

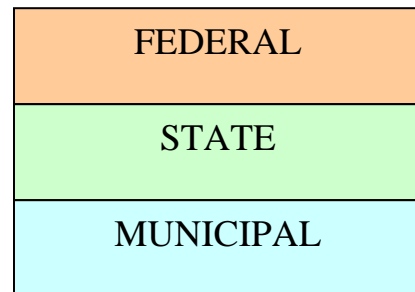
The Logic Model: Past, Present, and Future

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The “Abridged” Epic History

So much of the human services throughout the United States is intertwined with public policy and public funding, that it is instructive to review how this came about. The way things “evolved” led to the creation of the Logic Model to handle a particular problem along the way. The emergence of other problems led to the adoption of the logic model to handle new challenges. And, with a recent adaptation (eLogic Model™), the logic model presents the capacity to handle still larger challenges.

For the first 150 years of the United States, the governments were organized somewhat like a “layer cake.” Federal, State, and Municipal governments each had their own sources of revenue, areas of functionality, and spheres of influence. There was very little interaction or intrusion from one level of government to another.



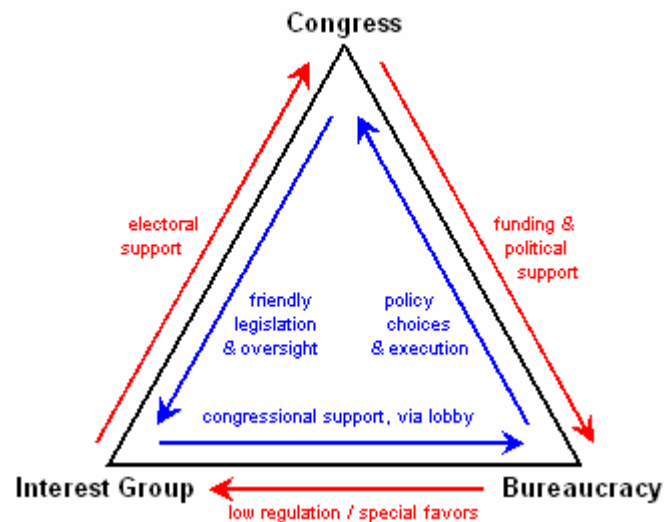
Then, cataclysmic events in the twentieth century changed this arrangement of relative “parallel play.” As a preliminary, Theodore Roosevelt introduced the “Square Deal” to expand the federal government’s role as referee of economic activity, and in 1913, the country passed the 16th Amendment which provided for income tax without apportionment (the first “slices” through the layers of the cake). The Great Depression, however, massively challenged the capacities of the layer cake arrangement for existing roles of the three levels of government.

The “New Deal” ushered in a variety of programs (the “Alphabet soup”) which enlarged and expanded the role of the federal government. With World War II, the federal government took on an unprecedented scope of new activities and preeminence. Truman followed this period with the “Fair Deal” which sought to further expand the “New Deal” concepts to those (mostly minorities) left out of the New Deal. Most of the New Deal and Fair Deal programs, however, were rolled back prior to and during the Eisenhower administration, which attempted to operate with a “No Deal” philosophy. The genie was out of the bottle, however, as the military-industrial-complex continued to expand and a special arrangement called the “Iron Triangle.” (more below) came into being.

SQUARE DEAL NEW DEAL FAIR DEAL NO DEAL CAMELOT GREAT SOCIETY NEW FEDERALISM Zero-Based Budgeting LOGIC MODELS GPRA 1993
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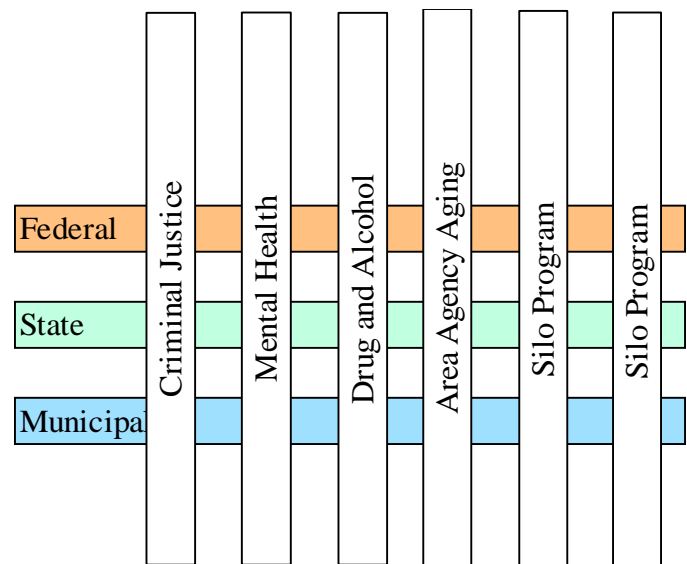
The Kennedy administration, sometimes affectionately known as “Camelot,” set the ground work for the largest ever slicing of the layer cake. People had a new confidence in government and its ability to solve problems. For those sitting on the fence, the Soviet threat was sufficient to push them into going along with a stronger government, especially at the federal level. With the stage set, the Johnson administration ushered in the “Great Society” with a plethora of domestic programs even beyond the hopeful dreams of Franklin Roosevelt.

Surprisingly, the “Great Society” programs experienced their greatest growth and expansion under the Nixon Administration. This period also marked a new expansion of the “Iron Triangle” form of politics. The diagram to the right shows the basic dynamics of the Iron Triangle.¹ It usually involves a Congressional Subcommittee, a Department or Bureau somewhere in the executive branch, and an Interest Group, or a Private/Public Interest Group (PIG). The three entities “conspire,” more or less, to get what they want and keep it coming.



For the new social programs, however, the Iron Triangle can be especially disturbing in that the “consumers” or the intended “beneficiaries” are not really represented in the mix. Further, policy making is piecemeal, often irrational or even contradictory, and it is slanted toward “spend more” regardless of consequences. In terms of the “Layer Cake,” the State and Local governments are completely ignored. The Nixon administration sought to curb the excesses of the Iron Triangle by introducing the “New Federalism.” It was also an attempt to restore to the States, some of the powers lost during the New Deal era.

For the social programs, the New Federalism took the form of Block Grants. That is, funding in the form of block grants was transferred to the States with considerable discretion. The Federal role was largely that of funding and monitoring. With the combination of greatly expanded federal programs operating across jurisdictional boundaries (former layer cake boundaries) and the New Federalism initiating (via block grants) programs at lower levels of government, the arrangement of governments took on the model of a “Picket Fence” rather than the “Layer Cake.”



In most cases, Block Grants to the States resulted in pass through grants from States to Municipalities. The final implementation of most programs occurred at the local level, with monitoring going on at the Federal and the State levels. Many municipalities, in turn, also contracted out major portions of the service delivery to community-based organizations and also played a monitoring role. So, with all this “monitoring” responsibility at Federal, State, and Local levels, there was an inevitable surge in the profession of Program Evaluation. We’ll return to this development momentarily.

The New Federalism did not break the Iron Triangle, but it did broaden the constituency (Interest Groups) considerably. Effective interest groups now required participation from all parts of the country and from all levels of operation; i.e., State and Local government, as well as private and community-based organizations. For social service programming, this is probably an improved version of the Iron Triangle. At least policy making is not as “tight” (exclusionary) as the typical Iron Triangle arrangement.

One of the characteristics of Iron Triangle policy making is that it creates “ratchet budgeting.” The budgets and funding just continue to expand regardless of effectiveness, needs, etc. To confront this, the Carter administration implemented what it called “Zero-Based-Budgeting” (ZBB). In Zero-Based-Budgeting, each program is required to justify its very existence as well as the requested level of funding, that is, programs required competent plans. The growth in funding did not abate, but the practice of “Planning” grew considerably.

The developments described above promoted two professionalized endeavors: (1) Program Evaluation and (2) Planning. Indeed, a professional journal was founded called *Evaluation and Program Planning*. This combination of program evaluation and planning led to both the development and the widespread use of Logic Models.

The Logic Model is Born

As noted above, the proliferation of social programs from the Great Society and the New Federalism (“picket fence federalism”) created a demand for Program Evaluation. Prior to the 1960’s evaluation was pretty much used only in the areas of agriculture, and to some extent, in education. By the end of the 1980’s, demand for Evaluators was so great that universities were offering graduate courses and degrees in Program Evaluation. By and large, most program evaluators came from existing disciplines in the social sciences; e.g., psychology and sociology. And, by and large, most of the evaluations conducted were “method driven.” That is, the evaluations were planned according to the methods prescribed in their social science background. Unfortunately, these evaluations rarely satisfied the needs of the program constituencies or served the policy making needs of the funding sources. In fact, many of the leading scholars in program evaluation published entire books devoted to the issue; e.g., *Utilization-Focused Evaluation*, *Fourth Generation Evaluation*, and *Beyond Method*.²

The method-driven approach was unsatisfactory in part because most programs were not structured like an “experimental design” to accommodate such rigorous methods. A prominent investigator, Joseph Wholey, attacked this problem by devising what was called “Evaluability Assessment.”³ Evaluability Assessment examines a program to determine “if” and “how” a program should be evaluated. It does this by examining the detail of program operations and formulating the parts so as to depict the program’s “Theory of Change.” The instrument that Wholey devised for doing this was, the “Logic Model.” And, the Logic Model that Wholey developed⁴ (*circa* 1980) is pretty much the same model used today, including: Resources, Activities, Outputs, and short-intermediate- and long-term Outcomes.

During the 1990’s, the Logic Model became a prominent and highly recommended tool or method for planning program evaluations.⁵ Variations of the Logic Model also appeared under different names, “Chains of Reasoning,”⁶ “Theory of Action,”⁷ and “Performance Framework.”⁸ The term “Logic Model,” (also attributed to Bickman⁹) however, seems to have gained the greatest staying power and has gained utility in areas beyond the field of program evaluation, as we shall examine later.

Also during the 1990’s, the field of evaluation seems to have drifted into two camps with regard to Logic Models. In one camp the practitioners are serious about “theory-based evaluation” and “theories of change.” For this group, the Logic Model is just too simplistic.¹⁰ The nuanced musings of this group, however, have receded into quiet obscurity in the ivy towers of deep contemplation, at least for awhile. For the other group, the Logic Model has made evaluation practicable on a massive scale, although it is sometimes not called evaluation, but something like “Performance Monitoring” or “Outcome Measurement” or “Result Oriented Management Accountability” (ROMA). The intuitive simplicity of the Logic Model is, in fact, the key to success for this group.

Logic Modeling Becomes the *Method du jour*

Although the Logic Model was well established among the practitioners of Program Evaluation by the early 1990’s, events during the 1990’s propelled the Logic Model to new heights in popularity. Chief among these events was the Government Performance & Results Act of 1993 (GPRA).¹¹ The Act was far reaching, covering every cabinet level department in the federal government and all entities that their funds reached, with few exceptions. The real “meat and potatoes” of the Act placed great emphasis on the “Performance Plan,”¹² and these must be updated annually. Although the Act was passed in 1993, it’s statutory effect occurred in 1997, when the first plans were due. During the anticipatory interval 1993-1997, a hard search was on for ways to develop performance measures and assemble them into meaningful plans. Two researchers were prominent in this search process, Harry Hatry of the Urban Institute, and our dear friend, Joseph Wholey, then Senior Advisor to the GAO.¹³ Needless to say, the Logic Model found its way into the “search for a method.”

During and following this same interval, the W. K. Kellogg Foundation issued a number of publications and manuals¹⁴ aimed at nonprofits, which featured the Logic Model as both a planning and evaluation tool. Similarly, the United Way of America adopted the Logic Model as the core of its performance outcome strategy.¹⁵ In 1994, the Community Services Network (all the programs funded by the Community Services Block Grants) created “Results Oriented Management Accountability” (ROMA)¹⁶ and the Monitoring and Assessment Task Force (MATF) initiated the development of the National Performance Indicators (NPI).¹⁷ Again, the Logic Model was/is a core component of ROMA.

There are several features which make the Logic Model especially suitable as a planning tool when performance is a paramount interest:

1. The Logic Model explicates the “Theory of Change” by which the program is operating. It explains the WHY, the HOW, and the WHAT of the program.

WHY: is explained in the Situation/Need column.

HOW: is explained in the Activity/Service/Output column.

WHAT: is explained in the Outcomes and Outcome Indicator column.

2. Because the Logic Model is graphical, it readily communicates the key components of the program and how they relate to each other. It exemplifies how a picture can be worth a thousand words.
3. The Logic Model presents not only a plan of operation, it sets forth a plan of evaluation as well. All one needs to do is gather information that quantifies the elements in the Logic Model and *voila!*
4. The Logic Model is an ideal device for promoting “organizational learning.”¹⁸

As a side note, it is probably true that the advent of computers with user friendly software had a lot to do with the rising popularity of Logic Models. Before word processors and *wysiwyg* (what you see is what you get) screen/print utilities, a Logic Model would be a great deal of trouble to assemble — a nightmare for typewriter users. As an example of how computers are making it easier to build Logic Models, the Math and Science Partnership Network (a component of No Child Left Behind) has an online “Logic Model Builder”¹⁹ You type in a component for the Logic Model and then *click and drag* it to where you want it on the form. The Center for Applied Management Practices, Inc. also has a logic model “Puzzle” game with similar dynamics.²⁰

Another side note is that the Extension Services across the country are among the most advanced users of Logic Models. Recall from earlier above, that Evaluation prior to the 1960’s was largely used in the areas of agriculture. To gain an appreciation of how extensive Logic Models are used by the Extension Services, do a *Google* on “Extension Services” + “Logic Models.”

With these developments, the Logic Model was/is no longer restricted to the repertoire of Program Evaluators. It is a tool of managers, planners, policy makers, public relations officers, organization development professionals, board directors, and trainers. When any method or device becomes so widespread and multi-purpose, it is inevitable that variations emerge. The next section explores these variations and what they portend for the future of Logic Model deployments.



Variations in Logic Model Format

The table below presents the components used in various Logic Model formats. This is not a comprehensive list, to be sure. But it may serve to make certain points about trends in Logic Model use. Notice that ALL formats include: “Activities,” Outputs,” and “Outcomes.” Many include “Inputs or Resources.” Some include “Situation, Needs, or Problems.” Some of government models include “Goals, Priorities, or Focus.” And finally, some of most recent models (ROMA and HUD) include “Measurement Tools.” The addition of “Measurement Tools” portends something about the future of Logic Models (next section).

Logic Model Components in Current Use

	Goals Priorities Focus	Inputs Resources	Situation Needs Problem	Activity Services	Clients Reached	Outputs	Outcomes Short Intermediate Long term	Measure- ment Tools Evaluation
Wholey		X		X		X	X	
United Way		X		X		X	X	
Kellogg Foundation		X		X		X	X	
Healthcare Kansas	X	X		X		X	X	
Extension Services	X	X	X	X	X	X	X	
ROMA			X	X		X	X	X
HUD	X		X	X		X	X	X

The instructions or guides that accompany Logic Model formats often prescribe the inclusion of some kind of foot notes or narrative attachments that amplify with details about the components used in the model. Many guides also recommend some kind of group process to follow for collaboration in building Logic Models. Some even suggest that the process of building the Logic Model is more important than the finished model.

The United Way, Kellogg Foundation, ROMA, and HUD approaches emphasize training in Logic Model building. Much of the training addresses the skill(s) required to recognize and specify the elements that go into a Logic Model. For example, a certain amount of experience is required to distinguish a Need from an Activity from an Output from an Outcome. Also, the Logic Model does not provide a lot space for specifying an element in the Logic Model. Therefore, it is necessary to develop statements that are short and to the point. Finally, the Logic Model is supposed to portray a “Theory of Change” so it is necessary to construct models so that the relationships among the components in the model are clear and representative of the Program for which the model is designed. All of these challenges, combined, also portend something about the future of Logic Models.

The Future of Logic Modeling

The Logic Model was first created to determine when and if a program was ready for evaluation. It then became a recognized standard for designing and planning an evaluation. Subsequently, Logic Models were adopted for use in proposal development, performance indicator development, performance planning, program planning, organization development, training, and most recently, grants management. In each instance, some added challenge was addressed by extending some aspect of the Logic Model. To date, these extensions involved adding new columns, or adding new content.

To prognosticate where the Logic Model is likely to venture next, imagine that other aspects of the Logic Model can be extended. Imagine that a wealth of information about a given program area (a knowledge base) is accessible to the Logic Model via dynamic search, selection, and drop down menus. Imagine that the content of a Logic Model is interactive and expandable (expert system) to any size and level of detail necessary to describe a program. Imagine that the Logic Model is not only interactive, but multi-user across an agency network or across the world-wide-web. Imagine that the Logic Model could transform its content to generate a custom data base for collecting and managing follow up data pertaining to the particular model created. Imagine, further, that the Logic Model could not only create a data base, but also transform itself into the client tracking or event tracking MIS used to manage operations. Finally, imagine that the Logic Model could combine itself with any number of other Logic Models from the same agency, or different agencies, along with all the data that the Logic Model(s) collected. If these imaginings seem a stretch, they are not. All these extensions of the Logic Model, in fact, exist in the form of the eLogic Model™.²¹

Extending these aspects of a Logic Model (the eLogic Model™) make it adaptable to address challenges on a whole new level. Providing a Knowledge Base and Expert System makes building Logic Models available to a much larger audience of participants. It is not necessary to “bog down” with the nuances about how a need statement or an output statement should be constructed (e.g.,, measurable, time specific, etc.). It’s okay to try things or make mistakes, because it is easy to edit the model. It is easy to

involve a team approach because the model interacts with as many users as desired. Ergo, the Logic Model should see even wider use and more participatory use than the paper models of the past.

Because the Logic Model can create a unique data base from the models created, it becomes not only a planning tool, but simultaneously it is an MIS designing and implementation tool. When approached this way, there is a very faithful relationship between “plans” created and “operations” implemented. Heretofore, planning efforts and MIS designing efforts are separate activities usually carried out by different persons. Getting the two efforts to match is a matter of approximation. And, if new planning occurs new MIS development is warranted (but costly) and may or may not also occur. If plans and MIS operations do not match well, generally one or the other gets ignored. The Logic Model overcomes these difficulties by adjusting MIS designs automatically.

Because the Logic Model can operate at all levels of an organization, that is, in the planning functions, in the management functions, and in the case work functions, and because the Logic Model can merge across programs and agencies, it can provide both vertical and horizontal integration of human services delivery. And, it does this without undue restrictions on the parties being integrated. The Logic Models for each part can be as flexible or unique as desired. The integration occurs as via on-going feedback loop between planning, management, and case work. The only restriction imposed on the participants is an adherence to ROMA principles.

With these new found extensions of the Logic Model, its future is likely to reflect a progression from “peripheral” functions; i.e., planning and evaluation (before and after), to “core” functions; i.e., management and case work (where the rubber meets the road). Whereas a static display is adequate to present a before and after snapshot of things, a dynamic tool is needed to support ongoing operations. The Logic Model has now evolved to support both static and dynamic modes of use.

End Notes

- ¹ This diagram is taken from *Wikipedia* and the permanent link is: http://en.wikipedia.org/w/index.php?title=Iron_triangle&oldid=70197409
Further details and description about the Iron Triangle are given at the above link as well as references to several prominent works in the field of public administration dealing with the topic.
- ² Patton, M.Q. (1997). *Utilization-focused Evaluation: the new century text*. Thousand Oaks: Sage.
- ³ Wholey, J.S. (1983). *Evaluation and effective public management*. Boston: Little Brown.
Wholey, J.S. (1987). Evaluability assessment: developing program theory. In L. Bickman (Ed.) *Using program theory in evaluation*. New Directions for Program Evaluation. No. 33. San Francisco: Jossey-Bass.
A brief presentation by Laura Leviton (2006) about what Evaluability Assessment is and the six steps to conduct and Evaluability Assessment can be found online at:
<http://www.eval.org/SummerInstitute/06SIHandouts/SI06.Leviton.PL3.Final.pdf#search=%22%22joseph%20wholey%22%22>
- ⁴ Wholey, J.S. (1979). *Evaluation: promise and performance*. Washington, D.C.: Urban Institute.
- ⁵ The Center for Disease Control Working Evaluation Group compiled a Selected Bibliography entitled “Logic Models in Program Evaluation” with about 130 citations. The bibliography is available online at: <http://www.cdc.gov/eval/logic%20model%20bibliography.PDF> and provides an excellent resource for work up to August, 1999.
- ⁶ Torvatn, H. (1999). Using program theory models in evaluation of industrial modernization programs: three case studies. *Evaluation and Program Planning*. 22(1), 73-82.
- ⁷ Patton, M.Q. (1997) *op. cit.*
- ⁸ Montague, S. (1997). *The three R's of performance*. Ottawa, Canada: Performance Management Network, Inc., September.
Montague, S. (1994). The three R's of performance-based management. *Focus*. December-January.
- ⁹ Bickman, L. (1987). The functions of program theory. In L. Bickman (Ed.). *Using program theory in evaluation*. New Directions for Program Evaluation, no. 33. San Francisco: Jossey-Bass.
- ¹⁰ Clark, H. and Anderson, A.A. (2005) Theory of Change and Logic Models: Telling Them Apart. Powerpoint presentation. Available link at:
http://www.theoryofchange.org/TOCs_and_Logic_Models_forAEA.ppt#285,1.Theories_of_Change_and_Logic_Models:_Telling_Them_Apart.
- ¹¹ Full text of the act is available at: <http://www.ombwatch.org/article/articleview/405/1/90>.
- ¹² A good review of the Act and its effects is available at:
<http://www.ombwatch.org/article/articleview/406/1/90>.
- ¹³ Hatry, H. and Wholey, J. (1998) An Interview with Harry Hatry and Joseph Wholey. *The Evaluation Exchange*. IV, no. 1. <http://www.gse.harvard.edu/hfrp/eval/issue10/qanda.html>.
- ¹⁴ W. K. Kellogg Foundation Revised Evaluation Handbook (1994)
<http://www.wkkf.org/Pubs/Tools/Evaluation/Pub3669.pdf#search=%22%22logic%20model%22%20planning%22>.

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- ¹⁵ United Way (1996) *Measuring Program Outcomes, A Practical Approach*. Available on-line at: <http://national.unitedway.org/outcomes/resources/mpo/>
- ¹⁶ The ROMA Website: http://www.roma1.org/about_roma.asp?pid=2.
- ¹⁷ NASCAP (2005) *Guide to Organizing and Reporting National Indicators of Community Action Performance*. Available at: http://www.nascsp.org/documents/NPI_Revised_Guide_Sept_05.pdf#search=%22national%20performance%20indicators%22.
- ¹⁸ Coffman, J. (1999) Learning From Logic Models: An Example of a Family/School Partnership Program. *The Harvard Family Research Project*. Available on-line at: <http://www.gse.harvard.edu/hfrp/pubs/onlinepubs/rrb/learning.html>.
- ¹⁹ Lehman, S. (2005) Logic Model Builder. In *Building Evaluation Capacity RETA Project*. On-line at: <http://hub.mspnet.org/index.cfm/11847>
- ²⁰ Go the bottom of the Home Page to the link "Puzzle Pages" <http://www.appliedmgt.com>
- ²¹ All these features of the eLogic Model are described in "eLogic Model to the Rescue" by Barry Nazar. Available online at: <http://www.appliedmgt.com/Papers%20and%20stuff/eLogic%20Model%20to%20the%20Rescue.pdf>