CHAPTER 14
IDEALISTIC SCIENCE

Before we adopt an existential philosophy or any portion of it, we may want to ascertain that it is technically feasible and that it can yield the happiness it promises. Even if we limit an existential philosophy to us individually, we may engage in a process of verifying it for our own account. If we assert a broader application to other individuals, we may have to demonstrate its feasibility and effectiveness to them. To serve that purpose, philosophies may assert that their principles have scientific quality. They may openly claim that they were derived from empiric studies. In that instance, they will concede that their foundation is based on experiences from which their principles were derived. Alternatively, philosophies may shroud the empiric genesis of their principles and claim ideal inspiration without empiric construction. However, even then, they regularly contend that their principles can withstand scientific scrutiny to demonstrate their practical applicability.

In as far as our needs are based on existential requirements for individual or collective survival and thriving, scientific proof should be possible. We should be able to establish fundamental rights as a matter of science. That should be most readily achievable regarding basic survival needs. Even the existential nature of collateral needs might be established by following the processes that depend on them and their importance for human survival and thriving. To the extent these processes can be isolated and reduced to physiological reactions, convincing scientific proof seems achievable. Yet, beyond basic survival needs, the task of scientific tracing and confirmation of our needs becomes exponentially more difficult. The often indirect and mentally involved ways in the pursuit of collateral needs, the complexity of interaction among perceptive, rational, emotional, and tangible factors and individuals in their pursuit, as well as the regular combination of collateral pursuits can render scientific proof arduous. Scientific tracing seems even more difficult regarding idiosyncratic aspects of any needs. The individualized qualities of happiness cast substantial additional doubt on whether scientific proof can be carried through because the sourcing of such needs seems to be concealed in our mind. At low levels of scientific development, problems in tracing needs threaten to impede even rudimentary existential philosophies if we insisted on scientific proof. We might therefore replace such proof for the time being with indications of trustworthiness and belief. Still, because this exposes us to error and manipulation, we may favor the development and application of scientific insights in all areas of existential philosophy.

As we apply scientific methods to needs, we must be aware that such methods generally, and their application to our needs particularly, are fraught with hazards that threaten the purity of the process and its results. These hazards arise from the fact that the mechanisms of our needs innately overlay with the mechanisms of scientific research. Our needs present the principal premises from which our motivations and activities for their fulfillment emerge. Beyond that, they form the objectives of all our activities, the conclusions we try to meet by our pursuits. Each need encompasses both a state of deficiency as its beginning and a claim that fulfillment can be had. It poses a hypothesis. Defined by the span between pain and satisfaction and by its instinctive and related experiential content, each need also contains the organizing principle and some information how we can move from deprivation to fulfillment. It provides criteria and direction for the identification and qualification of practical ingredients. These are measured according to whether and how well they serve the satisfaction of our needs. Interspaced between the definitional span of pain and pleasure, the function of means is to eliminate that differential. Our needs thus form or inform the hypothesis, premises, argument, and conclusion of our pursuits. In matters of happiness, the process leading to its occurrence cannot be constructed without the wish that spans between its beginning and end. Because all our activities, all our rational thoughts and our emotions focus on satisfying our needs, it is hard to preclude this same permeating focus from infecting scientific processes.

In a scientific process, every hypothesis is already a conclusion. We or someone else has already derived a generalization, a principle, or at least a supposition regarding the workings of an observed object or event. A hypothesis usually has a record of constituents that trigger it, impressions that shape an idea. Even if an idea is new, there has to be some conceptual basis for it to arise that is sourced in experiences. Our incomplete knowledge causes us to speculate about what we may find. We form an opinion of what we will find before we have the results of a related scientific process. This is the hypothesis that guides our exploration process. In this process, we ask what conditions would have to prevail to generate our experience and how these conditions would have to contribute. We form a hypothesis because our lack of knowledge deprives us of a potential means for our pursuit of happiness. Immediately, we are deprived of knowing the workings of an observed object or event. In a greater context, we may desire to establish knowledge generally that will permit us to use what we have observed consistent with a utility that we may imagine based on our experiences. In either event, we have a wish to confirm a hypothesis of utility.

Consequently, a scientific process can resemble the pursuit of a need. We begin with the desired result contrasted by a status of deprivation. We subsequently select or form the remainder of the process, the means of proof, to bridge our deficiency and meet the desired result. We work backward from what we are trying to achieve to securing the necessary premises. If science is an instrument we develop and use to implement and satisfy our needs, this type of approach would seem appropriate. Our purpose would be to make circumstances work for us or at least prevent them from working against us. Science fulfills that purpose if it can help us to find and arrange objects or events to deliver results we desire. This function of locating ways to satisfy our needs appears to be the reason we began to engage in scientific exploration and categorization. Much of our scientific research seems to be motivated by that interest. Our approaches toward finding happiness and toward science may therefore be largely indistinguishable because they represent essentially the same undertaking. Science seems to be a more focused manner of trying to develop an existential philosophy. It serves our wish to be happy in all our needs. It is then not surprising that we would undertake to prove a scientific hypothesis in the same manner we try to plan for the fulfillment of a wish. Since we begin and pursue our efforts with an ideal result we desire to reach, we may call the scientific methods that serve such a pursuit idealistic science. Because idealistic science is driven by fulfilling an objective of which we are currently deprived, it is not satisfied with what exists and can be shown to exist. Rather, it leaps ahead of what can be shown to a result it wishes could be proved. It tries to fill the discrepancy between what is and what we wish matters to be. This makes it the scientific embodiment of a wish issued by our needs. If we introduce a scientific process that includes such wish patterns to matters of building an ideal of happiness, we increase the likelihood that such a scientific process can serve our needs. We focus it on creating means that help us reach and maintain fulfillment of our needs. To the extent science is motivated by the wish to address concerns of our needs, we unavoidably infuse our needs into the scientific process. As useful as this infusion might seem to focus and motivate our research, it may also render the scientific technique less effective. The interest by our needs in its outcome may not stop at determining the subject matters of our inquiries. Defining its objectives may inexorably affect how we try to reach them.

There appears to be an integral risk that a scientific progression might be influenced by the wishes of the scientists who are engaged in the goal-driven nature of scientific development. By using science in the pursuit of needs, the scientific process may be more influenced by

what we hope to find than research that does not have such a practical purview. To develop our practical scientific insights and technological capabilities efficiently, we may depend on a scientific process that infuses the desired outcome and concentrates on ways to accomplish it. Yet such a restricted focus threatens to prevent us from detecting, understanding, or properly assessing circumstances in their entirety. We may lose sight of or discount the importance of relevant aspects that detract from desired insights. If science is not open to detect circumstances as they are and rather concentrates on aspects that are conducive to the objectives it wishes to accomplish, it may be an incomplete or faulty, and thus less effective tool in understanding and using our environment to our benefit. A bias in favor of our hypothesis of utility could have the opposite effect of what we are trying to accomplish. To improve and maximize our happiness, we have to deliberate potential interferences and weigh the advantages and disadvantages of different pursuits impartially. On the other hand, broad, aimless investigations expose us to the risks of increased expenditures, unproductive inquiries, delay, and potentially damaging encounters. To resolve this dilemma in scientific methods, we must take a closer look at them.

We may inquire whether the bias of idealistic science can be reformed in an effort to foreclose negative consequences. Idealistic science is prone to bias because it is based on prejudgment. Arguably, we could eliminate its bias if we could manage to disconnect science from the pursuit of needs. However, that may be incorrect. A prejudgment may not only be due to influences from particular needs or the general compulsion to find means that assist our needs. It also seems to necessarily exist in any technique of scientific exploration as a function of our rational processes. When we observe a phenomenon, our rational mind attempts to make sense of it in the context of our experiences. It attempts to detect similarities to known objects and events. It tries to supplement incomplete information about the new phenomenon with associated information from our memory. It takes reference to experiences in which the same or similar components participated. We tend to categorize new observations according to our knowledge base. Even if we cannot find exact matches, we can home in on similarities and dissimilarities that might allow us to understand new observations.

The formation of this rational process may often be motivated and supported by our needs. But it also appears to have the nature of an automatic mechanism in our rational mind that we cannot seem to escape. The sorting procedures for new information inevitably touch upon related impressions. We are compelled to compare newly made observations to our fund of existing experiences. This unavoidably re-

sults in a determination of similarity or difference. We form a rational opinion, a hypothesis, about a phenomenon. We prejudge an associated result based on what we perceive to be correct before we know it to be correct. Our judgment endows us with an interest in confirming its truth. We become invested in proving our hypothesis. A bias is established by the mere formulation of a hypothesis because it is a statement that is believed to be true. Even if we cannot pass firm judgment on an observation by a comparison with our knowledge base, we form a similar bias if our comparison has returned a potential explanation. We tend to form an opinion about the probabilities of alternative explanations and to subscribe to an explanation that we consider to be the most probable, that we deem to have the most potential for truth. We then champion that explanation at least until circumstances dissuade us. Such a bias appears to be constructive in several respects. Its categorization of new events according to similarities helps us to construct our understanding of a new phenomenon. It gives us a starting point for research and experimentation. It may further provide essential guidance in situations in which we must react quickly. However, there are several disadvantages connected to such guidance.

One potential problem arises because of the close correlation of our rational processes with our needs. Rational considerations seem to be inevitably recruited and drawn into the service of our needs. That can cloud our focus and our judgment. Our needs may introduce additional bias that may interfere with the assessment of empiric knowledge and logical deductions, or they may reinforce rational bias. They may also fill the void of missing information regarding a phenomenon with information that is derived from our imagination of ideal circumstances. But even if we can avoid such influences by desires of utility, our rational bias seems to be subjected to emotional aspects that can be problematic. When we formulate a hypothesis, we inexorably wish it to be accurate and that we could prove its truth. The hypothesis becomes our wish. Even if that hypothesis is not biased by utility, our needs still appear to influence our rational exploration processes. They seem to unite in their wish to confirm the competence of our rational mind. In the pursuit of all our needs, we want to be secure in our reliance on our rational mind to explain the world. Our resulting wish to prove a hypothesis represents the differential between a current pain of not being able to prove the hypothesis and the imagined satisfaction of proving it. The same can be said if we try to disprove a hypothesis. The mere fact that we are trying to disprove a hypothesis means that we are partial to disproving it. We wish the hypothesis to be false and that we could prove its falsity. The destruction of the hypothesis

becomes our wish. That wish represents the differential between the current pain of not being able to prove the falsity of a hypothesis and the satisfaction of disproving it. Although it is possible that a hypothesis would be propounded under the inclination that it is wrong, such a stance is unusual. We carry no natural inclination to posit hypotheses about factual assertions that we perceive to be wrong or to prove our own hypotheses wrong. We tend to want to be right in our hypotheses because it signals that we understand a part of our world and can use that understanding to find or build means for our pursuits. Hypotheses that prove assertions wrong do not usually serve that purpose as well as those that can be positively confirmed. The relative worth of proving the factual assertions of a hypothesis as correct is higher than proving them wrong. There are regularly many more facts and combinations of facts that do not serve the fulfillment of a need than there are facts or combinations of facts that advance that fulfillment. Therefore, proving the falsity of an assertion is often less helpful in pointing us into the correct direction than proving its correctness. Proving hypotheses wrong is commonly reserved to others who disagree with our ulterior wishes or do not share our perceptions and conclusions.

A general bias in favor of affirmation, at least regarding a scientist's own hypotheses, is then understandable. Nevertheless, such a bias is dangerous because it may be continued in the factual focus taken to prove a hypothesis. Our bias in favor of a hypothesis may make us partial to establishing the presence of required premises to prove the veracity of our hypothesis. If we have a wish to prove a hypothesis, we will attempt to locate and select facts that support our hypothesis rather than facts that detract. Our bias may continue even if we try to be mindful of circumstances that could disprove our hypothesis. We may be so focused on finding premises that help us establish the truth of a hypothesis that we may commit mistakes. We may convince ourselves that required premises are present when they are not. We may further mislead ourselves and others in presuming causal connections among components and claiming sequences that live up to a hypothesis when such connections have not been proved. Arguably, this bias is not of much import because there are merely two possible results. We either succeed in establishing all necessary premises and steps to prove a hypothesis or do not succeed. There should be no problem in ascertaining and distinguishing these two possibilities. Yet, besides appearing in obvious missteps, bias may also reveal itself in not immediately detectable ways. We may be able to construct a path of scientific deduction from ascertainable premises to the proof of a hypothesis. Still, the exclusion of contradictory evidence would render that deduction ten-

uous. We may underestimate, fail to explore or detect, disregard, marginalize, or dismiss circumstances that undermine our hypothesis. Instead, we may build a sequence leading up to our hypothesis that only contains favorable circumstances. We may find legitimate conditions of proof under the use of these circumstances. Only, our narrow focus may cause various deficiencies in our method that can render its results unreliable and the exclusivity of their avowal erroneous because we concentrate on the best circumstances for deduction. We may establish hypotheses, premises, and deductions that may be so rare or so prone to problems that they cannot serve us well. If we do not or do not adequately consider possible detractants of a deductive sequence, we cannot ascertain how effective or efficient it is on its own account. Nor can we determine whether it is inferior or superior to other possible sequences. Yet, even if we contemplate other avenues, we may let our zeal for reaching fulfillment of our preferred hypothesis cloud our judgment in assessing the relative feasibility of possible approaches.

The narrowing of our focus on features that agree with our hypotheses threatens to leave our scientific endeavors incomplete, shortsighted, and invalid. To pursue our wishes effectively, we cannot allow our judgment of reality to be dictated by our wishes. We cannot let our wishes of how the world should work determine our understanding of how the world does work. We must secure and maintain rational independence for our methods and reserve judgment until after we have derived objective results. It would appear that we could foreclose bias and ascertain objectivity in our scientific research by taking our preferences, our wishes, and needs out of our investigations. Such purity might be achieved if we confine ourselves to the abstraction of the substances of our world and the principles by which it functions without any ulterior purpose. Such an empiric research that is undertaken without any objective or hypothesis in mind constitutes an inquisitive form of accounting. It scrutinizes and registers what exists, how it behaves, how it works, what its components are, and how combinations of particular objects, events, or components behave. It classifies these phenomena together or in contrast with one another. Such a manner of research has a better likelihood of yielding objective results because it takes utilitarian motivations of researchers out of their process. Only after substances and principles are found would we deliberate their use. This concept of science that is not carried out in the service of our wishes may sound appealing. We may idealize such a mode of exploration. We may view it as the only manner of scientific research free of undue influences by concerns of utility and desires of being right. We may regard it as the sole pure manner of scientific exploration.

However, it is questionable how successful such a general scientific process could be. We may possess little incentive to investigate unless we have an idea that we might be able to use our findings directly or indirectly for the satisfaction of our needs. Arguably, most scientific exploration results might become useful at some point, and we should eventually venture across knowledge that is useful at our stage of development. On the other hand, we might waste efforts in gaining knowledge that is of no consequence to our advancement at this or even any future point. Further, playing through all possibilities without any ambitions regarding the result presents us with a workload that stands to delay the derivation of useful results. Nontargeted research may slow our ability to improve our conditions. It may leave the fulfillment of needs that could be provided languishing, exposing us to pain and possibly existential danger. But even if we had the luxury of engaging in unbridled research without practical considerations and without following indications, we might encounter problems of bias. To keep pure, our only motivation during research would have to be to gain knowledge for its own sake, without an expectation that we could use the results in any way. This may be difficult to accomplish. Even if the process is begun without a specific motivation, the considerations of our needs may inevitably arise as we derive knowledge. It may cause us to make choices in research that we believe more likely to yield functional results. This effect could only be avoided if all our needs were fulfilled and we were assured that they would remain fulfilled. It is also difficult to imagine how aimless research would escape the tendency of our mind to speculate based on preceding experiences about circumstances before we encounter them. We might not be able to avoid forming hypotheses and taking an interest in proving these in spite of the generality of our research. Even to generically expand our knowledge, we have to form a wish to apprehend concepts that we do not know. That wish alone may fill us with anticipations that may introduce bias. More particularly, achieving scientific order implies the ambition of transcending an initial stage of having to observe or experiment in a nondiscriminatory manner without any concept and to arrive at substances and principles that make further observation and experimentation unnecessary. That objective is an anticipatory ideal.

A forward-looking approach is essential to maximize the use of our potential. We must expand our grasp beyond the circumstances in which we are passive, coincidental recipients of information. While a passive mode may work well initially, new knowledge does not lie anymore on the surface as our insights progress. The chances that scientific insights would be accomplished by random combinations of what

we can immediately find or that we could immediately engage in such combinations become increasingly unlikely. We have to capture them by ever more elaborate machineries and by interventions that are only feasible through targeted research and production techniques. Even if it is not possible to imagine what we might find or we can resist theoretical speculation, we will have to develop means for the extraction of that knowledge through observation and experiment. If we refused to give any consideration to what we might find, we could not very well put the requirements for our observation or experimentation in place. We must have at least a general idea of the knowledge we might gain to competently detect its representations. The formation of an ideal of what we hope to find is therefore a requisite of scientific exploration. Thus, keeping a purely objective stance of research may not only come at an unacceptable cost. It may also be fundamentally impossible.

Arguably, many difficulties of bias for or against a particular result could be avoided if a researcher would not have formed an opinion on the subject being observed or tested, possible results, or the desirability of results. Although such a starting position seems preferable in the neutrality of its intent, it is unrealistic. It is unlikely that someone without a previous connection to a science and without any ambition would develop an interest to research an advanced topic or area in it. Nor is a novice likely to have the necessary knowledge to form a meaningful idea of research, the skill to undertake the necessary empiric studies, or the ability to interpret and to understand the resulting data. We may be substituting the risk of bias with a lack of drive and incompetence. Finding scientists who have not formed an opinion before engaging in or reviewing a study may be achievable in new fields of science that address new substances and principles with little or no connection to previous insights. Yet, because scientific progress is typically incremental, it seems unavoidable that a scientist preconceives a possible next step before being able to produce proof of it. The more we know about a subject matter, the more we are able and probable to form an opinion regarding its development. Even if a science is new, it may initially be perceived on the basis of existing notions. Our ability to avoid bias is impeded by the limitation of our research and speculation to concepts already familiar to us. The means to extract additional knowledge are founded on what we already know. Moreover, we are bound to base our anticipation of what we might find on substances and behavior we already know. All we can imagine is their modulation in ways we can already perceive. Discoveries beyond such extrapolations might not only encounter our bias but also our inability to understand them at least initially due to a possible lack of references.

To the extent our capacities or capacities of machines we devise cannot engender new reflections, our discoveries may be limited. We may meet boundaries of general impossibility. But our bias threatens to curtail and block scientific development long before we encounter such boundaries. In matters of science, what is considered as known is expressed as a doctrine by arrangement of accepted authorities on the matter. Those who originated or support a doctrine frequently have a personal stake in maintaining it because their status or other benefits may depend on its continued acceptance. If they cannot benefit more from a scientific development than the current state of knowledge or capability, they will be worried about the effects of new insights. This engenders bias against developments that question or disprove established science. Even if scientists and their beneficiaries should be open to progress, they might wish to conduct or allow changes only in ways that do not negatively affect their interests. Restrictions on the development of science may be particularly possible if exploration is controlled by individuals or groups vested in the current state of science. The institutionalization of science provides proficient instruments for such a control. This might impose a momentous obstacle on scientific progress. Nevertheless, even the shrewdest influences and restrictions may not be able to forestall it. Established interests may be unable to refute the objective proof of scientific insights. Nor may they be able to suppress their application, particularly if developments significantly advance the fulfillment of needs. They may only be able to defer or to guide it. Such powers may be crucial if they are undertaken for legitimate reasons. Making utility the focal point of research might prompt bias in favor of scientific proceedings that indicate utility and against indications to the contrary. It seems vital to provide incentives for scientists to create better insights by rewarding them. But it also appears prudent to have their predisposed focus supplemented by skeptical review of their results by scientists who would profit from disproof. This might assist in determining the correctness of a scientific result and in weighing its application ramifications. Both advancing and restraining interests fill necessary functions in achieving deliberate progress. Our best hope to avoid scientific bias may be the free communication and consideration of insights and arguments to reveal and address bias.

It would then appear that prejudgment and the resulting risk of skewed objectivity afflict all of science to some degree. The purposeful manner of empiric science turns it inescapably into idealistic science. In addition, in the pursuit of our needs, idealistic motivation for scientific advancement may not only be unavoidable. An ideal seems necessary to make empiric science relevant to our existence, to give us suf-

ficient motivation to engage in empiric exploration. Without an ideal, we would stagnate. Without the direction of our wishes, we could not concentrate our scientific research on what we need. The solution for the problem of potential bias of such orientations lies in the fact that idealistic science is in its core empiric. Its ideas, as fantastical and unrealistic as they may be, are formed from combinations of experienced aspects and have to prove themselves in empiric application. Idealistic bias may not necessarily overwhelm the empiric aspects of science if a biased attitude is confronted with an opposing stance that reveals the weaknesses in its claims. Our self-interest in succeeding motivates us to seek empiric testing and confirmation of our ideas before we apply them in our pursuits. Falsifying distortions can be identified and corrected through techniques of critical review that emerge from the nature of empiric science. The techniques and results of empiric inquiry are disposed to examination because they consist of factual phenomena that can be measured, recorded, and rationally traced. That potential for transparency of an empiric process can serve to establish the reliability of observations through data derived in the process.

If objects and events, components, methods, participating constants and variables, as well as the resulting functionalities are all recorded, scientific claims can be examined. Where scientific experimentation, observation, or deduction is performed in ways that favor conclusions or premises over others, such bias will find expression. It will be reflected in the selection of test or observation subjects, settings, and processes, in the data collection or its assembly, or the interpretations and conclusions drawn from the resulting data. Adherence to an empiric approach in the confirmation of a scientific idea can uncover subjective influences. The timing, detail, and formalities of the record accompanying the work are thus vital for giving research credibility. If there exist deficiencies in the record, the process itself is deficient because it did not establish itself as derived from observed circumstances. Its empiric basis and its conclusions may therefore be deemed unreliable. Once research data is recorded, it is difficult to create interpretations that contradict or skew the content or its meaning without such deviations being detectable. The recorded facts form the premises for any interpretive argument. If these premises are disclosed, subjective interpretation is restricted by them. Subjective influence is further constrained if we lay open the logical steps of our interpretation. Although it is possible to falsify data, verification processes can reveal its truthfulness. A record that complies with accepted standards of obtaining, measuring, and describing observations and that discloses the devices and conditions of research exposes the perceived occurrences

and their characterizations to causal investigation. It enables an independent establishment of the accuracy of observations through a reobservation of the underlying occurrences or a study of similar occurrences. Even if practical confirmation is not possible, a detailed record of observations, the conditions of their collection, and the processes of their interpretation can make a partial showing whether proper methods were employed that should have yielded objective results.

We can prove the correctness or falsity of a claimed sequence of causality by following the claimed steps in reverse. We may take the description of asserted factors and functionalities as a formula for reconstituting the declared starting position. If we review a process of synthesis, we should be able to trace the process back to its ingredients. We should be able to dismember the result or a similar result into its claimed constituents. If we review an analytical process, the reversal should enable us to synthesize the observed composite object or event. We should be able to reconstruct the investigated or a similar object, event, or array of components from the provided descriptions. If we can reconstitute the premises of a deductive process through its reversal, its descriptions are correct and complete. If we fail, the record does not describe all parameters and steps required for tracing it back to its beginning or it is otherwise erroneous. This indicates that the analyzed object or event or synthesized components are not completely understood because they are not fully governable. Underdeveloped insight, technology, or availability of means may not allow proof by reversal. If empiric processes are only provable by one-directional repetition rather than a reversal, we may settle for such an incomplete proof as satisfactory to establish the correctness of a scientific deduction. However, only if both directions of proof succeed can a scientific deduction be deemed established beyond any doubt of completeness. Complete proof requires a complete cycle of analysis and synthesis or its reverse. Controlled settings reduce the risk that unobserved causes participate in engendering the described results, but they cannot exclude such causes unless we are aware of the existence of such causes. As long as we cannot be certain that we are aware of all circumstances that might influence the outcome of an analytical or a synthetical sequence we are trying to prove, we cannot be certain that our deductions are correct. Unidirectional proof carries a higher possibility that such undetected grounds could be existent. A repetition of sequences does not remove that risk because they might be subject to the same unobserved causes as the original. That risk is also present in a proof by reversal. But the reconstruction of the beginning from a result reduces the possibility that unknown circumstances might participate.

Assuming that we can become comfortable with the accuracy of scientific results, we still have to confront the question what we will do with this knowledge. We have to determine what part of it and resulting capabilities serve our purposes best. We have to justify why we select certain aspects of what we know and are able to implement over other aspects. After all questions of what is true, what our possibilities are, and what we can do have been resolved, after we have found out how everything in us and in our surroundings works and what can be undertaken with it, the question remains which of all these means will make us happy. As long as science cannot fully trace the production processes of our needs and measure whether they are satisfied, there is substantial risk of error. Our investigation of our needs and wishes may be particularly impaired because our mind is at once the examiner and the subject of our examination. Our dual involvement may subject our endeavors to empirically explore and develop matters of our happiness to our bias. This bias might not necessarily induce our philosophy to remain within our experiences. Our ideas about happiness may also develop in nonconformity with our familiar notions because of our frustration with them. They might feature conditions or experiences that we do not possess but deem to be superior. What our needs and wishes are and what we would like them to be might therefore not correspond. Still, even such speculative concepts would arise from our reactions to our impressions of our current happiness and unhappiness. As in all science, our empiric exploration may be conditioned by our wishes. Yet, in this case, these wishes also constitute the subjects we hope to uncover by our research. Since our wishes guide their own revelation, we might only confirm what we already believe to be our wishes. The circularity of our research may not allow us to find mistakes or shortcomings in our wishes and underlying needs.

The negative consequences of this circularity might be confined if we examine our own happiness. However, the particularities of our needs and our experiences in trying to meet their demands are bound to inform our views on happiness generally and the happiness of others. Our scientific claim becomes problematic if we attempt to devise an existential philosophy for other individuals from more than human commonalities. But even if we try to avoid idiosyncrasies, our particular genetic and environmental traits and experiences in pursuing happiness with these settings form inescapable references. They influence our determination which concepts of happiness we view to be worthwhile possibilities or certainties and which concepts we doubt or reject. In examining happiness in general or the happiness of others, we may never be able to separate ourselves entirely from our preexisting

notions. Although we might try to apply an objective process of fact-finding and deduction, it may be difficult to accept forms of happiness that we cannot experience as genuine or valid. We may be arrested to interpret what individuals wish and should wish to be happy from the viewpoint of what we know or wish regarding our happiness. Even if we purport to engage in reasoned procedures, we may judge circumstances as right or wrong, worse or better, efficient or inefficient based on our own notions of happiness. As a consequence, our premises, hypotheses, and arguments may be biased even if we could discover our own principles of happiness. This is likely to lead to repercussions for others who seek guidance in our explorations. As humans studying an aspect of human nature, we have difficulties excluding ourselves from our observations even if we include other individuals or entirely dedicate our efforts to them. We may also look for confirmation and a development of our own idea of happiness in a scientific process because we remain personally interested in the results. We may even seek to influence scientific exploration of happiness to serve our ideas of happiness. Our intentional and inadvertent bias and its concealment tend to be supported by a widespread lack of scientific proof in the research of happiness. Hence, scientific research into matters of happiness remains subject to a significant risk of error and manipulation.

However, bias in scientific procedures may not be our principal problem at this juncture of our research. We face an additional type of bias that reigns because we have not sufficiently advanced to a scientific treatment of happiness. To the extent there are no scientific procedures regarding matters of happiness, we may be wholly exposed to the unbridled bias engendered by our needs. Because we lack a scientific concept of our needs, we lack a counterforce to that bias. This insight compels us to a sobering conclusion concerning our quest to improve our happiness. Future generations might manage to escape the circularity of their needs or intentional falsification of research. Even if their needs might not incentivize such an undertaking to overcome their own bias, someone might explore and apply scientific means to countermand oppressive philosophies imposed by others. Further, the course of independent technological advancement may disclose scientific tools that enable independent scientific insight. But we may still find ourselves considerably removed from exact scientific knowledge of our needs, particularly our idiosyncratic needs. We therefore face a situation where we must either abandon our undertaking to improve our happiness in a systematic fashion or find an alternative method to overcome the deficiency in our scientific capabilities. The next chapter probes how we might find the inspiration to devise such a method.