



# “We the people . . . ”: levels of analysis and the US Constitution

“We the people”:  
levels of analysis

Francis J. Yammarino

*School of Management, State University of New York and Binghamton,  
Binghamton, New York, USA*

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## Abstract

**Purpose** – Levels of analysis and multi-level issues have a long history and are becoming increasingly important in many areas of management and the organizational sciences. Nevertheless, specifics and clarity regarding these issues can be elusive for scholars and educators. To help overcome this difficulty, the paper aims to use the Constitution of the United States of America and the US presidential election to illustrate levels of analysis and multi-level issues.

**Design/methodology/approach** – The paper uses the example of the Constitution of the United States of America and the US presidential election to illustrate levels of analysis and multi-level issues in the areas of management and the organizational sciences.

**Findings** – The paper reveals the levels of analysis and multi-level issues using the US Constitution and US presidential elections.

**Originality/value** – The value of the paper to scholars and educators is the explanation and illustration of levels of analysis and multi-level issues using the US Constitution and US presidential elections.

**Keywords** Data analysis, Politics and political science, Elections, United States of America

**Paper type** Conceptual paper

On September 17, 2008, the USA celebrated “Constitution Day,” a new national holiday established to recognize the completion and signing of the Constitution of the United States of America by a majority of the delegates to the Constitutional Convention in Philadelphia, Pennsylvania on September 17, 1787. We also have just completed a US presidential campaign and election that selected Barack Obama as 44th President of the USA, effective on Inauguration Day, January 20, 2009. As someone who is interested in studying and teaching about issues related to levels of analysis, these events have considerable significance. Readers may express surprise and ask, “How and why”? Simply put, the process of electing the President of the USA, as specified in the US Constitution via the “Electoral College” (not called by this name in the Constitution, but commonly referred to as such), provides an excellent illustration of levels of analysis issues and what may go astray if we fail to pay attention to them. For the moment, put on hold your political persuasions regarding the presidential election and the Electoral College, and approach this issue and illustration as a scholar and teacher. First, to clarify the key points, permit me to provide some brief background material on levels.

Levels of analysis and multi-level issues have a long history (e.g., Behling, 1978; Dansereau *et al.*, 1984; Glick and Roberts, 1984; Roberts *et al.*, 1978; Rousseau, 1985; Robinson, 1950) and are becoming increasingly important in many areas of management and the organizational sciences (e.g., Dansereau and Yammarino, 2003, 2005, 2007; House *et al.*, 1995; Klein *et al.*, 1994; Yammarino and Dansereau, 2002, 2004, 2006, 2009). Various



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scholars have noted the importance of clearly specifying the levels of analysis at which phenomena are theoretically expected to exist, and have stated that it is critical to ensure that the measurement of constructs and data analytic techniques correspond to the asserted levels of analysis, so that inference drawing is neither misleading nor artifactual (see Dansereau *et al.*, 1984, 2006, 1999; Dansereau and Yammarino, 2006; Yammarino and Dansereau, 2008; Yammarino *et al.*, 2005). In particular, understanding how and if levels are specified permits an examination of the potential for, or degree of prevalence of, theoretical misspecification. Moreover, identification of relevant levels of analysis issues may help account for mixed, inconsistent, and contradictory findings in prior research. Without explicit incorporation of levels of analysis issues, incomplete understanding of a construct or phenomenon may lead to faulty measures, inappropriate data analytic techniques, and erroneous conclusions.

Levels of analysis are the entities or objects of study about which we theorize and for which we test. In particular, within management and the organizational sciences, we are interested in human beings in work organizations. These entities are typically arranged in hierarchical order such that higher levels (e.g., groups) include lower levels (e.g., persons), and lower levels are embedded in higher levels. Specifically, four key levels of analysis of human beings are relevant: individuals or persons (independent human beings), dyads (two-person groups and interpersonal relationships), groups (workgroups and teams), and organizations (collectives larger than groups and groups of groups).

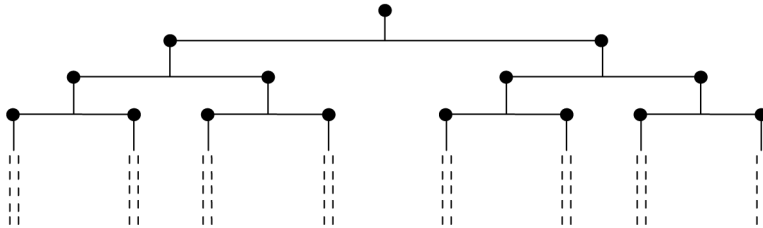
These four levels of analysis represent different perspectives on the human beings who make up organizations we study, and about which we teach. In this sense, they can be thought of as different lenses through which human beings can be observed. A key characteristic of these levels is their embeddedness. For example, two persons make up a dyad, multiple persons make up a group, multiple dyads make up a larger group, and multiple groups make up a collective. In other words, as one views human beings from increasingly higher levels of analysis, the number of entities decreases (e.g., there are fewer collectives than groups in an organization) and the size of the entities increases (e.g., collectives include a larger number of human beings than do groups).

Moreover, in our research and teaching, we often ignore entities per se, instead focusing and building upon on levels of management or assuming levels of analysis (without making them explicit) or both (see Dansereau *et al.*, 1984, 1999; Yammarino and Dansereau, 2008; Yammarino *et al.*, 2005). Even now, despite more than two decades of levels work in management and the organizational sciences, there is still confusion and misunderstanding about levels of analysis versus levels of management issues. Figure 1 clarifies and highlights the differences between levels of management and levels of analysis. The same people within the same organization are shown in the upper (levels of management) and lower (levels of analysis) portions of the figure, but a different configuration or view occurs by rearranging the nodes in the figures. The nodes are individuals who, in the upper portion of the figure, are placed in an organizational chart of four levels of management (with the CEO, for example, at the top). In the lower portion of the figure, these same individuals (with the CEO in the middle) account for various levels of analysis – i.e. 15 persons, 14 dyads (one-to-one relationships), seven groups (or teams), two collectives (e.g., departments), and 1 organization – and can be viewed in terms of any of these “lenses.” Note that

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Levels of Management: Organizational Chart (4 Levels)

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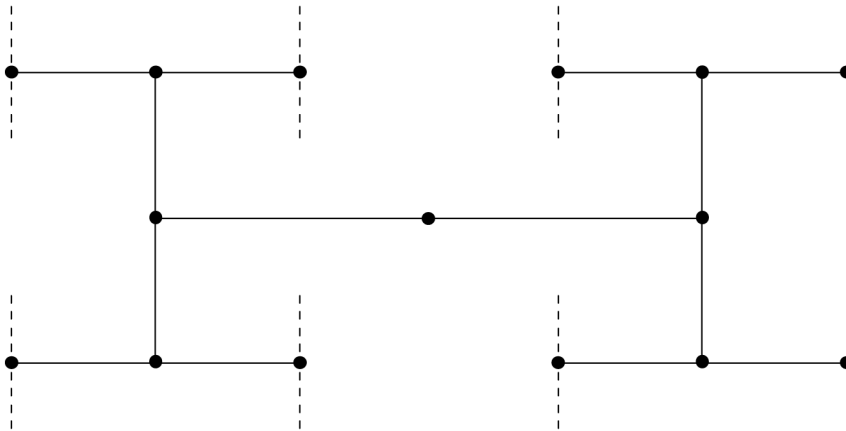


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Levels of Analysis: 15 Persons, 14 Dyads, 7 Groups, 2 Collectives, 1 Organization



**Figure 1.**  
Levels of management and  
levels of analysis

specifying and/or testing levels of management is not the same thing as specifying and/or testing levels of analysis.

What does this discussion and scholarly review have to do with the US Constitution, the Electoral College, and the presidential election? In brief, the Constitution provides the theoretical/conceptual, measurement/data analytic, and inference drawing levels of analysis for the presidential election. In fact, these are clearly spelled out in Article 2, Section 1 and the 12th Amendment to the US Constitution (The US National Archives and Records Administration, n.d.a). The relevant portion of Article 2, Section 1 is:

The executive Power shall be vested in a President of the United States of America. He shall hold his Office during the Term of four Years, and, together with the Vice-President chosen for the same Term, be elected, as follows:

Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors, equal to the whole Number of Senators and Representatives to which the State

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may be entitled in the Congress: but no Senator or Representative, or Person holding an Office of Trust or Profit under the United States, shall be appointed an Elector.

The relevant portion from the 12th Amendment is:

The Electors shall meet in their respective states, and vote by ballot for President and Vice-President, one of whom, at least, shall not be an inhabitant of the same state with themselves; they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice-President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice-President and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the government of the United States, directed to the President of the Senate;

The President of the Senate shall, in the presence of the Senate and House of Representatives, open all the certificates and the votes shall then be counted;

The person having the greatest Number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by states, the representation from each state having one vote; a quorum for this purpose shall consist of a member or members from two-thirds of the states, and a majority of all the states shall be necessary to a choice. And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following, then the Vice-President shall act as President, as in the case of the death or other constitutional disability of the President.

Essentially, these provisions of the US Constitution are the embodiment and establishment of the Electoral College. While this name is never used or mentioned in the Constitution, it is commonly referred to as such. Apparently, the Founding Fathers were leery of letting the people directly elect the President. Some were worried that the citizenry would be too focused on local rather than national interests; others felt the people would be too easily fooled by campaign promises and the like; still others believed a national election at that point in history (late 1700s) was just impractical. And, the Founding Fathers were also seemingly leery of letting Congress elect the President for a variety of reasons, including that the “big” states and “small” states delegates often disagreed on issues. The Electoral College, as it is now called, was proposed by James Wilson of Pennsylvania (who later became one of the original Supreme Court justices) as a compromise among a popular citizenry vote, a Congressional vote, or a vote by the States. Thus, the Electoral College insulates the election of the President from the national populous by having the people/voters elect “electors” in each state who are pledged to vote for a specific person for President. Each state has a number of electors equal to the number of its US Senators (two for each state) and Representatives (varies by state based on population). Interestingly, the Constitution does not specify or require that the electors be chosen by popular vote. Regardless, the electors are chosen by the States, and then they meet to “elect” the President (and Vice-President). An absolute majority, currently 270 electoral votes, is needed to be elected President.

Translated into levels of analysis issues, these provisions of the US Constitution can be interpreted and restated simply as follows:

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- Theoretical/conceptual level of analysis for the election of the US President – the Nation as a whole – or the “National” level of analysis.
  - Measurement/data level of analysis for the election of the US President – the 50 States separately or individually – or the “State” level of analysis.
  - Inference drawing/conclusion level of analysis for the election of the US President – the aggregated 50 states – or the “State” level of analysis results that are then aggregated to the “National” level of analysis to determine the President.

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In terms of levels of analysis, what is wrong with this picture involving the Electoral College? From the perspective of levels, the Founding Fathers created a levels misspecification error – theory, method, and inference are not aligned in terms of the same level(s) of analysis (see Dansereau *et al.*, 1984, 2006; Dansereau and Yammarino, 2006; Robinson, 1950; Yammarino *et al.*, 2005). The introduction of the state-level electors and Electoral College prevents an alignment of a national office with a national election and a national outcome or inference. On this point, the evidence is quite clear since, four times in US history (1824, 1876, 1888, and 2000), the candidate who “won” the “popular” (read “national”) vote actually “lost” the election in the electoral (read “state”) vote via the Electoral College mechanism (The US National Archives and Records Administration, n.d.b). In 1824, Andrew Jackson won the popular vote (by 38,000 votes), but even the Electoral College could not produce a majority winner; therefore, the House of Representatives elected President John Quincy Adams. In 1876, although winning the popular vote (by 264,000 votes), Samuel Tilden lost the electoral vote (by one vote) to Rutherford B. Hayes. In 1888, Benjamin Harrison lost the popular vote (by nearly 96,000 votes) to Grover Cleveland but won the electoral vote (by 65 votes). In 2000, we witnessed the George W. Bush-Al Gore-Florida Chads-Supreme Court election in which Gore won the popular vote (by over 537,000 votes) but Bush was the electoral vote winner (271-266 votes). If levels issues were aligned correctly, these events would never occur because the national presidential election (conceptual level) would be based on a truly national election or popular vote (methodological level), and the national “winner” would be the presidential election winner (inference-drawing level).

In the current election of 2008, this levels of analysis misspecification error was not an issue as Barack Obama has won the national popular vote (by about 8,453,000 votes) and also looks likely to win the Electoral College vote (by about 192 votes) over John McCain (see *New York Times*, 2008) when the electors meet in each state on December 15, 2008. This outcome is most likely to hold after the electors transmit their votes to be counted in a joint session of the US Congress on January 6, 2009 when the “official” winner and 44th President of the USA is declared.

Whether one is a proponent or opponent of how the US Constitution specifies the process of presidential elections via the Electoral College mechanism, this is a “political” choice or preference. But, as a scholar and/or teacher of levels of analysis issues the choice should be clear – the current mechanism distorts things from a levels perspective and can lead to a mismatch of theoretical and methodological levels resulting in a specification error, i.e. when one presidential candidate wins the popular (national-level) vote and different candidate wins the electoral (state-level) vote. Hence, given our current Constitution-based presidential election system, in effect, the “national polls” can be ignored – they are somewhat meaningless as they only attempt

to predict the winner of the popular “national” election, which is irrelevant in our misspecified levels of analysis world. However, we should pay particular attention to the “state polls” as they attempt to predict, in effect, the electoral vote of each state individually, which is relevant in our misspecified levels of analysis world. Is this levels misspecification error likely to be corrected in the near future? I doubt it, as the “small” states remain concerned about position and power relative to the “big” states and because, nationally, there is a disparity in political party registrations (Democrats exceeding Republicans). Again, the Electoral College appears to remain a viable “compromise” for electing the President of the USA. On the other hand, this level of analysis specification error just might be corrected if the frequency of discrepancy increases between popular (national-level) and electoral (state-level) presidential vote winners in the next several elections (e.g., 2012 and beyond). Why? Because eventually “we the people” will require alignment of levels of analysis issues – theoretically, methodologically, and inferentially – in our US presidential elections. Therefore, to understand levels of analysis, remember the US Constitution!

### References

- Behling, O. (1978), “Some problems in the philosophy of science of organizations”, *Academy of Management Review*, Vol. 3 No. 1, pp. 193-201.
- Dansereau, F. and Yammarino, F.J. (Eds) (2003), *Research in Multi-level Issues. Vol. 2: Multi-level Issues in Organizational Behavior and Strategy*, Elsevier, Oxford.
- Dansereau, F. and Yammarino, F.J. (2005), *Research in Multi-level Issues. Vol. 4: Multi-level Issues in Strategy and Methods*, Elsevier, Oxford.
- Dansereau, F. and Yammarino, F.J. (2006), “Is more discussion about levels of analysis really necessary? When is such discussion sufficient?”, *Leadership Quarterly*, Vol. 17 No. 5, pp. 537-52.
- Dansereau, F. and Yammarino, F.J. (Eds) (2007), *Research in Multi-level Issues. Vol. 6: Multi-level Issues in Organizations and Time*, Elsevier, Oxford.
- Dansereau, F., Alutto, J.A. and Yammarino, F.J. (1984), *Theory Testing in Organizational Behavior: The Variant Approach*, Prentice-Hall, Englewood Cliffs, NJ.
- Dansereau, F., Cho, J. and Yammarino, F.J. (2006), “Avoiding the ‘fallacy of the wrong level’: a within and between analysis (WABA) approach”, *Group and Organization Management*, Vol. 31 No. 5, pp. 536-77.
- Dansereau, F., Yammarino, F.J. and Kohles, J. (1999), “Multiple levels of analysis from a longitudinal perspective: some implications for theory building”, *Academy of Management Review*, Vol. 24 No. 2, pp. 346-57.
- Glick, W.H. and Roberts, K.H. (1984), “Hypothesized interdependence, assumed independence”, *Academy of Management Review*, Vol. 9 No. 4, pp. 722-35.
- House, R., Rousseau, D.M. and Thomas-Hunt, M. (1995), “The meso paradigm: a framework for the integration of micro and macro organizational behavior”, in Staw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behavior*, Vol. 17, Elsevier, Oxford, pp. 71-114.
- Klein, K.J., Dansereau, F. and Hall, R.J. (1994), “Levels issues in theory development, data collection, and analysis”, *Academy of Management Review*, Vol. 19 No. 2, pp. 195-229.
- New York Times* (2008), “Election results 2008”, available at: <http://elections.nytimes.com/2008/results/president/map.html> (accessed November 20, 2008).

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- Roberts, K.H., Hulin, C.L. and Rousseau, D.M. (1978), *Developing an Interdisciplinary Science of Organizations*, Jossey-Bass, San Francisco, CA.
- Robinson, W.S. (1950), "Ecological correlations and the behavior of individuals", *American Sociological Review*, Vol. 15 No. 3, pp. 351-7.
- Rousseau, D.M. (1985), "Issues of level in organizational research: multi-level and cross-level perspectives", in Cummings, L.L. and Staw, B.M. (Eds), *Research in Organizational Behavior*, Vol. 7, JAI Press, Greenwich, CT, pp. 1-37.
- (The) US National Archives and Records Administration (n.d.a), "Constitution of the United States", available at: [www.archives.gov/exhibits/charters/constitution.html](http://www.archives.gov/exhibits/charters/constitution.html) (accessed November 20, 2008).
- (The) US National Archives and Records Administration (n.d.b), "Federal Register: US Electoral College", available at: [www.archives.gov/federal-register/electoral-college/](http://www.archives.gov/federal-register/electoral-college/) (accessed November 20, 2008).
- Yammarino, F.J. and Dansereau, F. (Eds) (2002), *Research in Multi-level Issues. Vol. 1: The Many Faces of Multi-level Issues*, Vol. 1, Elsevier, Oxford.
- Yammarino, F.J. and Dansereau, F. (Eds) (2004), *Research in Multi-level Issues. Vol. 3: Multi-level Issues in Organizational Behavior and Processes*, Elsevier, Oxford.
- Yammarino, F.J. and Dansereau, F. (Eds) (2006), *Research in Multi-level Issues. Vol. 5: Multi-level Issues in Social Systems*, Elsevier, Oxford.
- Yammarino, F.J. and Dansereau, F. (2008), "Multi-level nature of and multi-level approaches to leadership", *Leadership Quarterly*, Vol. 19, pp. 135-41.
- Yammarino, F.J. and Dansereau, F. (Eds) (2009), *Research in Multi-level Issues. Vol. 8: Multi-level Issues in Organizational Behavior and Leadership*, Emerald, Bingley.
- Yammarino, F.J., Dionne, S.D., Chun, J.U. and Dansereau, F. (2005), "Leadership and levels of analysis: a state-of-the-science review", *Leadership Quarterly*, Vol. 16, pp. 879-919.

#### Corresponding author

Francis J. Yammarino can be contacted at: [fjyammo@binghamton.edu](mailto:fjyammo@binghamton.edu)

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