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THE ELEMENTS OF CLASSICAL EDUCATION

Classical education cultivates wisdom and virtue by nourishing the soul on truth, goodness and beauty. The substance of classical education is the liberal arts curriculum. The word "liberal" derives from the Latin *libera*, meaning freedom. For the ancient Greeks and Romans, a liberal education was necessary for a man to be free. Slaves would receive vocational training, but free citizens required an education that enlarged the mind and cultivated the soul. Classical education aimed at the apprehension of the true, the good, and the beautiful. The ancients believed that cultivation of virtue, knowledge of the world and of human nature, active citizenship, and practical action required an education with this purpose.

The "arts" in a liberal education were seven in number, and they comprised a comprehensive curriculum of study that engaged all the human faculties. The Seven Liberal Arts, as further developed in the Middle Ages, consisted of two parts: the *trivium* of grammar, logic, and rhetoric; and the *quadrivium* of mathematics, music, astronomy, and geometry. Once these "arts" of learning were mastered, the student was equipped for the study of the *sciences*: natural science (which included both the physical and the metaphysical), moral science (which contained history, politics, and law), and theological science (the study of religion and first principles). After this regimen, a student could study for the professions—law, medicine, or the church.

While this curriculum is impressive, it is obviously the creation of another time and place. Contemporary subjects such as literature, art, and psychology—much less computer science—are nowhere explicitly mentioned. Yet these have a place in the classical curriculum as well. The classical course orders these subjects in the overall curriculum. Literature, for example, is studied in the liberal art of grammar (from the Greek *Grammatikos*, or letters), psychology is a moral science, and so on. Obviously, a liberal arts education today would have to be very different from one in ancient Rome or medieval Europe. The order and purpose of learning, however, remain the same.

But the genius of the liberal arts is that it is comprehensive. It encompasses all subjects because it is open to all questions, including the most contemporary. The *trivium* and *quadrivium* are not discrete subjects. They are modes of learning.

The Trivium

The *trivium* employs the terminology of language and is comprised of grammar, logic (sometimes referred to as "dialectic"), and rhetoric. Anyone who wants to learn a language first must master its grammar: this is the structure, vocabulary, rules, and conventions that constitute language. But grammar is not enough. To use language you must also learn how to think in that

language. This is the role of logic, which makes possible the "dialectical" give-and-take of conversation. Finally, to have a genuine facility in language, the student must develop a capacity to speak and write his own ideas in a way that is compelling and persuasive. This is the "rhetoric" of language.

The trivium is a paradigm for the mastery of language. But it applies to far more than language. *Every subject* has its grammar, logic, and rhetoric. To be educated in any discipline, you must 1) know its basic facts (grammar); 2) be able to reason clearly about it (logic); and 3) communicate its ideas and apply it effectively (rhetoric).

Put another way, every type of learning requires knowledge (grammar), understanding (logic), and creativity (rhetoric). The classical trivium anticipates contemporary educational psychology, which postulates four "higher order thinking skills": 1. data accumulation (grammar); 2. analysis (logic); 3. decision making (logic and rhetoric); and 4. communication (rhetoric). Every academic discipline requires mastery of its trivium. For instance, the grammar of science is comprised of its foundational facts: basic models, essential discoveries, and standard procedures. The logic or dialectic of science is the mastery of scientific method and experimental design. The rhetoric of science represents original research that addresses an unknown.

The historian who is proficient in his discipline's trivium knows essential historical facts (grammar), can make sense of them by identifying causes and consequences (logic), and will apply his (i.e. historical) insights to related or current events (rhetoric). A computer scientist learns the grammar of operating systems and comprehends the logic of the technology before he writes original programs that organize and present data in new ways. Every field—music, psychology, literature, and engineering—has its trivium. The trivium is not an attribute of "classical" education because it embodies an archaic principle of organizing knowledge; it is classical because it is a universal paradigm for learning.

This learning paradigm still survives in America's professional schools and accounts for their continuing excellence. Students in medical school begin with courses (anatomy, physiology, pharmacology) that fill their minds with information. Then an experienced physician peppers them with questions about diagnosis and proper treatment. They learn to think like doctors. Finally, they begin to make independent medical assessments. This is the crucible of rhetoric in which doctors apply knowledge in original ways to unique circumstances. Law school also follows a trivium: students are made to memorize reams of legal rules and precedents; then they are grilled by the "Socratic" dialectic of a professor's classroom questions about legal reasoning. Finally, their persuasive lawyerly performance is assessed, first in moot court sessions, and then by juries and clients. The educational paradigm for musical conservatories, religious seminaries, and business schools is similar. In taking up grammar, logic and rhetoric, their learning processes follow, albeit sometimes unwittingly, the classical liberal arts tradition.²

The trivium applies in nearly every educational sphere because it accounts for the entire range of what education is supposed to do: The learner must acquire information, grasp it intellectually, and use it purposefully. To master any subject is to learn its language. The

trivium integrates the theoretical and the practical, tying together facts, arguments, and real-world applications.

Each element in the trivium is essential to education. Factual knowledge (grammar) is useless without understanding (logic). Knowledge and understanding mean little unless they can be expressed and applied (rhetoric). Many current educational reforms grasp at one or another part of the trivium, at the expense of the others. The "back to basics" movement correctly recognizes the importance of the grammar of learning. But some "back to basics" curricula stop short of enabling students to reason well (logic) or act independently and creatively (rhetoric).

Other education reformers have developed a "critical thinking" curricula which claims that it will "teach kids how to think." This approach appears to acknowledge the importance of logic. But "critical thinking" in practice too often is nothing more than an applied skepticism. Instead of instruction in formal logic or lessons in common sense, students are shown how to question moral authorities and undermine traditional values. Logic or dialectic, however, is concerned with the pursuit of truth: this gives thinking a moral context and purpose.

"The back to basics" and "critical thinking" movements imperfectly testify to what is missing in contemporary education. Education today leans heavily on the trivium's third leg—rhetoric—at the expense of both grammar and logic. Schools that constantly encourage students to "share their feelings," "be creative," "form their own opinions," and "draw on their own experiences" to come to judgments about history and literature, social questions and current events, have made education a purely rhetorical exercise. They have isolated the individual from the traditions that ought to guide their decisions. Lacking knowledge (grammar) and understanding (logic), students share ignorance. To be truly educated students should have opinions that are deeply held and persuasively expressed, but they need to rest as well on what is prior to rhetoric in the trivium: grammar and logic. Each leg of the trivium is essential.

The Quadrivium

The trivium is the foundation of learning. The next phase of a liberal arts education is the *quadrivium*, the study of mathematics, music, astronomy, and geometry. The quadrivium represents four kinds of learning. Mathematics is abstract and absolute thought. Music is aesthetic perception. (The ancients classified poetry under music.) Astronomy is observation and study of the stars. (By analogy this seems to suggest all empirical inquiry, the hallmark of modern science.) Geometry apprehends the relationships of objects in space. (Architecture and the visual arts were considered aspects of geometry by the ancients. In our own time, this might also include design and engineering.)

In the medieval world a man could not claim to be fully educated until he was well versed in the quadrivium. For our time, the quadrivium may be said to represent the conviction that a liberal arts education must be comprehensive and engage all faculties of the mind. Someone who is educated should be able to handle numbers (mathematics), science (astronomy), aesthetics (music), and spatial relations (geometry). This is contrary to the practice of

contemporary higher education which produces highly specialized experts who know or care for little outside their own fields.

The Sciences

Once trained in the "arts" of learning, a classically-educated student was at last prepared to grasp the "sciences" of objective truth. Natural Science dealt with knowledge of the objective world, and it included philosophical reflection as well as empirical inquiry. Moral Science explored human interaction: it included the lessons of history and the theoretical foundations of law and social organization. Theological Science was the knowledge of God and His revelation. Theology, "the queen of the sciences," disclosed the first principles which undergird all truth.

Once he had mastered the arts and the sciences, a student was then ready for training in a vocation. The student in a medieval or Renaissance university might prepare for a career in medicine, law, or the church, or pursue a vocation in the courts, the guilds, or a family business.

The liberal arts curriculum is a formidable and comprehensive theory of education. Surely it is one of the great creations of Western thought. Political events and social structures have caused it to be variously organized: from the informal dialogues of the Athenian Academy and one-on-one instruction conducted by slave-pedagogues in Rome to the medieval university's scholastic hierarchies; from the humanistic tutorials of the Renaissance to the homeschooling and frontier academies of the American colonies. Still, the liberal arts have a purpose which has been more than achieved in the educations of Alexander, Archimedes, Dante, Aquinas, Rabelais, Luther, Newton, Burke, and Jefferson.

Can classical education be adapted to the needs and culture of the twenty-first century? Yes, it can. It is neither of one time nor one culture, but is grounded in human nature and in the nature of learning. Classical education offers an intellectual framework that is disciplined and liberating, open to the past and to new knowledge.

This is the theory. It can be applied in a number of ways. The following chapters examine six case studies in classical education. The approaches used by the new classical schools are models that can be emulated, adapted and applied in classrooms across the country.