

The Institution of Public Education

Volume III of

The Idea of Public Education

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A note to the reader: This book contains numerous references to previous works by the author. These works are publicly available free of charge from the author's website:

Author's Homepage: www.mrc.uidaho.edu/~rwells

Index to author's technical publications: www.mrc.uidaho.edu/~rwells/techdocs

Preface

This book is volume III of the trilogy on *The Idea of Public Education*. The overall aim of *The Idea of Public Education* is to lay the groundwork for the establishment of an objectively valid social-natural empirical science of public education. In volume I, *Education and Society* [Wells (2012)], the fundamental axioms and functions for a social-natural empirical science of public education were deduced from the basic acroams of the phenomenon of mind. Volume II, *Critique of the American Institution of Education* [Wells (2013)], is a Critical analysis of the history of public education in America. This analysis reveals that there are crucial and fundamental errors in this institution. These errors are so serious and so fundamental that was not possible to conclude otherwise than that a major reform of that system is necessary and urgent. This present volume is a proposal for the way in which this reform should be done. It presents the empirical principles of the reform – derived from the axioms and functions of volume I – and it presents the rudiments of a social-natural science of *public* education. It does not address the topic of private education. It likewise does not address reform of teacher education or the publishing of textbooks and other educational material. Reforms in both are needed in order to implement the reforms presented in this treatise, but those reforms are additional topics in their own right.

No new science ever springs forth final and complete, and so it is with the science of public education. There remains a good deal of detailed technical work yet to be done by the future new professionals of public education science. These professionals will be none other than practicing professional education scientists – namely, *teachers*. This volume is, in part, a foundation for advancing the teaching art from its present state to a new and better state of the art. Much of the terminology used in this treatise is technical. To assist you in understanding the material, I have included an abridged glossary of technical terms at the end of this treatise. This glossary is a subset of a larger one that will be available free of charge before the end of this calendar year from my Laboratory's website at <http://www.mrc.uidaho.edu/~rwells/techdocs> [Wells (2014)]. You can also obtain other books and papers by the author and referenced in this treatise free of charge from this website.

The Institution of Public Education is formally the third part of *The Idea of Public Education*. But because it is engaged with empirical matters of education it can be read before either of the other two volumes. Indeed, Aristotle would likely say volume III was propaedeutic to understanding volume I. Full comprehension of everything you will find in this volume will require the study of the other two volumes, but I feel it is likely that you will better comprehend the material in those works if you go into them with the empirical contexts discussed here in mind. The risk you incur by studying *The Idea of Public Education* "from back to front" in this way is that you might be inclined to think some of the reforms presented in this volume are matters of opinion or taste. They are not. They are scientific consequences deduced from the earlier volumes.

This treatise is divided into two parts and these can be read in either order. Part I deals with social-natural organization of public instructional education grounded in the in the mental physics of human nature. Part II deals with the art of instruction. Both parts are necessary because mis-institution of organization can and will cause the failure of even the best methods of instruction, while inadequate instruction will render even the best organized institution a moot point. The governance of public education serves the instructional mission, and the nature of instructional education places requirements on the manner in which the institution is organized.

Chapter 1 sets out the social context of public education. No institution of education exists in a vacuum separate from the circumstances of the Society whose institution it is. It is essential that you keep this context at the forefront of your thinking as you study the remaining chapters. You should even regularly refer back to the material in chapter 1 in order to avoid being blinded by subsequent details according to the venerable saying of "not being able to see the forest for the trees." Chapter 1 contains the social foundational principles upon which the rest of the theory of social-natural institution of public instructional education is built.

The materials presented in Chapters 2 through 5 pertain to the grounding of social institutions in the nature of human beings living together in a Society. A persistent theme throughout this treatise is that social institutions are only successful if and to the degree that the institution is congruent with human nature. Individual human beings are the "social atoms" of every social-natural science and any institution design that neglects or ignores this fact produces an unnatural Institute. These chapters can properly be said to comprise a basic social-natural sociology theory derived from epistemology-centered social psychology.

Chapter 2 lays the foundations for a general theory of social-natural institution and derives the functions of enlightened institution in a civil Community. Like all social-natural sciences, this theory takes its fundamental grounding from the *homo noumenal* nature of being-a-human-being. For this reason, chapter 2 is a very technical chapter. It discusses the relationships between judgmentation and institution design and deduces a mathematical model of Institutes as corporate persons. The principal finding from this chapter is the set of synthesis functions that stand under the principles of the Enlightenment presented in chapter 1. Because the topic of this treatise is a special case, namely, the enlightened institution of public instructional education, understanding these functions, rather than the technical details of their derivations, suffices for readers to understand the material in the subsequent chapters.

Chapter 3 discusses challenges presented by the phenomenon of mini-Communities embedded within a Society. These challenges have important implications for the form of governance of institutions as well as for curriculum design requirements. The challenges and their implications are grounded in the *homo noumenal* nature of human beings. Chapter 3 provides important background material on the human nature of these challenges. Two crucial aspects of this are the nature of Obligation and the phenomenon of stereotyping. The chapter presents the mental physics and epistemology of both these aspects. A key outcome of these aspects of human nature that is immediately relevant to the institution of public education is the existence of special interests in mini-Communities alongside with and overlapping common interests in civil Society. The phenomenon of overlapping interests has a direct bearing on the organization of education.

Chapters 4 and 5 present a general theory of corporate persons and the concept of a "corporate personality." Chapter 4 presents an in-depth discussion of empirical and rational principles that govern social-natural institution and corporate persons. These principles are used throughout the rest of this treatise. The chapter introduces the important concept of corporate *Personfähigkeit* or "power of the corporate person." This concept is also heavily utilized throughout the treatise. The characterization of "corporate personality" using the D-PIPOS model is taken up in chapter 5.

Chapters 6 and 7 deal with organization principles and governance structures for a system of public education. Roughly the first half of chapter 6 gathers together a body of historical facts and empirical principles pertinent to organization theory generally. The second half of the chapter lays out the proposed general structure of public education governance in detail. Chapter 7 continues that presentation by presenting the detailed organization of its several organization layers and governing mechanisms. The proposal presented in this treatise introduces two new concepts of organization theory: Tocqueville governance and the inverted pyramid structure of organization.

Chapter 8 presents the structure and organization of the judicial branch of the institution of public education. This system augments the present U.S. judicial system by setting up judicial panels as courts of limited jurisdiction. It also calls for the establishment of judicial congresses to appoint the agents of judicial panels. These congresses, in their turn, are established by and answer to the U.S. or state senates with the advice and consent of the U.S. or state supreme courts. The chapter provides an in-depth discussion of the qualifications for appointment to a judicial panel and sets up checks and balances for the actions of judicial panels under the jurisdiction of appellate courts. The system proposed is comprised as an inquisitorial system rather than as an adversarial system.

Chapter 9 presents the structure and organization of the executive branch of public education governance. It begins by explaining the function of an executive in a civic institution generally. It then goes on to present the specific executive branch structure for an Institute of public education. The chapter also includes an introduction to management by objectives (MBO). It examines the flaws in the common Drucker-Odiorne MBO systems and then presents the proper social-natural heuristic of management by objectives (HP-MBO).

Part II of this treatise, instruction, begins in chapter 10. The principle of faculty governance of instruction is first explained. Next the issue of teaching to private purposes in public education is raised and discussed. The threefold perspectival synthesis of the art of instruction design is introduced. The three perspectives involved are: learner perspective; teacher perspective; and curricular perspective. The chapter then reviews the twenty-four basic functions of public instructional education that were derived in volume I [Wells (2012)].

Chapter 11 begins a discussion of the art of instruction from the perspective of the teacher-learner social Molecule of the classroom environment. In this Molecule, teacher-learner communication transactions, semantic messaging, and factors from subjective affectivity all are crucial constituents of teaching and learning. The chapter begins with the Weaver's model of teacher-learner transactions and relates this model to processes in the mental physics of the phenomenon of mind. The phenomenon of stagewise development of affectivity is briefly reviewed with some of its important consequences for instruction discussed.

Chapter 12 begins the discussion of subject-matters, topics of instruction, and curricula. First the curricular principle is introduced. This principle is deduced from the human nature of the phenomenon of learning. The deduction includes a brief explanation of the general mental physics of natural learning. Next it discusses the distinction between topics and subject-matters. It also discusses the relationship of these to social contracting and finds against the establishment of a 'common core curriculum.' Issues of teacher preparation and training are taken up next. The chapter discusses flaws in the present institution and outlines needs found within a social-natural science of instructional education. Topical exposition and teaching subject-matters by topical exposition is discussed next. A topic-by-topic presentation is given on the empirical exhibitions of divers topics found in existing curricular structures. Finally, the chapter concludes with a classification of topics into seven general frameworks that forms the basis of the material presented in the remaining chapters.

Chapter 13 develops the Critical foundations for the language arts framework. It begins by discussing what 'language' is in the context of public education. It provides a real explanation of what 'literacy' is and identifies literacy as the key objective of the language arts framework. It next engages the issue of learner educational Self-development in regard to literature. Averill's emotional creativity conjecture is discussed and related to the mental physics of comprehension. From this relationship we find that affectivity and creativity are fundamental factors in cultivating literacy skill. The chapter explains these factors and how they are related to literacy skill. The role of writing, speaking, and rhetoric in language arts is discussed and explained. One key point the

chapter makes is that language arts skills provide important and underappreciated breadth of skill enhancements in the other topical frameworks. The chapter contains several suggestions and other remarks pertinent to the art of instruction in language arts.

Chapter 14 takes up the mathematics framework. It begins with a Critical explanation of what mathematics is. Mathematics is inextricably linked to fundamental processes in the phenomenon of mind and the chapter discusses these linkages. From this it is shown how mathematics can be viewed from three Critical Standpoints, *viz.*, theoretical math, judicial math, and practical math. An important consequence of the mental nature of mathematics that is of primary importance for instructional techniques and practices is that teaching mathematics is always at the same time a cultivation of the learner's subjective judgments of taste. Development of effective methods and techniques for mathematics instruction requires that the teacher have a solid understanding of the phenomenon of judgments of taste. The chapter provides an overview of this. It includes several principles and remarks pertinent to developing instructional methods and techniques.

Chapter 15 covers the physical-natural science framework. It begins by providing the Critical real explanation of what science is. Although most people think that "science" is what is taught in traditional science courses, this is not an adequate definition of science nor can it serve to achieve the broad aims of public education. Many activities that are not presently recognized as being sciences can be made into sciences, and this making is crucial for Progress in Society. Many of these do not require a college-level education in science; the objective of science education is not to "study science" but rather to cultivate scientists. The relationship between science education and the functions of public instructional education is discussed. Science education is seriously misdirected when it is given a narrow occupational focus, and current science education at the primary and secondary level does do this now. The chapter goes into somewhat detailed discussion of science instruction in terms of the functions of public education. In the course of this discussion, several crucial needs for new developments in approaches and methods of science instruction are brought out and discussed. The chapter concludes with a brief remark about some challenges teacher education must face and overcome.

Chapter 16 begins by deducing a Critical real explanation of the aesthetical arts framework. This is the framework which includes what are more commonly called the arts and humanities. It finds the principle of the framework in the Idea of cultivation of aesthetical intelligence. The meaning of this term is explained and its basis in human nature is discussed. In relationship to education, the concept of aesthetical intelligence enlarges and generalizes the principle of mathematics instruction, *viz.*, that learner cultivation by instruction is effected by a teacher via the reflective process of judgmentation *in every topic of instruction*. In relationship to subject-matters often included in humanities education, the aesthetical arts framework is the primary vehicle for cultivating the art of discovery in the learner. The chapter brings up divers issues and challenges and discusses instructional *téchne* for cultivation of the learner's aesthetical intelligence.

Chapter 17 begins with a brief review of the origins of present day social studies instruction and divers attempts to define it. Next it criticizes root prejudices that shaped social studies developments during the Progressive Education Movement in the first half of the 20th century. From there it proceeds to establish the social-natural basis for the social studies framework. This basis turns the object of social studies away from its present centering on a Platonic abstraction and re-centers it human beings, the social atoms of all social phenomena. This re-centering on the learner sets up a practical and operational expositions for topics and subject-matters contained in the empirically development social studies framework. Finally, the chapter proceeds to present expositions and instructional guidelines for the social studies framework topic-by-topic.

Chapter 18 finishes this treatise with a discussion of post-secondary public education. It first takes up the question of whether or not *pubic* post-secondary education is justifiable under the

American social contract. A principle of interests-based public institution is formally introduced and it is shown how this principle does justify public post-secondary education. Post-secondary public education in America has always had a professional focus since colonial times. Chapter 18 defines the term 'professional' and explains the distinction between a profession in general and a 'learned profession.' Distinctions between a learned profession and a non-learned profession always come down to pairwise comparisons of the nature of the labor services each provides. Thus one profession can be more or less 'learned' than another but the concept of a 'learned profession' is always a relative, not an absolute, concept. Education for professional interests raises important fundamental questions and issues. The most important of these stems from the fact that no private interest *per se* can be justly supported by public wealth-assets. However, post-secondary education does provide for remote *common* interests along with the special interests it directly services. These common interests are discussed and identified. The important distinction between occupational training and skill training is discussed. It is explained why post-secondary education must be made entrepreneur-centric and capital skills oriented. Ways of justly blending common and special interests are discussed. It is pointed out that this requires *some* restructuring of post-secondary education but does not require *essential* restructuring. It does, however, require some significant changes be made in instructional and curricular design *téchné*. The chapter points out directions in which these changes should be taken. Finally, the chapter concludes with the role of the legislating education committees in post-secondary public education.

With that, *The Idea of Public Education* project is brought to its conclusion insofar as the need for American education reform is to be understood and a proposal for meeting this need must be developed. The more difficult part remains, namely, the actual institution of this reform.

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Preface References

Wells, Richard B. (2012), *Education and Society*, vol. I of *The Idea of Public Education*, available free of charge from the author's web site.

Wells, Richard B. (2013), *Critique of the American Institution of Education*, vol. II of *The Idea of Public Education*, available free of charge from the author's web site.

Wells, Richard B. (2014), *Wells' Unabridged Glossary of the Critical Philosophy and Mental Physics*, 4th edition, soon to be available free of charge from the author's web site.

Part I

Social-natural Organization of Civil Institutions