

A Unified Analysis of Teleology

By David Calhoun

TOPIC:	Teleology
NARROWED TOPIC:	Analysis of Teleology
NARROWED TOPIC:	A Unified Analysis of Teleology
PROJECT:	To determine whether an analysis of purpose can occur, and if it can, whether such an analysis must be unified (apply to multiple fields) or disunified (field-specific).
THESIS:	Analysis of purpose can and should be made, and we must start with a unified analysis, notably with my modification of Larry Wright's analysis.

Word Count: 6140 (not including Appendixes and endnotes)

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Preface

This paper is a culmination of the undergraduate philosophy program at Biola University, which tests the student's skills to rationally respond to academic philosophical material. The paper itself is the result of a semester's worth of research work and is required for the undergraduate philosophy major.

At the time I wrote this, I had attended Biola for two years and had taken every class required for the Philosophy major except a class in Metaphysics, which I was to take the following semester. I really enjoyed working on this, as I learned much more about current studies in teleology, something that is by-and-large neglected in philosophy today. After I had completed writing, my material was presented at the 2006 Senior Colloquium on May 17, which is held each year for senior philosophy majors to present their work.

My presentation was a blend of reading straight from the following paper and an improvised talk based on the main points I wished to present. The result, if I remember correctly, was me reading the Introduction to the paper word-for-word, then an improvised discussion of the major points in the paper, then a return to a word-for-word read when I came to Larry Wright's Unified Analysis of teleology and my modification to it. I wish I had recorded the talk I gave!

Anyhow, here's a nice PDF version of my paper, something which represents much thoroughly enjoyable work. I've included lots of extra things to this PDF, from the original colloquium announcement to the response and grade I received on this paper. You can find all these things listed in the Table of Contents. Also, one final word: I would have preferred to have converted the endnotes to footnotes for the sake of readability, but the program I use (Open Office) doesn't have this feature (although it does have the feature to convert footnotes to endnotes!). For this reason, my paper itself will be presented last, with even the Bibliography preceding it.

Enjoy!

David Calhoun (December 2, 2006)

Philosophy 450

SENIOR THESIS (Revised September 2002)

General Information: The Senior Thesis (PHIL 450) is the capstone course of Biola University's B. A. major in philosophy. It is designed for senior philosophy majors, but may be taken by other capable students with the consent of the philosophy department. For PHIL 450 the student is expected to write a major paper on a topic in philosophy. This paper should include a section addressing the relevance of the paper's arguments to the Christian faith. Although the student will meet with the professors conducting the course, and there will be two seminar sessions, the course will consist primarily of research and writing rather than classroom work.

Course Requirements: The following details cover all the basic requirements for the PHIL 450 course.

(A) Consultations with the Professors: Early in the semester (it should be the first full class week) the student will meet with the professors conducting PHIL 450. At this meeting the student will select a research topic with the assistance and approval of the professors. If additional thinking about this is needed, another "topic selection" conference will be scheduled. At this first meeting a semester calendar will be drawn up which lists all dates relevant to the APS, including future consultations with the professors.

(B) Amount of Work Required: In addition to time spent in consultation with the professors and in attending the two seminar sessions (see below), the student must invest 120 hours of work in PHIL 450. The student's paper will run from 5000-7000 words, not counting bibliography and notes. The student should use nothing smaller than a 12-point font, and must place the paper's word count beneath the title on the title page. All notes must be placed at the end of the paper's text (i.e., they must be "end notes" rather than footnotes).

(C) Type of Writing Required: The PHIL 450 paper may—and should—contain careful exposition of the work of others, but a significant part of the paper's text must be the student's own arguments. The student will flag these arguments by printing them in **bold type**.

(D) Pace and Record of the Student's Work: The student will keep a daily log of all the time he invests in the course, excluding only the two seminar sessions and consultations with the PHIL 450 professors. This log will list the date, type(s) of work done, and amount of time invested. After the student's first consultation with the professors, he or she must submit an update of the log by 4pm every Wednesday. A semester grade penalty of 1% will be assessed for each week the student fails to meet this requirement. The final update of the log will certify that the student has completed the full 120 required hours. **The 120-hour requirement is absolute. No student will receive credit for PHIL 450 who has not completed the 120 hours.** Because some students have in the past failed to pace their work wisely, the PHIL 450 professors are now requiring the following of all students: **By the first Wednesday in April the student will have completed at least sixty (60) hours of work.** (In the event that the first April Wednesday falls during Easter break, the minimum of sixty hours must be completed by the last Wednesday in March.) **And by the last Wednesday in April the student will have completed at least eighty-five (85) hours of work.** *For each completion deadline missed the student will be assessed a semester grade penalty of 10% (i.e., a full letter grade).*

(E) The Seminar Sessions: There will be two seminar sessions. The first one, to take place about half-way through the semester, will be a “progress report” during which each student will describe his progress to date, including making reference to any problems he is having and conclusions he is reaching. At this session the student must present two copies of a draft of an original argument that he or she has developed in the course of reading for the seminar. ***This draft must run from 350-1000 words, and must be the student’s own work. Submission of this argument is required for the student to receive credit for completing PHIL 450.*** The professors and all students present will have an opportunity to comment and ask questions about each presenter’s work. The second session will be set for the latter part of May. During it each student will give a formal presentation or reading of his or her paper, allowing time for questions from those in attendance. *Students should discuss their preparation for the final seminar session with one of the professors.* **For each seminar session missed, the student will be assessed a semester grade penalty of 10% (again, that is a full letter grade).** If additional paper reading sessions are scheduled, a student who has already presented his paper to the seminar may request to be exempted from attending them. The professors will grant this request only if the student has an exceptionally good reason for making it. As a matter of courtesy and respect for his or her fellow students, every member of the seminar should try to attend all the paper readings.

(F) Submitting the Paper: **Two copies** of the paper must be submitted at the time of the final (second) seminar session. These copies will be of the paper’s final draft, and must be accompanied by two copies of the student’s final log update, i.e., the one containing the final 120 hours. *In other words, the student’s semester work must be entirely done by the time of the seminar session.*

(G) Role of the PHIL 450 Professors: The professors (there will be three of them) are available to advise each student on research and writing. And at the end of the semester the professors will determine each student’s final grade.

(H) The Bibliography: At the time the student submits the 60-hour log, he or she will also submit a bibliography for approval by the professors. **The bibliography must have at least 12 entries, of which at least 10 are drawn from the philosophical literature. There must be no fewer than 4 articles from philosophy journals.** Once his bibliography has been approved, the student is free to add titles to it without consulting the professors. **Failure to seek and secure bibliography approval at the 60-hour log date will result in the student’s being assessed a 10% semester grade penalty.**

When the professors read a PHIL 450 paper, they will expect to see the student making serious use of a number of the titles in the bibliography, *including some of the journal articles.* **There will be a severe grade penalty if a student fails to meet this expectation.**

(I) Topic, Project, and Thesis: The student’s work will take him or her from a topic to a project and finally to a thesis. Settling on a topic should not be terribly difficult; it will be done very early in the semester (see section (A) above). The next step requires doing some reading and thinking to select a project—a task or set of tasks—within that topic. **The student must secure project approval by the time he or she completes 40 hours of work. FAILURE TO DO THIS WILL RESULT IN AN ‘F’ GRADE FOR THE COURSE.** The student does not need to secure thesis approval, but must have and defend a thesis in the paper itself. **The student may not change his topic after it is approved, and he may not change his project after it is approved. ANY SUCH CHANGES WILL RESULT IN AN ‘F’ GRADE FOR THE COURSE.**

(J) A Sample Topic, Project, and Thesis: Here is a sample to consider--

TOPIC:	Molinism
NARROWED TOPIC:	Objections to Molinism
NARROWED TOPIC:	The 'Grounding Objection' to Molinism
PROJECT:	To determine whether Molinism can sustain the 'Grounding Objection'
THESIS:	Molinism can sustain the three current versions of the 'Grounding Objection' found in the literature

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Review by Professor Thomas Crisp

Dear David,

I read carefully and thoroughly enjoyed your thesis. Its prose style is clear, economical and readable; its structure is easily followed, and its arguments are clearly laid out, and in some cases, downright clever.

I liked your point how the naturalist rejecting talk of purpose makes trouble for her acceptance of talk of causation. Nice.

I also thought interesting and plausible your objection to the claim that no word most people understand needs to be analyzed.

The one serious problem with your proposal is this, I think. If I'm following, a consequence of your proposed analysis is that only actions have purpose. But this is hard to believe, for I should have thought that my computer has a purpose/function, as does my heart, my car, and so forth. But these, one thinks, aren't actions. My heart is not an action. My raising my hand is an action, my typing this sentence is an action, but my heart, my arm, etc. aren't. Actions are typically thought of as events--things that occur (e.g., explosions occur, football games occur). Hearts, arms, etc., don't occur--they exist but don't occur, and thus are neither events nor actions.

Now, one could quibble about all of this, but your thesis would've been stronger if it'd recognized the counterintuitiveness of saying that only actions have purpose.

Finally, I'm still puzzled about artifacts built for a purpose they never serve: a plane, say, that never flies. Won't it follow from your analysis that it is not the purpose of such a plane to fly. But mightn't it be? The thesis would've been a tad stronger if you'd spent some time addressing this sort of worry.

We gave it an A-. Very nice work overall!

Best regards,

Tom

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Biola University's Department of Philosophy presents

2006 Senior Colloquium

Wednesday, May 17

8:00am – 10:30am: Session 1: Library Heritage Room

Nat Tabris: "Mind and Meaning in Plato's Meno: The Importance of Intentional Objects in Understanding Belief and Knowledge."

David Calhoun: "A Unified Analysis of Teleology"

Nathaniel Hatcher: "Defending Millikan Against Plantinga and Henry: An Attempt at Leading Naturalistic Evolutionists Away from Semantic Epiphenomenalism"

Michael Anderson: "McGrath, Four-Dimensionalism, and the puzzles of Coincidence"

Noël Saenz: "Della Rocca's Illusory Argument Against Essentialism"

10:45am – 12:45pm: Session 2: Library Heritage Room

Krisalyn Whiteaker: "Memory on Trial: A Criterion of Self-Identity?"

William Wethington: "God and Time: ET-Simultaneity and the A-Theory of Time"

Timothy Heggem: "The Fire of Force: An Analysis of Coercion and the State"

Ryan Smernoff: "Why Eating Too Many Twinkies Will Make You Stupid: A Critical Response to Paul M. Churchland"

12:45pm – 1:45pm: Lunch Break

1:45pm – 4:15pm: Session 3 Library Heritage Room

Andrew Bailey: "In Defense of Frankfurt"

Jonathan Mathew: "The New Ostler Challenge"

Dustin Earl: "Emotions as Objects of Moral Appraisal"

Janelle Klapauszak: "Trusting Common Sense: An Analysis and Re-formulation of Reid's Argument"

Benjamin Logan: "Entitlements and Rawls' Theory of Justice"

4:30pm – 6:30pm: Session 4 Library Heritage Room

Richard Williams: "Choice and Religious Belief"

Jeremy Finzel: "Lotteries and Defeaters"

TAllan Unfried: "Clones: A Phantom Menace"

Brandon Garcia: "Emotions: What Are They Good For? Absolutely Nothing?"

Colloquium Handout

A Unified Analysis of Teleology By David Calhoun

Intro

Purpose is a teleological term – thus I will use “purpose” in place of where I might have used “teleological” (you'll thank me later)

How can we understand “the purpose of life” unless we have an understanding of the meaning of “purpose”? Getting at this meaning is the project of analysis, and is the goal of this paper.

General project: examine views toward an *analysis of purpose*, then settle on a defense of one of these views (the unified analysis, i.e. a modified version of Larry Wright's analysis).

I. Analysis is definition – it is useful in distinguishing cases of purpose from cases of non-purpose.

II. Five Views

C. Philosophical naturalism (Quine, etc.).

General position: purpose is meaningless, so an analysis of purpose would be meaningless

Reasoning: anything that cannot be empirically verified is meaningless. Purpose cannot be empirically verified, therefore it's meaningless

Problem:

P1. Causation also seems to be meaningless, since it cannot be empirically verified. All we see is: when A moves, B usually moves. We never empirically verify the causation *itself*, only that A moves and B moves.

P2. The same reasoning that rejects causation rejects purpose-language

P3. But causation cannot be meaningless, since we rely on talking about it in the sciences

P4. Therefore something must be wrong with the reasoning of the philosophical naturalist

CI. “Common sense” view

General position: no analysis of purpose is needed

Reasoning: the meaning of purpose is commonly understood, and commonly understood terms need no analysis

Problem:

- how do we know the term “purpose” is commonly understood? The only way to find out would be to proceed with some sort of an analysis of the term (i.e. the one thing the “common sense” view says we need not do)

CII. Kantian view

General position: to make progress in biology, we must use “purpose” instrumentally. However, we cannot really determine if there is purpose in the natural world.

Reasoning: the only way to determine if there is purpose outside of ourselves is to have access to things (things-in-themselves) without mediation – i.e. directly. But we don't have this access.

Comments: it's inconsequential to the project of analysis whether there really is purpose in the world – we are just concerned with how we are using the term

CIII. Disunified view (field-specific) (Godfrey-Smith, Mayr)

General position: an analysis must be field-specific (i.e. for biology, include references to evolution)

Reasoning: the disunified view is superior because A) a unified view fails to account for important things such as evolution and natural selection and B) the unified account fails under the big-and-little rock counterexample, whereas a disunified view would not fail

Problem 1:

- how do we know we're giving an account of purpose within our field? How do we know we're accounting for purpose and not something else, such as causation? The answer is that we must have a *preconceived idea* of purpose. In other words, a general account of what purpose is.

Problem 2:

Paradigm cases of purpose:

- (A) the purpose of words
- (B) the purpose of the heart
- (C) the purpose of a hammer
- (D) the purpose of human life

Most would say that “purpose” has the same meaning in A-D. The disunified account, on the other hand, would seem to imply different meanings of purpose (i.e. field-specific meanings) in A-D

CIV. Unified view (not field-specific) (Wright)

General account: Purpose is when:

- (i) B tends to bring about G.
- (ii) B occurs because it tends to bring about G.

Why no mention of goal? Ambiguity in the application of the word “goal”

Problem with (i):

- “tends to bring about” is somewhat ambiguous – we can change this to “usually results in”

Problem with (ii):

- “occurs because” fails with the big-and-little stone counterexample

- the counterexample relies on an understanding of “occurs because” as a physical “is there because”, but “occurs because” is etiological (etiology refers to origin of something).
- we must modify “occurs because” to “exists (at all) because” to avoid the counterexample

My revision: Purpose when:

- (i) given B and G, where B is an action, B usually results in G.
- (ii) B exists (at all) because it usually results in G.

III. Application to Christianity

- if we want to have a meaningful creation-evolution debate, we must be agreed on our analysis of what purpose is. This is what the unified analysis seeks to do.
- if we want phrases such as “God's purpose for me is to X”, then we must be clear on what we mean by “purpose” - this is what our unified analysis seeks to do.

Thesis Paper

Introduction

If a non-philosopher were asked what philosophers talk about, one of their answers might well be “the purpose of life”. Surprisingly, “the purpose of life” represents a very small slice of the pie of what philosophers actually discuss. Another small slice of the pie, if even smaller, is discussion of purpose more broadly. That is, an analysis of what philosophers call “teleology” (where “telos” refers to the end, goal, or purpose of something). This analysis will be a sort of pre-philosophy: before we can answer big questions like “what is the purpose of life”, we must be in agreement on the meaning of the terms in the sentence, including the word “purpose”. Getting clear on this meaning is the concern of analysis.

What is interesting about teleology, or the study of purpose, is the number of different subjects in which its terminology is used. For instance, we might say “the purpose of words”, “the purpose of the heart”, and even “the purpose of a hammer”. In each of these cases we use the same word - “purpose” - and yet surely we don't intend a different meaning each time! Rather, in each situation it seems we are using the same meaning of the word “purpose”. This is the meaning I'm looking for in an analysis of purpose. **And I mean an analysis of purpose to be synonymous with an analysis of teleology itself. This is what will be the focus of this paper. More specifically, I will be defending Larry Wright's analysis of purpose.**

My project will proceed as follows: first I will examine what any analysis involves, secondly I will outline and critique five positions toward an analysis of purpose. Most of my time will be spent here, as there are some that think such an analysis cannot or shouldn't be made, and those that think the opposite, but disagree how to go about such an analysis. **I intend to show that an analysis of purpose can (and should) occur, and that we must first focus on a unified analysis (applied to all subject fields), as opposed to a disunified analysis (applied only to specific subject fields).** I will conclude

this section with a defense of a modified version of Larry Wright's analysis. In the third and final section I will briefly show how an analysis of purpose is actually quite essential for a basic understanding of Christian terminology.

I. What is Analysis?

What I am after in this paper is an analysis of purpose, but how will I know I have succeeded unless I know what analysis is in the first place? I take analysis to be the same as the *definition* of something. Thus, if I have given a sufficient analysis of “square”, I will have defined its essential parts, i.e. “a figure which has four equal sides”. The practical use of this analysis is that I will be able to distinguish squares from other shapes such as circles or triangles. In the same way, an analysis of purpose will define the essential parts of purpose. Thus we will be able to distinguish purpose from instances of non-purpose.

When will our analysis be successful? - when it describes the essential features of purpose, and when, practically using the analysis, we can correctly distinguish instances of purpose from instances of non-purpose.ⁱ

II. Five Positions Toward Analysis of Purpose

Though I will eventually be defending a version of a unified analysis, it will be necessary to examine other theories on the market. As far as I can tell, we have the following five positions toward an analysis of purposeⁱⁱ:

- (1) such an analysis is meaningless, since it cannot be tested by natural science (philosophical naturalismⁱⁱⁱ)
- (2) no analysis is necessary because most people already understand the meaning of the term “purpose”

- (3) an analysis merely for *instrumental* understanding, since we cannot rationally determine if there is purpose in the world (Kant^{iv})
- (4) confine analysis of purpose to each subfield (disunified account) (Godfrey-Smith^v, Mayr^{vi})
- (5) find a general analysis of purpose which applies to all fields (unified account) (Larry Wright^{vii}).

1

The first criticism, that analysis of purpose is meaningless because it cannot be tested by natural science, comes from the position of philosophical naturalists such as W.V.O. Quine^{viii}, who would argue that talk of purpose is meaningless essentially because no purpose can be found in nature.^{ix} Therefore, according to this view, sentences such as “the heart's purpose is to pump blood” are philosophically unacceptable. The most we can say is “the heart pumps blood” - anything more would be adding information not derived from empirical viewing.

My account of philosophical naturalism here is very minimal, but I don't think it is an incorrect statement of the philosophical naturalist's position. Quine, for instance, was greatly influenced by the logical positivists and their verifiability theory of meaning^x: “[A] statement is literally meaningful (it expresses a proposition) if and only if it is either analytic or empirically verifiable”.^{xi} “The heart's purpose is to pump blood” is neither analytic nor empirically verifiable, therefore it is meaningless. There is no doubt this view has had a great impact on philosophy, however if logically taken to its conclusion, it becomes a very destructive, as it seems to imply that causation is meaningless, which is contrary to the view of science and common sense.

Many sciences rely on the notion of physical causation^{xii}, yet it is unclear how causation might be acceptable to philosophical naturalism while purpose is not. For instance, take this sentence: “the

heart beating causes the pumping of blood”. This is obviously not analytic, so we can cross-off the first criteria of the verifiability theory. The only hope of causation remaining meaningful under this account is for it to be must be empirically verifiable. But it seems not to be. We have access to no empirical observation of causation *itself* – rather, the only things observed are the heart beating and the pumping of blood. Millions of observations might possibly find a probable relation between them (i.e. where A occurs, B occurs), but *we will never have an empirical observation of the relation or cause itself*. For the true philosophical naturalist then, it seems causation should be as meaningless as teleology.^{xiii}

If this is what philosophical naturalism leads to, then this is why it is a truly destructive account: it removes the entire basis for scientific understanding of the world itself. If we only know about some probably relation between A and B, we haven't learned about anything of a physical causal connection between the two, as science purports to do. We haven't learned of a causal connection itself – and worse yet, any talk of causal connection is meaningless, since it is not empirically verifiable.

As well as being destructive to many of the sciences relying on causal relations, this rejection of causation also goes against common sense. We don't seem to be saying something meaningless when we say that the heart causes the pumping of blood. Rather, it seems reasonable to say this is meaningful.

To sum up, causation is in the same boat as purpose: philosophical naturalism must reject both as meaningless, since we have no empirical observation of either. Since this reasoning calls causation meaningless, which is contrary to many sciences and contrary to common sense, there must be something wrong with this reasoning. Since this is the same reasoning that rejected purpose, we can safely assume that talk of purpose isn't necessarily meaningless, as philosophical naturalists make it out to be. This seems sufficient to reject (1) and move on.

The position of (2) is that an analysis of purpose isn't needed, since people already know what purpose is and can even identify instances of it. This might be called the “common sense” view, which appeals to the notion that most people have the same understanding of purpose. I have found no one who actually advocates this position in respect to the understanding of purpose, however it is being considered in this paper because it is quite a viable position, and appears at first glance very appealing.

It does seem entirely plausible that the term “purpose” is understood by all who hear it, and therefore needs no analysis. This can be illustrated by the example of X and Y. While we do not know anything about X and Y, if I say “the purpose of X is to Y”, then it seems we have learned a new piece of information. Most would say we now actually *know something* about X and Y, whereas before we didn't. Why then should we bother with an *analysis of purpose* if the *meaning of purpose* is already clearly understood?

Position (2) clearly implies the following:

(2A) No word which most people understand (i.e. purpose) needs to be analyzed

Surely this is wrong – for how do we know “most people understand” the word? Without giving an analysis, the only way to determine this would be to ask everyone the yes-or-no question “do you understand what purpose means?”. However, this isn't sufficient to determine if there is a consensus on the meaning of the word. The only sure way is to conduct an analysis of purpose, then ask if people agree with such an analysis. **So the failure of (2A) (and thus (2)) is that it begs the question – it *assumes* most people understand purpose, while the only way to verify this is to give an analysis – the one thing (2A) says we need not do.**

(2A) also fails in another way: even if we assume everyone has the same understanding of purpose, there are examples which show this is not the case. For instance, our now-familiar example of the heart and the blood. Is “the purpose of the heart to pump blood”? Person A might say yes, because

the heart has the goal of pumping blood. Person B might say no, since the heart simply pumps blood and has no goal. At first it seems that A and B actually have the same understanding of purpose, i.e. “purpose is when something has a goal”. However, A and B have a disagreement over *instances* of goals. In our case of the heart and the pumping blood, A sees this as an instance of a goal while B doesn't. **Because they disagree on the application of the word, the meaning of “goal” seems different to A and B. Thus, A and B are thinking of *different meanings* when they hear “purpose is when something has a goal”. If A and B can be positions held by actual people, which I think is reasonable, then not all people have the same understanding of purpose, and thus position (2) is again shown to be wrong. So much for this position.**

So far I have been considering positions which prevented us from analyzing purpose at all. Position (1) considered the philosophical naturalist's view that speaking of purpose is meaningless. However, if taken to its natural end, we must also reject causation, which is contrary to the sciences as well as to common sense. Since the method for rejecting causation is the same method for rejection of purpose, something must be wrong with the method. Thus our rejection of position (1) again allows for the *possibility* of an analysis of purpose. After this, position (2) was considered. However, it's not clear that we all have the same understanding of purpose, and to verify this in the first place would require an analysis of purpose. Such an analysis is inevitable, so we must also reject position (2). Now we are finished dealing with positions which clearly steer us away from analysis.

3

Position (3), notably explained in Kant's Critique of Judgment^{xiv}, is the view that purpose is useful for understanding natural sciences, particularly biology, but it can only be instrumental, and not tell us for sure if there is purpose in the natural world.

The first part of this is that terms such as “purpose” are useful for explaining natural

phenomena. For instance, we might say that the purpose of the stomach is to digest food. What a predicament we would be in if we had to explain this without using the term “purpose” or any other teleological term! Then we might be limited to saying something non-teleologically, such as “the stomach digests food”. But this removes the reason why the stomach is there in the first place! There seems to be a genuine loss of information. However, I take Kant to be saying that teleological language such as “purpose” or “function” (i.e. “the function of the stomach is to digest food”) is vital to understanding of organisms, *but no more than this*.^{xv} Kant doesn't think we can really know for sure whether this terminology is accurate.^{xvi} Because of this, I take Kant to be saying that terms such as “purpose” are *only* instrumental, and shouldn't be taken to be anything more. Something that goes beyond instrumental terms would be a sentence such as “the stomach was created for the purpose of pumping blood”. This would be crossing the limits of what Kant thinks we are capable of doing.^{xvii}

In other words, Kant's analysis tells us how we use purpose and other teleological terms, and nothing more. As it turns out, this is exactly the project of analysis. After all, as we said before in section I, an analysis is just a definition - and a definition is just the acceptable usage of a term. Whether purpose actually exists in the world is not the project of analysis, but rather a possible future project once we've settled on an analysis. Kant's position (3) that purpose (or any other teleological term) is *merely* instrumental is therefore inconsequential to our analysis.

We have seemingly survived through positions 1-3! We know now that an analysis of purpose *can* be made, and that's handy to know! Now we just have to decide how to approach such an analysis.

4

One approach toward an analysis of purpose is position (4), the so-called “disunified” account, which states that we ought to make an analysis of purpose in terms specific to each field. This position is held by Peter Godfrey-Smith^{xviii}, Ernst Mayr^{xix}, and others. Godfrey-Smith, who views purpose in

terms of “function”, has argued that subfields are too complex to be accounted for by more general, unified accounts:

“...there remain entire realms of functional discourse, in fields such as biochemistry, developmental biology and much of the neurosciences, which are hard to fit into this [unified] mold, as functional claims in these fields often appear to make no reference to evolution or selection.”^{xx}.

Thus Godfrey-Smith advocates that a disunified account provides a better explanation, since it will include important factors such as evolution or natural selection. A very rough picture of this might be as follows:

(B) Something has a purpose if it is the result of an evolutionary process.

This would be an example of a very basic disunified analysis of purpose within the field of biology. On the other hand, a unified analysis would not reference evolution at all, since it must not only describe biological phenomena but also purpose in other fields. For instance, fields describing human artifacts (creations), i.e. a knife's purpose to cut.^{xxi} Why can't we use our disunified analysis (B) to understand the purpose of a knife? It is obviously disastrous:

(B-A) A knife has a purpose (cutting) if it is the result of an evolutionary process.

On the disunified analysis this is not problematic, since we are misapplying a field-specific analysis. The remedy is simply to use the proper analysis from the field that analyzes knives and other human artifacts.

We might be led to the conclusion that the disunified analysis of purpose gives us innumerable and unrelated analyses of purpose from many different fields, which is somewhat true. However, this is what I think is the problem with the disunified analysis: these accounts from multiple fields *are not unrelated*. All these disunified analyses are related because they all give an account of purpose within their respective fields. Remember in the beginning of this paper that I argued we are referring to the

same meaning of purpose in cases such as “the purpose of words”, “the purpose of the heart”, and even “the purpose of a hammer”. **In order for the disunified analysis to work, it must presuppose we are using the same meaning of “purpose” in all these instances. The only way to determine if we are really using the same meaning in each instance is if we have a single unified analysis of purpose. In other words, a unified analysis is required before we proceed to disunified analyses.**

Because this is the main reason for rejecting the disunified approach (4), I want to clarify this before moving on to ultimately supporting the unified analysis of purpose (5). As I stated at the beginning of this paper, purpose and other teleological language occurs in multiple fields. My original examples were the following, which I will consider to be paradigm cases of purpose^{xiii}:

- (A) the purpose of words
- (B) the purpose of the heart
- (C) the purpose of a hammer

Because I started this paper by referencing the famous “what is the purpose of life” question, I will add the following to our list of paradigm cases:

- (D) the purpose of human life

What the supporter of the disunified account (4) wants to do is to leave analysis of A-D to each respective field. In such an analysis we will expect field-specific words. So (A) will involve an analysis using terms specific to the philosophy of language, (B) from the philosophy of biology, (C) from something such as anthropology, and (D) from Religion, ethics, etc.

Thought such analyses would use terms specific to each field (i.e. evolution, natural selection), it would be troublesome to say that a different meaning of purpose was meant in A-D. I think the supporter of (4) would agree that we were using the same meaning in each case. Now suppose we ask for clarification what we mean when we say “purpose” in A-D. As shown in (2), the surest way to go about this is through an *analysis of purpose*. **And since we say “purpose” has the same meaning in**

A-D, such an analysis must be applicable to multiple fields. In other words, not a disunified analysis, but a unified analysis.

The primacy of a unified account can be shown again through the problems we would have without it. For how would we ever know when we made a mistake in our field-specific analysis of purpose? For instance, suppose in my field-specific analysis that “purpose is when X causes Y”. We would respond that this doesn't sound quite right, as it doesn't seem to be a proper analysis of purpose. **This is illuminating: we seem to have a pre-conceived idea of what purpose is! If someone is going wrong in their analysis, we can tell them so, and perhaps tell them what they are missing in their analysis. This pre-conceived idea of purpose is the single meaning that applies to cases A-D. In other words, it is a multi-field meaning of purpose, something that only a unified analysis can verify. To sum up, a unified analysis is the only thing that can tell us if we are making progress in a field-specific analysis.**

If anything, I have not outright rejected (4) here. All I have shown is that for a disunified analysis (4) to make progress, it must necessarily rely on an understanding of the unified account (5), which I will next examine.

5

Finally we arrive at the conclusion that the unified analysis (5) is of prime importance in our study of purpose – it is the analysis that must take place before we have a general understanding of purpose, and thus an understanding of how to formulate field-specific accounts of purpose, as Godfrey-Smith and other supporters of the disunified account (4) want to do. Before their account begins, they must be settled on a unified analysis. And this is what I intend to do for the remainder of this paper!

For this section I will defend a version of Larry Wright's analysis of purpose, which I think offers us the most hope for a unified analysis. His account is as follows:

(W)^{xxiii} B for the purpose of G iff:

- (i) B tends to bring about G.
- (ii) B occurs because it tends to bring about G.

Wright's account is famed for being quite simple,^{xxiv} but this is deceiving, as it is well-formulated to avoid the errors of his predecessors.^{xxv} I think we should even *expect* a unified analysis to be quite simple, after all it must be general enough to be able to describe all sorts of different cases such as A-D. If it's too specific and detailed, then it will presumably not be able to account for some cases.

Another thing we notice with Wright's account is that it doesn't refer to a goal.^{xxvi} This is to avoid what Wright takes to be errors of previous analyses of purpose, notably Norbert Wiener's famous cybernetic account, which I've critiqued in some detail in Appendix B.^{xxvii} Wright's reason for not using the term "goal" is because he thinks there is purposeful behavior which lacks a goal. I think this is wrong, as I've shown in Appendix B. Yet I still agree with Wright's decision to omit the word "goal" (or one like it) from our unified analysis. As shown in section 2, people disagree over goal-directed behavior. But if they disagree, it seems to me they have a different understanding of the word "goal". As such, using the word "goal" would be unhelpful and ambiguous in our analysis.

Since I've already given what I take to be paradigm cases of purpose in A-D in section 4, let's return to those cases. And since (W) is a unified analysis, we will expect it to correctly work in each case:

(5A) the purpose of words (B) is to communicate meaning (G):

- (i) words tend to bring about communication of meaning
- (ii) words occur because they tend to bring about communication of meaning

(5B) the purpose of the heart (B) is to pump blood (G):

- (i) the heart tends to bring about pumping blood
- (ii) the heart occurs because it tends to bring about pumping blood
- (5C) the purpose of a hammer (B) is to drive nails (G):
 - (i) the hammer tends to bring about driving nails
 - (ii) the hammer occurs because it tends to bring about driving nails
- (5D) the purpose of human life (B) is to glorify God, live virtuously, etc (G):
 - (i) human life tends to bring about glorifying God, living virtuously, etc.
 - (ii) human life occurs because it tends to bring about glorifying God, living virtuously, etc.

Generally, each of these cases seem to be satisfied by Wright's account. However, in translation there are some awkward sounding sentences. First, “tends to bring about” sounds awkward – as in “the heart *tends to bring about* pumping blood”. And secondly, sometimes “occurs” sounds awkward, as in “the hammer *occurs* because it tends to bring about driving nails”. The remainder of this section will detail why I think this terms should be modified for clarification.

The first problem is the usage of “tends to bring about” - why not simply say “B does G”, as in “the hammer drives [does] nails”? Wright's concern here is that there is purposeful behavior that never reaches its goal (G).^{xxviii} For instance, a man groping around in the dark looking for matches that are not there.^{xxix} Clearly the man will not reach his goal, since the matches aren't there. Thus Wright prefers to use the indefinite “tends to” instead of the definite “does”. Here is a description of the situation using Wright's analysis of purpose:

- (i) the man groping around in the dark looking for matches *tends to* bring about finding matches

Again, the wording just doesn't seem to work here, so I will replace it with a similar phrase, while still leaving the basic idea:

(i) the man groping around in the dark looking for matches *usually results in finding matches*
or more generally,
(i) B usually results in G.

Let's also apply this to cases 5A-5D: (5A) words usually result in communication of meaning, (5B) the heart usually results in pumping blood, (5C) (the action of) the hammer usually results in driving nails, (5D) human life usually results in glorifying God, living virtuously, etc. Notice there is still some strangeness here, especially in 5C, where I had to add “*the action of the hammer*” instead of simply “the hammer”. How strange it would sound if we said “the hammer usually results in driving nails”, as if leaving the hammer alone with some nails for a short time would result in driven nails!

Francis Slade recognized this concern, and explained that human artifacts, such as hammers, do not have purposes in themselves, but only have purposes because they are given purpose by humans.^{xxx} This is certainly true, but we are after a more generally description here – i.e. certainly we would say that the heart has a purpose, and yet it is not given its purpose by humans.^{xxxi} A more general description of what's going on seems to be that purpose involves action. A hammer is inactive without a person using it, for instance. In other words, purpose involves action, so we must again modify Wright's formula:

(i) given B and G, where B is an action, B usually results in G

Notice that this revision really does agree with our common sense understanding – for instance, we don't think of inactive things such as rocks as having purposes. This is because they are passive and inactive. However, rocks can be used for throwing weapons – and only here, when they are used for an action, do they have purpose.

These modifications to (i) seem to be sufficient. Now let's move to my second concern, the ambiguity of the term “occurs because” in (ii):

(ii) B occurs because it tends to bring about G.

Since we've already modified the “to bring about” wording from (i), we can safely modify it here as well:

(ii) B occurs because it usually results in G.

In a more specific paper addressing purpose as function^{xxxii}, instead of using the word “occurs”, Wright uses “is there because”. This change seems to be purely stylistic, as “occurs” and “is there because” can be reasonably thought of as having the same meaning. As such, Wright's clarification of “is there because” should also be helpful in understanding what is meant by “occurs because”:

It can mean something like "is where it is," as in "keeping food out of the windpipe is the reason the epiglottis is where it is." It can mean "G's have them," as in "animals have hearts because they pump blood." Or it can mean merely "exists (at all)," as in "keeping snow from drifting across roads (and so forth) is why there are snow fences"^{xxxiii}

Wright's translation into “is where it is”, has some problems, as Boorse^{xxxiv} and Godfrey-Smith^{xxxv} have shown. Godfrey-Smith uses the following example, adapted from some of Boorse's examples:

Consider a small rock holding up a larger rock in a fast-moving stream. If the small rock did not support the larger rock, it would be washed away. Holding up the big rock is the thing the small rock does, that explains why *it is there*. So on Wright's original analysis this is the function of the small rock.^{xxxvi}

In terms of our analysis, this is troublesome because it implies the *purpose* of the small rock is to hold up the larger rock, when it seems obvious that there is no purpose involved here. The small rock just happens, by accident, to physically be there. Here's what it looks like when we've plugged it into (ii):

(ii) the small rock blocking the way (B) *is there because* it usually results in the larger rock that is stuck (G)

This seems to work perfectly well with (ii) – and yet we would say that the small rock obviously has no purpose, so something must be wrong with (ii). I would therefore disagree with Wright that “occurs” means “is there because”. Wright offers another translation which avoids this difficulty: “occurs because” seems to mean what Wright translates as “exists (at all)”. Thus we now have the following:

(ii) the small rock blocking the way (B) *exists (at all) because* it usually results in the larger rock that is stuck (G).

The rock counter-example is ineffectual here – obviously the small rock doesn't exist simply because of the larger rock. Previously we considered that (ii) was just making a claim about physical location, but the rock counterexample rejected this. Instead, (ii) is making an existential claim – and in this case the rock counterexample fails. Incidentally, this should be no surprise, as Wright's theory is called an “etiological” (having to do with origin) theory. “Keeping food out of the windpipe is the reason the epiglottis is where it is” is not primarily a claim about physical location (as in the rock example), but an existential claim – why the epiglottis is there at all. We should revise (ii) to remove any ambiguity in light of this:

(ii) B exists (at all) because it usually results in G.

Let's now examine the paradigm cases A-D in light of these modifications to (i) and (ii) (modifications in italics):

(5A) the purpose of words (B) is to communicate meaning (G):

(i) words (B) *usually result in* communication of meaning (G)

(ii) words (B) *exist (at all) because they usually result in* communication of meaning (G)

(5B) the purpose of the heart (B) is to pump blood (G):

(i) the heart (B) *usually results in* pumping blood (G)

(ii) the heart (B) *exists (at all)* because it *usually results in* pumping blood (G)

(5C) the purpose of a hammer (B) is to drive nails (G):

(i) the hammer (B) *usually results in* driving nails (G)

(ii) the hammer (B) *exists (at all)* because it *usually results in* driving nails (G)

(5D) the purpose of human life (B) is to glorify God, live virtuously, etc (G):

(i) human life (B) *usually results in* glorifying God, living virtuously, etc (G)

(ii) human life (B) *exists (at all)* because it *usually results in* glorifying God,
living virtuously, etc (G)

I don't see any glaring problems with any of these accounts, and thus I'm fairly satisfied with these modifications. Notice, however, that I have done little to Wright's original account. I have changed "tends to bring about" to what I see to be the more appropriate "results in" without a major change in meaning. I've also changed "occurs" (or in Wright's functional account, "is there because") to "exists (at all)", which is really only one of Wright's suggestions. But contrary to Wright, I think "exists (at all)" is the *only* option, since it avoids the big-and-small rocks example.

Thus I have settled on the following unified analysis of purpose:

B for the purpose of G iff:

(i) given B and G, where B is an action, B usually results in G.

(ii) B exists (at all) because it usually results in G.

III. Teleology and Christianity

Admittedly, how we use our analysis is immensely more interesting than the analysis itself, yet the analysis is necessary before this can be carried out. This entire paper has so far only been concerned with an analysis of purpose, and nothing to do with how we might rely on such an analysis. And in particular, how this applies to us as Christians.

Perhaps the best example of use of an analysis is the controversy between evolution and intelligent design. One posits that the natural world has no purpose in the sense that there is no supernatural creator which has given things purpose. The other, intelligent design, posits the contrary – that there is purpose in the natural world, since it has been created by a supernatural being. Most of our debates here proceed as if we have a mutually-agreed-upon understanding of the meaning of purpose. But this doesn't necessarily seem to be the case, and further – as I explained in section II, the only way to verify this common understanding of meaning is to proceed with an analysis! Then surely we will have made progress in the evolution-creation debate if we can get both sides to agree on at least the terms being used!

A more practical example of our reliance on an analysis of purpose is seen throughout our daily conversations we often say things such as “God's purpose for me is to go into ministry”, “God's purpose for me is to teach”, etc. Do we really understand what is meant by this? To understand these sentences we must understand what purpose entails, and this is where analysis is concerned. But don't we all have a common understanding of purpose? As explained in section (2), the only way to tell if we have a common understanding is to undergo an analysis of purpose. If it is important for us to understand sentences such as “God's purpose for me is to X”, then it is important to know exactly what we mean when we say purpose, even if it would appear obvious at first. From my revised version of Larry Wright's analysis, it is clear that “God's purpose for me is to go into ministry” really means “I exist (at all) because it usually results in me going into ministry”. Here “usually results in” sounds

awkward, but this only allows for cases of failure. Surely God has a purpose for our existence, but surely we can also fail to meet this purpose.

Conclusion

To sum up, I have shown in section (I) what an analysis involves. In section (II), the philosophical naturalist position (1) and the position that assumed a common understanding of purpose (2) was examined. It was made clear, contrary to these views, that we can and should analyze purpose. Position (3), that of Kant and others who view talk of purpose or any other teleological language to be purely pragmatic, was seen to be at the very least only neutral to an analysis of purpose. Before we can assess whether purpose actually exists in the world is quite a different project from an analysis of purpose. In any case, the former depends on the latter – how can we determine if there is purpose in the world unless we have a clear understanding of what purpose is? Thus at the very most, (3) is supportive of an analysis of purpose.

From this point in the paper it was clear that an analysis of purpose must be made, so positions (4) and (5) were our only remaining options. The disunified analysis (4), which is the position of Godfrey-Smith as well as others, argues that our analysis must occur within very specific fields, in his case in the field of biology. Thus such an analysis can be useful and include language of evolution and natural selection. We can't use such language in a unified analysis (5), since it must be applicable to all fields in which purpose occurs. For instance, it would be nonsense to talk about evolution or natural selection in relation to the purpose of words or the purpose of hammers, both of which do not reproduce and thus aren't affected by evolution or natural selection.

The disunified analysis (4), or analysis within a field, is quite useful, but I have argued here that such an analysis cannot be made without presupposing a unified analysis of purpose. Otherwise, what will be the criteria for knowing if our field-specific analysis of purpose really has to do with purpose?

It relies on understanding of purpose more generally, and this is what the unified analysis (5) attempts at. So if anything, (4) is no outright rejected, but we cannot go about (4) without (5).

In section (5) I argued for a version of Larry Wright's unified and etiological analysis of purpose. With small modifications it can survive the big-and-small rock counterexample raised by Godfrey-Smith, as well as nicely explain the paradigm cases of purpose. If there are no counterexamples to my unified analysis, then we should feel free to proceed in the project of disunified analysis (4). However, if there are problems with my unified analysis, then they should be addressed before we even attempt a disunified analysis. Either way, we must start with this unified analysis.

Appendix A: A Short History of Teleology^{xxxvii}

The concept of the telos, or purpose, itself can be traced back to Aristotle's four causes, which is called a final cause or final end:

...[the telos is] 'that for the sake of which' a thing is done, e.g. health is the cause of walking about. ('Why is he walking about?' we say. 'To be healthy', and, having said that, we think we have assigned the cause.)^{xxxviii}

This conception of the telos persisted through into the Medieval period, when Thomas Aquinas took Aristotle's four causes one step further (the telos was ranked as the most important cause).^{xxxix} It isn't difficult to see why it was ranked so highly, as surely the most important of all causes in the universe is the cause or purpose of its creation by God.

So far there have been no major obstacles to the conception of teleology. However, when science was beginning to distinguish itself from philosophy, it soon created a difficulty for any conception of teleology. The method of science is to explain purely naturalistic, observable phenomena. Where then do we find a telos in naturalistic descriptions of living things? In teleology, for instance, we would say that “the telos of the heart is to pump blood”. In science, however, a telos seems completely extraneous to a description of the heart. Thus on a scientific account our sentence gets reduced to “the heart pumps blood”, with seemingly no need for a telos at all.

An interesting case example that sheds light on the debate during this point of transition is correspondence between Newton and Leibniz. Newton, on the one hand, generally saw the universe as governed by mathematical laws.^{xi} That is, a mechanistic view of the universe. Leibniz on the other hand viewed the universe as a world guided by a “pre-established harmony by which God has established an order among all things”.^{xii} That is, the complete opposite of a mechanistic universe, and instead a universe of harmony, where everything is in its place for a purpose or telos.

In the nineteenth century, prior to Darwin, it had previously been debatable whether the

differentiation of species could be explained by purely mechanistic phenomena, especially in the multitude of examples where living things seem so well adapted to their surroundings. Surely it is unthinkable that these adaptations could arise purely by chance, especially in situations where the living thing seems to be well adapted to its environment. Such adaptations were at the time best described best by the works of Paley and others, who described these phenomena as evidence of God's design in the natural world. Such adaptations can be compared to finding a watch in the sand. Surely it would be unthinkable to say that the watch came to exist purely by chance. In the same way, isn't it unthinkable to say that such complex organisms as cats and dogs, and other life, came to exist purely by chance? After all, these kinds of animals have all sorts of organs – a brain, a stomach, a liver, muscles and bones – all sorts of parts that all work amazingly well together. In the same way, a watch is made of springs, gears, a face plate, and all sorts of things that enable it to function quite well. In the same way that a watch without a watchmaker would be unthinkable, it seems unthinkable to imagine a cat or a dog without a creator – to imagine a creature with no creator. Thus to understand the creature properly, and to understand why the creature exists at all, it is necessary to understand its creator

When Darwin published his *Origin of Species* and after Darwinism became accepted by natural science, there was no longer a need to account for this order in terms of a conscious all-powerful designer (God). Instead, the origin of these complex things could be described by evolution and natural selection, and thus no need for a supernatural designer.

Darwinism threw most talk of teleology out of science, but what about general philosophy? No doubt the idea of evolution influenced philosophy in this respect, but philosophy itself had also undergone a dramatic change: the shift away from metaphysics^{xlii}. Teleology, as a part of metaphysics, was seen as something that was truly meaningless and could not be described, since it appears by definition^{xliii} to have no basis in the empirical world. General philosophy still more or less ascribes to this view of teleology as meaningless, though some have argued that talk of teleology in philosophy is

becoming more popular^{xliv}. Perhaps the one area where teleology is, or at least was, legit was in the case of Marxism and other intellectual descendants of Hegel, in which the telos is of crucial importance to society as a whole. In this view, all of society throughout history is seen as continually progressing towards a goal^{xlv}.

One proponent who has argued in this way is Mark Perlman, who has recently said that we should once again be able to talk about teleology (and the rest of metaphysics, for that matter) ever since Quine published his “Two Dogmas of Empiricism”, in which he criticizes the analytic/synthetic distinction as dogma, and more importantly for our discussion, the dogma of reductionism – that something is meaningful and “legitimate only if reducible to well-behaved physicalistic and non-teleological phenomena”^{xlvi}. The problem is that teleology is still largely viewed with suspicion, and as such has been ignored, even to the point where the subject has been left out of a recent introduction to Philosophy book^{xlvii}.

However, as stated above, teleological-like language does occur in fields such as the Philosophy of Language and the Philosophy of Religion, and as such is taken for granted. For instance, an article in the Philosophy of Language might go on and on about what the purpose of a “promise” is, yet take for granted that the reader knows exactly what is meant when we talk about “purpose” of this or that. It would not be a far stretch to say that the reader does have some idea of what the purpose of something might be, . . . , but most explicitly in the Philosophy of Biology. In fact it is in this field that we find what have been the most serious attempts toward a definition of the concept of teleology itself, and consequently this

Appendix B: Norbert Wiener's Cybernetics Account

Norbert Wiener's famous "cybernetics" account appeared in 1948, by a paper written by him and two other colleagues. The entire account rests on the idea that any account of teleology will have what Wiener calls a "feedback device". Thus this account can be simply stated as follows:

CV. An event is teleological iff there is a feedback device.

Of course we cannot understand C until we have a basic understanding of what exactly a feedback device is. In Wiener's account, a feedback device exhibits "a continuous feedback from the goal that modifies and guides the behaving object".^{xlviii} So a feedback device consists of at least two parts, A and B, one of which is a "behaving object" and one of which is a "goal object". These two devices interact with each other through some causal relationship. In Wiener's account, the term used to stand for this causal relationship is "signal". So a signal from the behaving-object will affect the goal-object, and a signal from the goal-object will affect the behaving-object. Thus our revised account:

CVI. An event is teleological iff behaving-object A is affected by a signal from goal-object B and goal-object B is affected by a signal from behaving-object A.

As Larry Wright and other have shown,^{xlix} there are obvious counter-examples. Wiener's account works very well for machines and even biological mechanisms, but it falters when we apply it to more broad cases. Israel Sheffler uses this example: "a man's purpose in groping about in the dark may be to find matches that are not there...".^l It is just common sense that such a case is teleological, and yet the cybernetics account would say otherwise. Since the goal-object, the matches, are not present, the system is incomplete. We have an A without a B, and surely according to cybernetics this is not a functioning teleological mechanism. So in summary, there are demonstrative cases of teleology where no goal-object is present.

However, I think this criticism is ill-founded. What we have concluded above is that there can

be teleology without a goal-object:

1. There can be cases of teleology where there is no goal-object.

Yet isn't a goal-object really just the same thing by what we mean by "end"? If this is the case, which I think is obvious, then we have this revision of our conclusion:

2. There can be cases of teleology where there is no end.

We are not done revising this. Teleology itself *cannot* be thought of without reference to an "end", since "telos" literally means "end" or "goal". Here it will be more difficult to translate teleology into something else, since this definition of teleology is the very purpose of this paper! However, we need not have a complete account of teleology in order to find the contradiction of our conclusion. In this case, our incomplete definition of teleology will be "End + X", where X represents what would complete our account of teleology. "End + X" simply means that any account of teleology will contain reference to an end or goal. Thus we have the reformulated account, which reveals the contradiction:

3. There can be cases of End + X where there is no end.

Surely this is not a correct conclusion then! But it seemed obvious that the man searching for matches in the dark exhibited teleological behavior – what are we to say if that are, after all, no matches? Then doesn't it seem that the end doesn't really exist? Here is where real insight is found: the physical end need not be required to exist in order for there to be purposive teleological activity! In the case of the man looking for matches, all there needs to be is the *representation* of matches, the *idea* of matches, to direct the man's teleological activity. This is what distinguishes the man who gropes around in the dark looking for nonexistent matches and the man who is simply groping around in the dark: one has the representation of matches before him, the other does not.

Whether Wiener's cybernetics account could provide such a rebuttal is questionable, as we are about to see. The question is this: can representational ideas be considered as goal-objects in the same way Wiener imagined them? The answer seems to be: no. In CI we saw that the causal relationship

between behaving-object A and goal-object B was a signal. So A sends a signal to B, and B sends a signal to A – such is the nature of a feedback device.

To account for our man and the matches example, the cybernetics account gives us the following:

4. the man (A) sends a signal to his idea of the matches (the representation (B)), and the idea of the matches (B) sends a signal to the man (A).

What we have here is a *very* strange account. It doesn't seem quite right to say that our ideas send “signals” to us, or that we send “signals” to our ideas.

A clearer counter-example to CI appears in the purpose of a hammer. A hammer exhibits teleology because it has a purpose: to drive nails. This is not to say there aren't other purposes, such as digging out nails or murdering people, as in the case of Maxwell in the Beatles song “Maxwell's Silver Hammer”. In any case, what is clear here is that a hammer has a purpose. So let's formulate it in terms of the cybernetics account:

5. the hammer (A) sends a signal to the nails (B) and the nails (B) send a signal to the hammer (A).

Something has gone so wrong here that it's no wonder people avoid a study of teleology! I will go no further on this than to say that hammers obviously don't send signals to nails, and nails don't send signals to hammers.

We have seen that the cybernetics account analyzes teleological systems as feedback devices, where A sends a signal to B and B sends a signal to A. A counter-example was raised in the man and the matches example to show that teleological behavior takes place even when B is absent. It was suggested that this wasn't truly a counter-example, as it seemed that B was in reality not absent, but really that it was something else (the idea of the matches instead of the matches themselves). However, it seems strange to think of “signals” being involved in the case of the man and his idea of the matches.

Further, it seems to be clear-cut that in the case of the hammer and the nails, no signal is involved. Thus we must give up hope for analyzing teleology in terms of the cybernetics account not because teleological behavior can be seen in systems without a goal, as we first thought, but that teleological behavior can be seen in systems without “signals”.

More importantly, this first analysis of the concept of teleology has already given some requirements of what sort of definition we're looking for:

1. The requirement of a telos. That is, a goal or end. As I've basically shown above, teleology requires reference to telos, or it isn't really teleology.
2. The requirements of application. Any general analysis or definition of teleology must cover the following cases:
 - A) to natural cases. For instance, “the purpose of the heart is to pump blood”, which I referred to in the first section of this paper.
 - B) to human intention cases. We have seen this in the example of the man looking for matches.
 - C) to human artifact cases. We have seen this in the case of the hammer, a man-made object (artifact) having the purpose of driving nails.

- i There is some worry here that the only way to gage a successful analysis is to have a presupposed idea of what instances of purpose look like. Since we all seem to have an idea of what instance of purpose look like, an analysis would seem to be unneeded. This presupposes we all have the same understanding of purpose, but I think this is demonstrably false. This will be further explained in section (II-2).
- ii As far as I know I'm the first person to outline these positions this clearly, so more likely than not this is not an exhaustive list of positions. However, these seem to me to be the only relevant positions toward analysis of purpose.
- iii Quine, *Epistemology Naturalized*, pp. 69-90
- iv Kant, *Critique of Teleological Judgment*
- v Godfrey-Smith, *Functions: Consensus Without Unity*, pp. 185-197
- vi Mayr, *The Idea of Teleology* (1992), pp. 117-135
- vii Wright, *Functions*, pp. 139-168; Wright, *Teleological Explanations* (1976)
- viii Quine, *Epistemology Naturalized*, pp. 69-90
- ix See Wikipedia article on philosophical naturalism as well as an older version of the article on Teleology from February 2005.
- x See Wikipedia article on W.V.O. Quine
- xi See Wikipedia article on the verifiability theory of meaning and Quine
- xii Interestingly, cause-and-effect seems to be related to purpose or other teleological terms. Kant saw that only experience of cause and effect lead to our thought of "teleological judgment". See his *Critique of Teleological Judgment*, part of his greater work the *Critique of Judgment*, §63
- xiii Some argue that purpose or other teleological terms are just as important as causation is: "...it is surprising that analytic philosophers, with their strong focus on science, would reject a notion [teleology] that is so central to some areas of science, most notably, biology and engineering sciences. Of course, the Positivists would have said that biology's reliance on teleology jeopardized its standing as a science at all, and certainly prevented it from being a basic natural science". Perlman, *The Modern Philosophical Resurrection of Teleology*, p. 4 (2004)
- xiv Kant, *Critique of Teleological Judgment*, in *Critique of Judgment*
- xv Burnham, *Immanuel Kant (1724-1804) Theory of Aesthetics and Teleology (The Critique of Judgment)*
- xvi Kreines, *The Inexplicability of Kant's Naturzweck: Kant on Teleology, Explanation and Biology* (2005), pp. 270-311. Unfortunately I only had access to Kreines's abstract, which supports this: "...Kant argues for very different conclusions: we can neither know teleological judgments of living beings to be true, nor legitimately explain living beings in teleological terms; such teleological judgment is justified only as a "problematic" guideline in our search for mechanistic explanations."
- xvii Using Kant's language, this would be talking about the thing-in-itself, and the reason for that thing's being. The most we can do is talk about our *impression* of that thing – the *phenomena* of it – and talk of purpose is instrumental for our understanding of this phenomena, but nothing more.
- xviii Godfrey-Smith, *Functions: Consensus Without Unity*, p. 185-197
- xix Mayr, *The Idea of Teleology*, pp. 117-135
- xx Godfrey-Smith, *Functions: Consensus Without Unity*, p. 189
- xxi Sober, *Philosophy of Biology* (2nd edition), pg. 84
- xxii To say A-D are paradigm cases of purpose is perhaps the biggest philosophical move I'm making in this paper, and one I am not entirely confident with. These cases seem to me to be obviously cases of purpose, and yet someone simply disagreeing might destroy my entire account. It seems to me I haven't sufficiently addressed this in either endnote 1 or in II-2, where something similar to this was addressed and dismissed as being a problem. The problem here is basically the problem of the criterion, as such I cannot address it fully in this paper. For a (relatively) recent treatment of this problem, see Chisholm, *The Problem of the Criterion* (1973).
- xxiii Wright, *Teleological Explanations*, pg. 39. I have slightly modified the first part, which originally reads "S does B for the sake of G iff". I take Wright to equate "for the sake of" with "purpose" or other teleological words.
- xxiv Godfrey-Smith, *Functions: Consensus Without Unity*, p. 186
- xxv For a detailed analysis of the theories Wright builds on, see Wright, *The Case Against Teleological Reductionism*, pp. 211-223
- xxvi Boorse, *Wright on Functions* (1976)
- xxvii Wiener, *Behavior, Purpose and Teleology* (1943), pp. 18-24
- xxviii Wright, *Teleological Explanations*, p. 38.
- xxix This example is from Scheffler, *Thoughts on Teleology*, p. 268, quoted in Wright, *The Case Against Teleological Reductionism*, p. 214
- xxx Slade, *Ends and Purposes*, in Hassing (ed.), *Final Causality in Nature and Human Affairs* (1997), p. 83
- xxxi There is a concern here that all purposes really do involve human action, and there is no purpose in things independent

of humans. This is the so-called anthropomorphic objection. Saying that anything outside of human action has purpose would be an anthropomorphism, and thus an incorrect description of the phenomena. Yet it's unclear why talk of purpose should be necessarily anthropomorphic. Consider, for example, a cat chasing a mouse. Surely it would be correct to say that the purpose for the cat chasing the mouse is to catch the mouse! This isn't necessarily anthropomorphic – certainly the cat knows exactly what it's doing in chasing the mouse, as it's not some involuntary reflex. Ruth Millikan uses a similar example (Millikan, *Varieties of Meaning*, p. 203-204), which she actually observed, of a squirrel trying to get to a bird feeder. The squirrel eventually found a way to get up by running along a railing, then ricocheting against a screen door, finally landing on the bird feeder. It would seem absurd to say that it had no purpose, or that our ascribing it a purpose is anthropomorphic!

xxxii Wright, *Functions* (1973), pp. 139-168

xxxiii Ibid., p. 158

xxxiv Boorse, *Wright on Functions* (1976), pp. 70-86

xxxv Godfrey-Smith, *Functions: Consensus Without Unity*, pp. 196-208.

xxxvi Ibid., pp. 196-208.

xxxvii Somewhat better histories of teleology are found the following: Perlman, *The Modern Philosophical Resurrection of Teleology* (2004), pp. 3-7; Stillwell, *Philosophy of Biology in the Nineteenth Century* (1994)

xxxviii Aristotle, *Physics*, Book 2, Chapter 3

xxxix See Wikipedia article on Aristotle

xl Newton, as a Christian, did make room for God in this mechanistic view of the universe: “Newton's own view was that God acted upon the world from time to time to preserve it in its required form”. Stillwell, *Philosophy of Biology in the Nineteenth Century* (1994), p. 274

xli Stillwell, *Philosophy of Biology in the Nineteenth Century* (1994), p. 274. Leibniz would include both the physical and the non-physical in his conception of the universe.

xlii Perlman, *The Modern Philosophical Resurrection of Teleology* (2004), p. 4

xliii Metaphysics means “beyond physics” - something beyond the natural empirical world.

xliv Perlman, *The Modern Philosophical Resurrection of Teleology* (2004), pp. 3-51

xlvi Wikipedia article on Teleology

xlvi Perlman, *The Modern Philosophical Resurrection of Teleology* (2004), p. 4

lviii I'm referring here to Roger Scruton's “Modern Philosophy : An Introduction and Survey” (1996)

lviii Wiener, *Behavior, Purpose and Teleology* (1943), p. 20

lxix Wright, *The Case Against Teleological Reductionism* (1968), pp. 214-215

l Scheffler, *Thoughts on Teleology* (1959), p. 268, as quoted in Wright, *The Case Against Teleological Reductionism*, p. 214