NovoClassical Education: An Invitation

by Nolan Nicholas, NovoClassical

The great defect of the modern movement of "classical education" is that it is wasted in its confinement to the classics.

Recognition and praise for the great benefits of the classical model of education is the only proper beginning for an essay such as this. I have only the highest esteem for the classical Trivium which organizes the learning process into stages of grammar, logic, and rhetoric. And I am both personally and culturally thankful for the recent renaissance of the classical model of education that has reintroduced the Trivium as the philosophical core to education. It has been invaluable to many, such as myself, in training our minds in how to learn and reason. Truly, the invaluable nature of the Trivium cannot be ignored in a modern society where the mass populace shows such susceptibility to the influence of advertisement and propaganda and the majority of the educated "intelligentsia" often cannot construct or even follow a basic logical argument. Notwithstanding my profound respect and appreciation for the classical education model, I believe the great defect of the modern movement of "classical education" is that it is wasted in its confinement to the classics.

It has been famously said that "the advantage of a classical education is that it enables you to despise the wealth that it prevents you from achieving." Though I do not believe that this is universally accurate, this sentiment well represents the general marginalization which characterizes classical education in modern society. I advance that a great deal of this marginalization is not intrinsic to the classical education model but is self-imposed through confining the scope of classical education to focus on "classical" subjects and neglecting a Trivium-based approach to more "modern" branches of knowledge, especially the "hard" sciences. It is an unfortunate reality that though the classical education produced by the modern movement has greatly improved foundational education in the humanities, it has had little notion how to handle the "sciences." This marginalization is in no one's best interest; it limits the scope of impact which classical education can exercise on society and reduces the number and breadth of students who may be interested in attending. We lose some of the best minds of the next generation because the current form of "classical education" is not equipped to train them in the sciences.

Though the model of classical education does well to recognize and employ the achievements of the past for training the mind, this sets a subtle snare lest we become limited to it. The Trivium is not a thing of the past and we must not make it one. That is, we wish to instill an education that will equip students to build upon the classical foundation and not simply rearrange furniture in a house long since built.

But this divide is not in the least intrinsic to the basic idea of classical education; it is rather an artifact of our own culture. We now divide the humanities from the sciences but at the height of the Trivium's original use the sciences were understood to be natural philosophy. Over time natural philosophy has been forgotten and the humanities divorced from the sciences. This must be remedied, natural philosophy must be remarried to the humanities; classical education must remind the culture of what it has forgotten and restore natural philosophy in its properly understood place.

If you are reading this, then I am going to presume that I do not need to convince you of the relevance of the Trivium to the learning process of "modern" subjects such as physics and computer science just as it is to "classic" studies of Latin and astronomy. Indeed, I would like to suggest that not only is the Trivium suitable to the teaching of modern subjects, but that modern subjects provide material that is in some ways superior for training students in the methods of the Trivium. Let us take for instance the discipline of computer programming—indisputably a modern subject—which provides a uniquely suited grist for teaching the principles of Trivium education. In computer

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programming, grammar, logic, and rhetoric are not only implicit but measurably enforced and almost quantifiable in a way that is not true of traditional human language. That is, one can say any bit of nonsensical, illogical idiocy that one likes in English and no logic police appear from thin air to inform the culprit that they have just violated logical dictums. Thus much of the populace remains blissfully unaware of much of the implicit contradiction which they prattle off every day. However, if one tries to input a logical fallacy into a computer program the computer rapidly makes the fool aware of their stupidity with a long list of error messages. And rhetoric can be almost quantifiably measured in modern programming with analysis of the elegance, cleverness, and efficiency of the code.

But this begs the question of why classical education has had such difficulty with modern disciplines and natural philosophy. In my observation this arises because attempts to fit scientific disciplines into the framework of classical education seek to do so by developing them along the lines of their historical development. As described by Susan Bauer, "The sciences are studied in a four-year pattern that roughly corresponds to the periods of scientific discovery." But this misunderstands the essence of natural philosophy. History is historic—science is not. Of course science has a history, but the workings of the universe are not governed by human history. The same laws governed the universe when Aristotle misinterpreted them as when Newton suggested his corrections, and the same laws still apply today.

The sciences should not be and must not be taught according to their path of historical development. To set about on this path denies the very concept of a science. Brilliant though Newton's Opticks is, it is not suitable as a textbook to teach physics as we understand it today and I have to think that Newton himself would not be honored but horrified to discover that we sought to use it as such. For today we have available to us observations that Newton did not and that cannot be reconciled to the theories that Newton proposed. Source documents can serve a vital role in scientific education, but it is to introduce the students to clear examples of the thought process of natural philosophy to see how we may deduce laws about the natural order, rather than introducing the source materials themselves as codifications of natural law. Therefore, to teach students a science according to its historical development is to teach them lies which they must later unlearn and create bad habits which hinder deep understanding of the subject (a condition which I have observed all too often). Furthermore, to teach science subjects according to their order of historical development (typically starting with biology and ending with physics) robs beginning students of the foundational idea that the behavior of the universe is governed by observable and understandable physical law and instead starts them off with the idea that natural philosophy amounts to stamp collecting.

Proceeding from the idea that something ought to be done to reunite natural philosophy into a modern classical education, the next question is how? I propose that we remedy these deficiencies by using the classical principles of the Trivium to construct a classical education which incorporates modern technical insights "from the ground up." For the sake of convenience I shall designate this paradigm as "NovoClassical" education.

The first task is to identify what modern knowledge is most suited to educating students at all levels of the Trivium and equipping students to tackle the scope of human knowledge with broad impact throughout society. To that end I give a preliminary suggestion that three "subjects" ought to be incorporated throughout the NovoClassical curriculum which are currently isolated or completely absent from present teaching:

1. Physical sciences/natural philosophy (*e.g.*, physics and chemistry)
2. Information and computational sciences (*e.g.*, programming)
3. Game theory and strategic analysis (of utmost relevance to economics and law)

Though most will probably react with skepticism to this suggestion (after all who teaches physics to a second grader?), I believe that these topics are both of great use in general to the student and tractable for teaching throughout the Trivium cycle.

I have already mentioned computer programming which can easily be implemented quite as soon as the young students have learned basic skills of reading and writing. On the topic of game theory and strategic analysis, I shall, in the interest of length, restrict myself to only a very few, brief remarks. Game theory, in short, studies what happens when agents (such as people) interact and how interactions are "won" or "lost" for the "players"