

## ART AND SCIENTIFIC EDUCATION

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WHAT a fine prospect it is to look forward to that as yet promissory millenium of art and science when man will understand Nature and relish her inevitable measures of law and industry, creative power and naive beauty. The inspiring influence of such an aesthetic promise is in itself an ennobling force in the contemporary world, although any situation which offers possibilities of understanding and love and spiritual refinement is always rich in just those patterns from Nature which are worthy of our devotion. In that goodly age we will look to things truly exemplary of the Good for our action-patterns, to things really just and worthwhile for the skill-limits of our conduct as well as for the efficiency of our meditations, so that they may be broadened and validated for a more wholesome useful life.

I believe it is to be largely by an honest patronage and pursuit of the arts and sciences that the future will realize a method of social readjustment and control far more durable and efficient than the petty system now in vogue. But if failing of this last resort what hope for philosophy and religion, even though exquisitely refined and given prestige in academic arenas of conflicting aims and idealisms? There are not enough people living normally balanced and intelligent lives to make even a sufficient minority power to filibuster the actions and wishes of our vulgarian age; so how can we lay adequate plans for bringing the arts and sciences to bear on our social problems when we have not much more than staked our claim and sent a few sample ores to the refinery?

The work of the near future is not to be so vain, theoretical and controversial as it has been in the past, for even now a dynamic psychology is ruling out the inane and trivial affairs, the catch-penny wisdom of base motives, vulgar scheming and opportunist livelihood. And it is almost certain that the faith we place in the future as a time of nobler living and jubilant ethical arrangements shall not

be proven ill-advised, but will be well rewarded with realization and achievement. The arts and sciences shall supply much of the new apparatus, and the new empirical understanding derived from them shall help us to develop more and better methods of mental and spiritual application so that our energies and intelligence will be able to accomplish the work and realize the religion of the future. This work and this religion shall not be worldly but heavenly, not vulgar and mercenary but devout and free; they shall not rest wholly in material refinements, inventions or physical ministrations merely, but will look more and more to the spiritual communion and aesthetic understanding of people grown erect in just and righteous living. The future is already being prepared for and previsioned by the several courses now offered in what is called scientific education; it is being made preexistent by our very anticipations and preparations. The venerable traditions of old which were treasured and taught in what was called a classical education could not prophesy or foresee anything; such an education being more reflective and given to fond retrospects than to action and the bright prospects of enthusiasm. However, it is a sort of artificial arrangement to view human life as covering a temporal series of past, present and future, because for us either as thinking or as acting units in the eminent domain of consciousness the past only exists as a present memory or innate tendency while the future exists only as the bright visions of hope, ambition or the promised land of our dreams. Hence in either case the facts of the situation are the same. Founded in the soul's innate *gnosis aesthetikos* where all the arts and sciences really originate and find their true devotion, in the mind's intuitive response to the beautifully good and true, Art and Education stand forth as the dual affection and expression of human genius. With these to guide and counsel us such work and faith as shall be required in the future will be adequately inspired and given sanction for dynamic application to whatever personal or social problems may arise. Then will we begin to see signs of an approaching glory, a millenium of happiness, peace and worthy industry.

But let us not try to force an issue between Art and Science as being mutually exclusive or antagonistic, as has been deplored recently by John Galsworthy in an address before the New York Society of Arts and Sciences. There is justification aplenty for the view that our arts have not yet become so materialistic and mercenary as have our sciences, that they have rather been more inclined to hold aloof from the smoke and wheels and grimy overalls of the world.

Even though it is quite probable that the arts have been more open to scientific influence than the sciences have been to artistic coloring, still we cannot doubt that the former are far the more conservative of the two. Unlike the ready utility values which make Science so generally applicable to the affairs of the world, Art is more bashful, more cloistral in its plans and functions; it seeks perfection rather than utility, it functions in the spiritual rather than in the material world. Also unlike the sciences, the arts (i. e., all of the *fine* and most of the *industrial arts*) are still seductive in their subtle spiritual charms, still sweetly alluring in the naive purity, the modest beauty and the impassioned truth of which they are sacristans as well as vestal priestesses. While the sciences may or may not be gloating over any rabid post-war conquest, yet neither are the arts suffering any passive rout, although they are somewhat disorganized and suffer an appreciably decadent morale owing to the treachery of cowards and fools and spoliators in their ranks.

Both the arts and sciences, as pursued in general practice, are now in mutual carnival and presage a far more effectual companion role than even their present indispensable functions seem to promise. Their devotees seem done at last with the vandal lusts and vainglory of a vulgar creed which listed nought but greed and war and pestilence in its chronicle of specious valor. Their aims are more clear-seeing and their trumpet-call is Forward, leaving all those clutch-gearred souls of past monopoly in the lurch. The tawdry garments of cheap idealism no longer clothe the arts and sciences which still remain erect and free of moral poverty, for they have been cast aside in favor of the virgin raiment of a nobler spirituelle. It might even be said that in view of the recent number of romancing accounts of scientific achievement, the gradual increase of writers, teachers, artists and other *travailleurs intellectuels* who are trying to be the match-makers for the future marriage between Art and Science—from this fact alone it might be argued successfully that the pure (if not the applied) sciences are growing more romantic and artistic day by day, that the arts are gradually being rendered more accurate with Nature and more constructive of the social good by keeping intellectual company with philosophers. If so, then it is only a step from this situation to the one I have already suggested, namely that the future will see not only mutuality but oneness between what are now differentiated as the two spheres, aims and ambitions of an artistic and a scientific education.

The miracles of religion are even now shaded and eclipsed by the miracles of art and science, for the latter are *getting at our souls with prods of fire and fascination* never before so implacably applied for purposes of enlightenment and ennoblement. Even the most inert brute on the levee or the most lazy vulgarian in the salons of the nouveaux riches cannot help but be slightly aroused and inspired by the vast efforts being made to redeem the world from savagery and vandal power. The robes of our spiritual night are gradually falling away and we are beginning to see ourselves in natural innocence and adolescent modesty. There is a growing demand for intellectual honesty, for moral faith, heroic sacrifice and generous aid for all the lesser peoples and less fortunate nations of the world. The greedy are openly cursed and condemned, the vicious are summarily dealt with by an arm of the law but recently given such august powers—public opinion and its penalties of social ostracism and spiritual boycott. Not even the naive indefensibility of our clumsy inexperience can be considered culpable for what we do in face of mischiefs done by conscious vandal power, for we pass along an inexorable road, making largely unconscious pilgrimage to Helicon. From there alone can we see both the Acropolis and Gethsemane. From there alone can we make emprise upon the overworld and hope to bring back the golden fleece of future wisdom and virtue.

A few significant instances of how a superficial conflict between an artistic and a scientific education may be avoided are as follows: One is to be found in the early education and later disillusionment of William Wordsworth, a poet of exquisite power and charm whose best work was in the realm of philosophy and romantic morality. At first under stress of the French Revolution he entertained ideas aiming at a social Utopia of justice and heroism, but after the failure of the Girondists and the collapse of those powers to which he pinned his faith, he turned away from the evils of urban life and sought a wanderer's happiness by taking refuge in the hermitage of a melancholy philosophy. Just as Sir Joshua Reynolds followed the *proportionate beauty* of Pere Buffier's aesthetic theory, so did Professor Blackie follow Stewart and Payne Knight as against the associationists Aleson and Jeffrey in recognizing the all-round symmetry of Wordsworth's poetic art; but we now see that it would not have had this symmetry and pluralism of Platonic proportions if he had not taken up a recluse philosophy to offset the various uglinesses of worldly life.

Another instance is that of Boris Anisfeld whose fantastic symphonies in sympathetic oils and complementary colors recently intrigued the curiosity of American patrons and dilettantes at the Brooklyn Museum of Art. He worked through an early childhood of poverty and degradation, and now gives autobiographical accounts on canvas with just enough subjective metaphysic to make them problematic and symbolic of life in general. He confesses that many of his scenery conceptions for ballet or opera are direct pastel translations from the musical score rather than from the plot of the play. There is no actual conflict between his early recollections and the idealism of his decorative panels, but there is an effect which seems to result from a premature ageing of the imagination, and this is impressionistic but not contributory to either art or the science of art.

John Stuart Mill has laid a fairly solid foundation of analysis and argument to show the place of art in education as well as the place of education in art, holding that no one can practice virtue without loving it and giving it noble value any more than he can execute a work of art without having ideal conception and inspiration ever ready to carry it through to complete and perfect realization. It is a mistake to think that anyone can reverse the whole scheme of life and have either an artificial science and a true art or an exact science and a vulgar art; true understanding and nobility of character go together, no matter whether the subject of interest and pursuit be art or science. If people do not see the justice of this arrangement from the pattern of inward principle, then they should somehow be made to see it by virtue of the discipline of experience—and fortunately they usually do.

There is a certain artistic fascination about the romantic phases of modern science. For instance, the great struggle of astronomy is against variability and imprecision; it seeks to replace the personal equation with instrumental accuracy so that whatever is discovered can be proven free of bigotry and bias. We find that Laplace's famous nebular hypothesis was only an elaboration of Kant's speculation regarding the course and limitations of material development in the Cosmos. We find that the geo-orbital base line now gives way to the helio-orbital or solar arc base line for computing stellar distances and motions. In a century this amounts to about 400 times the geo-orbital diameter and should give us ample grounds indeed for determining the dimensions of at least this course of the Universe.

We hear much of how Lavoisier's solar biology supplements Buffon's physico-chemistry of life, and how both are antiquated in the recent controversy between Dr. Henry F. Osborne and Svante Arrhenius on the extra-mundane origin of life on this planet. But when we take a more philosophical view of the situation we find that the biological war is not between materialism and spiritualism but between mechanism and vitalism; that physical and chemical laws do not unconditionally apply to *all* the functions of our being, not to the whole life of man. Measurements of motion and matter do not apply to creative power, artistic genius, heroic sacrifice or spiritual aspiration. Osborne's term for replacing the old mechanistic theories of life is the *energistic*, meaning whatever is genetic and creative rather than what is merely motive and urgent, reactive or inert. Darwin's naive evolutionism of fortuity in the surviving fitness of the most adaptable organisms is overruled, regardless of Spencer's disciplinary elaborations and Jacques Loeb's mechanical tropisms. Count Korzybski however has recently shown that the primal purpose of all organisms is the storage of energy, the life of anything is but some phase of bionergic expression which at the same effort binds up just so much time and space in terms of instinct, memory, reflex appetite or aspiration. As we rise in the scale of life energy grows less materially expressed and formal (i. e., consciously directed), functions become more pronounced and perfect; the vital energies and functions soon become interactive in their natural process of preserving and fostering the evolution of life.

In many recent programs of scientific romancing there are certain far-fetched devices to win popular attention and approval. There is the easy and plausible explanation of the fourth d'mension as being simply the temporal period which measures mass and weight in terms of motion, energy and duration. The eternal and the transitory can be reconciled only by thinking that fleeting things are still eternally existent, only they vanish out of the realm of conscious life and enter the timebound world of the fourth d'mension. If they move fast enough, that is, if they are sufficiently fleeting and transitory, they will have no sensory existence at all in our physical tri-dimensional world.

Now that Professor Goddard has perfected his plans for launching a stellar rocket into space carrying with it a whole laboratory of automatic recording devices, and providing somehow for their safe return to earth, we can await some first hand data on conditions outside the earth's atmosphere. Even the failure of his propellant



power to carry the rocket through rarified space would be ground for many interesting deductions. Mere quantity of data in any science is not a guarantee of a closer approach to certainty of knowledge even when closely scrutinized and arranged in logical schematism of form. Such industrious gathering of facts pertaining to the nature and immensity of the Universe is still a finite procedure offering only a finite conception after all; it matches quite closely the statisticism of modern psychology which conflicts with the old established notion of philosophy holding that any majority representation, either in or out of a positive conceptual series, is yet itself only a finite type, a special part, and does not require nor give a full understanding of the *whole* condition, nature or size of a collection.

This quantitative aim in much of our modern scientific achievement has an undesirable influence on the trend, both the ideals and methods, of what is called a scientific education. The latter then by natural process of plausibility and specious intellectual satisfaction soon results in materialism, finite sense-knowledge and a pallid humanism which falls back on automorphic judgments for persuasion and support. Above all it not only lacks provender for sustained inquisitive digestion, but it lacks the very condiments which lend zest to the intellectual appetite. Such nourishment and relish are supplied in the artistic viewpoint, in the romantic morality and spiritual insights of those who are scientific by training but esthetes by nature. The love of beauty and goodness is never so forehanded and despotic as the desire for knowledge or the will-to-power; an innate spirituelle is always more a credential of philosophy than the inquisitive instincts of sense-culture and materialism. Something on this subject was the constant burden of most of the charming as well as highly instructive criticisms of Sainte Beuve and James Huneker in literature, art and music. Both were equally versatile and constructive in nearly every branch of culture, art and science; not exactly specialists, but guides and counsellors in the subtle relations and researches of man's intellectual goods. The latter especially saw the world as from a steeple and expressed his views in fascinating affirmations of noble faith and courage.