* through time introduce the field portion of

the subject term under our consideration [43, p. 88]. As an example, think of mutual actions taken at a particular social club before each meeting held, the members in such a case are displaying unifying action through time predicated around the interest in that club. Social fields are defined by this unifying tendency or communal tendency through time. Field theory contributes some insight into the creation and dissolution of coordinated plans and action in the structure. Plans may coordinate and dissolve along shared interest lines and unifying action.

While field theory explains processes, the fuel that drives processes is knowledge. The origin of action is the application of knowledge [20, p. 7]. Any examination of labor structure, a product of action, is predicated on the *qualities* and *transmission* of knowledge. We consider these in order. What follows comes from or is implied in *The Use of Knowledge in Society* by F.A. Hayek. For Hayek, the problem of a rational economic order is how to best utilize knowledge “not given to anyone in its totality” and whose importance is relative from one individual to another [20, p. 1]. A rational economic order is a necessary but not sufficient condition for social cohesion and community stability. Plainly, valuable knowledge is scattered across many minds, the rational economic order aims to allow the application of such knowledge to its fullest extent under such assumptions [20, p. 1]. Hayek states, concerning individuals, that they have “some advantage over all others because he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation” [20, p. 3]. Hayek’s advantage of individuals, that they possess unique information of which beneficial use might be made, can be extended to communities/fields based on the characteristics that define such knowledge, for example, interest and locality [20, p. 3].

“In a system in which the knowledge of the relevant facts is dispersed among many people, prices can act to coordinate the separate actions of different people in the same way as subjective values help the individual to coordinate the parts of his plan” [20, p. 6]. It is both prices and subjective plans we are concerned with when it comes to the notion of labor structure. Wages act as a certain, short-term gain for wage laborers. In contrast, subjective entrepreneurial plans are uncertain and unknowable long-term gains or losses. Wages are a subject of reality. Entrepreneurial plans are a subject of potential and become real at the point a decision is made. Thus, while knowledge may be scattered among many minds, it only becomes valuable when decisions are made that optimize its use. When considering the role of knowledge, one must think in terms of when potential meets reality and reality manifests toward optimality in the Structure of Labor. This is at the point of *decision-making*. The Laborer is the decider in our proposed theory.

Capital, for our purposes, is defined as an economic factor of production alongside land and labor. This is in contrast to the financial definitions of capital defined as currency or assets related to income. More precisely, capital is a produced good that aids in producing other goods. This again in contrast to consumer goods or raw materials, or notions such as human capital. This is strictly a machine focused economic conceptualization of capital, it is necessary as we aim to illustrate the existence of a Structure of Labor which is first and foremost a social phenomenon and second an economic one. Before the existence of capital, there was only land and labor. *Capital is, in its essence, an extension of labor that can economize production*. Before capital, labor related directly to labor. After capital, labor interacted with machines and labor. How we went from two factors of production (land/labor) to three historically (land/labor/capital) is necessary to understand moving forward. The economic change driven by social change will be part of our first look at capital through the lens of primitive or *primary accumulation*.

Primary accumulation, for Marx, divorces the producer from the means of production through expropriation and brutality [18, p. 610]. It was not the division of labor or saving of money that led to the creation and accumulation of capital but the violent divorce of self-sufficient people from their traditional life and alongside the rise of industry that drove capital accumulation. The former is in contrast to Adam Smith. Smith argues division of labor and savings naturally brought about capital

formation as certain individuals began to specialize in the creation of complex tools and ownership of the structures of production to organize them (Marxists.org, Glossary of Terms, Primitive Accumulation). Neo-Marxists such as Samir Amin have argued that while imperialism may be a valuable tool for primary accumulation, it is not necessary to create capital but is instead an opportunistic tool for established power structures [18, p. 613]. Ultimately, for Marx, primary accumulation explained the origin of capital accumulation. Capital accumulation was the driving force or implicit underpinning of international development thinking for most of the 20th century [4, p. 165]. While primary accumulation in the Marxian sense was a response to Smith's idea of toil and savings separating capital owners from wage laborers.

An original and effective critic of this thinking is the economist Peter Bauer. Upon examining local economies in Malaysia and West Africa, he found them to be quite sophisticated and efficient in contrast to the dominant western view that they were backward. Mingardi states, Bauer observed that indigenous people were not conscripts or forcibly mobilized [34, p. 623]. In his observation, trade was not objectively exploitative but beneficial to those that should be backward and exploited. Bauer began to nudge development thinking back to Adam Smith. People are trading creatures, and both parties' benefit when a trade is made [34, p. 627]. Observations in these local economies made suspect popular development thinking for Bauer. The key to development and implicitly the origin of capital for Bauer is directly associated with a range of choices for people in the market. So, for Bauer, the field of development should be primarily concerned with *extending the range of choice or effective alternatives for people with their labor and endeavors*. Where the range of choice is narrowed, development falters. Where it is expanded, development expands and improves society [5, p. 113]. The former proposition puts Bauer firmly in the camp of Adam Smith, "Division of Labor is limited by the extent of the market"; thus, for Bauer, trade takes a society or nation from subsistence to production [34, p. 627]. The contribution of the primary accumulation discussion to the Structure of Labor is the existence of alternatives for the application of labor. At worst widening mobility and access within the Structure of Labor limits the harm of Marxian primary accumulation by providing less exploitative channels for labor to apply their skills. At best, widening alternatives for labor application through mobility and access provides support for trade as a less exploitative substitute to primary accumulation, supporting a positive creation of capital through time. Where a wider range of mobility and choice is offered in the application of one's labor the less harm is done by capital accumulation as individuals and communities can opt out of employment that is relatively more harmful compared to other work. In this way, Structure of Labor theory aims for a kind of harm reduction at minimum and at best drives dynamic positive development through time.

There are three takeaways when we discuss the origin of capital. First is the definition of capital as a machine in the process of production and that capital is merely an extension of labor. This means that our labor and capital structure are inextricably entwined and most importantly the capital structure is determined by the labor structure. Second, is the distinction between necessary conditions for capital creation (Primitive accumulation/Trade) and the sufficient condition for capital creation – the application of knowledge by labor to economize at a point in the production structure through capital creation and allocation. This sufficient condition can only come about through knowledge transference created when labor interacts with other labor. It is the diffusion of knowledge through social processes and acting on such knowledge that creates the sufficient conditions for capital creation. Third, where theory proposes that capital is created through Marxian primary accumulation, our theory is a mechanism for harm reduction offering alternatives for applying one's labor that are less harmful than other relative options. Where capital creation is mutually beneficial such as through Smithian trade theory, Structure of Labor optimizes capital creation allowing knowledge to be disseminated far and wide to points in the structure where economization of labor can take place through capital creation.

A key factor for our Structure of Labor theory is that each individual has a dominant skill that will tend to align with their best preference or most preferred labor. Movement, discussed in detail in

the theory portion, argues that the laborer will trend toward their best preference and thus their dominant skill through time, *ceteris paribus*. A primary work that alludes to this is *The Division of Labor in Society* by Emile Durkheim. Durkheim contends in discussing social instability that where a function of labor is forced by one class on another and this function does not align to the preferences of the dominated class that class will seek to “change” or undo the established order [15, p. 375]. He goes on to state that “for the division of Labor to produce solidarity, it is not sufficient, then, that each have his task; it is still necessary that this task be fitting to him” [15, p. 375]. Here we have an affirmation that preference in labor provides social stability, but from it we can derive preferential labor is also more efficient than non-preferential labor. Where social instability results from imposed or poorly organized labor, efficiencies must break down as a product of the discontinuity and breakdown in established production/social structures under such methods of organization. We can use this aggregated destabilization versus stability binary as a barometer for efficiency versus inefficiency of the individual within the firm. In other words, working at employment people loathe in the aggregate creates social instability in the community, for the individual in a firm production structure this manifests into inefficiency. Where a stable society exists, preferences are able to be met at some effective level and efficiency, by comparison, is the rule in a production structure.

The field of research most closely associated with what this paper proposes as a relationship between labor preference and labor quality is that field of study that examines relationships between *Job Satisfaction and Job Performance*. In a comprehensive review of research in that field it was found that it was inconclusive, not disproven, whether there is a strong correlation between job satisfaction and increasing job performance [27, p. 378]. In an examination of a reciprocal relationship between job satisfaction and job performance, four of five studies reviewed suggest job performance drives job satisfaction and two of five suggested satisfaction improves performance [27, p. 379]. While those studies that found spurious or no correlations between performance and satisfaction had potential problems with excluded variables or invalid causal effects [27, p. 379]. After a review of the established research a re-evaluation was undertaken by the authors concerning the work of Iaffaldano and Muchinsky and the relationship between satisfaction and performance which found low correlation between satisfaction and performance [25, p. 268]. The re-examination of the Iaffaldano and Muchinsky study improved the original correlation of satisfaction and performance from weak to moderate [27, p. 389]. The authors believe the original results of the study had a chilling effect on the research in the field but argue the case that it deserves continued research and re-conceptualization. For our purposes job satisfaction and performance are a substitute for work performance and work satisfaction. In the explanation of the proposed theory, the closer one gets to their preferred or most satisfying employment the closer they get to applying their dominant skill which provides maximum performance or efficiency returns both to the laborer and society. This relationship between the two is the lynchpin of the proposed theory but empirical research with the necessary preciseness around such a relationship between preference and performance appropriately defined was not found. The most suitable substitute is that field of study which examines the relationship between job satisfaction and performance. *The proposed theory must be considered in the context of this empirical gap and inconclusive insights of the empirical research generally.* A follow up to the theory proposal would be to design a quantitative study to examine the precise relationship between satisfaction and performance to critically and empirically examine Structure of Labor theory and determine objective viability.

3. Structure of Labor Theory

The following proposal for a progressive Structure of Labor theory is broken into four parts. First, is a description of how the structure is defined and the role and importance of knowledge within it. This is intended to illustrate what the structure looks like, the parts that comprise it, and the significance of its function. Second, we define the laws of motion within the structure and the base assumptions and

forces that constrain its dynamism, optimality, and drive its motion. This discussion of dynamism explores how the structure moves, or is prevented from moving, as a morphological phenomenon to ends that directly require mobility and access to create meaningful development. In the third section of the proposal, we analyze the qualities of labor and how these qualities impact dynamism and structural function through time. These qualities of labor are a kind of appropriation of Lachmann's [29] capital qualities applied to the individual laborer. In the conclusion of our theory proposal, we examine implications of Structure of Labor for community and economic development. Further, Structure of Labor treats the local/regional community as a place, that is, the geographic space where laws directly and most profoundly impact individual economic action. As this theory is a result of the development landscape in the United States, the default place would be a municipal community. However, the idea of place can be scaled up to the county or state level in the United States, depending on the origin of a given impact on the individual. Applications beyond the U.S. require defining at what level governance and/or social norms and constraints impact individual action the most. It must be noted that Structure of Labor theory is not a cure-all. Practically, it is a means to improve outcomes in the aggregate for individuals and community's *ceteris paribus*. Realistic constraints of impartial knowledge, changing knowledge, and failure at employment changes mean not every laborer will achieve their best preferred labor, it does not promise utopia. The aim is to maximize the potential for labor mobility and access to move the individual and place toward an economic and social optimal relative to the current status quo.

The Meaning of Structure and Knowledge

The Structure of Labor theory guides applied efforts of community and economic development. It is predicated on labor and capital specialization aligned with labor skill across a society. From the ancient world to today, societies have gone through transformations defined by their labor specialization, hunter-gatherer to pastoral, horticultural to agrarian to industrial. If from the primordial ooze we came and eventually became groups and tribes and societies, the binding fabric of our collective survival has been first and foremost the labor specialization we organize around for basic survival. The way labor is organized today is no less important than it was five thousand years ago for the survival of the group. It matters in the local community as it matters in the nation.

As a theory of change, Structure of Labor is a continuous, interactional process of action and relations along the functional lines of labor and work in a society. It is defined not by fields but by function and repetition which occur through the interaction of labor in the course of the act of improving one's condition. It requires a systems theory approach to optimization and development action. Specifically, it is not the individual endeavors promoted that matter but how endeavors relate to each other in the continuous process of development toward the community's development preference through labor alignment. Our aims in the system are to make it more robust for individuals to align themselves with their most desired labor given available knowledge. The levers used to broaden such alignment for all members of the community or optimize the structure are *mobility and access*. To understand optimization, we must first understand what it means when we call our theory a structure.

Why is there a Structure of Labor? The use of the word 'structure' is deliberate. At any point or snapshot in time, the specialization of individuals is creating a defined structure by the labor they functionally provide and the coordination of *consistent* plans around that function in markets, the community, and the firm [29, p. 10]. The farmer provides meat to the butcher, the baker provides bread to the grocer, the ditch-digger provides their service to the builder. Labor, in these cases, can be skilled or unskilled in the context of traditional economic views, *but it is always specialized and must be coordinated*. The plumber acting in their objective capacity as a specializing professional applies knowledge the carpenter does not, though the carpenter may know plumbing or vice versa. These *functions* of applied knowledge are links of a community chain, it is the *coordination* and *consistency* of their application that gives form to the structure. In order to maximize the strength of the chain, what

matters is the order of labor in the structure. For Lachmann, the capital structure is “the order in which the various capital resources are arranged in the economic system” [29, p. xvi]. For labor, structure is the order in which individuals are arranged in the economic system/community. The development concern is optimizing the arrangement of such individuals with the roles or functions at which they are most skilled.

In the Structure of Labor each relies on another for things they, themselves, cannot provide. Further, mere participation in the structure provides something no matter the role. Where an employment type dissipates or plans change, a link in the chain is broken and the arrangement of labor must be re-organized, the structure transforms. This mirrors Lachmann’s views on capital structure as a morphological phenomenon and that view extends to the theory of labor structure [29, p. 9].

Similar to a plumber or carpenter, the service employee at a large box-store or fast-food chain is specialized in the organization of the store, department or production line and understands the nuance of navigating the unique material and social environment where their labor takes place. An example of this would be the service employee of a hardware store. Such an employee understands where the product is stored and must be re-supplied, and what the various nomenclatures for the organization of the product mean. If there are peculiarities of the environment, such as a till that needs special treatment to work properly or a machine that starts in a certain way to supply a customer’s needs, the employee is specialized in such practices. More precisely, their knowledge is specialized, so its application is specialized and has a place within the Structure of Labor. Here comes the primary concern as it relates to the arrangement of labor; The person who is most skilled at a particular type of engineering may be better than any other prospective laborer at being the service employee. However, as their dominant skill is engineering, they will be the most efficient at engineering relative to any other role they could fill in the broader community. The allocation of labor within the structure, in such a case, aims to get the engineer as close to or in the role they are best at relative to other functions they could provide, no matter how good they may be at a particular function relative to other individuals.

As it relates to knowledge, if the plumber ceases plumbing or the service employee ceases their service, where the labor of those individuals is not put back into the structure, for example, they sit idle - the structure has less total specialized knowledge on the whole. The individual’s specific knowledge is lost and not expanded elsewhere. This is not bad *prima facie*, for example, lost knowledge within a firm that is defunct and closed down because of loss/failure in the marketplace. However, when it comes to losing knowledge of functions that developed over centuries such losses can be profound. An example would be the loss of the recipe for Roman concrete for centuries [14, p. 6]. Further, those laborers that directly complement the individual laborer such as the well-driller for the plumber, or the office clerk for service employees, lose access to the function and knowledge that the individual provided and either have less alternatives or none at any one point in time. The key element is not that knowledge loss occurs, but that a tangible benefit is lost and not replaced elsewhere when individuals leave the Structure of Labor.

New knowledge, too, is never created where a function that would otherwise exist is not undertaken. The implication of this being knowledge is not advanced as much as it otherwise would be or at all. Critically, where an individual is most skilled at a certain role but cannot apply themselves in that role, *useful or consequential knowledge* is not expanded in the way it would be for that function [38, p. 27]. Whether it be passing on the high-quality skills and experience to a new generation to maintain the same quality of work, or contributing something new to the field in a creative capacity, society misses out. Imagine if Niels Bohr never became a physicist and spent his life as a tax collector instead.² If he had to abandon his interest in physics because of arrangements that prevented him from pursuing physics the world would be poorer for it because the knowledge expansion he provided in his role would never have been. Now, if we consider this phenomenon multiplied across hundreds of thousands or millions of individuals through forces constraining mobility and access, the potential collective impact of undiscovered knowledge is immeasurable. Knowledge transference and expansion

is a key function of the Structure of Labor. The Structure of Labor is in a constant state of dynamic change through time, allowing this change in individual arrangements, optimizes knowledge transference, and expands total knowledge in a community. It is this dynamic change and knowledge transference that drives the expansion of total knowledge and human progress through time.

An individual in the Structure of Labor is a miner of new knowledge or a supplier of new talents and goods and often both at once. As long as one is engaged in some capacity within the structure, they are of some objective value to the community or group and transfer some kind of knowledge. However, just because one is of some value engaged in labor does not mean they are providing their highest value to the structure and thus to the group. What the highest value work is for the laborer is not determined by prices, but rather by movement toward their preferred work across time.³ One who is a great stone mason may be paid more to create various programming macros if they have the skills, this does not mean such programming is of objectively greater *value* than that of the masonry. The problem with associating prices with value to society is that prices are impacted by far more than demand, such as systems of law, natural catastrophe, resource cartels, cultural norms, time, and *limits of established knowledge*.⁴

The Structure of Labor deals with the efficient allocation of scarce resources through knowledge sharing and coordination of *consistent* plans. Plans are formulated based on the *expectations* formed with knowledge transmission [29, p. 10]. In the capital structure the entrepreneur allocates capital and coordinates plans within the firm, industry and across society. In the labor structure the laborer allocates their own skills and coordinates their own plans with other individuals in the market, the firm, and across society. Due to imperfect knowledge, the interaction in the structure creates spillover knowledge across groups and individuals as functional roles interact with each other through collaboration and complementarity demanded by specialization and coordinated planning. Explicitly, the laborer must have some minimum base awareness or knowledge of those fields, skills, and goods that complement or require the specific type of labor that the laborer provides. An example would be the service employee that runs a cash register must occasionally rely on the stock employee for price checks and replacements. Thus, the cashier, who is not directly responsible for cataloging, comes to acquire some basic understanding of it because of its complementary horizontal relationship with the cashier. Similarly, the assembly line worker is made aware of complementary forces through the existence of the assembly line itself, and the end product it creates. Assuming no other interaction takes place, knowledge of these two items, the line that delivers the nut to be tightened and what the final product is, assuage the fog of imperfect knowledge concerning what other roles exist and their possible specializations. Specialization demands complementarity, complementarity demands coordination of plans and thus awareness outside of narrow specializations, taking the unknown and making it known [29, p. 12]. The expansion of knowledge to the individual, brought about by knowledge transfer within the structure, is a reminder in the act of labor that other opportunities exist. The laborer then uses this knowledge of other functions to create and coordinate new plans and expectations navigating the Structure of Labor through time to their own preferred role.⁵

The problem of subjective value in determining efficient allocation is also addressed by the Structure of Labor. Prices, again, do not determine value, value is determined by the individual through action [39, p. 12]. It is why we presume a thief still values an object when they steal it and do not pay for it; they acted in some manner to acquire that very object even though they avoided the price system entirely. The Structure of Labor allows for action toward one's vocation of choice, or in other words, the laborer may vote with their feet toward their highest valued employment. Let us assume a labor market with two choices, drawing patterns and threading needles, also assume through time laborers must interact with each other and can move freely between these two vocations and will develop a preference for one over the other, all else equal. At some point, laborers will develop their preference for the particular labor they enjoy most and pursue that craft abandoning the least preferred craft. With the introduction of wages, expected living standards, social expectations that vary, the preferred labor

may be abandoned. In such a case, say in favor of higher earnings, all else equal the person with a preference for needle threading switches to pattern drawing. While they make more in wages at pattern drawing, they do not share an interest in it with their colleagues *nor are they as good at it* as they were at needle threading. Prima facie, the preference changed so it appears positive as it was a choice, but in the case of this change society suffers, because the aggregate quality and efficiency of pattern drawing and needle threading suffers. For our purpose the needle sower and the pattern drawer not being aligned with their true best preference creates an efficiency deficit that has implications not only for the individual and firm but for broader society. This employment efficiency deficit exacerbates inequality and downward social mobility.

Aligning skilled/talented labor with functional roles is a major concern for the 21st century. In India, for example, some expectations point to a skill gap of 75-80 percent for firms in the coming decades [10, p. 92]. The skill gap Chenoy references is an estimated deficit between the talent available for a firm's particular roles in the labor market and the number of roles they expect to need filled in the future. Structure of Labor impacts such supply shortages directly and indirectly, directly the focus on access and mobility encourages greater mobility and thus potential supply of skilled labor in any industry where shortage exists by maximizing movement of labor to where it is needed. Indirectly, knowledge transfer through the interaction of laborers within the structure allows for the refinement of established skills and development of new ones, that could address such skill gaps while helping individuals navigate to their best preference through time.

As knowledge transfer through labor creates awareness of new opportunities individuals align to their preferred best preference in employment, all else equal, through time. Greater knowledge transfer allows for alignment to one's best employment preference as one becomes more aware of what they do and do not enjoy versus navigating the structure to their preferred vocations. *The Structure of Labor, allowing for maximized employment mobility, is a critical component of development* and moderates impacts of the pricing system and social norms on development, by encouraging action based on ability and satisfaction that benefits the micro and macro facets of a place. It incentivizes the innate over the extrinsic when it comes to subjective value determinations by individuals across society and benefits the group by benefitting the individual.

Concerning changing knowledge, the Structure of Labor acts as a conduit for disseminating knowledge through labor spillover (new processes, techniques, technology) and new preferences/expectations/allocations (new vocations or coordinated plans) across a society. In the same way, prices communicate information through fluctuations in cost, the Structure of Labor communicates information through *objectively measurable labor composition and mobility fluctuations*. Mobility and composition are able to determine the quality of the structure in any particular geographic area relative to another. Prima facie consider a society based on skilled slave labor where labor cannot choose where it is employed, versus a society of skilled artisans who are free to do otherwise. Simply put, the slave does not have the freedom to choose their own vocation and is assigned to a vocation, regardless if that is what they are skilled in. In contrast, the artisan assigns themselves to their vocation and is free to do so. Thus, the composition, or how labor is arranged or created gives profound insight into quality. Imagine two communities, one where there is a need for carpenters and one where it is solely composed of plumbers. Such a community is bound by restrictions that make it impossible to move from plumbing to another vocation. As an example of composition impact, imagine a community in the same condition, all plumbers with a need for carpenters, but mobility allows plumbers to become carpenters with little to no restrictions. In isolation the community that allows mobility can meet its needs itself (greater diversity of composition), whereas the absence of mobility is crippling to the supply of new skills, goods and services.

When introducing the concept of trade, the dichotomy becomes even clearer. The community that has only plumbers can offer only one skill set in trade, whereas the community with plumbers and carpenters not only offers everything the first community can but also carpentry alongside any other

needs through time that manifest into preferred labor changes. Mobility drives changes in composition which improves quality, individuals can go where they please based on innate talent and preference within the structure as a hedge against extrinsic forces, benefiting society in the process. The flexibility and broadening of labor composition through labor mobility is critical in determining the quality of a community as it maximizes the chances of an outcome where each community meets each of its objective needs and desires. Even where a community does not meet its needs it maximizes the goods, skills, and services available to trade for what it needs. While money or currency is a way around this limitation, as a medium of exchange that is universal, it is still underpinned by mobility and composition because money, like goods and services, is still a thing to be traded for. If your trading partner does not value what you offer, you will receive neither money nor goods or services for it.⁶ The greater the mobility of labor and the more flexible and broader the composition of labor and better off a society. The Structure of Labor is essential as it facilitates in a unique way “from each according to his ability, to each according to his needs” [31, p. 531]. For Lachmann, composition of the capital stock is critical as it determines investment for better or worse “investments will tend to take such concrete forms as are complementary to the capital already in existence” [29, p. 7]. The Structure of Labor relies on mobility and composition to balance against the capital structure, there is a binary tension between these two structures.

The essential takeaways as they relate to structure and knowledge are that consistent coordination of labor and plans are what define the structure. New appendages or a broadening and expansion of structure are defined by fragmentation from these consistent coordinated plans into new lines of action that in the beginning are inconsistent and over time may become consistent. It is mobility and access for individuals that allow for these new appendages to be formed and attempted. Whether or not these new lines of action are improvements depends upon whether they become consistent through time, such forces can be impacted by everything from market demand to cultural norms and natural disaster. Knowledge transfer is the glue between these continuous links in the structural chain that guides movement across alternate possibilities and drives action toward new possibilities for individual laborers and places. Knowledge transference is critical to maintaining, refining, and adding to the existing structure of labor through maximizing the knowledge of the laborer and their available alternatives over any geographic area.

Influence of Capital

The key element of the labor structure is that it both supports and hedges against the structure of capital. Capital is simply a more efficient solution to comparatively inefficient labor or legacy capital in a production structure.⁷ A given piece of capital is only the most objectively efficient solution for a brief period of time, even if created out of perfect knowledge. It is efficient from the time of adoption up to the time of awareness of a new more efficient piece of capital or a new arrangement of capital for the same specialized production.

Changing knowledge quickly subordinates the objective efficiency of any capital to a newer superior alternative.⁸ Our first concern with capital is one of rigid specialization and high creation costs that necessarily incentivize stagnation for a return on investment and altering the relationship of labor with other labor within the production structure. The important impacts of capital are that labor no longer relates to other labor and the structure of production is less apt to change or improve in order to garner a full return on capital. This happens by reducing the aggregate spillover knowledge of vocations and people who once collaborated with each other and now work directly with capital, limiting the aggregate transference of knowledge within the Structure of Labor. As labor and capital relate in this way, capital disincentivizes mobility, book-ends labor composition, and exacerbates inequality and downward mobility by restricting mobility and stagnating development. The irony is that capital was created out of such spillover, mobility, and broad/flexible composition in the first place.

Once created, the high cost, anti-social and anti-change qualities of capital work against the dynamic forces that led to the prosperity it introduces through mass production.

The second concern is the laborer's relation to the production structure. The role of the laborer becomes less social and interactive as an extension of facilitating the rigid specialization of the capital they support. This creates a problem of inequality and stagnation or decline concerning capital, disincentivizing mobility, and narrowing the composition of labor across a community. When mass production is introduced to an area, capital requires supporting labor in roles that are less interactive, require less knowledge to complete, and demand fewer social relations. The trade-off here is productivity increases and short-term quality of life improvements for long term and intergenerational quality of life gains. These qualities through time impact the community as one can survive on less knowledge, reduced interaction and knowledge transference, and fewer social relations. This degradation of persons reduces local total knowledge, though in the short term it may be expanding in the aggregate across a society. If not addressed, such degradation, intensifying from one generation to the next, exacerbates inequality and downward social mobility in the aggregate. The moderating force against this is development policy favoring the Structure of Labor over capital. Leisure time also allows for a rejuvenation of social bonds, an expansion of knowledge, and opportunities for interaction as a moderating force to this capital phenomena but our focus is the labor structure offsetting capital influences in work [8, p. 87].

Capital also creates path dependency for the community at large beyond its direct impact on laborers associated with it. Capital, once chosen as an efficient solution in a production structure, requires such high start-up costs with returns over longer periods of time that it necessarily narrows improvements to a particular spectrum that must favor the established capital investment [1, p. 32]. This is proven in the fact that capital combinations as a result of changing knowledge are first exhausted before replacement or liquidation is considered [29, p. 3]. There is a kind of transition trap where incremental changes that do not favor legacy capital investment are automatically ruled out because they undermine those expected returns and do not complement established capital and by extension the production structure. As this expands beyond the firm to the particular industry, we see incentivized stagnation underpinned by path dependence over the long term. There are two main ways around this; the first is competition, or new firms entering into the industry that are not bound by the path-dependent capital of established enterprises. Those new firms can create new and alternative production structures with newly efficient capital and their arrangements that force established firms to adapt. The second is to force adaptation through regulatory structures and market controls. In either case stagnation and cronyism is still likely without consistent pressure from forces for change because of the rigidity of capital specialization coupled with high start-up costs and long-term returns creating a kind of "irreversibility" of the investment [1, p. 32]. Further, until such replacement, incremental changes in the production structure will be defined by the established capital, doubling down on less efficient methods incrementally and making long-term absolute replacement more costly.

Some exceptions to this general rule do exist. For example, if the short- to mid-term reward on new capital and rearrangement of the production structure is greater than the cost of and long-term return on investment of established capital a transition, all else equal, a change will take place. However, this is unlikely as capital tends to be high cost at start-up with long-term rewards and return on investment. A second reason replacement may take place is where established capital is no longer supported by the production structure, supporting or complementary elements of the production structure advance such that established capital ends up costing the entrepreneur in the long run, in contrast to providing a return on investment. An example of this could be wireless versus wired connections. If a piece of capital requires wired connections but the production structure around it moves to wireless, such established capital may end up being a drag and a critical point of failure unable to adapt to the change in the structure as a whole and will have to be upgraded/liquidated.

Outside forces of change such as competition and intervention are the primary drivers of capital change within a production structure. The point is to say that capital is not flexible relative to labor; it is fixed or static, it exerts a gravity well shaping the people and production structures around it that can very easily swallow up firms and industries and communities into an inefficient complacency on a long enough timeline. The trade-off for this tendency toward stasis is a minimum guarantee of some level of mass production and productivity and quality of life higher than in some previous state but not as high as it could be. The world is of course better off with the introduction of capital and capitalism than it was before, but it has created a new set of problems and works against the very forces that brought about its creation in the first place.

In this section we examine the impact of capital and its structure to labor and a labor structure. What must be considered is the impact of capital on the structure as a whole and the individual laborer. There is no doubt mass production brought forth by capital has improved the collective prosperity and ease of labor to humanity over the centuries. There are however tradeoffs with this boon to our collective material condition. While capital introduction to a community does provide a short-term benefit in wages and new opportunity, in the long term it drives stagnation due to high cost and long-term return on investment that demands updates within the firm are tailored to legacy capital not new more efficient processes with few exceptions, creating a technology lag or stagnation for a particular firm or industry. This in turn stagnates the skillsets of the labor in the surrounding community directly working with said capital, relative to a labor-to-labor or labor-to-new capital relationship in work. Capital is anti-social in the way it alters the relationship between laborers within the production structure, changing how they relate to each other inside work and may even have some impact on person-to-person relations within the community. Before the introduction of capital, labor related to labor thus maximizing knowledge transfer and creating new appendages of continuous coordinated plans. As labor relates to capital, knowledge does not transfer as it would if labor related to labor, thus reducing knowledge transfer promoting the creation of new appendages in the Structure of Labor that would lead to new technology and the degradation social benefits to workers and their communities that would improve community stability.

Laws of Motion Within the Structure

For the laborer within a production structure, the maintaining of capital becomes categorically superior to the maintaining of people and social relationships. In this way, the structure of capital acts as a kind of skeleton in firms and societies. Where the labor structure is the muscle of such a society, it is inextricably connected to the skeleton, but it also decides the ultimate direction of the capital structure. Here we come to the mechanics of the structure through time or its laws of motion.

First, the proposal does not run contrary to traditional general equilibrium theory in economics. Such equilibrium theory deals with prices, and supply/demand requiring certain assumptions such as knowledge is perfect, competition is perfect, and full employment exists employing a simplified or ideal model to explain reality. These labor laws of motion are separate from equilibrium and are useful in understanding development that is labor driven. In contrast, equilibrium analysis concerns itself with prices and particular points or snapshots in time as an illustrative simplified model of market clearing equilibrating activity [28, p. 96]. When we consider changing knowledge through time it is clear, even with a favorable view, there is no such thing as general equilibrium in supply or demand of a good at a particular price except at a particular point in time as supply and demand are in a constant state of change. However, if we shift the concept of market equilibrium to optimized or more efficient, the tools of equilibrium analysis complement our idea of dynamic motion practically and visually. The Structure of Labor's laws of motion offer a labor-centric view of development and provide integration with equilibrium models relating to inequality. Before we examine the explicit laws governing the

movement and momentum of our labor structure through time, we must establish some basic assumptions:

- The first assumption is any individual doing their best preferred work will tend to be better/more efficient at that work than any other employment they could otherwise take on average.
- Second, as one gets closer to their best preferred work through time they will be more efficient/better at that work closer to their best preference relative to employment that would be further away from their best preferred work.
- Third, entrepreneurship is merely an extension of labor, entrepreneurs come out of the labor class and it is a type of labor.
- Fourth, for every individual there exists some best preference employment, this will tend to *align* with their dominant skill or what they are best at.

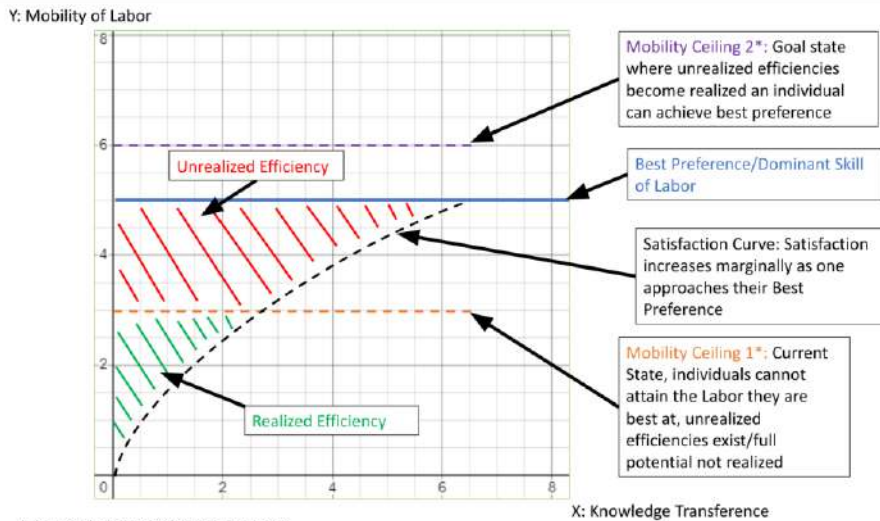
Below are the laws of motion for our Structure of Labor or how the Structure changes through time.

The First Law of Motion: *There is a positive relationship between knowledge transference and mobility of labor within the structure.* As an individual moves through various types of vocations, wage labor, or entrepreneurial endeavors toward their best preference they learn and share knowledge in the form of experience and ideas. Such learning not only sharpens and narrows what the individual's best preference is but spills over to other individuals refining their own employment journey due to specialization and the reliance of labor on other labor. Transference of knowledge constantly shapes preferences and expectations, leading to new action toward one's best preference as new plans are coordinated and mobility is maximized in tandem with knowledge transference. This translates directly into increasing group quality of life as individuals slowly move toward work they prefer over time. This increase in personal quality of life shares a positive relationship with group utility through time. The optimal for the individual is their best preference, for the group it is the development preference, or the ideal society given scarcity constraints. This is not a utopian model but an equity or value building model. It illustrates the path to getting to a better collective or group position. As change is perennial, after enough time a best preference for the individual may shift and so would the development preference of the society, in such a case the individual and community are again not optimized and through time act to find that new optimal.

The Second Law of Motion: *There is an increasing marginal satisfaction and efficiency through time for the individual that moves closer to their best preference.* At the point of arriving at their best preferred employment, whether it be some form of wage labor, artisan craft, or entrepreneurial endeavor, mobility ceases to increase as the best preference is arrived at and the individual's preference curve becomes perfectly elastic, continuing knowledge transfer and total knowledge growth in perpetuity. For the group, at their development preference, the continuous increase is related to efficiency or optimization through time. At the point where the development preference is realized by a society their development preference curve goes perfectly elastic because their quality-of-life goal is attained. The group has reached the point of development they want to be at over a given period. As aggregate knowledge and group utility grow through time this invariably changes best preference and development preference moving the individual and group away from their previous ideal toward a new one.

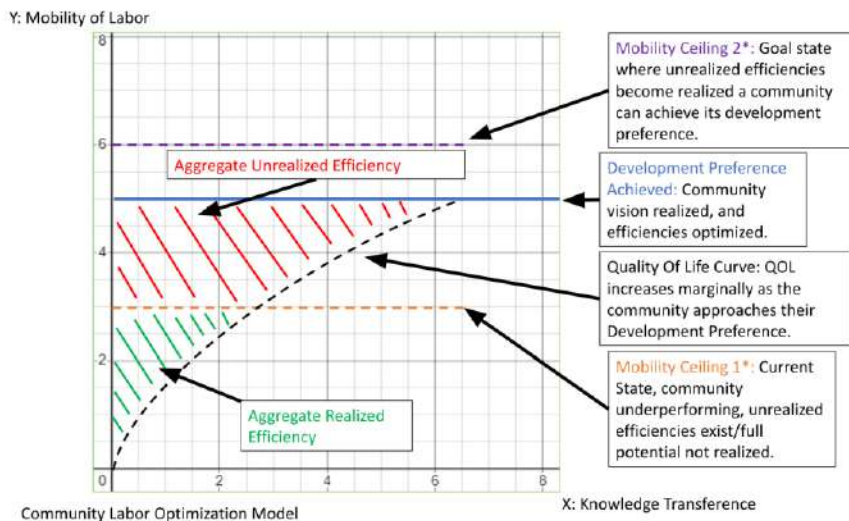
The Third Law of Motion: *Maximizing mobility and the opportunity to reach one's best preference along with access to the tools to realize such opportunity is critical to a functioning structure and society.* Standing in the way of this is something called the *mobility ceiling*. The mobility ceiling limits the ability of individuals to move along their best preference curve through time (1-A). Forces that impose such a ceiling would be issues such as corruption, barriers to entry, lack of access to capital for entrepreneurial ventures, overt discrimination or racism, or monopolies/capital industries that restrict industry entry and lobby to insulate themselves from competition, and welfare that disincentivizes or prevents movement within the labor structure. The impact of these misallocating or

constraining forces as it relates to our Structure of Labor is one of unrealized efficiency/wealth gains/and knowledge. Each force contributes to and is responsible for placement of the mobility ceiling in the best preference curve of the individual and the development preference curve (1-B) of a community. Further, one of these forces may impact ceiling height more than the others allowing for targeted development efforts that raise the community and individual mobility ceiling generally in a specific place.



Individual Labor Optimization Model

1-A Best Preference Curve: Preference curve for the individual, case by case or average.

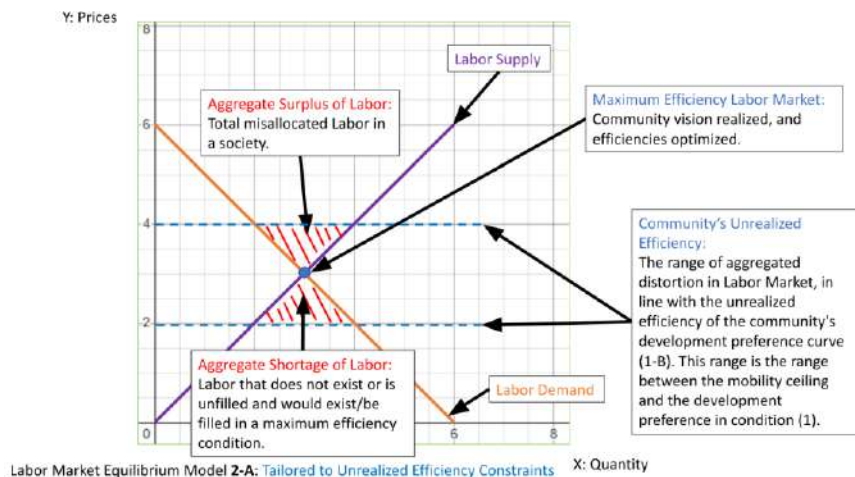


Community Labor Optimization Model

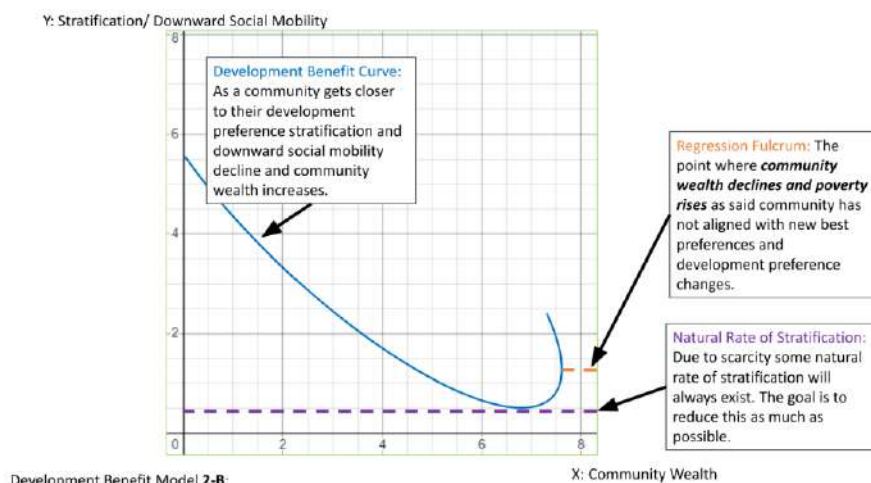
1-B: Development Preference Curve: Preference curve for the subject community or region.

The identified lost efficiency gap can be directly translated to equilibrium analysis as the space around the point of equilibrium in general equilibrium theory that labor markets are distorted at any particular point in time. Assuming a standard quantity and price cartesian plane with supply and demand curves and an equilibrium price, the lost efficiency gap translates to the *range* of distortion (surplus and shortage) existing in the aggregate across labor markets in an equilibrium analysis (2-A). There will be a surplus of labor in the aggregate equal to a shortage of labor in the aggregate due to misallocation of individuals not engaged in their best preference employment. Narrowing this range gets the market closer to equilibrium or, for our purposes, efficiency optimal. A feature of equilibrium in traditional analysis is that it is market clearing. In contrast for our analysis the point of equilibrium is the point of

best preference employment and is the optimal given scarcity constraints and imperfect knowledge. It is not market clearing it is only market optimizing given reality. At this best preference/equilibrium point, prices will not be market clearing, but they will be the most *efficient* price assuming all else equal under knowledge and scarcity constraints. At this most efficient price of labor, supply will align with demand for those in the labor pool. Individuals will all be in their best preference for employment and society will be at its demand preference, maximizing group utility and quality of life for those in the labor structure. The relationship between quality of life and group utility is positive when examining the development curve and as we move along this curve increasing utility and quality of life there is a direct impact on poverty within the group of laborers discussed (2-B). This analysis does not address those individuals not in the labor pool and thus not in the Structure of Labor. A society in this way can have an optimized development preference alongside some level of poverty and inequality among those outside the labor pool. However, properly maximizing mobility and labor participation in the Structure of Labor will minimize these conditions.



2-A Equilibrium/Development Preference Alignment: Labor market impact with restrictive mobility ceiling.



2-B Development Benefit Curve/ Wealth Relationship: As mobility increases, stratification and downward social mobility decline, regression fulcrum reached when mobility ceiling does not adjust to new development preference.

The relationship between poverty and mobility is supported by some research, one example is labor segmentation theory and lack of mobility for individuals in less productive labor industries or segments

and their ability to move to more productive sectors [23, p. 32]. The causes of this lack of mobility range from discrimination to geography and weak property rights [23, p. 33]. *Optimizing the Structure of Labor by maximizing mobility and access is a necessary but not sufficient condition for wealth and development gains* among any group or community. Maximizing the mobility ceiling through improving movement and access across the labor structure is the reforming aspect of this theory for community and economic development. It takes development out of the hands of certified development experts, high level policy, and vast institutions, putting it squarely on the shoulders of local leaders, planners, and service providers. The latter are closest to those individuals across communities around the globe navigating the Structure of Labor toward their preferred work. In this way, maximizing the height of the mobility ceiling is critical locally and involves non-traditional development actors in the local community.

What is described in the Structure of Labor laws of motion is a dynamic evolutionary theory of economic development, more precisely an evolutionary theory of the efficient allocation of scarce resources that improves society in a social and material capacity. As an evolutionary theory it is in line with the thinking of institutionalists such as Thorstein Veblen and Clarence Ayers [3, p. 61].⁹ Importantly, the use of cartesian planes to illustrate the relationship between the macro and micro movements of the structure are not intended to constrain or imply this theory is static, they are merely models to illustrate how the individual and the community share a positive mirrored relationship and that each rely on the other. Further, the support this theory provides toward static theories such as the general equilibrium model in 2-A assumes a frozen point in time and a replacement of the standard conception of equilibrium to fit our structures dynamism. If a visual model of the continuous process were provided it would mirror a body of water in continuous motion that adds or recedes in volume or speed depending on its mobility ceiling, or for the sake of applied analysis the model would live in the mathematical field of systems theory and topology.

Structure of Labor is an interactional theory of dynamic development. Development cannot proceed without interaction within the structure. This is significant for both the individual and the community. What is meant by dynamism, especially as it relates to the laws of motion within the structure, is that the process of development is continuous, it is never ending and always changing. To more clearly articulate the distinction, consider a traditional development effort toward some goal – the building of a path or acquisition of grant money to fix a road. Once achieved the development effort is completed. In traditional theory we could say the aim is equilibrium and a market clearing price. These finite examples require an end to development action at some particular point. Under Structure of Labor, the development professional's goal is managing and tending to their local structure in perpetuity to realize the community's development preference within realistic constraints because of the focus on process. While grant writing for a particular public good or facilitating a company's navigation of the local bureaucracy will still take place, because of the focus on a process that benefits all people such efforts are categorically subordinated to process/environment improvements around mobility and access for the community as a whole. The essential takeaway is that Structure of Labor takes development away from chasing projects and money or even creating specific places as a matter of finite action and static models to a systemic analysis and optimization approach of an evolutionary process in a particular place.

Labor Re-imagined

The significance of mobility both as a means to broader composition of labor roles in society, and knowledge transference driving wealth creation is best understood by examining the qualities of the laborer as they relate to capital. The comparison drawn is between labor and capital, explicitly those qualities of capital envisioned by Lachmann. In Lachmann's vision capital has several primary qualities, it is heterogeneous, possesses multiple specificity, is deliberately ordered, and has

complementarity with other capital. In light of this capital has the propensity for excess capacity/unrealized capacity or “disguised unemployment” [29, p. 9]. Labor in comparison has qualities that mirror or complement those of capital described by Lachmann. These qualities similarly translate into a kind of *unrealized capacity or unrealized efficiency* for labor.

The first quality of capital shared by labor is that of heterogeneity. As it relates to capital, heterogeneity is defined by use and each piece of capital has narrow limited use called multiple specificity [29, p. 2]. In contrast, labor too is heterogeneous. The heterogeneity of labor is not related to use but to talent or skill. It is an a priori truth that individuals are skilled at some things more than others, the implication of this truth being there exists some dominant skill relative to all others on the spectrum of skills possessed by each individual.¹⁰ For the laborer, there is a *heterogeneity of skill* that contrasts with heterogeneity of use in capital. Labor, unlike capital, is not limited by narrow uses. There are no use constraints for the laborer compared to capital, *only skill constraints*. Within the spectrum of skill there is a dominant skill, a craft or talent that a particular laborer is more proficient at than anything else and this proficiency can be measured [2, p. 426]. The problem of labor is the following: one *may be better at carpentry than plumbing for example, but one can do either with no constraints driven by limited use*. In contrast for capital, a printing press may print the pages for books but cannot seal aluminum cans, again a laborer can do both. This *illimitable specificity* of labor is the origin of efficiency concerns across a community or society.¹¹ Compared to capital, labor has a far wider range of use and can easily be placed into a use that is not aligned with their skills. One can employ the same laborer to till fields, break rocks, play a sport, engineer a bridge, or turn a screw. The key is to ensure the laborer is aligned with what they are best at.

The combination of *heterogeneity of skill* in tandem with *illimitable specificity* of labor creates a unique problem as it relates to Economic and Community Development. The question for economic development becomes one of *aligning or allocating* individuals with the labor they are most skilled at, not driving any kind of employment for the sake of employment or increasing the tax base. Any employment will be productive compared to none, but any employment will be less efficient, even detrimental compared to employment in one’s dominant skill. Further, growing a tax base is by no means certain to expand prosperity as it relates to development [32, p. 458]. As allocation or alignment of role with skill in the Structure of Labor is the substitute for alignment of position with use in the structure of capital, one must consider for the purposes of efficiency the way labor is *ordered*.¹² Society can order labor as needed through means such as authoritarianism, which was common in feudal and slave societies historically. In a similar vein, society can also order labor the way the firm must because of high transaction costs for a range of alternative arrangements [11, p. 392]. Planned ordering by an authority of one or a group is the *only way* capital can be organized within the firm [29, p. 35]. Further, it can be allocated to be immediately productive based on use. Unlike capital, labor does not easily arrange because its range of use is illimitable and sometimes labor requires training for its intended use. Consider that efficiency is not a question of simply slotting a laborer into a role into a production structure that is productive, because any laborer may fill any role. It is rather a matter of slotting the most efficient/capable laborer into their dominant skill role in that production structure. *Failing to do this creates inefficiencies or efficiencies that would otherwise be*. Refusing to acknowledge this complexity is one of the problems of social cost, putting any labor in any position is no solution to a problem but rather a tradeoff that may lead to a new set of problems for better or for worse [12, p. 876]. Aligning the right role with the most skilled laborer for it can be summed up in the colloquialism “the right person for the job”, in contrast to “some person for the job” or “any person for the job.” While labor can be allocated by an authority just like capital there are certain knowledge constraints, for example local knowledge versus common knowledge that limit optimal allocation [20, p. 3]. However, unlike capital, labor has the unique ability of organizing itself as it relates to applying one’s skill. To drive home the significance of self-organization, think of it in the context of capital. Imagine a printing press that could also seal cans and heat treat glass or practice any imaginable function. Further, it could

autonomously choose which function it wanted to fulfill and has a sense which function it prefers and is better at compared to others. This is the power of labor, it is self-ordering, and this ordering is constrained from becoming chaos by specialization and the extent of the market.¹³ From an aggregate perspective it is a spontaneous order [35, p. 395]. The labor market or entrepreneurship is where the individual goes to exercise their self-organization and application of skill or use within the Structure of Labor.

The actual exercise of one's craft is complementary with other labor and capital based on function across the Structure of Labor as a whole. The wheat farmer complements the flour maker, the flour maker complements the baker. These functional connections create unique consistent plans linking labor across an industry [29, p. 4]. Underpinning this are unique *chains of efficiency driven by the laborer's efficacy within their functional use*. A problem arises that confuses two notions. First, complementarity of function may be productive if labor and capital are organized to some minimum standard in a production structure. Second, with the wide spectrum of alternative uses for labor combined with the optimal use being known only by the laborer, *a laborer can be productive due to function but not efficient relative to performing some other function*. Where the laborer is employed in a use they are less efficient at relative to their optimal use, productivity may be high but it is not efficient, implying both productivity and efficiency would be higher with the right person in the role. Productivity may only be high compared to a previous arrangement of capital and labor in the present, but not compared to a potential and relative optimal arrangement of capital and labor. The significance of an efficiency deficit in labor can be observed in the talent acquisition industry and rise of a hyper competitive landscape for talent, driven by data analytics and technological advancement [41, p. 3]. As functional roles become more complex, eliminating efficiency deficits in labor is a crucial focus in the firm and contribution of The Structure of Labor. Further, talent alignment and management within firms to meet business goals is a burgeoning topic. Forbes has defined one of its "12 effective strategies for aligning talent and business goals" as "Have the Right Person for the Right Job" [17]. Both concepts are driven by underperformance compared to the desired expectation. Talent acquisition is a tangible manifestation of the firm's solution to efficiency deficits driven by the misallocation of labor in markets, where talent alignment represents the same concept but is within the firm, not outward facing.

The combination of heterogeneity of skill, illimitable specificity of use, and complementarity of function, alongside the fact labor is self-ordering or self-coordinating creates a similar problem to excess capacity as it relates to planning the use or arrangement of labor. The impact of multiple uses as it relates to capital can be summed up in the following: "Capital resources will be used in ways for which they were not planned, but these uses will be discontinued the moment complementary resources make their appearance" [29, p. 9]. If this were to be translated to labor terms it would say labor will be used in ways which are not ideal. When new knowledge makes the laborer aware of a more ideal functional role, they will then pursue that role within the labor structure, *ceteris paribus*. *Providing this mobility and access for adjustment toward preferred work is the key function of the Structure of Labor.* Raising the mobility ceiling on individual and community preference curves narrows the efficiency deficit of misaligned labor in the aggregate across a society through time.

So far, we have discussed Structure of Labor theory as it relates to markets, production structures, and the firm. However, its greatest significance is to the community, state, or nation. Misalignment of labor in the firm can still lead to a base success because a planned production structure provides some minimum guarantee of productivity where demand exists. Where the firm is the domain of capital relationships, communities and societies are the domain of labor relationships and are the focus of community and economic development. There are critical and practical implications of Structure of Labor theory for Development as a field.

The characteristics of labor that are critical to the functional efficacy and efficiency of the structure are labor's *heterogeneity of skill, illimitable specificity of use, complementarity of function*

and the fact that labor is self-ordering. Heterogeneity of skill implies a dominant skill; illimitable specificity means labor can be placed in a role that does not coincide with its dominant skill. These two characteristics imply possible mismatch of skill and functional labor role affecting structure efficiency and community efficiency. Complementarity of function means labor must act in a manner that complements other labor, as a part of consistent plans, and inconsistent or risky new ventures. The self-aligning characteristic of labor ties all the former together. Where labor does not have the mobility and access to align skill with role, both the laborer and society will suffer as they can be misaligned due to illimitable specificity of use. Self-alignment also means choosing functional paths of complementarity which can benefit society where those paths offer efficiency gains, which they will as labor moves closer to its best preference. Our proposal also contributes to psychological concepts such as self actualization in Maslow's Hierarchy of needs, regarding meaning and inner potential realized through labor [33].

Implications of the Structure of Labor for CEDEV

For community and economic development as it relates to Structure of Labor theory there are two essential aims. First, concerning *economic development* the goal of this theory is to take away *responsibility* from far and away impersonal forces, institutions, and people. Then, plant such responsibility squarely in the local community with development agents where individuals live, work, and ideally thrive. It is not sufficient that the problems of development be dismissed as an outside responsibility or functionally reduced to grant writing or relying on national development organizations. It is, in fact, the responsibility of every local official, firm owner, planner, town manager, council and individual with the time and means to enhance a collaborative labor structure that supports people and the community. It is a theory that empowers action through simplicity: *raise the mobility ceiling, ensure all know it is raised* and individuals with dreams, ambitions, and *expectations* will begin development on their terms, coordinating plans in the employment landscape toward their best preference. Contemporary local politics and planning departments in the United States have been outside the influence of development thinking and action for far too long, they must think of development as a primary concern in their office.

This theory is intended to be easily understood and offer a path to meaningful action for the individuals in such roles. Furthermore, it focuses on promoting structural maintenance for labor movement, beyond the narrow confines of state and local incentives focused on firms [13, p. 864]. Due to this it can have a greater impact when it comes to the goal of development than more antiquated policy approaches, such as grant writing and tax incentives for manufacturing. Similarly, professional development organizations such as the International Economic Development Council (IEDC) are focused on attraction and of firms (capital), in contrast to people (labor). The very first line in the introduction of a recent IEDC toolkit released for community recovery and resiliency states "Economic developers serve as a vital bridge between the business community and the greater economic interests in their communities. Many local, regional, and state governments turn to their publicly or privately funded economic development organizations (EDOs) to be the economic leaders, 'deal makers', and visionaries for attracting new investment and supporting existing businesses" [26, p. 7]. Although the IEDC purports to be doing "Economic Development" I would argue it is not. This is not development because IEDC efforts are implicitly exclusionary, development as a field and practice intends to bring up all members of a community, not cater to some over or at the expense of others. To focus on the "business community" and the "greater economic interest" of a community is not egalitarian, it is a form of elitism. What such professional credentialed bodies engage in is sales and marketing of communities to business and vice versa. Where such relationships are deemed to be important enough, they act as special agents to navigate bureaucratic complexities, complexities normal individuals do not receive the same help in navigating. It must be stated that arguing this practice is not development is

not the same as saying it is not useful. Indeed, having experts that can navigate bureaucratic structures, facilitate informal and formal business to community relations, and be “Deal Makers” is useful but, again, it is not development. Development, as it relates to such credentialed experts, is a matter of reducing the need for them by opening up policy and simplifying labor centric, social, development processes. Credentialing bodies like the IEDC currently reflect a form of “Unproductive Entrepreneurship” more than a profession focused on Development [7, p. 897]. Thus, Structure of Labor theory aims to change the focus of contemporary development and policy away from capital focused elitist tendencies toward egalitarian labor-centric policy and action.

Second, concerning community development, this theory is intended to reinforce the concept that gain as an individual and community gain are inextricably linked. It should be viewed in the collaborative individualist tradition in contrast to competitive individualism. This particular theory of the unification of the individual and community has origins in philosophy, specifically Hegel’s System of Need. It is the union of the universal (community) and the particular (Individual) in a dialectic (process) to achieve a new type of existence (development) [21, p. 227]. In development language this theory is a road map to optimizing the local labor structure as a means to quality of life improvements and wealth creation in the community. It complements the notion of Social Capital and the idea that “Social Capital as a community characteristic... permits the community as a whole to act effectively as a collective entrepreneur, innovating in new ways to create business opportunities and also to solve other social problems” [42, p. 80]. The definition of social capital that should be associated with Structure of Labor theory when conceiving of labor navigating the structure is defined by Gary Becker as preferences created by past experiences [42, p. 79]. These preferences, informed by experience, directly yield welfare to the individual in contrast to production that yields welfare [19, p. 170]. In our case, through time, informing such preferences ends up doing both. For community development the Structure of Labor informs community decision and action related to labor markets. Specifically expanding and simplifying entry and exit of labor markets to maximize mobility.

Markets are an ancient social institution, they existed long before capitalism and they will exist long after. With this understanding, the usefulness of markets for individuals should be maximized, not frowned upon in development. Just as significant as mobility is access. *Access as relates to the proposed theory is the means to move toward one’s best preference when initiative is not enough.* Access for community development involves a combination of public goods, incentives, and a reduction in costs of mobility. The essential element is that *every individual* can tap into access tools necessary to optimize the efficacy of the local labor structure. A final point on access; the Structure of Labor allows movement horizontal as well as vertical. Labor can move in either direction within it. Further, as labor plans for such movements in advance such as getting a degree, saving money, or living within their means, they are building a bridge to their next employment goal. This is to say that laborers build toward future movement, as they become aware, they act and move along or up the Structure of Labor to reach their best preference. Municipalities, concerning planning and action related to access, must always consider the future in the same way the laborer does. The future problem for communities to consider is having the space and capacity to build. For perspective, consider Engels critique of Malthus, specifically his failure to account for unforeseen technological advances that may eventually arise [24, p. 307]. Communities when acting should consider the change they have not accounted for, making space everywhere possible in the pursuit of current goals.¹⁴ This space ensures capacity for change and preparation for change in a community. Preparation for each step closer to the development preference is essential for both communities and individuals.

In summation, contemporary practical development thinking at the municipal level in the United States is narrow and constrained by a focus on capital attraction or relying on external funds and stakeholders. Structure of Labor theory is intended to provide a labor-centric organic approach to development at the local municipal level. Labor gain and community gain are inextricably connected. Structure of labor theory enhances labor quality of life by improving mobility and access for the

individual to strive toward their preferred work as a means of returning development to the focus of the individual within the community. This should be pursued in tandem with, but categorically superior to the current practice of marketing to already established capital enterprises or chasing funding from external community entities such as state development organizations. Mobility and access improvements in governance such as ordinance and local politics or changes in rules of the game or public goods favoring access and mobility are the key to optimizing the Structure of Labor for the development practitioner or those local officials that directly impact a local labor structure.

4. Conclusion

The aim of this paper has been to introduce, define and describe a Structure of Labor theory. The essential message is that meaningful development is people-centric and that mobility and access matter. In addition to the definition, a brief overview of the theory's intended and potential contribution to community and economic development was provided. Further, this is an inherently political theory because it values people, mobility, and access and thus implies changes away from an established norm toward conditions which favor impacting such mobility and access as a method of system management. Political change, assuming further empirical verification of the theory, is a matter of returning development thinking and action toward a labor-first policy in the context of mobility and access. Doing this, all else equal, creates the conditions necessary to positively impact income inequality and the decline in intergenerational mobility. Structure of Labor returns development power to laborers as opposed to political authority or capital interests. This labor first focus will be at odds with contemporary development thinking focused on capital or state-driven development that aims at employment for the sake of employment or simply broadening the tax base and chasing manufacturers. However, it can co-exist with and improve contemporary approaches within reason.¹⁵ The ideal means of implementation is at the local level – that level for which this theory is explicitly intended *although not constrained to*. If one can establish some test cases where a local community and its stakeholders commit to Structure of Labor optimization, positive results would provide political impetus to the greater region through time. To get that local buy-in initially would be a matter of offering the appropriate training and awareness to community decision makers and supporting their vision for the community.

An additional step is to verify the theory with further empirical research. Should it pass such an examination, this paper is only a first step in a full exploration of the proposal, it is defining the subject for further analysis. As indicated in the literature review there is a key gap in the theory around its mechanics, notably the assumption that individuals tend to do better work if they enjoy that work, causing a gain in efficiency for society as those individuals align to the work they prefer. A second potential gap in the theory is the idea of a unique or dominant skill each individual possesses. In the author's opinion this sentiment is a tautology, as no performance of one task relative to another is ever perfectly equal in diligence or efficacy, there must be some skill each individual is marginally better at than all other skills they possess. It is my view that such a notion must be disproven, not proven. However, further examination is critical as it concerns labor heterogeneity. The proposed theory should be considered in light of the empirical gaps associated with it. What must also be considered is its focus on mobility and access as a means to prosperity, both of these qualities have strong supporting literature that they are a community benefit.

As a next step, an empirical study should be conducted on the relationship between diligence or efficacy at one's work (how efficient one performs their work), and their enjoyment or satisfaction in line with the Structure of Labor in this proposal. At first consideration such a study should examine satisfaction and diligence within the context of different team roles under the same manager within the same firm as an appropriate place to start if the data is available. Then include multiple firms in the examination. The initial empirical model would be an Ordinary Least Squares (OLS) regression where

the dependent variable Y is diligence or skill, and preference or satisfaction would be the primary independent variable X. A series of ordinaly tailored questions would be asked of each team member and to their managers on teams where movement between roles is common. The same series of questions would be asked to managers and perhaps other team members on the perspectives of a subject employee to confirm self-perception/opinion. Where self-perception/opinion is confirmed by managers and teammates then weigh those responses when running the regression. The focus on work change within a team with an established manager, under the same firm, may offer a semi-controlled analysis. The ordinal nature of the questions is critical to rule out the subjective propensity of number scales and individuals, offering more certainty on response.¹⁶ This would be an initial proposal for analysis of the relationship between diligence and satisfaction, a next step in empirically verifying or disqualifying the claims of Structure of Labor theory.

The limitations of Structure of Labor theory in its current form are its focus on local community policy and microeconomic action that define and articulate the structure and propose aggregate impacts at the macro level. While some macro impacts of the broader society on the structure as a whole are discussed, such as rules of the game, key macro forces and how they affect the structure are not presently considered in this paper. The impact of macro forces such as natural disaster, offshoring, globalization, foreign aid (credit lines) to developing nations and competitive advantage between nations that would impact the extent, composition and efficacy of a Structure of Labor are not addressed in the current work. A fuller research endeavor and expansion of the theory to encompass a full macro picture and a more detailed micro picture is needed. The current proposal is merely a primer for a much more substantial work. Beyond expansion of the theory to include critical items not covered in its current form, applied research questions and a selection of appropriate methods will be considered at a future date.

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Notes

2. As capital is essentially an extension of labor when it can be economized, excess capacity, for our purposes, is extended from capital into labor but is distinct from disguised unemployment. It represents more of a disguised productivity resulting from the qualities of labor, which we will explore further in our theory proposal.
3. For more information on Neils Bohr's contribution to physics and the importance of knowledge transference, especially on knowledge frontiers I recommend "The Making of the Atomic Bomb" [36]
4. Prices, while valuable for rationing, are a product of knowledge and because knowledge is always incomplete prices are chronically inaccurate as they relate to some value provided to society. Further, in a purist sense, they are subject to artificial fluctuations. A prime example of this is in stock markets and the price fluctuation of assets due to the *Cantillon effect* driven not by "value to society" but by a particular investment bank's proclivities or social fad at any one point in time.
5. I recommend Daniel Yergin's *The Prize* [44] as it documents how gasoline was once considered a worthless runoff by product of kerosene production, at that period in time prices simply did not reflect the value to society of gasoline. This is a problem everywhere all the time because of incomplete knowledge.
6. Knowledge can also disincentivize navigation, keeping individuals in a role for extended periods. For example, knowledge of more responsibility and higher expectations may deter movement into management for a wage labor employee.
7. An example of this historically can be compared to mono-industry economies such as the anthracite coal regions, see Carley [9]
8. Legacy capital is outdated and obsolete capital that is an efficiency gain relative to a previous process, but inefficient relative to a newly discovered process or technology.
9. The same is not true of labor; capital is static, and its quick subordination to a superior substitute is guaranteed. In contrast, labor is adaptable; it can learn, adjust, and improve upon some previous state of itself. While subordination may still occur with labor, it is far less certain case by case. The entire professional field of change management exists to facilitate labor's adaptability to new, more efficient processes and actions, in contrast to capital's inherent static nature.
10. Similar to the institutionalists Ludwig Lachmann himself arrived at a kind of evolutionary theory of economics in his work *The Market as an Economic Process* published in 1986, in it he challenges static conceptions of Macro Economic theory and proposes the evolutionary view that markets exist in a state perennial change mimicking a kind of kaleidoscopic flux through time.
11. A dominant skill may not be known to an individual and it may take training to manifest or experience to reveal, but for each individual with inequality as the rule in talent, a dominant skill must exist. It may even remain undiscovered but the Structure of Labor is intended to bring awareness of such skills to the individual.
12. Keynes multiplier effect examines productivity through the lens of homogeneity of labor and capital. Though a multiplier does in fact exist, it is incomplete because it fails to account for heterogeneity of labor. The multiplier is never as impactful as it might be because any kind of work labor is engaged in resulting from investment is deemed positive versus the appropriate type of work or that work which aligns with the laborers skill and preferences. Such a consideration requires re-evaluation of prioritizing spending versus saving, even in times of hardship.

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13. When we reference the order of labor we mean explicitly how labor comes to be applied in broader society for example, authoritarian direction or through markets etc.
14. In society one does not perform non valuable functions where merely by a function existing it is specialized and where it is exchanged for it must provide some rational value, thus chaos in this sense is non-existent (as it relates to labor markets and development).
15. An anecdotal example of this failure to think more than a step ahead concerning technology is a municipality in the southern united states that granted a 40 year internet monopoly to a single company. When a satellite internet initiative developed regionally, the municipality opted out as they were still under contract with the company. That regional effort would have provided more individuals internet access in that community than what the monopoly firm was willing to provide. Thus access, in the case of the internet, could not be maximized.
16. Structure of Labor does not salt the earth behind it as it relates to other development alternatives. It is not hostile to other contemporary approaches. It simply renders other development paths such as capital attraction and grant chasing categorically inferior to structure maintenance.
17. When an individual is presented with a number scale, what that scale means to one may mean something totally different to another, even when possible selections are clearly defined. Further, the subject being questioned may also have such constraints because of differing subjective interpretations of the experience with number scales. Ordinal questions avoid this problem in my view and provide more certainty of correlation where it is shown to exist.

The Influence of Organizational Culture on Human Capital Development of Polish Army Officers in the Context of Post-Service Employment

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Abstract:

Organizational culture paves the way for employees, shows how one should function in a given organization – it aims to keep it together by adhering to similar values. Thanks to conditions prevailing there, specific rules employees know how they can perform their duties, properly cooperate with others and also how looks like the possibility of professional development, which is very important in the development of human capital. Human capital is people, their skills, creativity and qualifications. Development of capital through competence development has a positive impact on further functioning of the organization, but also on the satisfaction of employees themselves. In the case of retired officers of the Polish Army, who acquired specialized knowledge and valuable skills during their service, it is important to use their capital after the end of service. They can be supplemented with additional courses, training that will enrich their existing potential, and also enable them to find work in the civilian market. A survey was conducted among retired Army officers and employers/supervisors hiring retired officers from 2019 to 2021. The snowball method was used. A qualitative method was used – a survey questionnaire.

Keywords: organizational culture, human capital, professional development officer of the Polish Army, retirement.

1. Introduction

The culture within an organization is something that sets it apart from others. Organizational culture consists of symbols, artifacts, norms and values, and basic assumptions that are more difficult to change and less visible to the company's external environment. Thanks to the culture, the company's employees understand the adopted vision and mission and the strategy implemented in connection with it. It is easier for them to cooperate thanks to clear rules or regulations, which not only prescribe but also indicate how one should function in the organization.

In a military organization, there is a specific organizational culture that is governed by many regulations, or documents. One of such documents is the General Regulations of the Armed Forces of the Republic of Poland, in which there is information that “a superior in a military organization

exercises commanding (managerial), managing, training and educational functions with regard to his subordinates” [1, p. 68]. It is worth mentioning a survey that was conducted in late 2017/2018 among employees at one military institution. It concerned organizational culture. The results of the study confirmed that in this type of organization, due to its specific nature, there is a culture of hierarchy, the management of which is an important element of its functioning [2].

2. The Essence of Human Capital

Along with social capital and organizational capital, human capital makes up intellectual capital. This is shown in the figure below. It is defined as the most valuable among the others, affecting the company’s success the most. Human capital is people, including their skills, creativity, qualifications. They are connected with a given organization. The development of their capital, for example through the development of competencies will positively affect the further functioning of the organization, but also the satisfaction of employees.

Human capital is “the competence, intellectual agility, and motivation of personnel” [3, p. 59]. It is also the knowledge found in people [3]. It can also be assumed that human capital „encompasses the totality of qualities and characteristics” [4, p. 6], that reside in people, who are the cause of value creation. These include the abilities, skills, and motivation of personnel.

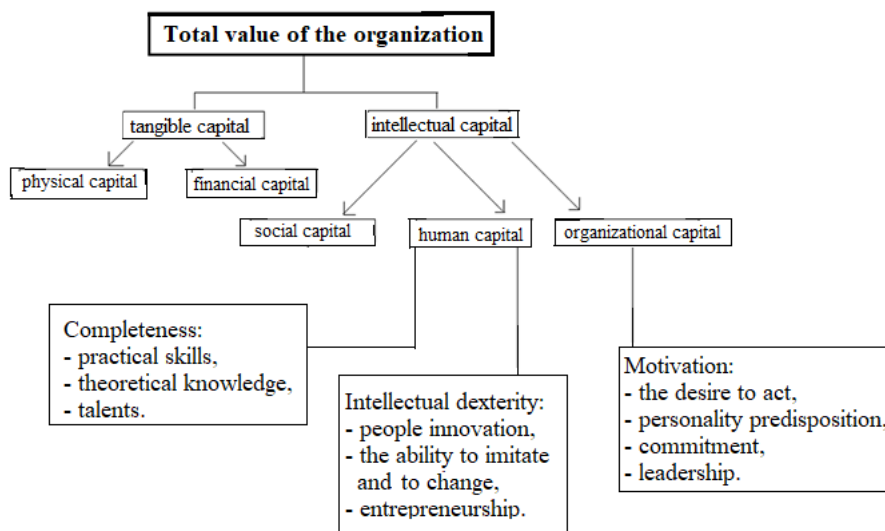


Figure 1. Total value of the organization
Source: compilation based on [5, pp. 153]

Human capital can have a threefold meaning. First, for the individual, who „owns it and, by taking proper care of it, can develop professionally and not only” [6, p. 18]. Secondly, also for the employer, who gains as a result of hiring employees with specific skills. It should be added that often this employer invests in these skills of the subordinate. Thirdly, human capital is important for the whole economy in the context of its competitiveness, as it depends more and more on economic development which is based on competences and knowledge [6].

According to M. Bartnicki, human capital is people who are permanently connected with the company and its mission. They have the ability to cooperate, creativity, qualifications, motivation, competence and „intellectual agility” [7, p. 179].

The main objective of human capital development in an organization is to „shape (develop) the performance (efficiency) of employees allowing to achieve the objectives of the company” [8, p. 7]. To impact employee effectiveness, investing in human capital should address areas such as employee competencies, organizational culture, and development opportunities.

3. The Importance of Organizational Culture in the Development of Human Capital of Polish Army Officers in the Context of Employment at Retirement Age – Research Results

Organizational culture is defined as an established way of thinking, feeling, and also a way of acting. The influence of “culture on the attitudes of people in the professional environment and the behavior of employees in companies have led to the formulation of the concepts of organizational culture and organizational identity” [9, p. 58]. Organizational culture, which plays an important role in a given company, enterprise or institution, is the style in which a given organization operates, the views and values that are shared by its members and common patterns of behavior, as well as ways of communication [10]. According to E. Schein, creator of the organizational culture model, symbols/artefacts, located high up on the so-called „iceberg”, are visible to the internal and external environment. Symbols/artifacts are divided into: linguistic (language, anecdotes), behavioral (ceremonies, rituals), and material (clothing, buildings, interiors). In contrast, values and norms are partially visible and conscious. We can mention, for example, ideologies, ways of behaving, prohibitions. As mentioned at the beginning of this article, the most difficult to change are the basic assumptions at the bottom of Schein’s model [11]. It is connected with invisibility and also unconsciousness of human actions and interpersonal relations. Figure 2 shows the organizational culture model discussed above according to E. Schein.

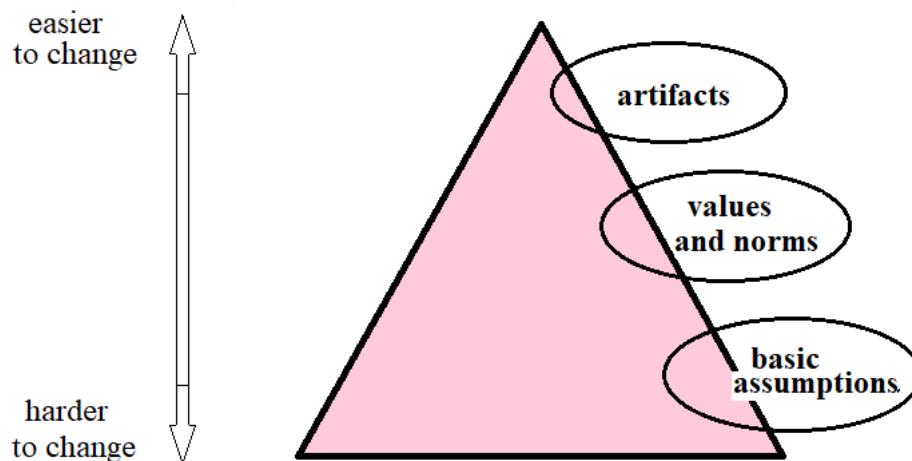


Figure 2. Model of organizational culture according to E. Schein

Source: own compilation based on: [11]

Related to human capital is the definition of the concept of human capital management. This is due to the fact that employees began to be seen as an asset of human capital and not just as a cost of an organization [12]. In the Armed Forces human resource allocation model, the Armed Forces’ strategy, structure, and organizational culture are internal factors. External factors include the external environment [13].

The information contained in the Ordinance of the Minister of Defense of September 15, 2014 *on the study of professional soldiers* [14], concerns, among other things, the assistance provided to professional soldiers in connection with undertaking their studies. It also defines the type, form, scope and amount of assistance and how to determine it and the manner of its repayment. The regulation also addresses how to document expenses incurred by a professional soldier that are covered by the assistance. You can find information related to with directing / recalling professional soldiers to study or study in a military school, or non-military or to internship, course or perhaps specialization in the country or abroad.

The system of in-service training for professional soldiers consists of two categories of in-service training forms, which result from the above mentioned Ordinance of the Minister of Defense. These are [15]:

- **post-graduate studies and qualification courses** – are supposed to prepare „to take up a service position of higher full-time rank”. Their main purpose is to „update and broaden general and specialist military knowledge, as well as acquiring competencies necessary to function on a higher official position”.
- **in-service training courses** – designed to help supplement knowledge and prepare „to perform the duties on a particular official position specified in the description sheet of a given official position”. When organizing courses, the needs of the Polish Armed Forces are taken into account.

In the system of professional development of officers, basic qualification courses are „realized in functional departments: command, staff, security and special as characteristic for the tasks performed on official positions in relation to particular full-time ranks” [15]. The presented solution is primarily to ensure adequate recruitment, selection and rational use of personnel resources of the Armed Forces, so it is important that they are taken into account in the system of professional development of professional soldiers.

Professional development of Polish Army officers [15] is related to the possibility of participation in, among others, postgraduate studies or courses. This is intended to develop the already possessed general and specialized knowledge. It is also intended to help in preparing officers to individually solve problems concerning the implementation of decision-making processes on particular duty positions. In order to be eligible for a duty position located at a higher grade, „depending on the evaluation from the service opinion and service forecast”, each officer must complete the course training or studies assigned to that position.

An organizational culture with strict hierarchy, bureaucracy, but also specific language, behavioral, and physical artifacts has been a part of a retired officer's life for most of his life. For managers of state institutions or uniformed organizations, it is a good solution because there is no need to implement the employee from the beginning and therefore there will be no barriers to adaptation in the workplace.

It is worth citing the results of a survey that was conducted between 2019 and 2021 among retired Army officers serving in the Land Forces and employers/supervisors who hire retired officers. The snowball method was used. The qualitative method used was a survey questionnaire. The figure below shows the years of service of former officers of the Polish Army. Most retired officers served in the range of 26-30 years (42%), the least – 36 and over (8%).

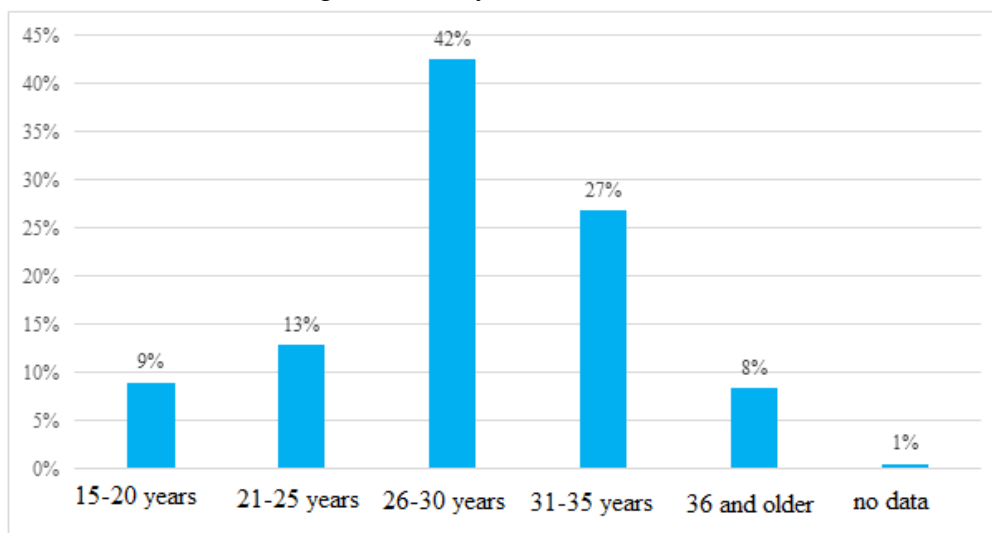


Figure 3. Years of service by retired officers.

Source: own study based on own research.

In contrast, Figure 4 shows the responses of survey respondents-employers/supervisors who employ retired officers, categorized by organization size by number of employees. The largest group were employers/supervisors in organizations with 11 to 50 employees (44%). The fewest respondents selected an organization with up to 10 employees (4,6%). Almost 4% did not mark any answer.

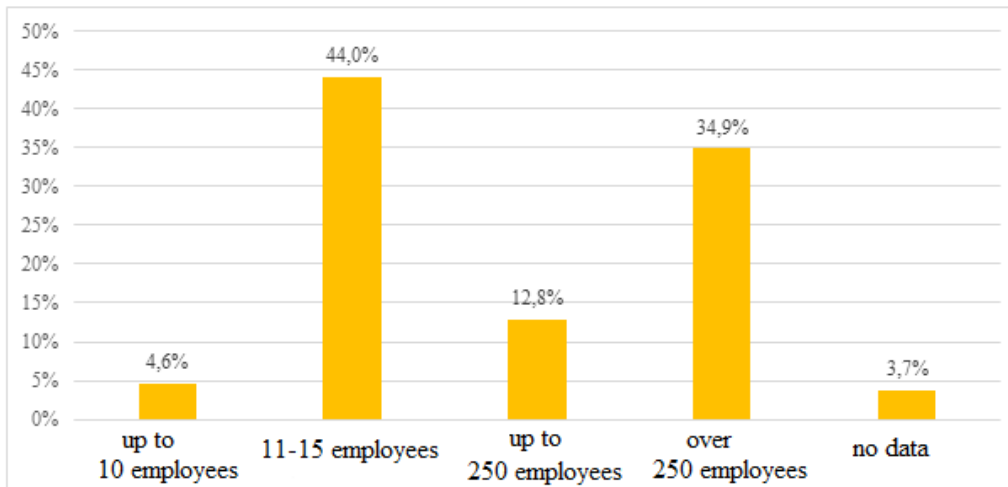


Figure 4. Distribution of respondents by size of organization based on number of employees. Source: own study based on own research.

The next figure shows a confrontation of retired officers' responses regarding the usefulness of their competencies acquired while on active duty with employers/supervisors' responses related to former officers' competencies affecting their employment. Respondents could select more than one response.

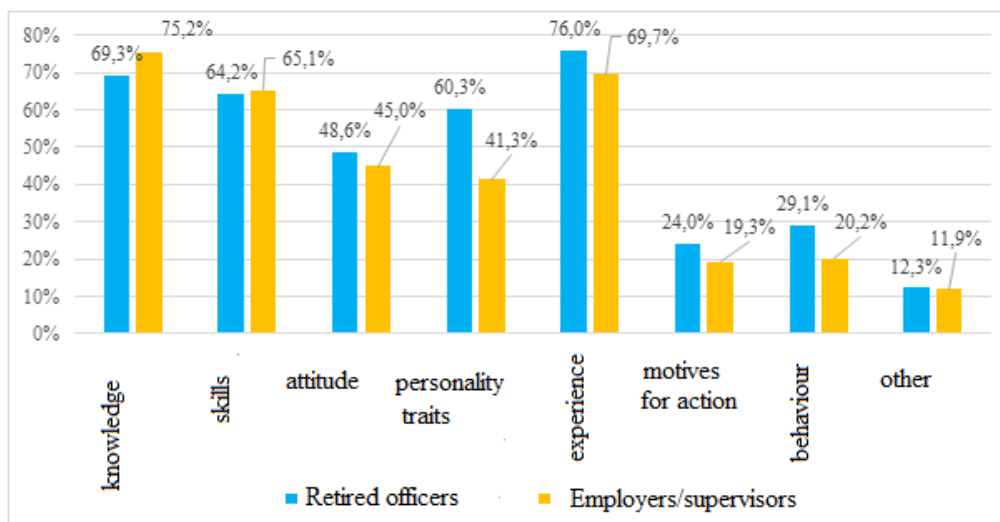


Figure 5. Competencies that influenced the hiring of a retired officer according to employers/supervisors vs. usefulness of competencies in current workplace according to retired officers.

Source: own study based on own research.

Comparing the other competencies, it can be seen that the responses of employers/supervisors and retired officers were similar. It is important that experience, knowledge and skills are acquired and also supplemented – if necessary, as these competencies are highly useful according to employers/supervisors.

In the category of other at employers / supervisors were given such competencies as: the speed of decision-making, awareness of systematic improvement of knowledge and skills, availability, ability to assess human behavior. Retired officers listed, for example: disciplined, responsible, independent in action, initiative, reliability, loyalty, commitment, determination to

achieve a goal, ability to work with people, ability to make decisions under time constraints, and awareness of the need to improve their knowledge and skills.

It is important to improve one's competence. Therefore, self-development plays an important role. Employment of an employee, in this case a retired officer, depends on his/her competence. The employer does not have to invest too much in the development of a former officer at the beginning of his career because a Polish Army officer has a unique potential. To support future retired officers or those who have already passed, additional training, courses can be offered to help them find their way in the new environment and find a suitable job.

One of the questions addressed to employers/supervisors concerned the characteristics that a retired officer has at work.

It should be noted that respondents could indicate more than one characteristic. The largest number of responses received such a feature as: independent (83,5%), effective (68,8%). Slightly fewer marked such a characteristic as definitely. The respondents also gave their suggestions. They included, among others, responsibility, showing initiative, ethical and moral attitude, goal orientation, creativity, decisiveness, dutifulness, availability, organization.

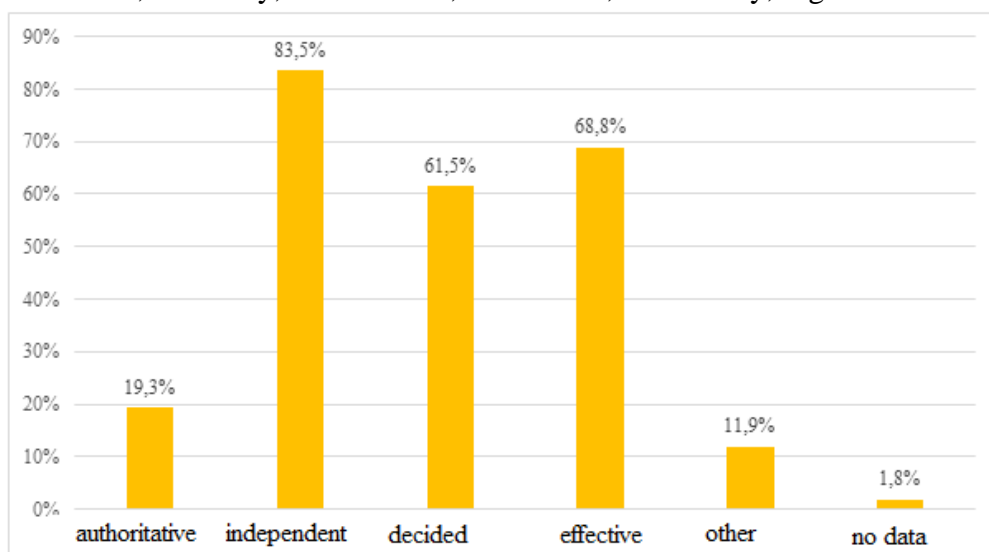


Figure 6. Characteristics of a retired officer at work according to the employer/supervisor. Source: own study based on own research.

The next figure shows the opinions of employers/supervisors regarding the impact of training/courses received while on active duty on the employment of a retired officer.

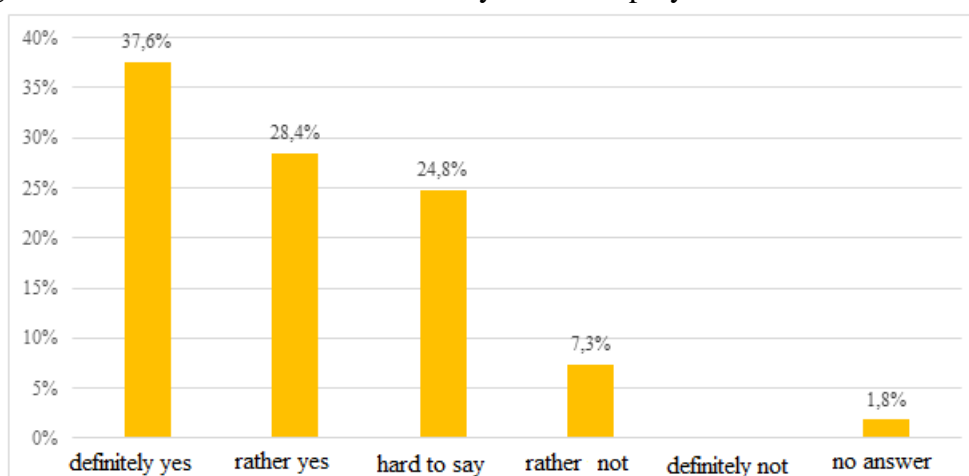


Figure 7. Employer/supervisor views on the impact of training/courses taken while on active duty on a retired officer's employment.

Source: own study based on own research.

According to the majority of respondents, training/courses by former officers had a definite impact on their employment. This shows that participation in training or courses by retired officers is important to future employers/supervisors and has a positive impact on the duties performed by former officers. An employee, who has taken multiple training courses or courses prior to employment and has increased their skills as a result, is a valuable resource to an organization.

Additionally, training or courses taken by retired officers are rare and therefore all the more valuable to potential employers. It is worth mentioning that gaining additional competences is, quite often, connected with high costs and retired officers are, for example, former officers with doctoral degree and those who know in detail how to properly manage people.

Figure 8 shows the respondents' responses on the importance of the work style, the culture elevated while serving in the Polish Army.

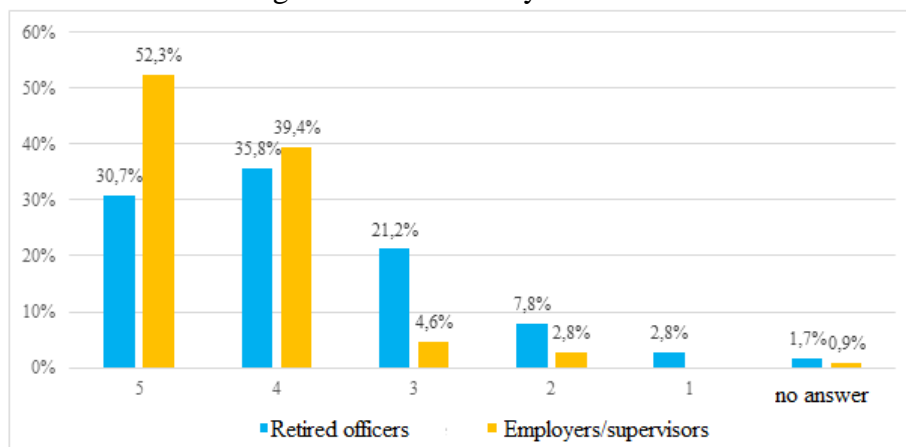


Figure 8. Respondents' views on the importance of culture and work style learned from the military while on duty according to retired officers and employers/supervisors.

Source: own study based on own research.

According to both groups of respondents, work style, culture is of great importance.

It can be seen that for more than half of the employers/supervisors it is definitely of great importance (52,3%). This can be evidenced by the fact that the skills brought from the military are an added value to the future organization, the new work environment in which the former officer will be employed. A retired officer is a disciplined person who operates according to specific procedures.

An officer of the Polish Armed Forces, in addition to commanding others, also listens to his superiors, cooperates in a group, but if the situation requires it, he acts individually. Orderly style of work, awareness of one's place in the hierarchy will only positively affect the performance of duties.

4. Conclusion

In the Polish Army, hierarchical culture has a significant impact on the functioning of this institution. Thanks to specific regulations, e.g. on the professional development system, officers of the Polish Army can acquire specialized knowledge and skills useful in a given official position. They also participate in trainings, courses that complement the already acquired knowledge. However, it is important to manage human resources in such a way that it is possible to develop the desired competencies of officers, while remembering to use their competence potential after leaving the service.

It is worth noting the importance of the culture and work style that is brought by a retired officer from the military. For most employers/supervisors it is definitely of greater importance than compared to the responses of retired officers. As already mentioned in the dissertation discipline, organization of time, knowing one's place in the hierarchy and responsibilities are valued by employers/supervisors.

Hard competences are very important, but compared to soft competences, they can be acquired, learned. Soft competencies cannot always be learned as quickly as knowledge, for example. It is especially this kind of competences that characterize a former officer, because it is difficult to find an employee, who knows how to work under time pressure, how to take responsibility for his decisions, and how to cooperate in a group or, if the situation requires it, also individually. It can be said that a large role is played by the organizational culture, which creates the above-mentioned qualities in the officers of the Polish Armed Forces.

As a result, having the so-called competent employee, which is an innovative solution, you can immediately go into action towards achieving the goals set by the organization, because you do not have to focus on the development of the former officer. He from the very „entrance” to the organization is ready to work.

It is also worth noting that the competencies acquired by officers during their service should be used more by state institutions and enterprises, where their experience and knowledge will certainly be of benefit to society. Also, it is important to help future retired officers to enter the civilian market, where they compete for employment and employers highly value the competence of a former officer in the economy. Therefore, consider expanding job opportunities to more closely match their potential. You can also enrich their capital through additional studies, interpersonal trainings or special programs that will allow them to complement the competencies already acquired. Thanks to that their potential enriched with additional qualifications will be more desirable in the civilian environment.

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**The Foreign Exchange Rate-Femicide Nexus in Turkey:
Evidence from the Cointegration Tests Based
on Nonlinear and Fourier Functions**

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Abstract:

The purpose of this study is to look at *femicide* from a different perspective, even though it may seem unrelated at first. Accordingly, it investigated the existence of a link between foreign exchange, which was a major cause of the crises and unemployment, and *femicide*, which was the outcome of violence against women other than murder. The data were acquired from the We Will Stop Femicide Platform and the Central Bank of the Republic of Turkey in light of the study's goal. According to the findings of the investigation, there is a long-term cointegrating association between the foreign exchange rate and *femicide* in Turkey. After 22.6 days, the deviation induced by a 1% change in the currency rate could be balanced. This study is notable for approaching *femicide* from a hitherto overlooked economic perspective, as well as demonstrating that exchange rate changes are “vital” in terms of non-economic reality and public health.

Keywords: femicide, foreign exchange rates, cointegration, fourier function, nonlinearity.

1. Introduction

Femicide is the outcome of a violent engagement that is the killing of a woman or a girl and the extreme and direct form of an interpersonal process. Researchers have suggested that femicide should be considered a specific issue of severe fact, which can be evaluated in a detailed and theoretical structure. Femicide was first used as a concept in 1801, referring to “the murder of a woman” [1]. It was legally recognized in 1848 and published in the Wharton Legal Dictionary, thereby appearing in the English legal terminology. Radford (1992) [2] made a special emphasis by saying, “You cannot mobilize against something with no name.” The fact that the violent deaths of individuals belonging to gender have reached non-negligible systematic dimensions has drawn all disciplines' attention. Hence,

studies have been initiated to establish a conceptual framework. When Diana Russel first used it at the International Tribunal for Crimes Against Women in 1976, the term femicide was added to the literature. Radford and Russell [3] later defined femicide as ‘the misogynistic killing of women by men.’ Furthermore, Radford underlined that femicide is a form of sexual violence. The term homicide, which refers to the murder of a human being, has been restricted with the term femicide [4], a theoretical concept referring to the murder of a woman [5]. Because of the growing number of occurrences, this phenomena has begun to be included in other languages. It has been referred to as “feminicide” in Spanish and “kadın cinayetleri” in Turkish. The term *gendercide* emerged in 1985 to describe the intentional annihilation of people of a particular gender [6].

Femicide is a sociological effort of apprehension that has been prosperous in converting traditional sense, communal cognizance, academic inquiry, and policymaking. This new word is used in the political context to understand women's violent deaths and create changes in the social order. It aims to prevent the confusion of women's violent deaths with the concept of murder, which does not discriminate between genders, draw attention that it is a crime in itself, and raise awareness [7]. Thanks to Radford and Russell [8] and Russell and Harmes [9], the term femicide evolved as a theoretic notion aimed at reversing the structuring forms of patriarchal power.

According to Ertürk [10], the female body is subjected to social control for the social groups to reproduce generations according to specific criteria. Violence against women has been normalized throughout the historical process and has become an “ordinary tool” used to maintain labor division between the genders. The data have demonstrated that this tool has been used all over the world. In particular, in cultures where women are of less worth and provided fewer rights than men, women are more vulnerable to the inevitable violence and death. Inequalities in the gender ratio and the relatively high number of males have potentially destructive outcomes for society [11].

Violence against women and girls is a major public health issue that affects one-third of the world's women (35.6 percent globally) and is a violation of human rights. Based on WHO’s data; 30 percent of women have been subjected to physical and/or sexual violence by their partner and 7.2 percent by someone who is not a partner. The prevalence estimates of violence are 23.2 percent in high-income countries, while in the Western Pacific Region, Eastern Mediterranean Region, and Southeast Asia Region, respectively; 24.6 percent, 37 percent, and 37.7 percent. It is seen that 38 percent of femicides, which are the last point of interpersonal violence, are committed by intimate partners [12].

Figure 1 presents the global scale of femicides. There is a great difficulty in accessing data on this sensitive matter, which requires a multidimensional approach. It necessary and of public interest to store the data and make it available to scientists. On the other hand, the available data belonging to the period after 1990 does not include some of the countries’ annual data or some of the data of many countries at all. According to available data, the number of women murdered in 2018 in the world is 82,227. Figure 2, which has been created based on the available data, presents the total global values revealing how the femicides have been deliberately and systematically committed.



Figure 1: Femicide around the world (2018)

Source: United Nations Office on Drugs and Crime (UNODC)

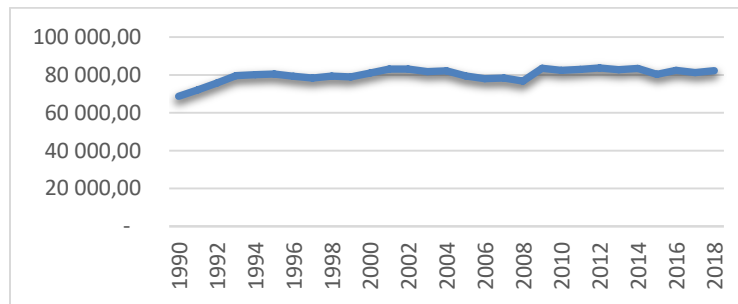


Figure 2: Global Femicide Rate Around the World (2018)

Source: Created by the Author

The increasing violence was associated with the destruction and dissolution resulting from globalization by Friedman [13]. And female movements against the increasing violence have become global and attracted attention. This multifaceted phenomenon requires multidisciplinary studies. According to the literature review, femicide has been studied regarding *i.* feminist, *ii.* sociological, *iii.* criminological *iv.* human rights and *v.* decolonial paradigms; however, it is observed that the investigation of the issue in terms of the economy has been neglected. However, economic conditions affect the psychology and behavior of individuals. Therefore, it is important to investigate femicide from a perspective based on the economy. To prevent future murders, it is vital to determine the causes of gendercide from different perspectives, take the necessary measures, and put the necessary policies into practice.

This study investigates the existence of a relationship between the foreign exchange rate, which has devastating effects when not taken under control, and femicide in Turkey, which has a chronic current account deficit and is dependent on short-term foreign capital. The current and advanced empirical analysis will be used in the study. Before investigating femicide in terms of economy, it would be appropriate to explain why the foreign exchange rate was selected by describing its effects on individuals. A foreign exchange rate is a crucial tool applied in Orthodox anti-inflationary stabilization programs. Its effects are not limited to international trade and capital flows. The policies implemented by the central banks and political authorities, whose primary purpose is to protect the national currency's value, affect all areas of life, starting with the economy. The foreign exchange rate policies implemented in Turkey are observed to be a significant cause of economic crises. The exchange rate, international trade, and unemployment have a linear relationship [14]. Besides, the foreign exchange rate, through imports and exports, impacts the labor market [15]. An increase in imports can affect the relationship between the employer and employee, thereby leading to the termination or change of various rights and regulations regarding wages, labor, and working conditions against the employees. Studies reveal that a 10 percent rise in competition between imported and domestic products results in a 1.6 percent decline in wages and an increase in the unemployment rate [16]. Also, it is known that currency crises have a significant impact on the unemployment phenomenon. For instance, both the foreign exchange rate and unemployment level increased in Mexico during the 1994 Crisis. In the 1997 Asian Crisis, the currency crisis in South Korea led to both unemployment and inflation [17]. Turkey experienced a process starting with the 1978 crisis, and particularly with the crisis created by the threat of unemployment after 1990. Since the establishment of the Republic, there have been five serious crises (1929-32, 1958-61, 1978-83, 1998-2001, and 2008). Before the crises, there have been increases in current account deficits. In 1977, 1987, 1990, 1993, 1997, 2000, and 2008, although the fact that the national currency's external value should have been corrected against the ongoing inflation problem, it was not reduced. Or, the national currency's external value was increased. All these were the factors

that increased the current account deficit. Currency explosions constituted the main factor that triggered the crises. In addition to inflation, the current account deficit is the leading cause of crises. Unemployment replaced inflation in the 2008 Global Financial Crisis [18]. The fluctuations of the foreign exchange rate were empirically presented in the study conducted for Turkey by Demir [19] regarding its negative effect on employment.

Recession, unemployment, and poverty caused by the crises adversely affect human psychology [20]. According to Olivera [21]; violence against women is associated with the rise of extreme poverty, unemployment, fragmentation of the peasant economy, and social polarization imposed by neoliberal policies on the poor. The level of violence against his wife and children increases by the man who has lost his job and whose income has decreased. The pressure created by the social division of labor that men have to support the house drives men who cannot fulfill this duty because of unemployment and poverty to violence more [22], [23]. In the case of long-term unemployment, men resort to violence due to mental tension and depression as a result of the decrease in the hope of finding a job [24]. Losing power and feeling helpless in socio-economic life, the man exerts violence on his wife and maintains his domination in the home and thus feels strong [25], [26]. Women who earn more income than their husbands have at least twice the risk of being subjected to violence. Two out of every three women in this situation are subjected to violence [27]. Studies show that women who are subjected to violence by their spouses point to unemployment and poverty as the cause of violence, and accept violence as a “normal domestic situation,” whereas, for men, unemployment and poverty serve as a tool to “normalize” violence against women and girls [28], [29], [30], [31], [32]. In a report published by the World Health Organization (WHO) during the days of the COVID-19 pandemic when the risk of violence against women increased, it is observed that the reasons for the increase of violence against women include unemployment, economic problems, prolonged staying at home and stress. The main reason for the increasing domestic violence is the predominant patriarchal order and gender inequality. According to several criminological theories, the long-term presence of the potential aggressor and victim in a specific socio-geographic area sets the foundation for violence [33].

Unemployment has been linked to family breakdowns, alcohol addiction, crime, and violence, according to a study that found a link between a 1% increase in the unemployment rate and the deaths of 37 thousand people, 920 suicides, 650 murders, 4 thousand hospitalizations in mental hospitals, and the imprisonment of 3.3 thousand people, over six years [34]. Empirical studies have demonstrated that the increase in unemployment [35], [36], [37], [38], [39], [40], [41], [42], [43] and income inequality [44], [45] increases crime rates.

Violence against women in Turkey, despite being a phenomenon seen in all socio-economic levels and all levels of education, are more frequent and widespread among the poor, low-educated, and those who do not have occupation [46], [47], [48].

In the studies conducted, it was found that women in lower-income groups were more likely to experience frequency of domestic violence than upper-income groups [49], [50]. Insomuch that, it has been found that women in lower-income groups are seven times more likely to experience domestic violence than women in upper-income groups [51]. Loss of socio-economic status brings about violence and oppression [52], [53].

Men in low socio-economic groups perceive unemployment and loss of income as a threat to male identity. Economically weakened men try to compensate for their socially shaken power with the pressure and violence they inflict on women and girls [54], [55], [56].

The devastation of livelihoods, the increase in male unemployment causes power structures and masculinity to become impotent. Violence against women and girls is on the rise as compensation for the loss of control of masculinity and it is going into crisis [57], [58].

The widespread use of flexible and insecure working patterns and high structural unemployment cause men to be unemployed. On the other hand, the level of anxiety of unemployed men about the responsibility of supporting and managing the house is increasing. The fact that the man

(can) not fulfill the role of supporting the household that is expected of him due to unemployment and poverty causes his power in the family to be shaken. Man increases his pressure to maintain his power and reestablishes his power by using violence “on weak individuals” [59], [60].

Low-income level, crowded households cause tension for men who are experiencing financial difficulties, the feeling of inadequacy caused by the man who is culturally expected to support the family not being able to do so, and the economic difficulties that lead to conflict between spouses, increase violence against women [61], [62]. Straus [63] found that families living below the poverty line were 50 percent more likely than wealthy families to experience violence against women.

In the short term, Nikolaos and Alexandros [64] found a negative association between wage and crime rate. According to Lombardo and Falcone [65], in regions with high divorce rates, youth unemployment, and female employment, the highest rates of crime are observed. Andresen [66] determined that the income had a significant and positive coefficient in the crimes of violence and mentioned that the level of unemployment had a significant and positive coefficient in the crimes of violence in the long run.

Low-income and insufficient income lead to mental tension; limited resources increase the risk of domestic violence; attacks of violence are more common among individuals who are unemployed or work in jobs with low dignity. It has been determined that the risk of domestic violence is doubled if the man has at least two of the stated factors; *i*) unemployed, *ii*) low-educated, *iii*) between the ages of 18-30, *iv*) using illegal drugs and *v*) inadequate family income [67].

Violence against women in the family increases when men with low socioeconomic status are unemployed or in irregular employment [68], [69]; Poverty and the inability to meet basic needs and especially unemployment cause male violence to become permanent in the family. Men with low socio-economic levels use physical violence against their wives and children more intensely. Unemployment and poverty create tension within the family and conflicts trigger violence [70]. Domestic violence is common and persistent in poor families. Also, poverty brings along the acceptance of violence [71]. Man maintains his dominance over women and in the family by using violence against women [72]. Taş et al. [73] discovered a similar link between unemployment and divorce rates. Kavaklı [74] discovered that femicide was predominantly committed in economically underdeveloped areas. Economic development mitigates the risk factor’s negative influence.

Although initially seemingly unrelated, exchange rate fluctuations and Femicide can be linked upon closer examination. Exchange rate fluctuations are often associated with economic crises. Especially in fragile economies like Turkey, which runs a current account deficit and is dependent on short-term foreign capital, exchange rate fluctuations can lead to economic crises. These crises, in turn, increase unemployment rates, cause income losses and economic uncertainty, and widen income inequality. Unemployment and economic uncertainty may increase the tendency towards violence, especially in men, by bringing along effects such as decreased hope of finding a job, mental tension and depression. In some studies in the literature, it is stated that men who are economically weakened tend to commit violence due to the feeling of powerlessness caused by the inability to comply with social expectations. The impact of economic factors on the increase in violence against women is of great importance. Poverty, unemployment and loss of income cause violence against women to be experienced more frequently and intensely, especially in families with low socioeconomic status. Women’s economic disempowerment may trigger the acceptance and continuation of violence.

There is a clear loop among crisis, unemployment, violence, and murder in light of all this information. This study, which aims to empirically investigate the existence of a relationship between systematic femicide and the exchange rate, an important trigger of crises, will first present the methodology and data sets used and explain the findings. Then, implications will be drawn based on these findings.

2. Methodology and Data

To analyze the existence of the nexus between the foreign exchange rate and femicide in Turkey, the daily *femicide* data belonging to the period between 1 January 2019 and 29 September 2020 were obtained from the We Will Stop Femicide Platform, and the data regarding the daily buying rates of US Dollar in the same period were obtained from the Central Bank of the Republic of Turkey (CBTR) Electronic Data Delivery System (EDDS) (Table 1). These data were examined through various analyses. The analyses consisted of 373 observations. Figures 3 and 4 present the distribution of variables. While an increase was observed in the foreign exchange rate during this process, a systematic “*gendercide*” was also prominent.

Variables	Abbreviation	Source
Femicide	Femicide	We Will Stop Femicide Platform
American Dollar, Buying Rate	Rate	CBTR

Table 1: Data Used in Analysis

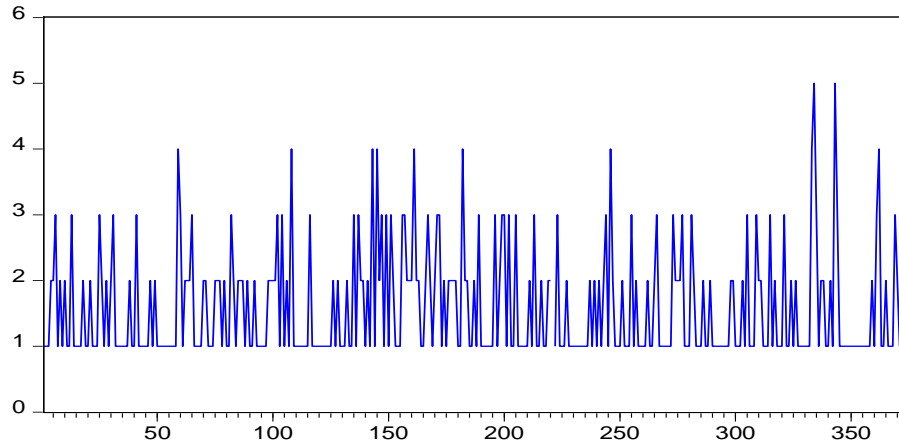


Figure 3: Femicide in Turkey (01.01.2019–29.09.2020)

Source: Created by the Author

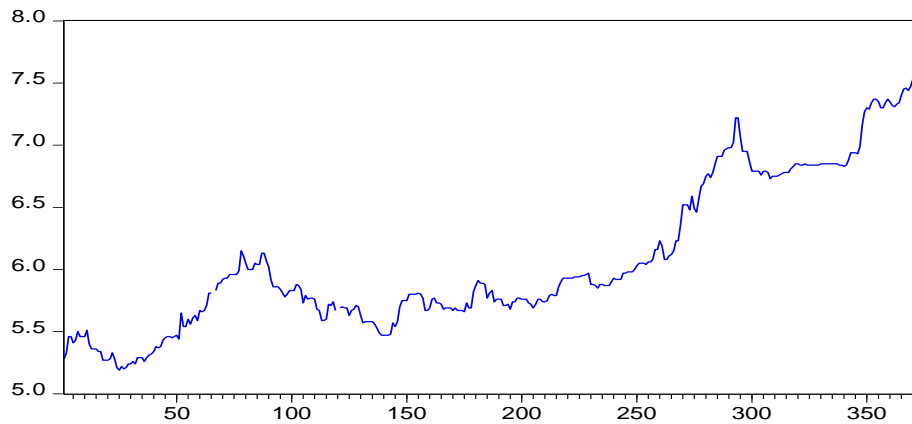


Figure 4: USD/TRY Buying Rate (01.01.2019–29.09.2020)

Source: Created by the Author

Is there a link between the national currency's depreciation and femicide? Before attempting to address this question, the series' linearity was tested using the Harvey and Leybourne [75] and Harvey, Leybourne, and Xiao [76] tests. The stationary tests were then carried out.

2.1. Tests for Linearity

Linearity tests of the series should be performed first since the linear analysis of the series exhibiting nonlinear behaviors would lead to the establishment of false models. Linearity Tests are structured upon the models based on smooth transitions typed the STAR (Smooth Transition Autoregressive). These tests are a priori test for the transition to the STAR type test. Unlike other tests, these tests, which were introduced to the literature by David Harvey, do not have any prerequisites. Considering the main advantage of not being affected by stationarity levels, Harvey and Leybourne [77] and Harvey, Leybourne, and Xiao [78]. Tests were administered for testing the linearity.

2.1.1. Harvey and Leybourne Test

This test, which was introduced to the literature by Harvey and Leybourne [79], does not make any assumptions, I_1 and I_2 it allows the coexistence of processes. This test has a structure with four degrees of freedom, where the following equation is used (1):

$$y_t = \beta_0 + \beta_1 y_{t-1} + \beta_2 y_{t-1}^2 + \beta_3 y_{t-1}^3 + \beta_4 \Delta y_{t-1} + \beta_5 (\Delta y_{t-1})^2 + \beta_6 (\Delta y_{t-1})^3 + \varepsilon_t \quad (1)$$

Equation 2 and Equation 3 demonstrate the null hypothesis representing linearity and the alternative hypothesis expressing non-linearity;

$$H_0 : \beta_2 = \beta_3 = \beta_5 = \beta_6 = 0 \quad (2)$$

$$H_1 : \beta_2 \neq \beta_3 \neq \beta_5 \neq \beta_6 \neq 0 \quad (3)$$

Test statistics of Harvey and Leybourne [80] are presented in Equation 4;

$$W_T = \frac{RSS_1 - RSS_0}{RSS_0/T} \quad (4)$$

$$W_T^* = \exp(-b|DF_T|^{-1})W_T \quad (5)$$

In these equations (Equation 4-5), b indicates the non-zero constant, DF_T indicates the standard ADF t statistics derived from the restricted regression, T indicates the number of observations, RSS_1 , indicates the total of squares of the error term for the H_1 hypothesis. The Harvey and Leybourne [81] test statistics are suitable for the distribution of χ_4^2 .

2.1.2. Harvey, Leybourne & Xiao Test

The Harvey, Leybourne, and Xiao [82] Linearity Test, which was developed by enhancing and strengthening the Harvey and Leybourne [83] Test, reviews the state of stationarity and I_1 separately. It has a structure with two degrees of freedom.

To analyze the basic hypothesis of linearity (Equation 6) compared to the alternative hypothesis indicating the nonlinearity (Equation 7), it is suggested to use Equation 8;

$$H_0 : \beta_2 = \beta_3 = \beta_5 = \beta_6 = 0 \quad (6)$$

$$H_1 : \beta_2 \neq \beta_3 \neq \beta_5 \neq \beta_6 \neq 0 \quad (7)$$

$$y_t = \beta_0 + \beta_1 y_{t-1} + \beta_2 y_{t-1}^2 + \beta_3 y_{t-1}^3 + \sum_{j=1}^p \beta_{4,j} \Delta y_{t-j} + \varepsilon_t \quad (8)$$

Equation 8 can be reorganized using the first-order Taylor expansion, and it can be written as Equation 9;

$$\Delta y_t = \lambda_1 \Delta y_{t-1} + \lambda_2 (\Delta y_{t-1})^2 + \lambda_3 (\Delta y_{t-1})^3 + \sum_{j=1}^p \lambda_{4,j} \Delta y_{t-j} + \varepsilon_t \quad (9)$$

In Equation 9, p indicates the number of delays, and Δ indicates the difference operator. The (W_0) test statistics, which are calculated for stationarity, and the (W_1) test statistics, which are calculated for nonstationarity, are calculated by using the Harvey et al. [84] W_λ test statistics. They conform with the distribution of $W_\lambda x_2^2$.

2.2. Nonlinear Unit Root Tests

Following the determination of the nonlinearity, the unit root tests produced from nonlinear models were performed.

2.2.1. Leybourne, Newbold and Vougas (LNV) Unit Root Test

Leybourne, Newbold, and Vougas (LNV) [85], who suggested gradual integration of structural changes to the model with a smooth transition instead of instantaneous integration, developed a unit root test as an alternative to the unit root tests with structural breaks. This test, in which structural breakage is taken into account with a logistic function, allows smooth structural transitions and constitutes the beginning of nonlinear tests. Logistic soft transition regressions were created by defining three models;

Model A

$$y_t = \alpha_1 + \alpha_2 S_t(\lambda, \tau) + v_t \quad (10)$$

Model B

$$y_t = \alpha_1 + \beta_1 t + \alpha_2 S_t(\lambda, \tau) + v_t \quad (11)$$

Model C

$$y_t = \alpha_1 + \beta_1 t + \alpha_2 S_t(\lambda, \tau) + \beta_2 t S_t(\lambda, \tau) + v_t \quad (12)$$

In the models, the $S_t(\lambda, \tau)$, indicates the logistic smooth transition, which is presented in Equation 13. In this logistic function, τ defines the midpoint of the transition process, and γ determines the transition speed. Where $\gamma > 0$, $S_{-\infty}(\gamma \tau) = 0$, $S_{+\infty}(\gamma \tau) = 1$ and $S_\tau(\gamma \tau) = 0.5$. If γ is smaller, it would take longer for the logistic smooth transition of $S_\tau(\gamma \tau)$ to exceed the interval (0,1). If $\gamma = 0$, $S_\tau(\gamma \tau) = 0.5$ at all t moments. If γ is greater, $S_\tau(\gamma \tau)$ would exceed the (0,1) interval rapidly. If γ converges to $+\infty$, the function's value changes from 0 to 1 momentarily at $t = \tau T$.

$$S_t(\gamma, \tau) = [1 + \exp \{-\lambda(t - \tau T)\}]^{-1} \quad (13)$$

v_t is the expression of the stationary process with a mean of zero. Hence, the Y initial value for Model A is stationary around a mean that gradually changes between α_1 and $\alpha_1 + \alpha_2$. Similar to Model A, there is also a mean gradual change in Model B between α_1 and $\alpha_1 + \alpha_2$; however, unlike Model A, there is a constant trend term in Model B. In Model C, the constant ranges from α_1 to $\alpha_1 + \alpha_2$, and the trend

ranges from β_1 to $\beta_1 + \beta_2$ gradually, only once, and at the same speed and time. In this test, there is a constraint that the constant and trend transitions occur at the same time and the same speed.

There are two phases for calculating the test statistics. In the first step, using the Nonlinear Least Squares (NLS), the appropriate model is estimated only with deterministic components, and the residuals are obtained;

Model A

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\alpha}_2 S_t(\hat{\lambda}, \hat{\tau}) \quad (14)$$

Model B

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\beta}_1 t - \hat{\alpha}_2 S_t(\hat{\lambda}, \hat{\tau}) \quad (15)$$

Model C

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\beta}_1 t - \hat{\alpha}_2 S_t(\hat{\lambda}, \hat{\tau}) - \hat{\beta}_2 t S_t(\hat{\lambda}, \hat{\tau}) \quad (16)$$

After the residuals are obtained, the ADF regression is established in the second phase, and the unit root test is performed over this regression (Equation 17).

$$\Delta \hat{v}_t = \delta \hat{v}_{t-1} + \sum_{i=1}^p \psi_i \Delta \hat{v}_{t-i} + \varepsilon_t \quad (17)$$

$$H_0: \delta = 0 \quad (18)$$

$$H_1: \delta < 0 \quad (19)$$

The hypotheses to be established in the analysis of the unit root are presented in Equation 18 and Equation 19. This test is performed by testing the statistical significance of $\hat{\rho}$ using the t-test.

2.2.2. Harvey and Mills (HM) Unit Root Test

The unit root test based on soft transition, created by Leybourne, Newbold, and Vougas [86], was extended to two soft transitions and introduced to the literature by Harvey and Mills [87]. Three models were also created for this test;

Model A

$$y_t = \alpha_1 + \alpha_2 S_{1t}(\lambda_1, \tau_1) + \alpha_3 S_{2t}(\lambda_2, \tau_2) + v_t \quad (20)$$

Model B

$$y_t = \alpha_1 + \beta_1 t + \alpha_2 S_{1t}(\lambda_1, \tau_1) + \alpha_3 S_{2t}(\lambda_2, \tau_2) + v_t \quad (21)$$

Model C

$$y_t = \alpha_1 + \beta_1 t + \alpha_2 S_{1t}(\lambda_1, \tau_1) + \beta_2 t S_{1t}(\lambda_1, \tau_1) + \alpha_3 S_{2t}(\lambda_2, \tau_2) + \beta_3 t S_{2t}(\lambda_2, \tau_2) + v_t \quad (22)$$

While there are two transitions for mean in Model A and Model B, unlike Model A, there is a fixed trend in Model B. Model C allows two transitions in both mean and trend.

In the models, $S_{it}(\lambda_i, \tau_i)$ indicates the logistic smooth transition, which is presented in Equation 23. The error term, v_t is the expression of the stationary process with a mean of zero.

$\tau_1 T$ and $\tau_2 T$, indicate the middle points of the transition process; γ_1 and γ_2 indicate the transition speeds. The difference in transition speeds is allowed.

$$S_{it}(\lambda_i, \tau_i) = [1 + \exp \{-\lambda_i(t - \tau_i T)\}]^{-1} \quad \lambda_i > 0, i = 1, 2 \quad (23)$$

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\alpha}_2 S_{1t}(\hat{\lambda}_1, \hat{\tau}_1) - \hat{\alpha}_3 S_{2t}(\hat{\lambda}_2, \hat{\tau}_2) \quad (24)$$

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\beta}_1 t - \hat{\alpha}_2 S_t(\hat{\lambda}_1, \hat{\tau}_1) - \hat{\alpha}_3 S_{2t}(\hat{\lambda}_2, \hat{\tau}_2) \quad (25)$$

$$\hat{v}_t = y_t - \hat{\alpha}_1 - \hat{\beta}_1 t - \hat{\alpha}_2 S_t(\hat{\lambda}, \hat{\tau}) - \hat{\beta}_2 t S_t(\hat{\lambda}, \hat{\tau}) - \hat{\alpha}_3 S_{2t}(\hat{\lambda}_2, \tau_2) - \hat{\beta}_3 t S_{2t}(\hat{\lambda}_2, \hat{\tau}_2) \quad (26)$$

$$\Delta \hat{v}_t = \delta \hat{v} + \sum_{i=1}^p \psi_i \Delta \hat{v}_{t-i} + \varepsilon_t \quad (27)$$

The hypotheses to be established in the analysis of the unit root are presented in Equation 28 and Equation 29.

$$H_0: \delta = 0 \quad (28)$$

$$H_1: \delta < 0 \quad (29)$$

Using the two-step technique proposed by Leybourne, Newbold, and Vougas [88], unit root testing can be achieved. The t statistics of ρ obtained by the classical least squares method of estimation is used as the test statistics.

2.3. Cointegration Tests

The Kapetanios, Shin and Snell (KSS) [89] Cointegration Test from the nonlinear cointegration tests, and the Banerjee, Arčabić and Lee [90] Fourier Cointegration Test from the cointegration tests based on Fourier functions, which were used in the analysis, were explained in this part.

2.3.1. Kapetanios, Shin and Snell (KSS) Cointegration Test

Kapetanios, Shin, and Snell (KSS) [91] enhanced the Engle-Granger Cointegration Test and introduced it to the literature by applying this test to nonlinear models. The alternative hypothesis stating that there is a nonlinear long-term relationship between the variables is tested against the basic hypothesis stating that there is no cointegration relationship.

The KSS Test, in which a smooth transition is modeled using a logistic function, can be used for the variable series of *raw data*, *demeaned data*, and *detrended data*.

$$\Delta y_t = \phi u_{t-1} + \gamma u_{t-1} (1 - e^{-\theta(u_{t-1}^2)}) + \psi' \Delta x_t + \sum_{i=1}^p \omega'_i \Delta z_{t-i} + \varepsilon_t \quad (30)$$

$$\Delta x_t = \sum_{i=1}^p \Gamma'_i \Delta z_{t-i} + \eta_t \quad (31)$$

$$\hat{u}_t = \hat{y}_t - \hat{\beta}'_x x_t \quad (32)$$

$$\Delta y_t = \delta_1 \hat{u}_{t-1} + \delta_2 \hat{u}_{t-1}^2 + \delta_3 \hat{u}_{t-1}^3 + \psi' \Delta x_t + \sum_{i=1}^p \omega'_i \Delta z_{t-1} + \varepsilon_t \quad (33)$$

$$H_0: \delta_1 = \delta_2 = \delta_3 = 0 \Rightarrow F_{NEC} \quad (34)$$

$$\Delta y_t = \delta_1 \hat{u}_{t-1} + \delta_3 \hat{u}_{t-1}^3 + \psi' \Delta x_t + \sum_{i=1}^p \omega'_i \Delta z_{t-1} + \varepsilon_t \quad (35)$$

$$H_0: \delta_1 = \delta_3 = 0 \Rightarrow F_{NEC}^* \quad (36)$$

2.3.2. Banerjee, Arčabić and Lee Fourier Cointegration Test

This test, which was introduced to the literature by Banerjee, Arčabić, and Lee [92], is a typical cointegration test expanded in Fourier terms that takes the delayed structures of both dependent and independent variables into account. The test is logically based on error correction. As presented in Equation 37 and Equation 38, the test includes constant and trend terms, the delayed value of the independent variable, and the value of its level in the previous period.

$$\Delta y_t = \alpha + \gamma_1 \sin\left(\frac{2\pi kt}{T}\right) + \gamma_2 \cos\left(\frac{2\pi kt}{T}\right) + \delta y_{t-1} + \psi' x_{t-1} + \theta' \Delta x_t + \varepsilon_t \quad (37)$$

$$\Delta y_t = \alpha + \beta_t + \gamma_1 \sin\left(\frac{2\pi kt}{T}\right) + \gamma_2 \cos\left(\frac{2\pi kt}{T}\right) + \delta y_{t-1} + \psi' x_{t-1} + \theta' \Delta x_t + \varepsilon_t \quad (38)$$

$$H_0: \delta = 0 \quad (39)$$

$$H_1: \delta < 0 \quad (40)$$

The equation is used to test whether the coefficient (δ) before the variable of y_{t-1} is equal to or less than zero. To put it another way, there is no cointegrating relationship in the null hypothesis, and the alternative hypothesis suggests the existence of a cointegrating relationship. What we need to do is to estimate this model and y_{t-1} test the coefficient before the variable.

3. Empirical Results

This part presents the empirical findings obtained by performing the tests described in the methodology and dataset parts. The linearity test results of the series are reported in Table 2.

Variable	Harvey & Leybourne (2007)	Critical Value	Result
Femicide	11.57	5.991465	H ₀ Rejected
Rate	52.72	5.991465	H ₀ Rejected
Variable	Harvey, Leybourne & Xiao (2008)	Critical Value	Result
Femicide	9.51	9.487729	H ₀ Rejected
Rate	3.49	9.487729	H ₀ cannot be rejected

Table 2: Linearity Test Results

According to the results of both tests, there is nonlinearity in the femicide series. In the foreign exchange rate series, there is nonlinearity, according to the Harvey and Leybourne [93] Test, and linearity, according to Harvey, Leybourne, and Xiao [94] Test. Following the determination of the nonlinearity of the series in the linearity tests, the stationarity of the series was tested using nonlinear unit root tests. In Table 3, the findings of the analysis are presented.

Variables	Leybourne, Newbold & Vougas (LNV) Unit Root Test	Critical Value	Result
Femicide	-1.90520	4.825	H ₀ can not be rejected. Unit root.
Rate	-0.46622	4.825	H ₀ can not be rejected. Unit root.
Variables	Harvey & Mills (HM) Unit Root Test (2002)	Critical Value	Result
Femicide	-2.19824	6.01	H ₀ cannot be rejected. Unit root.
Rate	-1.55240	6.01	H ₀ cannot be rejected. Unit root.

Table 3: Stationarity Tests with Nonlinear Unit Root Tests

ADF			
Variables	T-Statistics	%1, %5, %10	Result
Femicide	-15.035	-3.9837, -3.4223, -3.1340	Unit Root
Rate	-16.651	-3.9834, -3.4222, -3.1339	Unit Root
PP			
Variables	T-Statistics	%1, %5, %10	Result
Femicide	-259.7058	-3.9832, -3.4221, -3.1339	Unit Root
Rate	-16.58659	-3.9834, -3.4222, -3.1339	Unit Root

Table 4: Stationarity Tests with Traditional Unit Root Tests

To confirm that the series that were determined to have unit roots by nonlinear unit root tests (Table 3) are stationary in I_1 , the ADF and PP tests were applied by taking their first differences (Table 4). Following the determination of the stationarity of the series at I_1 , cointegration tests were performed.

F Statistic	Critical Values	Result
15.24	15.07	H ₀ Rejected

Table 5: Kapetanios, Shin and Snell (KSS) Cointegration Test Results

According to the results of the Kapetanios, Shin, and Snell (KSS) [95] Cointegration Test, a long-term synchronized relation was found between the foreign exchange rate and *femicide* (Table 5). Due to the provision of the precondition, which was the determination of the cointegrating relationship, the short-run causality test was performed;

Prob.	Error Correction Coefficient	Result
0.17748550	0.044197075	H_0 can not be rejected*

*0.17748550>0.05.

Table 6: Kapetanios, Shin and Snell (KSS) (2006) Causality Test Result

In the short run, no causality was determined from the exchange rate towards *femicide*. Based on the error correction coefficient (ECC), the system's rebalance ratio can be calculated by dividing the ECC by "1" (1/0.044197075). This value demonstrates that the deviation caused by a 1 percent shock in the foreign exchange rate can be balanced after 22.6 days (Table 6).

F Statistic	Critical Values	Result
-15.61680	4.27	H_0 Rejected

Table 7: Banerjee, Arčabić and Lee (2017) Fourier Cointegration Test Result

As a result of the Banerjee, Arčabić, and Lee [96] Fourier Cointegration Test, one of the cointegration tests based on Fourier functions, long-run cointegration was found between the foreign exchange rate and *femicide* (Table 7).

4. Conclusion

The current living conditions of individuals and their economic status affect their psychology and behavior. Therefore, it is very imperative to investigate the widespread and systematic violence and murders of women from an economic perspective, as well as the feminist, sociologic, criminologic, civil rights, and decolonial frameworks. It is also necessary to investigate the effects of macro-economic phenomena on the vigorous deaths of women and shape the monetary and fiscal policies based on the findings to prevent future murders.

Violence and murder of women and girls have an economic cost that cannot be measured and ignored. This cost is the loss of production, labor force, and income on a macro basis. Unemployed/prevented (and even killed) female labor potential causes a loss in the growth rates of countries. Each individual has a consumption process that starts before birth and continues as long as he/she lives. The transformation of consumption into production is important for all economies. The fact that women, who make up half of the world population, cannot find a place in employment and other fields is against all individuals and all societies and is not understandable. Political authorities and policy-makers need to shape the society with this perspective, away from individual power struggles.

This *matter*, which has turned into a serious public health problem, requires global multidisciplinary studies. Globally harmonized – based on gender equality – policies should be developed by identifying causes, costs, and potential risk factors. Rather than imposing certain groups' norms in the healthy reproduction and shaping of societies, the use of harmonized human rights, law, and scientific-based global norms is necessary on behalf of all humanity and behalf of countries. Women and girls who are subjected to violence and victims of sexual violence are not responsible for violence and *femicide/gendercide*, contrary to what some people think, perpetrators and policy-makers are responsible for the violence against women and girls and *femicide/gendercide*. All experiences are the results of the choices. For instance, as Ertürk [97], pointed out, the allocation of available resources to defense and military expenditures leads to the neglect of social development and human rights while

bringing about an increase in poverty and violence. Disintegrations and fragmentation experienced, destroyed livelihoods lead to an increase in male unemployment in some areas. Losing socio-economic status and the balance of power are tried to be compensated in the form of violence against women and girls.

As mentioned by Engelen et al. [98], based on the findings of their study, the significant and strong deterrent effect of the increase in the probability of being caught and punished should be benefitted from. Nonetheless, it is also possible to identify the factors that trigger these criminal elements and prevent them with appropriate policy practices. For this reason, it is necessary to investigate the phenomenon of violence and murder against women and girls in terms of the economy. The purpose of this study carried out from this point was to examine the existence of a relationship between the foreign exchange rate and *femicide*. The reason for choosing the foreign exchange rate among various variables to carry out the study was that exchange rates were one of the triggers of many crises. Crises lead to unemployment and poverty. The increase in the foreign exchange rate in Turkey, which has a chronic current account deficit and is dependent on foreign capital, affects various socio-economical factors in addition to growth and employment. The data on *femicide* required for conducting this study was not available; eventually, support was requested from a non-governmental organization. The daily data on *femicide* and US Dollar buying rates belonging to the period between 1 January 2019 and 29 September 2020 were obtained from the We Will Stop Femicide Platform and the Central Bank of Turkey. Various econometric analyses were performed on these data. Based on the findings of the analyses,

- A long-run cointegrating relationship was found between foreign exchange rate and *femicide*.
- It was determined that the deviation caused by a 1 percent shock in the exchange rate could reach the balance after 22.6 days.

Based on these results, maintaining the fluctuations in exchange rates under control and ensuring that they remain within a specific range is important regarding the value of the national currency, foreign trade, growth, and employment, and also in terms of preventing deaths of women and girls. This research is a contribution to the literature as it is *the first study* to reveal this subject matter empirically using current and advanced analyzes. The independence of the Central Banks, whose main task is to protect the national currency's value, and the implementation of correct policies in this direction is of *vital* importance. Policymakers have important responsibilities in preventing violence and murder of women and girls, which have become widespread and legitimized by discourses and policies. It is essential to carry out future studies investigating widespread and systematic violence against women and girls and *femicide* from an economic perspective.

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