

Conscientious Objection as a Human Right: A Logico-anarchist Approach

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1 Introduction

1.1 Traditional Approaches to Conscientious Objection

This paper deals with the notion of conscientious objection at a meta-level. This restriction implicitly requires that the social or political discourse on conscientious objection will intentionally be omitted along these lines as such discussions belong to the object-level of the theory. In these discussions, while considering the notion of CO (we will abbreviate the term “conscientious objection” as CO henceforth), the usual approach is to theorize which individuals can be considered conscientious objectors and against what the act of CO can be raised. In other words, when discussing the issues related to CO, social and political sciences usually aim at determining the *domain* of the “conscientious objectors” and the “organizations/institutions against which the act of CO can be carried out”, *i.e.* who is a conscientious objector and what makes him a conscientious objector?¹ The size of such sets varies from country to country according to their respective legislations and it can also be claimed that some of such sets are empty in some countries. Furthermore, the process to determine whether a particular person is a member of any of such sets can be extremely difficult in some countries, and rather straightforward and immediate in some others. However, the entire endeavor of social and political sciences on CO can easily be reduced to an effort of defining or determining the boundaries of such social or political groups and individuals.

Yet another approach to the subject is to theorize the idea that CO should be recognized as a human right and thus should be decriminalized. Supporters of

¹Schinkel's book provides an extensive outlook of the problem of conscience and conscientious objection [Schinkel, 2007]. After an elaborate introduction of the moral issues related to CO, he asks: “How do we identify a certain case as a case of conscientious objection?” and discusses the theoretical issues related to this question. His approach however is rather philosophical.

Cohen gives a notable account of CO from a philosophical point of view, too [Cohen, 1968]. He starts by noting the following.

Conscientious objection deserves more reflective attention than it generally gets; I want to help correct this deficiency. (...) I hope to make conscientious objection more deeply and accurately understood. With such understanding, those who contemplate conscientious objection for themselves can (given an awareness of their own beliefs) act more consistently and intelligently, while those who witness conscientious objection by others can better appreciate the essential nature of that conduct.

Similarly, Childress discusses the term “conscientious objection” [Childress, 1979]. He emphasizes the following.

My concern is with what we might call “conscientious objection” (broader than objection to participation in war), or what John Rawls calls “conscientious refusal”. What is involved in a person's description and evaluation of his own or others' acts as “conscientious”? What should our public policy be toward those who appeal to their conscience when they violate customs, established expectations, and laws?

Then, Childress discusses the ethical issues related to CO.

Another approach to the subject was presented by Wiberg [Wiberg, 1985]. His main argument can be summarized as follows: “if it is possible to justify conscientious objection on deontological grounds, then it must necessary be the case even on some teleological grounds.”. Starting from this point, Wiberg explores CO from both stands and exhibits the claimed connection between two.

this idea claim that legal recognition should be the aim of CO movements as it is the only realistic goal in terms of attainability. However, since the CO movement, by definition, is an antimilitarist movement, supporters of this idea seem to overlook the principal goal of the antimilitarist movements: dissolution of the armed forces independent from the existence of conscription. Legal recognition demands a regulation for conscription and it does not direct any criticism towards the very existence of the armed forces.

There are several other underlying reasons for us to disagree with this position. The first is the fact that CO is essentially a *civil disobedience* act, thus cannot consistently be justified legally. Cohen agrees with our point here [Cohen, 1966]. He remarks the following.

It follows from the nature of civil disobedience that it cannot be given a *legal* justification. The law cannot justify the violation of the law.

Thus, being an instance of civil disobedience, CO itself cannot be legally justified according to Cohen with whom we agree². In order to not to diverge more from our current focus, let us leave it to the reader to convince himself by consulting Cohen's original paper³.

The second reason for us not to agree with the shift of CO movements for legal recognition of the right to CO is the fact that not all CO movements act within the legal borders and demand a change in the legal system *per se*. Therefore, the legal aspect of the CO movement is only one of its aspects, and thus the entire movement cannot (and perhaps should not) be reduced to only one aspect (unless this reduction is proved to be a one-to-one mapping). The third reason is the focus of this paper.

1.2 Our Approach

We have one clear and narrow focus in this work. How can we give a formal account of the recognition of CO as a basic human right? We will argue that any universal recognition of CO as a basic human right *cannot* be justified on the basis of the definition of CO. In order to be able to achieve this, we will make use of elementary level predicate logic and then express the definition of CO in that logic. Then, as the crucial point of this work, we will assume that CO is a universally recognized human right. This assumption will have no sociological,

²Cohen's remark implicitly assumes that the law is consistent. Thanks to R. Parikh to underline this point.

³One activist strategy which has been used in various movements is to "keep breaking the law" even after some rights are recognized legally. In other words, such movements think that "there is always a point which has not yet been legally recognized" and thus direct their civil disobedience actions towards this point. For example, when conscription was abolished in some countries, CO movements in these countries were perhaps expected to dissolve. However, they then refocused their attention to the *active soldiers* who currently have no rights or whatsoever regarding CO. Therefore, these movements tried hard to encourage active soldiers to use their non-recognized right to object the war, and perhaps then to leave the armed forces. This has been a very significant shift and thus proved the persistency and consistency of such movements.

political or legal relevance here - as we are now in meta-level and abstracted ourselves from such concerns and try to pursue a formal investigation⁴.

What can logic provide then? The use of mathematical apparatus to analyze the concepts may seem circular or even *ad hoc* at first glance. This is perfectly fine with our point of view in this paper. We do not claim that the use of logic will provide something genuine, or clarify the ontological status of a notion which might be needed to analyze CO. Our goal is rather descriptive, and thus involves basic logical operations to manipulate and clarify the concepts. There are several reasons why we need such an approach.

One of the very first reasons is rather pragmatic. Our approach is influenced and perhaps based on the recent evolution of the CO movements all over the world. A closer look at the local or national CO movements (especially in Europe) will reveal the fact that there occurred an immediate and significant decrease in the activities of such groups just after the legal recognition of the right to CO. For instance, being a post-fascist country, Spain exhibits a very special case for this [WRI, 2005]. Therefore, the unpredictable future of the movement, especially in the countries where conscription was abolished and fully professional armies were introduced, motivated this work deeply⁵. Thus, in our opinion, the demand of legal recognition of CO should be widely discussed both in formal and social contexts. This will hopefully clarify such fragile issues for the weakening movements, and perhaps provide some inspiration for them, too.

The second reason why we employ formal tools to analyze CO is the clarity that logic provides. The logical clarity and formalism, we believe, will provide an accurate and a deeper understanding of the concept. However, the opponents of this idea may claim that the specific logic which we choose to employ might make a significant difference. The symbolic tools, they might point out, alter from one logic to another. We believe that this is an entirely sound point of view. For this reason we will use the most common and perhaps the most intuitive logic, namely the first-order predicate logic, for our purposes in order to avoid such criticism. Some may further object by maintaining that logic by itself is far from being sufficient to formalize the social events, actions and procedures. Law and language for instance, they may claim, are human activities which may not necessarily follow universal and predefined logical patterns. Philosophical literature provides various examples for the cases where syntactic meaning and intended meaning of some well formed statements differ. This is clearly a logical issue, and furthermore this is the approach we take here, too⁶.

⁴Clearly, in socio-political contexts, our assumption is shallow and meaningless as numerous organizations struggle to have the legal right to CO granted in local and international level. For the sake of our arguments, we just *assume* that right to CO is a universally recognized human right - either granted after a legal struggle or after a socio-political campaign.

⁵However, some of the CO movements managed to refocus their activities by working on issues as CO of active soldiers etc. USA represents a familiar example in this case. Israeli CO movements, on the other hand, focus on both aspects: CO of conscripts and officers.

⁶Grice, as it is stated in [Davis, 2008], was the “first to systematically study cases in which what a speaker means differs from what the sentence used by the speaker means”.

Let us follow from [Davis, 2008]:

Consider the following dialogue.

However, most of these objections can be discarded when one consults the vast body of literature on social choice theory and game theory which deals with formalizing social phenomena - sometimes even with incomplete information. We do not assert that logic is necessarily and completely sufficient to express human actions; on the other hand, we do not subscribe ourselves to the idea that logic is too weak to express any aspect of human actions and social interactions either⁷.

The third reason is the current tendency in academic research to employ mathematical methods in social sciences and our aspiration to make a contribution to these works. Clearly, this is not independent from our second reason in the sense that the mathematical method we will use along these lines is logic.

As we mentioned earlier, this paper focuses on the relation between CO and human rights from a formal point of view. However, we are more ambitious than this. We intrinsically believe that CO is *per se* an anarchist act⁸. The act itself is against the authority by definition, and in most actual cases, comes along with the refusal to participate to other militarist state duties including civil service as an alternative to conscription or noncombatant military service as an alternative to combatant military service. Thus, starting off with an instance (or we rather would like to call it *an application*) of anarchism, we will then proceed to the idea of anarchism itself. Our global aim is to make some small contributions to the discussions on the logical status of anarchism by exploring the self-evidentiality and formal definability of it.

The organization of the paper is as follows. First, we will indicate which definition of CO we will adopt for our purposes. Then, we will provide a basic introduction to the first-order logic which is the logic we will employ throughout the discussion. These constructions will set the basis of our argumentation. Next, we will utilize the formal logical tools to analyze the problem, and consequently suggest some solutions. In the last part, we will discuss whether this approach of ours can be used to examine the formal basis of anarchism - which covers antimilitarist CO acts and ideas by definition.

Alan: Are you going to Paul's party?

Barb: I have to work.

If this was a typical exchange, Barb meant that she is not going to Paul's party. But the sentence she uttered does not mean that she is not going to Paul's party. Hence Barb did not say that she is not going, she implied it. Grice introduced the technical terms *implicate* and *implicature* for the case in which what the speaker meant, implied, or suggested is distinct from what the speaker said. Thus Barb implicated that she is not going; that she is not going was her implicature. Implicating is what Searle called an indirect speech act. Barb performed one speech act (meaning that she is not going) by performing another (meaning that she has to work).

An acclaimed work, on the other hand, suggests a modal logical tool, namely *dynamic predicate logic*, to solve the issues stem from such observations [Stokhof and Groenendijk, 1991].

⁷In of the primary works on this research area, Parikh argues about the necessity of using mathematical methods (such as game theory) to reason about social situations [Parikh, 2002].

⁸However, we are very well aware of the fact that not all of the objectors define themselves as anarchist and participating to an anarchist act does not *make* them anarchist. But, this is not our concern here.

2 Conscientious Objection

2.1 Definition

We will state the definition of conscientious objector asserted by *Amnesty International*. We chose this definition since it is one of the definitions which itemizes the largest number of arguments for refusal and, therefore encloses the largest number of cases which could be considered CO. Some other definitions can also be examined for our purposes. However, choosing some other definition will not alter neither of the results we will obtain in this paper⁹.

Let us now start by considering the *Amnesty International* definition. It reads as follows.

Definition 1 (by Amnesty International, [AI, 2007]). A person who for reasons of conscience or profound conviction arising from religious, ethical, moral, humanitarian, philosophical, political or similar motive refuses to perform armed service or any other direct or indirect participation in wars or armed conflicts.

This definition describes *conscientious objectors*. Therefore, the action that these persons took is then called *conscientious objection*¹⁰.

We will not discuss the sociological, psychological, political and philosophical issues that can be raised based on the Definition 1 for the reasons we spelt out above¹¹. We will, therefore, take this definition for granted. It would be

⁹One of the canonical definitions for conscientious objector is given by the *Oxford Dictionary*. It reads: “one who refuses to conform to the requirements of a public enactment on the plea of conscientious scruple; esp. such an objector to military service” [Oxford, 1989].

Schinkel states several definitions from the Dutch literature [Schinkel, 2007]. They read “We speak of conscientious objection when someone feels compelled in conscience not to fulfill a legal obligation. Conscience then incites to inaction.” and “A conscientious objection is an objection (...) that an individual has an action that is required of him, because he feels obliged in conscience to act otherwise in the concrete situations.”. Observe that the structure of such definitions are rather different. These two definitions draw a rather broad and perhaps vague borderline for the concept. Nevertheless, the vagueness of these definitions simply prevented us from discussing them.

Furthermore, United Nations definition given in the Article 18 of the “Universal Declaration of Human Rights” is worth checking [UN, 1948]. It reads ‘Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.’ Sean MacBride, Assistant Secretary-General of UN read this article as it is “the right to refuse to kill” and cited this in his 1974 Nobel Lecture.

On July 30, 1993, explicit clarification of the International Covenant on Civil and Political Rights Article 18 was made in the United Nations Human Rights Committee general comment 22, Para. 11: “The Covenant does not explicitly refer to a right to conscientious objection, but the Committee believes that such a right can be derived from article 18, inasmuch as the obligation to use lethal force may seriously conflict with the freedom of conscience and the right to manifest one’s religion or belief.”

On the other hand, for obvious reasons, associating CO with religious rights is not entirely a smart move for anarchism for the reasons we will not discuss here.

¹⁰The definition makes it clear that we will focus only on the CO against the military service.

¹¹A careful analysis reveals that anyone with no objection to war can be a conscientious objector as long as he satisfies *some* of the antecedents. This is entirely correct and it happens everywhere. One does not need to try hard to find objectors who refuse to fight for state army but will be more than willing to take part in an armed uprising such as socialist revolution, or who refuse to

worthwhile to remind the reader again that our purpose here is rather an abstract one - we will deal with the propositional content of the term “conscientious objection”, not with its social or political background.

2.2 Conscientious Objection as a Basic Human Right

What is so special about CO being recognized as a basic human right? For trivial reasons, if a notion is recognized as a basic human right, then it applies to *all* human beings. A singular property which was applicable only to *some* entities, becomes a universal property which is then applicable to all¹². In order to illustrate our point, let us consider the right to life. Right to life, as it can be recalled, was not universally recognized. *Some* privileged people had this right whereas *some* other did not¹³. However, after numerous revolutions and turmoils we now have the right to life as a universally recognized human right. In other words, the right to life has been universalized. Furthermore, no additional condition is imposed or required for this recognition. *If* you are a human, *then* you have the right to life.

The process of universalization is the precise point which calls for the quantified formal language *i.e.* first-order logic. Some may claim that the standard first-order logic would not suffice if one wished to formalize epistemic, social or doxastic situations which are essentially modal notions. We agree with this point of view to some extent. Classical or non-classical modal logics were demonstrated to be successful and sufficient (*i.e.* sound and complete) for various social phenomena in a very restricted setting (for instance, [Hintikka, 1962]). Nevertheless, we follow the minimality principle: first-order logic is sufficient for our purposes, and it works. We might as well have utilized some other rather unintuitive non-standard or modal logics to formalize our arguments. As quantification in first-order logic case is rather well known and more straight forward than, say first-order modal logic, we will maintain that first-order logic is the most useful tool for our actual purposes. Our reason is simple. Universalization is a universal quantification operation, and the language of first-order logic has such a quantifier, namely \forall , in its language.

Finally, it can very well be observed that the process of universalization is rather familiar from rational philosophy. The famous Kantian motto “*Act as if the maxim of your action were to become by your will a universal law of nature*” seems to fit into this context very much [Kant, 1998]. Nevertheless, Kantian motto of rational ethics has not been very popular in the circles of CO¹⁴.

Let us now present the logical apparatus we will use in this work.

participate in secular state army but will be more than willing to take part in a religious crusades. But, in this work, we do not discuss the soundness of such CO acts. Thanks to Mark Lance for pointing this out.

¹²CO is only meaningful when it is declared by possible conscripts. The CO of women and children in the countries where they do not get conscripted is a very interesting point from sociological point of view. Similarly, the CO of previous conscripts or volunteered soldiers exhibit a similar situation. In this work, we do not single them out.

¹³Canonical example for the class of people with restricted right to life is slaves.

¹⁴Therefore, we do not refrain ourselves from implicitly pointing out this direction.

3 Logical Analysis

3.1 First-Order Logic

In order to make this article self-contained, we will briefly describe the logical language that will be utilized along these lines. We will use *first-order logic* to formalize our ideas. What makes a logic first-order is the level of *quantification*. For our goal, it suffices to quantify over the individuals who tend to subscribe themselves to the act of CO, thus forming the domain of discourse for the logic. The Definition 1, which we stated earlier, solely identifies the persons who can be considered an objector. In order to be able to quantify and state the fact about all the people in our domain of discourse, we need a logical setting which allows us to do this. The tools of first-order logic enable us to quantify over the elements in our domain of discourse.

Let us now briefly recall the basic technical details of first-order logic. Our main reference is a classical textbook in logic [Mendelson, 2001].

We will start with defining the syntax. This will allow us to construct well-defined formulae which will be used to formalize the social phenomena that we focus here. The language of first-order logic contains the following symbols.

- The propositional connectives \neg (unary) and \rightarrow (binary); and the universal quantifier \forall .
- Punctuation marks left parenthesis (, and right parenthesis) and the comma.¹⁵
- Countably infinitely many variables x_1, x_2, \dots
- Finite or countably infinitely many function symbols.
- Finite or countably infinitely many constant symbols.
- Finite or countably infinitely many predicate symbols.

Moreover, the connectives \wedge (and), \vee (or) and \leftrightarrow (biconditional) can be defined by using only the two given connectives \neg and \rightarrow ¹⁶.

We shall now give meaning to the formulae in this logic¹⁷. The formulae will be interpreted in a domain of discourse. In our case, the domain will be the set of persons. Each predicate symbol, function symbol and constant symbol, then will be given a *meaning* in its domain by an *interpretation* mapping. A domain together with its interpretation will be called a *model*.

¹⁵According to [Mendelson, 2001], the punctuation marks can be avoided by some syntactical tricks. However, for notational clarity, we will stick to this.

¹⁶Thus, the set of connectives $\{\neg, \rightarrow\}$ is *adequate* to obtain all propositional formula.

¹⁷Clearly, not every string of symbols is a formula. There are some technical and inductive definitions which describe how to construct a well-defined formula. But, we will not discuss them here. We refer the interested reader to [Mendelson, 2001] for further and rather more technical discussion of this issue.

In a model M , we say that the formula $\neg\varphi$ is true if and only if φ is not true (*i.e.* false) in M . $\varphi \rightarrow \psi$ is true if and only if we have φ implies ψ . Moreover, the truth symbol \top is true *everywhere*.

The term $\forall x.Px$ for the variable x and the predicate symbol P will read Px is true for all x in the domain. The semantics for this formula is the following. In the model M with the domain set D , $\forall x.Px$ is true if and only if $P(d)$ is true for each and every d in the domain D .

For further discussions on the long-established subject matter, we refer the reader to one of the classical textbooks [Mendelson, 2001].

3.2 Logical Analysis

Having established the mathematical basis, we will now present a simple formalization of CO as a basic human right. However, before doing this let us begin with a simpler case which is the example we elaborated above and then proceed step by step.

The United Nations Universal Declaration of Human Rights asserts that “Everyone has the right to life (...)”[UN, 1948]. One can easily formalize this assertion as follows

$$\forall x.(Hx \rightarrow Lx) \quad (1)$$

where Hx stands for the predicate “ x is human” and Lx for “ x has right to life”. However, as we pointed out earlier, there was a time in humans’ history when only *some* people had the right to life, namely we had $\exists x.(Hx \rightarrow Lx)$ which can be translated as “there are some people who have the right to life”, or with a simpler parsing as “some people have the right to life”.

We will call the action of obtaining a universal statement from a given existential statement *universalization action*. Clearly, for a formula φ , we cannot generally obtain $\forall x.\varphi$ from a given $\exists x.\varphi$ since $(\exists x.\varphi \rightarrow \forall x.\varphi)$ is not a sound schema. This is the reason why we introduce it as an *action*, rather than as an axiom. The imposition of the universalization action to a specific formula φ ensures that we have $\exists x.\varphi(x) \rightarrow \forall x.\varphi(x)$ in the system which is otherwise an invalid sentence in most cases. Nevertheless, this is a big move, and it comes along once the universalization is considered. Therefore, for our actual specific example of “right to life”, we have the following sentence.

$$[\exists x.(Hx \rightarrow Lx)] \rightarrow [\forall x.(Hx \rightarrow Lx)] \quad (2)$$

satisfiable in our system due to the universalization action applied to the predicate “having right to life”.

After the universalization action applied to the predicate “having right to life”, we now have $\forall x.(Hx \rightarrow Lx)$ in our system. However, as we consider the U.N. Universal Declaration of Human Rights with the obvious domain of human beings, the antecedent of the implication (*i.e.* Hx in Formula 1) is redundant as we all are human beings already and the Formula 1 is meaningful only for human beings with the obvious domain of human beings. Therefore, Hx is evidently true. Hence, the truth of the implication in Formula 1 is equivalent

to the truth of $\forall x.(\top \rightarrow Lx)$ where \top denotes the truth. This last statement then reduces to $\forall x.Lx$ when the Formula 1 is considered in a social setting with an obvious domain of human beings¹⁸. Therefore, it is concluded that “every human x has a right to life”, is true. Thus, every person has a right to life. Similar observations work for the Formula 2, too.

The action of universalization can also be considered without referring to the obvious domain of human beings. In short, the action will apply to $\exists x.Lx$ to get $\exists x.Lx \rightarrow \forall x.Lx$ where the latter formula is not a valid sentence in general otherwise without the imposition of the action.

What we have done so far can be summarized as follows. We defined the universalization action and imposed it to the situations where the universalization of some particular rights are considered. This is a brute force satisfaction of sentences. The logical sentences which are otherwise invalid are satisfiable only if we adopt this unusual action - which is essentially the idea behind the universal rights from a logical point of view.

3.3 Logic of Conscientious Objection

Can we use a similar reasoning in the context of CO? Can we follow the same flow of thought when the subject matter is CO recognized as a basic human right? In order to be able to see this, let us start by formalizing the Definition 1.

If Rx stands for the predicate “ x has religious convictions for CO”, Ex for “ x has ethical convictions for CO”, Mx for “ x has moral convictions for CO”, Hx for “ x has humanitarian convictions for CO”, Fx for “ x has philosophical convictions for CO”, Px for “ x has political convictions for CO” and finally Cx for “ x has a right to CO”; then we have the following first-order sentence¹⁹.

$$\exists x. \underbrace{[(Ex \vee Mx \vee Hx \vee Fx \vee Px) \rightarrow Cx]}_{\chi(x)} \quad (3)$$

One of the distinctive features of the Formula 3 is that it is an *existential* statement of the form $\exists x.\chi(x)$, that is, it states that there is an individual with the designated properties, and this individual is called a conscientious objector once he is in the possession of the given properties.

Now, let us assume that the right to CO is a universal human right. In other words, *everybody* with some of the designated properties listed above will be counted as a conscientious objector. Thus, we replace the existential quantifier with a *universal* one by the *universalization action*. Namely, we obtain the following sentence.

$$\forall x. \underbrace{[(Ex \vee Mx \vee Hx \vee Fx \vee Px) \rightarrow Cx]}_{\chi(x)} \quad (4)$$

¹⁸ $\varphi \rightarrow \psi$ is logically equivalent to ψ when φ is true. In other words, $\top \rightarrow \psi$ and ψ are truth-equivalent. A brief consideration of truth tables will immediately verify this simple observation.

¹⁹A question about the independence of these predicates can be raised. However, as we kept emphasizing, we will not be targeting the accuracy of the defining terms of the definitions in this work.

The reason for this deduction can be explained by referring to the universalization action. The universalization action instantiated to the formula $\exists x.\chi(x)$ gives the following.

$$\exists x.\chi(x) \rightarrow \forall x.\chi(x) \quad (5)$$

Since we already have $\exists x.\chi(x)$ (as there are some objectors somewhere), by deductive reasoning (*i.e. modus ponens*), we conclude that $\forall x.\chi(x)$.

We can then manipulate the Formula 4 further. Basic logic tells that the Formula 4 is equivalent to the following²⁰. So, we will still have the same $\chi(x)$.

$$\forall x. \underbrace{[\neg Cx \rightarrow (\neg Ex \wedge \neg Mx \wedge \neg Hx \wedge \neg Fx \wedge \neg Px)]}_{\chi(x)} \quad (6)$$

Before proceeding further, let us observe that the Formula 4 is exhaustive. In other words, it suggests that *all* the conditions for being an objector are listed and thus stated in the antecedent as a disjunct, and furthermore no other condition for being an objector can exist apart from the listed ones. Therefore, the universalization action guarantees that the given schema in the Definition 1 is fully complete - it includes all the conditions, nothing is missed. This is one of the powers of the universalization action - it is quite powerful, and perhaps too powerful.

Let us now focus on Formula 6. It simply says that for all x , if x is *not* a conscientious objector than it does not have any ethical, moral, humanitarian, philosophical and political convictions for CO. Observe that the consequent of the implication in Formula 6 is a conjunction of negations. Therefore, in order to render the consequent false, it is sufficient to render only one of the negated conjuncts false. Thus, it suffices to have either of E, M, H, F or P true - does not matter which. Therefore, the Equation 3 holds if the agent c has a moral convictions for CO. Now, let us assume that for the same agent c , it is false that c has a political conviction for CO, *i.e.* $\neg P(c)$ is true. In other words, c does not have any political reasons for the act of CO, but he has moral convictions for CO²¹ (We can get the same conclusion by negation all but one predicates.). However, for the agent c , the sentence in the Formula 4 is still true. This is actually not a logical contradiction, but rather a philosophical contradiction (related to the logical properties of material implication, and possible disjointness of political and moral convictions) which makes the convictions of the agent c for CO questionable and less plausible. The immediate solution implied by the logical analysis is obvious. In order to prevent such problems, the agents should have each and every possible convictions for CO²². However, this changes the logical structure of the sentence in the Equation 4. It can further be asserted that under these circumstances, whenever the truth of, for instance, Px is attained, then

²⁰ $\varphi \rightarrow \psi$ is logically equivalent to $\neg\psi \rightarrow \neg\varphi$ and $\neg(\varphi_1 \vee \dots \vee \varphi_n)$ is equivalent to $\neg\varphi_1 \wedge \dots \wedge \neg\varphi_n$.

²¹Although the predicates E, M, H, F and P are logically independent, there is an intrinsic connection between them. One can ask if $Mx \rightarrow Ex$ is satisfiable or not? However, as we emphasized earlier, this is not our focus in this paper.

²²The underlying reason for this is the fact that the disjunction operator \vee we use is exclusive. In other words, $\varphi \vee \psi$ is also true when only one of φ or ψ is true.

the truths of the other conjuncts (i.e. Mx, Hx, Ex, Fx) are also attained. In other words, once an agent has any of these convictions, then automatically he will have all the others in order to be able to maintain a political consistency. This point however, is not implied by the form of the logical formula. Given only the Formula 4, one cannot deduce that either predicate implies the other. We need to consider instances of these predicates reduced to some particular individuals c, d etc. In other words, for some individual c , we may have $Mc \rightarrow Fc$. Yet, this does not make any change neither in the formulation of the Definition 1 nor in the formation of Formula 4.

Another interesting point is the fact that if an agent has none of the itemized convictions he can still be a conscientious objector! Assume the agent *Bush* has none of the listed convictions, i.e. we have $\neg E(\textit{Bush}), \neg M(\textit{Bush})$ etc. Thus for the agent *Bush*, the antecedent of the Formula 4 is false. As anything follows from the false antecedent, we see that $C(\textit{Bush})$, in other words the agent *Bush* is a conscientious objector!²³ Observe further that the sentence in the Equation 4 is a universal statement as we assumed that the right to CO is a human right and hence it applies to everybody including even the agent *Bush*.

This discussion is an instance of the problems associated with material implication. These problems have long been discussed, and we will not elaborate more on them²⁴. However, it is important to keep in mind that CO is no exception for such problems.

An immediate attempt to avoid this problem is perhaps to suggest to extend the definition by introducing additional predicates as preconditions. Since the given definition after all has to be exhaustive and is currently found out that it is not, one can propose to plug in the missing predicates as preconditions to the definition. In order to illustrate this point, let us assume for the moment that the missing predicate is Xx . Let us plug it in to obtain the following extended definition²⁵.

$$\exists x. [(Ex \vee Mx \vee Hx \vee Fx \vee Px \vee Xx) \rightarrow Cx] \quad (7)$$

However, it is easy to see that the previous problems still prevail. We leave it to the reader to verify that the earlier argumentation also applies to the extended formulation. Therefore, we conclude that this approach is essentially *ad hoc*²⁶.

²³ $\varphi \rightarrow \psi$ is merely true for each formula ψ if φ is false.

²⁴It has been pointed out by Mark Lance that “right to” can be considered a modality. However, this will bring along the problem of axiomatization of such systems. Because, depending on the goals and expectations in each and every such systems, one can suggest quite differently axiomatized yet all sound (perhaps even complete) modal logics to formalize “rights”. Modal turn, in our point of view, is rich; but essentially missed the point. Furthermore, the work done in deontic logic is quite sufficient for such purposes. We refer the interested reader to the following expository article [McNamara, 2008].

²⁵Apparently, this is how the legal definitions of CO is constructed. When the only valid reason for being a CO was religious, the definition had only one predicate in the antecedent. Then, after political and social struggles, the conceptual understanding of the definition has been extended by incorporating some other predicates to the antecedent. Note that, we do not claim that this was a logically valid move.

²⁶We do not have to stop after introducing Xx . Let us consider the situation where we added

How can we then offer a solution to such problems? How can we or how can we not justify the universalization action? The next section will investigate these problems.

4 Anarchism?

4.1 Conditionals in Politics

There are several common points that anarchism and CO share and suffer from. In this paper, we will not focus on the features they share, but rather we will briefly mention one feature they both suffer from, namely “conditional implications”²⁷.

Conditional implications, in our context, are the political statements involving conditional assertions and implications about political discourse. “*If you are an anarchist, you shall not vote.*” or “*If he is a conscientious objector, then he is a pacifist.*” are such statements. In a similar fashion, conditional implications can very well be used in *definitions*. Most of the responses to the question, for instance, “Who is an anarchist?” are conditional implications. “*If a person is such and such, then she is an anarchist.*” is one of the schemata to answer this question.

In this section, we will investigate conditional implications within the context of anarchism motivated by our previous discussions on CO. We will present ideas on how to *decide* whether φ implies ψ , not only logically but also *fairly*. What makes an implication fair then is a measure of its exhaustiveness. Hence, we will argue that φ fairly implies ψ if and only if φ logically implies ψ and they have the same extension. Therefore, the relation between φ and ψ is *fair* in the sense that neither φ nor ψ expresses more than its counterpart.

The fairness condition seems to forget about the logical properties of material implication. This is actually what we want precisely. Due to the ambiguity that material implication poses when one tries to utilize it in social phenomena, we have to introduce something *ad hoc* in order to be able solve this problem. Is this a real solution then? Certainly not! What we have established so far is only a representation in the sense that we had only aimed at drawing a clear picture of the situation.

countable many Xx 's to get the following.

$$\exists x. [(Ex \vee Mx \vee Hx \vee Fx \vee Px \vee X_1x \vee X_2x \vee \dots \vee X_\omega x) \rightarrow Cx]$$

However, it is obvious that the same problems still occur. We leave it to the reader again to convince himself that the *number* of the disjuncts in the definition do not matter in this sense.

²⁷Clearly, this is not unique to anarchism and CO. Quite the same approach can also be reflected upon, say socialism and guerilla warfare. However, in our context, we will instantiate this problem in the context of anarchism and CO.

4.2 Fair and Unfair Implication

In political discourses, conditioning a political right is often a problematic decision procedure as we just saw in the context of CO. The question still prevails: “How can one ensure that he considered all possible cases?”. Therefore, in order to be able to have a set definition, one should sacrifice some by keeping them out of the domain set. Setting the boundaries of a concept by *defining* it is a philosophical problem of utmost importance²⁸. Here, we will not offer any method to solve this problem apart from the those in the literature. Instead, we will try to avoid making such decisions by utilizing the apparatus we present here.

The reason why we want to emphasize *fairness* is rather pragmatic and stems from the current political movements focusing both on anarchism and conscientious objection. Due to the reasons we mentioned previously, CO deserves a great deal of attention from an egalitarian and anarchist point of view. What we miss in these movements, in our opinion, is the lack of attention given to these issues from an egalitarian point of view. *Equality* is a very central notion in any political discussion although it is still not well-defined mathematically²⁹. Thus, what we suggest here can be considered an attempt to motivate some further work revolving around the computational moral philosophy of egalitarianism. We will suggest a formal direction to define *fairness* which is a core notion in moral philosophy.

Here, we will consider the formulae, which are not necessarily sentences. The first notion we need to establish is the *extension of a formula*.

Definition 2. The extension $\|Px\|$ of a formula Px with a variable x is the set of points in the domain at which Px is true.

The reason why we need this definition is the fact that formulae are defined by their extensions, and thus it is possible to identify each formula with its extension to characterize it. Nevertheless, we will stick to the classical interpretation. On the other hand, it is important to note that the extension of a logical formula cannot go beyond the given universe. We can state this observation as follows.

Proposition 3. For any formula Px , $\|Px\| \subseteq U$, where U is the universe of discourse.

Example 4. If $Px \equiv (x = x)$, then $\|Px\| = U$. In other words, tautologies are valid everywhere.

Example 5. If $Px \equiv (x \neq x)$, then $\|Px\| = \emptyset$. In other words, contradictions are valid nowhere.

²⁸One of the most significant examples for this case is [Lakatos, 1976]. In this work, Lakatos approached a mathematical theorem from quasi-empiric point of view and discusses the definitions, terms and their defining terms extensively, even in a *ad hoc* fashion sometimes. Nevertheless, the methodological approach to define the concepts by adjusting their domain of validity is very well examined in this work.

²⁹Game theory proposes significant ideas for such matter in terms of utilities.

An interesting observation tells that propositions can very well be identified with their extensions. In other words, if the extension sets of φ and ψ are the same, then we will conclude $\varphi \equiv \psi$, i.e. φ is logically equivalent to ψ as they both have the same output in their truth tables. We will use this observation later.

We can now define what fair implication is based on the extensions of formulae.

Definition 6. Fx is fairly-implies by Gx (or Gx fairly implies Fx), if:

1. $\forall x.(Gx \rightarrow Fx)$ is true.
2. $\|Fx\| = \|Gx\|$.

What does this definition say? It says that the fair implication is merely a renaming in a simple sense. Following the notation of the definition, we observe that Fx and Gx are true at the very same points, and furthermore, Gx implies Fx for every x in the domain. Therefore, although syntactically they are different formula, they have the same extension, and together with the implication condition, we see that none says more than the other, so their expressive power is fairly distributed. In other words, this definition prevents the implication $Gx \rightarrow Fx$ to be true at the points where Gx is false³⁰. Let us consider several examples.

Example 7. $Px \wedge Px$ fairly implies Px . Observe that $(Px \wedge Px) \rightarrow Px$ and $\|Px\| = \|Px \wedge Px\|$.

Example 8. $Px \wedge Qx$ does not fairly imply Px . Observe that, we logically have $(Px \wedge Qx) \rightarrow Px$ but $\|Px\| \neq \|Px \wedge Qx\|$ in general. The reason is simple, the extension of the formula $Px \wedge Qx$ is smaller than that of Px , therefore we have $\|Px \wedge Qx\| \subseteq \|Px\|$.

We can now make small observations regarding the immediate properties of fair implication.

Proposition 9. *Every formula fairly implies itself.*

Proof. Trivial. □

Proposition 10. *If Fx fairly implies Gx , then Gx fairly implies Fx .*

Proof. Assume Fx fairly implies Gx , Then, by definition $\forall x.Fx \rightarrow Gx$, and $\|Fx\| = \|Gx\|$. Since Fx and Gx have the same extension, they are true at the exact same points. In other words, they are truth equivalent and their truth tables are the same. So, we then have $\forall x.(Gx \rightarrow Fx)$. Hence, we obtain Gx fairly implies Fx . □

³⁰The definition of fair implication stems from the involved philosophical arguments about Frege's discussion of *Morgenstern = Abendstern* in [Frege, 1892], and Kripke's discussion of names in [Kripke, 1980]. The interested reader then should consult the aforementioned monographs to convince himself about the cognitive and propositional content of naming and necessitation.

Proposition 11. *If Fx fairly implies Gx , and Gx fairly implies Hx ; then Fx fairly implies Hx .*

Proof. Similar to the above. □

Proposition 12. *The relation of fair implication is an equivalence relation.*

Proof. Recall that a relation is an equivalence relation if and only if it is reflexive, symmetric and transitive. Then the proof is trivial, based on the previous propositions. □

Let us denote the relation of *fair implication* by \sim . Therefore, $Fx \sim Gx$ means that Fx is fairly implied by Gx ³¹. Recall that every equivalence relation gives rise to *equivalence classes*. The equivalence class $[Fx]$ of Fx is the set of formulae which are fairly implied by Fx . Thus, $[Fx] = \{Gx : Fx \sim Gx\}$. Thus, it is easy to see that the relation of *fair implication* divides the universe U of formulae to equivalence classes. In other words, in the universe of formulae U , we have disjoint subsets within which each formula is fairly implied by the others. What does it mean then? It means that the fair implication of Fx can only be achieved by a formula Gx from the *same* equivalence class³².

We can also have a weaker notion which we will call *unfair implication*. The definition is as follows.

Definition 13. Fx is unfairly-implied by Gx , if:

1. $\forall x.(Gx \rightarrow Fx)$ is true.
2. $\|Gx\| \subseteq \|Fx\|$.

Therefore, we may have cases in which Gx is false and Fx is true rendering the distinct extension sets for them while the entire implication $Gx \rightarrow Fx$ is true.

Theorem 14. *The predicate Cx is unfairly implied by Ex , Mx , Hx , Fx , Px and Cx ; where Ex means “ x has ethical convictions for CO”, Mx means “ x has moral convictions for CO”, Hx means “ x has humanitarian convictions for CO”, Fx means “ x has philosophical convictions for CO”, Px means “ x has political convictions for CO” and finally Cx means “ x has a right to CO”.*

Proof. Previously discussed. □

The above theorem establishes the mere fact there are conscientious objectors who are not encompassed by either of Ex , Mx , Hx , Fx or Px . Thus, how can we make sure that we exhausted all possible motivations for CO? In other words, what is the fairness equivalence class of Cx ? The only thing we can deduce at the moment that it is not fully covered by the union of the extensions of Ex , Mx , Hx , Fx and Px . Then what else do we need?

³¹Observe that as the relation \sim is symmetric, we can read $Fx \sim Gx$ as Gx is fairly implied by Fx .

³²This observation still reflects the intuition of Frege as we remarked in Footnote 30.

Our bold claim here is as follows. Any definition of CO which attempts to list countably many³³ preconditions which will imply the predicate Cx is never exhaustive, and will eventually fail. We can do the same tricks to obtain a counterexample, say $Bush'$ which will violate the new conditional definition in question³⁴. Thus, we impose that a definition with conditionals should have fair definitions. Consequently, only the predicates which are in the fairness equivalence class of Cx can define CO. We can formalize it as follows.

Theorem 15. $\forall x.Xx \rightarrow Cx$ is a [fair] definition of CO if and only $Xx \in [Cx]$.

Proof. Previously discussed. \square

This theorem concludes the formal discussions, but does not bring the philosophical and political argumentation on the subject matter to an end.

There are two issues we want to discuss further. The first is the idea that CO should not be precisely and formally defined in order to prevent such complications; and the second is the possibility that the CO is self-evident, thus does not require any discussions about its definition.

A closer look at the CO movements will reveal the fact that these movements often times refrain themselves from suggesting a set definition for CO in order not to exclude any self-claimed conscientious objector. Intentionally or unintentionally, CO movements confirm with our observations due to the fact that it is quite reasonable for the movements to come across to a person who is a self-claimed objector and does not fit any of the preconditions listed in the definition(s). Thus, self-declerativeness of CO is essential in practice. Once it is defined, the domain of possible objectors is restricted. Therefore, since no formal definition will be able to determine the fairness equivalence class of CO perfectly; one should refrain himself from defining it³⁵.

The second idea is to claim that CO is self evident, namely its truth does not require any further argumentation apart from symbolic manipulations. Therefore, this approach asserts that CO is always true at every formal structure at all times and does not require further justification. It is true, because its truth value is \top ³⁶.

³³In other words, ω -many.

³⁴For the readers familiar with foundational issues in mathematics, it should not be difficult to observe that this construction resembles the diagonalization argument of Cantor to prove the non-equinumerosity of natural and real numbers.

³⁵The reader who is familiar with mathematics can see that it is quite the same reasoning of Cantor's diagonalization procedure where he established that the sizes of natural numbers and real numbers are incommensurable.

³⁶We can attempt to define self evidentiality in terms of fair implication.

Definition 16. P is called self-evident, if:

1. $\|P\| = U$
2. P fairly-implied by all logical tautologies.

The above definition is an over-statement as the given two properties are logically equivalent. However, it perfectly reflects the intuition. Observe that for a tautology T , we automatically have $\|T\| = U$. Hence, we can simplify the definition.

All these observations on the conditionals in the definition of CO motivates us to use a similar reasoning in the context of anarchism. The principal reason for this endeavor is the definition of anarchism itself - if there is such a widely agreed definition. It is certain that such a definition would be a conditional and therefore would suffer from the similar problems.

Before investigating anarchism, let us first consider a rather radical and ultra-rationalist account of CO and perhaps anarchism. It can be claimed that CO is a moral duty based on the fact that it is rationally self evident, and therefore does not require any external and *posterior* justification, thus it is true by its existence.

4.3 Self Evidentiality

As we just remarked that the claim that CO is self-evident means that CO does not require any empirical evidence to justify its validity. Any rational entity, then, according to the claim, can deduce that CO is evidently true by only consulting to its very definition and making use of sound logical transformations.

This is a quite undesirable situation for variety of reasons. First, it underestimates the effect of the political movements on the formation of conceptual notions. Second, it is a purely rational construction which undermines the empiric data that the political movements provide. The aforementioned empiric data itself already shows that the international CO movement possesses a vast amount of diversity [WRI, 2005]. Thus, practically it would be impossible to come up with a definition which can encompass all such variety.

Therefore, the self evidentiality claim is a politically incorrect claim. The idea behind self evidentiality is a positive answer to the decision problem which set off to determine the exact boundaries of the domain of conscientious objectors based on several predicates which designates some certain properties. Thus, in our context, self evident CO means that the predicates in the antecedent of the definition of CO (*i.e.* Formula 3) are all logical tautologies. This is too much to ask for.

4.4 Anarchism

In this section, our aim is to transfer the previous results to anarchism in order to be able to claim that the motivations for being an anarchist cannot be

Definition 17. P is called self-evident, if $\|P\| = U$.

Definition 18. P is called self-evident, if P fairly-implicated by all logical tautologies.

The reason we gave the two equivalent definitions of self-evidentiality is the fact that they reflect to different approaches to the very same subject. The Definition 17 underlines the fact that Px is true everywhere based on the semantics. The semantical rules and operations tell us that Px is true everywhere. On the other hand, the Definition 18 emphasizes the connection between self-evidentiality and fair-implication.

However, this approach will make everyone conscientious objector once CO is taken as self-evident. This generalization perhaps the Kantian ideal of every objector. However, this does not reflect the actual universe.

effectively enumerated; and, thus cannot be incorporated in the antecedent of a conditional definition.

The transfer of such ideas can only be made precise once we identify the notions that are shared by both anarchism and CO. How can we do it then? It seems that this tedious task is not attainable for the very same reasons. Namely, we cannot enumerate the motivations and causes that imply anarchism (or CO); so that we cannot compare the respective motivations of both thoughts. Thus, how can we know what they share? We do not know how to answer this question. However, several speculations are actually worth mentioning. The first is one is the following. It can be claimed that we do not have to know the exact members of the respective sets in order to establish a mapping between them. This is actually a quite sound speculation. But, in order to be able to define such mapping in a well-defined way, some properties of these sets should be known. We again go back to our initial point. It seems quite impossible to get rid off this vicious circle. Yet another speculation can be phrased as follows. One can claim that we do not need to enumerate the entire set to spot the common notions. One such point might be enough, and the transfer mapping can be built upon this point. However, it is again quite obvious that in order to find such point, we actually need to know the points, and this requires enumeration - one way or the other.

We are very much inclined to claim that a conditional definition for anarchism for the very same reason should not be given.

5 Conclusion

5.1 A Brief Overview

In this paper, we formalized the definition of CO to show that any such definition is prone to inevitable fallibilities. One of such errors is the unexpected outcomes, and one another is the enumeration problem: how can we ensure that we enumerated all possible causes and motivations for CO?

After all these discussions, we claimed that similar ideas can be (in fact, should be) applied to anarchism as both CO and anarchism seem to share similar notions. We concluded that we cannot spot these common points as we cannot enumerate the factors that makes it anarchism or CO.

The *raison d'être* of this paper is modest. We wanted to open up discussions in the field of CO by introducing some simple ideas and a simple apparatus. This paper is a beginning, and hopefully it will motivate further research on the topic.

5.2 Future Work and Insights

The topic is deep and promising. As we briefly implied in the text, the newly emerging field of computational ethics can possibly provide even further ethical conclusions on the subject.

The formal results exhibit the very anarchist idea that CO movement should not be dragged into the legal terrain. After all, any legal recognition may bring along its own definition of CO which will lead to further restrictions attached to the definition. Therefore, there will be some conscientious objectors who are not covered by the legal definitions. So, the associated problems will not be fully resolved. The very anarchist idea underlying the entire discussion, and thus makes our approach a *logico-anarchist* one is the observations we have made so far. In conclusion, we claim that the struggle should not be directed towards the legal gains. Any legal gain, in either short or long term will cause similar *ad hoc* problems.

It is also quite conceivable to approach the subject from a game theoretical point of view. One can step by step investigate what can be won or lost in terms of political or social *utilities* when the definition of CO is extended or restricted by introducing or dropping some certain propositions. Such a game would consider the changes in the domain of conscientious objectors and the value these individuals return under the utility function. Therefore, introduction or omitting of each proposition to the antecedent of the definition can very well be considered a strategic move.

Another formal approach is to consider the relations *among* the individuals within the set of conscientious objectors. The neighborhood of such individuals with respect to the set of objectors can be used to define the set and its relations with other set of political domains. “*What connects conscientious objectors?*” thus is the question that will reveal the idea behind *being a conscientious objector*. This approach can very well be considered an internal one as opposed to the external one which we presented in this work.

Most of the ideas we presented in this paper are not peculiar to CO. Therefore, similar methodologies can be used in other sociopolitical matters. In a similar fashion, some other formal methods such as game theoretical apparatus from sociopolitical investigations can be imported to the realm of conscientious objections in order to be able to analyze it further. We believe that the topic is promising for both approaches based on the rather intuitive and simple observations we have made in this paper.

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