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A BLAST AT THE PAST: AN INQUIRY INTO HERBERT SIMON'S ARGUMENTS AGAINST THE PRINCIPLES

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The decades since 1946 have seen repeated rhetoric supportive of Herbert Simon's critique, published that year, of Luther Gulick's 'Notes on the Theory of Organization' (published in 1937). The literature offers few contrary opinions against this support. The present article presents a minute analysis of Simon's arguments against Gulick. The reason for this focus is that the rhetoric supportive of Simon's critique addresses the manner in which he argued against Gulick. It is shown how Simon's critique suffers from flawed and misleading argumentation, semantic incoherence, naïve simplicity, disproportionate emphasis, implied imputation, misdirected logic, historical misinterpretation, contextual overshooting, methodological incommensurability, false reproaches, misguiding charges, and an etiological approach unequipped to deal with complex webs of interrelationships.

INTRODUCTION

> Indeed, if we are to learn any one thing from Simon's work on rationality, it is that perfect consistency is not a necessary characteristic of rationality. (Bartlett 1988, p. 304)

A 'celebrated blast', a 'devastating' and 'blockbuster logical critique', 'significant' and 'lambasting', a 'formidable dissection' – such are the terms with which Simon's (1946) attack on the so-called 'principles' movement, and especially on Gulick's (1937) 'Notes on the Theory of Organization', was described over the course of the ensuing four decades (Mosher 1956, p. 175; Henry 1975, p. 380; Golembiewski 1988, p. 268; Rainey 1989, p. 393). Lovrich (1989, p. 460) went so far as to say that Simon 'ridiculed' the principles movement.

To be sure, contrary opinions were also published during these years (Altshuler 1968, pp. 60–61; Seidman 1970, pp. 5–6; Ostrom 1973, p. 36), but none seemed to dampen the applause. Balk and Calista (2001, p. 92) noted that 'Simon's conclusions have been repeatedly contested', but they erroneously cited only the work of Hood and Jackson (1991). Although Hood and Jackson did consider Simon's arguments, it was but for a more general reconsideration of argumentation in administrative thought (Gray 1991). Balk and Calista could, instead, have looked back 11 years, to Hammond (1990), for support of their statement.

Faced with the repeated rhetoric supportive of Simon's critique over the decades, Hammond (1990, p. 147) perceived a 'gross misinterpretation' and 'an intellectual injustice'. He offered a detailed argument against the hyperbole, based upon a side-by-side comparison between Simon's critique and Gulick's 'Notes'.

Ten years after Hammond's analysis, however, Simon's critique was still being described as a 'final blow' (Kettl 2000, p. 11) that, as Lynn (2001, p. 152) put it, 'brought an influential profession to its knees'. Curiously, Hammond's article appears in Lynn's list of references, but is neither cited nor referred to anywhere else in his discussion. In any case, despite Hammond's analysis, and in apparent ignorance of it, the rhetoric continued after 1990. For example, Dubnick (1999, p. 12) asserted that Simon's critique 'point[ed] to fundamental

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flaws in the principles approach'. Augier and March (2001, p. 398) described Simon's attack as 'consign[ing]' the principles 'to an intellectual purgatory'. Williams (2000, p. 522) even went so far as to charge Gulick with offering 'illogical recommendations'. Raadschelders (2008, p. 926) – echoing Mosher (1956, p. 175) – asserted that Simon (and Waldo 1948) 'blasted' the 'pretensions' of pre-World War II studies in public administration, of which Gulick was a leading voice (and, it should be added, an unpretentious representative). In general, the conventional wisdom – to borrow a term from Galbraith (1958) – may be summed up by Overman and Garson (1983, p. 140), who wrote that Simon's critique 'demonstrat[ed]' the contradictions inherent in the principles.

The present discussion will argue that the rhetoric in support of Simon's critique is unreliable, unfounded, and verges on disinformation. If this sounds polemic, it is not less forgivable than the uncritical manner in which Simon's critique has been received by, not to say sold to, generations of students (Meier and Bohte 2000); nor is it as dubious as the serial omissions, in the course of 20 years after the fact, of Hammond's extensive argument against such reception. As Meier (2010, p. S287) writes: 'The image created by Herbert Simon is that Gulick and others were willy-nilly applying a series of proverbs without any thought to whether their prescriptions would solve the problem.' He continues by noting that Simon's 'critique ... was perceived to focus on Gulick', and describes Hammond's analysis as 'an excellent, detailed assessment of Simon's critique of Gulick' (Meier 2010, pp. S284, S290).

Hammond's analysis is not completely correct, however. For instance, when discussing Gulick's treatment of the principle of unity of command in the 'Notes', Hammond (1990, p. 148) writes that 'Gulick asserted that no worker should have more than two masters'. This is incorrect: Gulick makes no such assertion in his 'Notes'. Still, setting this slight slip aside, Hammond offers an antidote to decades of uncritical acceptance of Simon's critique.

What follows is an analysis of Simon's 1946 critique which, though appreciable as complementing Hammond's arguments, is also somewhat different. To begin with, although Hammond focused his discussion on a comparison between Simon's critique and Gulick's 'Notes', he bolstered his analysis by considering three of Simon's publications following the 1946 critique, and included other authors of the principles movement and additional literature across the decades. Here, the discussion is limited to the arguments of the two primary documents.

This limited focus raises the question as to whether Simon was intent only on Gulick or whether he was taking on numerous writers of the principles movement. The movement itself is traceable back to Frederick Taylor's (1911) studies. By the time of Simon's critique, therefore, the movement could boast 40 years of accumulated research. In his autobiography, Simon (1991, pp. 269–70) mentions Gulick and Urwick jointly when he briefly refers to his critique. In the critique itself, Urwick is mentioned only twice (Simon 1946, pp. 55–56), in the footnotes, and, even then, the first time is but to cite the *Papers on the Science of Administration* (Gulick and Urwick 1937), which he co-edited with Gulick, and in which Gulick's 'Notes' appears; and the second time it is with reference to the delineation of two schools of thought, into one of which Simon includes Urwick due to this latter's extended discussion of military organization in the *Papers* (Urwick 1937).

By contrast, Gulick's name appears ten times in Simon's critique (on pages 55, 56, 59, 61, and 63; not counting the footnotes), along with numerous citations taken from the 'Notes'. Other names are mentioned peripherally. One can therefore conclude that, even if Simon was attacking principles commonly held in the writings of numerous thinkers

across 40 years, he chose Gulick as their representative and his attack was focused, more often than not explicitly, upon this latter's interpretations.

Another difference with Hammond is that he continues by looking at the final third of Simon's (1946, pp. 62–67) article, wherein certain proposals are offered for an 'approach to administrative theory'. In this respect, Hammond offers a holistic analysis of Simon's article. Here, by contrast, the aim is to offer a minute analysis of Simon's arguments targeting the four principles he chose to confront. In so focusing, the present article generally agrees with Hammond's related conclusions, but does not completely accept them. Since the discussion at large is not concerned with a point-by-point comparison with Hammond, a summary, in this respect, is given below, in relation to each of the four principles in turn.

1. *Specialization*: Hammond (1990, pp. 153–54) argues that Gulick and Simon do not essentially differ on this point: they are both arguing for the design of specialization based upon empirical, contextual nuances of a situation. By contrast, the present article argues that Simon's critique of specialization betrays flawed argumentation.
2. *Unity of command*: Hammond (1990, p. 154) finds it necessary 'to construct an argument about the role of unity of command which follows the spirit of [Gulick's] analysis', in order to show that Gulick's 'position may appear somewhat more reasonable than Simon makes it out to be'. The present article, on the other hand, argues that Simon's argument is misdirected, addressing neither Gulick's argument, nor its context, nor its clear reference. Furthermore, where Hammond (1990, p. 158) finds that 'Simon was right that unity of command conflicts with specialization', the present article argues that, if such incompatibility exists in Gulick's argument, it is not deducible from Simon's critique.
3. *Span of control*: Against Simon's critique, Hammond (1990, pp. 160–61) finds two responses from Gulick. The first is that there is no issue between the two thinkers on the elusive magic number of subordinates that may ensure effective control. On this point, the present article agrees. Hammond then finds the second response to be that 'at no point in his essay does Gulick mention the principle that the number of organizational levels should be kept to a minimum'. This, however, is an equivocation on the part of Hammond, for Simon does not accuse Gulick of promoting a minimum number of organizational levels. What Simon (1946, p. 57) does is to ask whether an 'optimum point' is discoverable along a continuum ranging from steeper to flatter organizational structures. The present article argues that, in this case, the two thinkers betray incommensurable methodological positions when approaching span of control.
4. *Organization by purpose, process, clientele, place*: Hammond (1990, pp. 161–62) argues that, on these four organizational modes, there is, in general, no issue between Gulick and Simon. The present article begins by highlighting how Simon's critique is based on three issues: (a) the indefinability of means and ends; (b) the apparent relief offered by nesting; and (c) the lack of guidance in choosing between modes. On the third issue, Hammond (1990, p. 164) briefly concludes that 'Gulick would not have argued otherwise', and points to Gulick's '16-page discussion on the costs and benefits of each of the four bases of specialization'. In contrast to Hammond's approach to this issue, the present article extracts five further issues from it which Simon raises, and adds further questions. These are then addressed by considering aspects of Gulick's discussion. The present article finds that, in a couple of instances,

> Simon may have a point, but, even so, it does not absolve the disproportionate value placed on his critique. The present article further mentions two issues raised by Gulick which Simon could easily have critiqued, but on which he remained silent.

Finally, where Hammond aims 'not so much to criticize Simon's essay but to resurrect Gulick's from the oblivion to which Simon is thought to have consigned it', the present article is critical of Simon's essay, and especially of the manner in which he argues against Gulick on the four principles under consideration. The case for resurrection is left to other researchers.

There is good reason to focus minutely on Simon's arguments: the rhetoric that has sprung up over the decades is addressed to the manner in which Simon *argued* against the principles. The present article therefore investigates the tether of Simon's 'logical critique': it examines the depth of Simon's 'dissection', and consequently questions whether he really did point to 'fundamental' flaws; it gauges the 'significance' of his attack in terms of whether the 'blast' was on target, and consequently asks whether there was anything 'devastating' about it. Ultimately, it throws open to inquiry what exactly Simon did 'demonstrate'. Questions of defamatory 'image'-creation, 'final blows', and of bringing a 'profession to its knees', not to mention the consignment of 40 years of research 'to an intellectual purgatory', are all issues more related to resurrections, and will therefore not be considered here.

The next four sections, then, tackle Simon's arguments on each of the four principles he chose to attack. References to Simon and Gulick are to their 1946 and 1937 papers, respectively, unless indicated otherwise. In the comparative analysis of these two papers, a page indicator of a respective paper remains valid for any citations or paraphrases which follow, until a new one is specified.

SPECIALIZATION

Simon (1946, p. 54) begins by tackling the principle of specialization. This he describes as concerned with increasing administrative efficiency through the specialization of tasks within a group of people. Simon's critique is focused on the issue of 'increase'. He begins by asking: 'is this intended to mean that *any* increase in specialization will increase efficiency?' By way of making his point, he offers an example of two respectively different specialization arrangements for one particular context. One arrangement is based on what he describes as geographical specialization, whilst the other is based on what he calls functional specialization. Simon finds that both arrangements are equally appealing, and is forced to conclude that 'the principle of specialization is of no help at all in choosing between the two alternatives'.

There are two flaws in Simon's argument. His question refers to any *increase* in specialization. An increase in specialization arises from the subdivision of a task into smaller tasks, these smaller tasks constituting the quantitatively increasing increments of the whole. Simon's example, by contrast, is of two *types* of specialization, neither of which shows an increase of specialization over the other. Thus any conclusions he draws from his example do not address the question he poses. The second flaw is more subtle. In concluding that the concept of specialization does not help in choosing between two types of specialization, he attempts to use the same concept both as criterion and scrutinized object. It is somewhat akin to opening a dictionary and absurdly encountering the semantic discontinuity whereby the definition of specialization is given as specialization.

Notwithstanding this, Simon correctly surmises that specialization cannot be treated as a 'condition of efficient administration' but merely as 'an inevitable characteristic of all group work, however efficient or inefficient that effort may be'. In itself, therefore, specialization does not guarantee efficiency, although it may be a means towards achieving efficiency. Simon then notes that further discussion of specialization will be undertaken when considering the final of the four principles he is attacking.

Simon's critique raises three questions, each of which is posed below, along with respective answers.

1. Does Gulick indicate that 'any increase in specialization will increase efficiency'?

   - Gulick's (1937, pp. 3–6) discussion of specialization is given in the first section of the paper, entitled 'The Division of Work'. It is important to bear in mind this equivalence in terms, since it will have repercussions later: specialization is being discussed in terms of the horizontal division of labour among workers or subordinates.

     Gulick (pp. 3–4) begins by noting that specialization depends upon human 'aptitude' to use certain tools and materials and, furthermore, 'upon the development and maintenance of skill through continued manipulation' of such tools and materials. Specialization is subject to a gradual evolution of science, technology, and society. Especially as knowledge increases, human beings are forced into specialization since learning all there is to know of a task becomes overwhelming due to, among other issues, time, cognitive limits, energy, and space.

     Gulick (pp. 4–5) also explicitly places limitations on the increase of specialization, and thus offers a direct answer to Simon's question. First, specialization is a function of the volume of work: where the volume of work does not justify any further specialization (say, due to payroll costs), a limit has been reached. Second, specialization cannot increase beyond the available technology or invented technique, the societal customs, and those jurisdictional agreements found in the history and practice of industrial relations. In this respect, efficiency derived from specialization is efficiency as based against certain contextual criteria – an arguably correct way to judge efficiency. Given this, the correct question is not so much whether an increase in specialization increases efficiency, as whether an increase in specialization is possible in such-and-such a context and, even if possible, whether this will lead to increased efficiency and, if then, according to what criteria. Finally, any increase in specialization is limited by organic constraints. For example, one person licking an envelope is quite sufficient and efficient for an envelope-licking process.

     In summary, therefore, Simon's question oversimplifies the issue. On a more theoretical level, a process cannot be subdivided ad infinitum without risking, at some point, the loss of the central purpose of the process. Here, the issue of coordination is pertinent, and this will be addressed in due course.

2. Does Gulick indicate that specialization can be used to choose between competing modes of equally viable arrangements of specialization?

   - Gulick does not, at any point, assert this. Indeed, he repeatedly states that specialization is a process that arises naturally, or pragmatically, perceived as

needed through logic and set against the context of purpose (pp. 4–5, 16, 38). The thesis is one of an empirically verifiable need and desire for specialization, and not one that aims to argue the idea as a criterion against which various types of specialization may be judged. Gulick, therefore, does not fall into the trap of confusing the same concept as both signifier and signified. In this respect, Simon's attack is misleading.

3. Does Gulick state that specialization is a 'condition of efficient administration'?

   - Gulick (p. 3) does state at the very beginning that 'the best *results* are secured' with specialization (italics added). He adds that specialization is the 'foundation of' and 'the reason for' organization. But neither the word 'efficiency' nor its derivatives appear in the section that deals with the 'division of work', in other words, specialization. Indeed, the entire section is geared towards the effect of specialization and its results, with derivatives of 'effectiveness' being used. Therefore, Gulick does not state that specialization is a 'condition of efficient administration'. Instead, the section emphasizes that specialization is inevitable in any group work – the exact point made by Simon. Of course, the reader may be left with an understanding between the lines that specialization is merely one of the contributors towards efficiency. Implications between the lines, however, are insufficiently explicit to warrant Simon's heavy charge.

In summary, with his attack on the first principle, Simon betrays flawed and misleading argumentation, semantic incoherence, naïve simplicity, and disproportionate emphasis.

UNITY OF COMMAND

The next principle that Simon (1946, pp. 54–56) tackles is stated by him as follows:

> Administrative efficiency is supposed to be enhanced by arranging the members of the organization in a determinate hierarchy of authority in order to preserve 'unity of command'. (p. 54)

No such principle is stated by Gulick (1937), although he does discuss the three issues of hierarchy, authority, and unity of command. The issue of hierarchy and its design begins to be discussed in the second section entitled 'The Co-Ordination of Work' (p. 6). It continues to be discussed throughout the 'Notes' due to its generic relevance when thinking about organizational structure. Perhaps due to the expansive nature of this discussion, Simon does not tackle the issue of hierarchy. Authority is also a generic issue discussed throughout the 'Notes'. Simon touches upon it in his critique. In the 'Notes', the issue of unity of command is raised in a small, two-paragraph subsection entitled 'One Master' (p. 9). It is but one issue among others that inform hierarchy and authority. Simon chooses to tackle this one in detail. It is important, therefore, to note Gulick's understanding of this issue:

> A workman subject to orders from several superiors will be confused, inefficient, and irresponsible; a workman subject to orders from but one superior may be methodical, efficient, and responsible. Unity of command thus *refers to those who are commanded, not to those who issue the commands*. (italics and underlining added)

According to this understanding, commands are merely expressed decisions, and the principle assumes that workers do not take decisions: they merely receive commands.

The principle addresses the issue of what single command the worker will receive and, more especially, that the worker receive it from one source. Importantly, the principle does not address the issue of how the source is led to form the decision.

Simon begins his attack by offering a definition of authority. Authority, he explains, is the imposition of behaviour on a subordinate irrespective of the subordinate's own judgment as to the merits of such imposition. The focus here is on the imposition, in other words on the command being communicated and expected to be followed – a focus in line with Gulick's understanding of unity of command. Then, however, Simon's discussion veers away from this issue.

Simon (p. 55) complains that if unity of command is observed, 'the decisions of a person at any point in the administrative hierarchy are subject to influence through only one channel of authority'. He points out, quite reasonably, that a decision may be, and quite frequently is, liable to expertise in more than one field of knowledge, to more than one advisory source, and to more than one information service. He notes that drawing thus on multiple sources contributes sophistication and accuracy to the decision to be made. He also warns that due to such multiplicity of sources, unity of command 'is incompatible with the principle of specialization'.

Simon's point is valid in itself, and indeed his *Administrative Behavior* attempts to build an entire theory around 'the premise on which a decision is based' (Mitchell and Scott 1988, p. 353; Simon 1997, p. 43). Given Gulick's understanding above, however, Simon's attack is misdirected. The principle does not pretend to apply itself to the manner in which a decision is taken; it merely speaks of the communication of the decision as a command to subordinates (whose job is not to make decisions but to follow the commands that ensue from them), as illustrated in figure 1.

Contrary to Gulick, Simon chooses to discuss the multiplicity of influences that may impact upon a single decision *prior* to its communication as a command, as illustrated in figure 2.

Therefore, whatever Simon writes about decision making itself may be valid, but it addresses neither Gulick's argument, nor its context, nor its clear reference to '*those who are commanded*'.

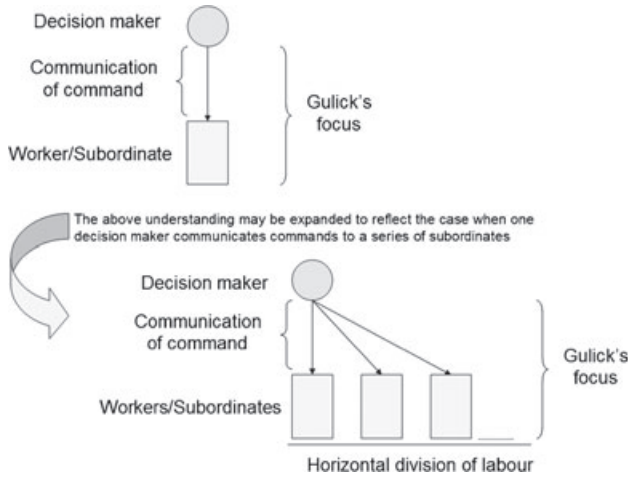

FIGURE 1 *Unity of command as discussed by Gulick*

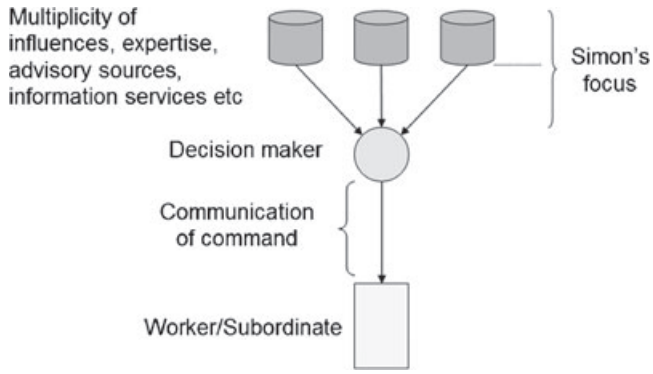

FIGURE 2 *Simon's focus when critiquing unity of command*

Both writers (Gulick 1937, p. 9; Simon 1946, pp. 54–55) refer to Frederick Taylor's recommendation whereby separate 'foremen', dealing respectively with machinery, material, and speed (among other issues), each have the power to issue commands directly to the individual worker/subordinate, as illustrated in figure 3.

Taylor (1903, pp. 99–110), in his *Shop Management*, called this 'functional management'. Both writers perceive that Taylor's set-up may lead to horizontal inefficiency as a result of confusion and conflict between the commands issued. Simon (p. 56) considers (though not by name) what Taylor (1903, p. 109) called the 'exception principle', which refers to arbitration from higher organizational levels in case of conflictual commands (curiously, Taylor's discussion of the issue in *Shop Management* is not cited by Simon; instead, the matter is quickly brushed aside).

Here, however, Gulick is closer to addressing the Taylor organizational set-up (even if he does not definitively resolve the issues it raises), for it refers to the communication of

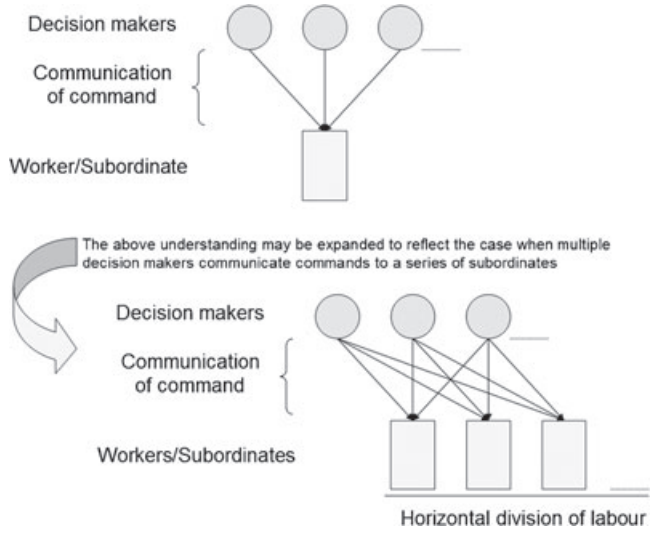

FIGURE 3 *Taylor's functional management*

multiple commands and not to the multiple influences bearing upon decisions prior to the issuance of commands. Furthermore, given that Taylor's set-up raises the question of effective coordination of the horizontal division of labour, Gulick is more in tune with the relevant details than Simon. Gulick's allocation of one decision maker to issue commands to multiple subordinates involves this single decision maker in the coordination of the various work activities stemming from the respective commands. For this reason, Gulick included his discussion of unity of command within the section regarding 'the coordination of work'. Interestingly, Simon's (pp. 54–55) critique of unity of command begins by citing Gulick at length, including Gulick's (p. 5) assertion that 'the significance of [unity of command] in the process of *co-ordination* and organization must not be lost sight of' (italics added). Despite Gulick's insistence on the issue, Simon's critique then unfolds with no further mention of coordination.

Simon (p. 55) adds another factor to his critique: he asserts an incompatibility between specialization and unity of command. He explains the incompatibility, however, in terms of his focus on decision making, and not in terms of the communication of commands. Fundamentally, Simon is raising issues to do with vertical division of labour whilst Gulick is firmly focused on the coordination of horizontal specialization. Gulick's focus was recognized by Simon (1944, p. 17) himself in a paper he published two years earlier, but he seems not to have borne in mind that acknowledgement. That Gulick is so focused is obvious when, a couple of pages earlier, and within the same section where unity of command is being discussed, he states (p. 7) that the central concern of the theory of organization is to establish communication and control between the coordinator and the horizontal divisions of labour, so that the objective, or purpose, of the work undertaken in such divisions is achieved efficiently.

The efficiency in question is that of the horizontal division of labour. Thus, Gulick focuses on the efficiency of the workers, whereas Simon is focused on the decision maker and, as noted earlier, especially on the manner in which the decision is informed and taken. As such, if there is any incompatibility between specialization and unity of command in Gulick's argument, it is not deducible from Simon's critique. It is as if Simon is pointing to his full house against Gulick's pair of aces, except that they are playing on different tables. In a word, Gulick's unity of command remains intact under Simon's critique.

Simon's attack on the second principle may be summarized as follows. First, with specific reference to Gulick, Simon's statement of the principle is incorrect if he implies that the former thinker stated it as such. Second, although the content of Simon's thesis may be reasonable, its use as an attack on Gulick's understanding of unity of command is misdirected. Third, Simon bypasses the context of coordination within which Gulick's discussion is set, and this consequently reveals Gulick as more in tune with the historical, Taylorist interpretation of unity of command which is close to his own interpretation. Fourth, although Simon raises the question of incompatibility between specialization and unity of command, he attempts to substantiate this question on a different dimension from that with which unity of command is concerned. In brief, in Simon's argument one finds implied imputation, misdirected logic, historical misinterpretation, and contextual overshooting.

SPAN OF CONTROL

One consequence of Gulick having situated his discussion of unity of command in the context of coordination is that any model of coordination, that includes a consideration of the command communication channels, must account for the effective span of control

of those issuing commands. Consideration of the span of control may, in other words, be appreciated as a prerequisite to any discussion of command communication channels. Indeed, Gulick (1937, pp. 7–9) discusses it prior to unity of command, whereas Simon (1946, pp. 56–58) attacks it only subsequently, and states it as follows (p. 56): administrative 'efficiency' is 'enhanced' by limiting the span of control at any point in the hierarchy to a small number.

Simon (p. 57) refers to thinkers who have suggested various limiting numbers of subordinates as being optimal, and complains that none of these suggestions have been based on scientific scrutiny: they are neither empirically verifiable nor refutable. Gulick (p. 8) complains likewise:

> when we seek to determine how many immediate subordinates the director of an enterprise can *effectively* supervise, we enter a realm of experience which has not been brought under sufficient scientific study to furnish a final answer . . . It is not difficult to understand why there is this divergence of statement among authorities who are agreed on the fundamentals. It arises in part from the differences in the capacities and work habits of individual executives observed, and in part from the non-comparable character of the work covered. (italics added to signal the contrast with Simon's emphasis on efficiency as stated above)

Thus far, and despite his complaint, Simon has no issue with Gulick. Gulick, however, explains in quite some detail how context invariably governs the span of control. To begin with, the limitations of span of control arise in inverse proportion to the executive's cognitive capacity, will, knowledge, time, and energy (the 'executive' being the controller, the director, etc.). Second, the span of control of the executive is less or more limited along a continuum that qualifies the type of work undertaken by the workers, the organizational level at which the span of control is considered, the state of the organization in which span of control is being applied, the distribution of organizational space, organizational size, and the purpose of the organization. This continuum is illustrated in figure 4.

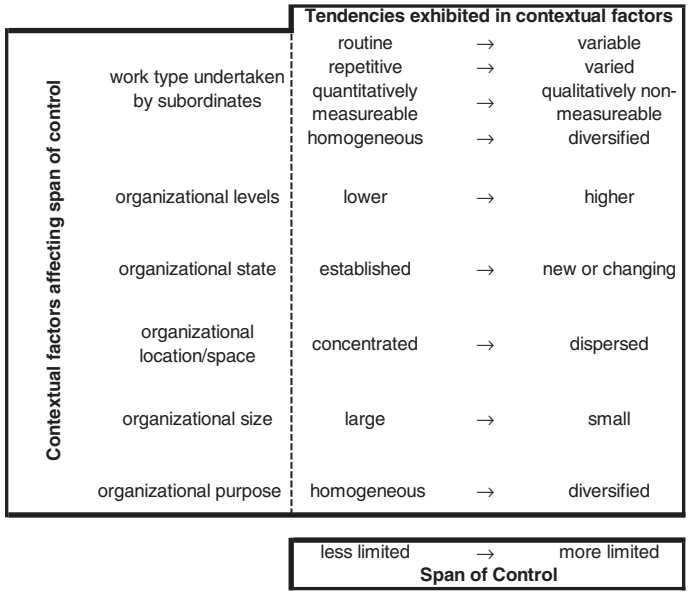

FIGURE 4 *Summary of Gulick's continuum of span of control with reference to main contextual factors*

Instead of addressing the continuum, Simon presses on with a discussion regarding an equally viable, but opposing, principle: that of the flattened organizational design, with its shorter channels of communication through the upper and lower levels, a design which may (although, for Simon, will necessarily) broaden the span of control of an executive. Faced with a continuum ranging from steeper to flatter organizational structures, Simon (p. 57) asks: 'what is the optimum point?' In asking this question, Simon fails to consider that Gulick does not pretend to claim the viability of such a supposed optimum. Additionally, Simon fails to consider that the continuum described by Gulick highlights that the issue is so dimensionally rich and complex and contextually dependent that no generic optimum likely exists.

Indeed, in desiring a scientifically deducible optimum, Simon is once again playing his cards on a different table to that of Gulick: methodologically, Gulick is a contextualist, whereas Simon is proposing a non-contextual approach to the issue at hand. In a social science, like administrative or organizational theory, either approach is acceptable if presented in a methodologically justifiable manner (Abbott 2004, pp. 47–48). Of course, there are respective risks. Gulick, for instance, risks relativism. The risk to Simon's approach may be appreciated when we consider the central role of non-contextuality in survey methods:

> When we send out questionnaires, we are assuming that everyone who answers has the same frame of reference in mind.... Or that people's frames of reference are distributed independently of those things about them that we are trying to investigate. In that case, we can treat the errors that arise in their answers as noise. Of course, the problem is that we don't know whether the frames of reference are correlated with things we want to investigate, and we can't answer that question without new data. (Abbott 2004, pp. 48, 256)

Can Simon's proposal ensure the discovery of an optimum span of control independent of organizational 'frames of reference'? This remains an open question, and for which none of Simon's published writings offers a definitive answer. In summary, Simon's attack on the third principle is methodologically incommensurate with the terms in which Gulick establishes it.

ORGANIZATION BY PURPOSE, PROCESS, CLIENTELE, PLACE

The fourth, and final, principle which Simon (1946, pp. 58–61) attacks is one to which Gulick (1937, pp. 11–31) devotes much discussion. Simon also discusses it at greater length compared to his previous three critiques. However, Simon's discussion is focused on only three issues, whereas Gulick's (pp. 15–21) explores numerous intricacies within the context of departmentalization. Since Simon's discussion is simpler, there follows a summary of his critique. This is subsequently compared with relevant points raised by Gulick.

Below is Simon's (p. 58) statement of the fourth principle, along with his immediate critique:

> Administrative efficiency is supposed to be *increased* by grouping workers according to (a) purpose, (b) process, (c) clientele, or (d) place. But *from the discussion of specialization* it is clear that this principle is internally inconsistent; for purpose, process, clientele, and place are competing bases of organization, and at any given point of division the advantages of three must be sacrificed to secure the advantages of the fourth. (italics added)

Simon's reference to 'the discussion of specialization' concerns his earlier example that contrasted geographical specialization with that of procedural specialization (or, in terms of the present discussion, place and process). The earlier analysis found that by focusing on the issue of 'increase' – as he also does here – Simon's critique misfired. The reasons

given then continue to be relevant here. The difference is that Simon's critique here is more detailed, and this offers an opportunity for an extended comparison with Gulick.

Simon argues the 'internal inconsistencies' and 'competing bases' between purpose, process, clientele, and place along three dimensions. First (pp. 58–59), he notes that any one of these organizational bases, when taken as the primary end of organization, is quite easily reduced to a means when set against the larger context in which organization is established. A purpose on one level, supported by the processes that enable the purpose to be realized, becomes itself a process for a purpose on some higher level. There is a chain of processes and purposes which leads to an infinite regress and progress from any one point in the chain. Given this extendable means–end relationship, Simon (p. 59) notes:

> The same activity may be described as purpose or as process ... the lines of demarcation between these categories become very hazy and unclear indeed ... there is no such thing as a purpose, or a unifunctional (single-purpose) organization.

At best, he adds, any one single purpose can be seen as embedded into some greater purpose or even form part of a combination of purposes which, together, constitute the aims of an organization. Furthermore, any purpose is always directed, whether explicitly or not, towards clientele and place, which only serves to render more complex the issue of hierarchical means–end delineations. Simon concludes:

> There is, then, no essential difference between a 'purpose' and a 'process', but only a distinction of degree. A 'process' is an activity whose immediate purpose is at a low level in the hierarchy of means and ends, while a 'purpose' is a collection of activities whose orienting value or aim is at a high level in the means–end hierarchy.

Simon's first attack, therefore, is focused on the fact that the four groupings are indistinguishable between means and ends. His (p. 60) second attack is related to this: he proposes that sacrificing three groupings in order to enjoy the advantages of one may be relieved by nesting the three below the primary one. He adds, however, that any attempt at such hierarchical nesting only reverts to the questions raised in tackling means and ends, for, within any nest, all four initial groupings need to be addressed anew.

Simon's third attack is focused on choice (a complaint also evident in his critique of specialization and span of control): 'the principles of administration give no guide as to which of these four competing bases of specialization is applicable in any particular situation'. The complaint is referred to numerous times here. Simon writes, for instance, of 'the dilemma of choosing between alternative, equally plausible, administrative principles' (p. 58), of the lack of a 'basis ... for adjudicating the competing claims of purpose and process' (p. 61), and of a 'choice, without any apparent logical or empirical grounds'. In his disillusionment, Simon concludes that Gulick, and others:

> have stated certain advantages and disadvantages of the several modes of specialization, and have considered the conditions under which one or other mode might best be adopted. All this analysis has been at a theoretical level – in the sense that data have not been employed to demonstrate the superior effectiveness claimed for the different modes. But though theoretical, the analysis has lacked a theory. Since no comprehensive framework has been constructed within which the discussion could take place, the analysis has tended either to the logical one-sidedness which characterizes the examples quoted above or to inconclusiveness.

Summarizing, in this third attack Simon raises the following five issues:

1. No guidance is offered as to how to choose between the four bases.
2. The literature has been theoretical in the sense that no data have been employed for empirical demonstrations.

3. Although the analysis has been theoretical, it lacks a theory.
4. No framework, comprehensive or otherwise, is available within which discussion can take place.
5. The analysis is biased in its logic, or is inconclusive.

To these, however, may be added further questions, such as whether Gulick actually aims 'to demonstrate the superior effectiveness claimed for the different modes', and whether the search for such superiority is even relevant. One may ask whether nesting can so easily be brushed aside as an empirically viable approach. One may also wonder whether Gulick was so naïve as to ignore the means–ends relationships that are bound to emerge when establishing the entire scale of organizational structure. And one may also ask whether Gulick proposed the four organizational bases in order to force a choice between them and, as Simon alludes, to consequently suffer the sacrifices of the remaining three.

Gulick's discussion of organization by purpose, process, clientele, and place is situated in the third section of his paper, entitled 'Organizational Patterns', a section that runs for 20 pages (pp. 11–31). As the title suggests, the discussion here aims to explore possible patterns of organization. At no point is the claim put forth that any one pattern is better than another. Suggestions of organizational patterns depending on contextual variables are given, such as in his examples of secretarial and engineering functions (p. 20), and these are useful, as they stand, for thinking about particular organizational attempts. They are not, as Simon claims, devoid of guidance or logic (for one example of many, see Gulick's (p. 20) discussion regarding the grouping of stenographers). Furthermore, they are offered against a background of organizational planning. Gulick (pp. 11–12) advocates both top-down and bottom-up planning, and highlights various variables that must be considered for each. A summary is given in table 1.

The summary in table 1 points to the richness of Gulick's discussion, the entire breadth of which need not be considered here. The present discussion needs only to note that Gulick introduces the idea of organization by purpose, process, clientele, and place when turning to issues of bottom-up planning (p. 15), a discussion which extends to 16 pages of organizational analysis (pp. 15–31). Included are not only a detailed discussion of the advantages and disadvantages of each mode, but also issues in horizontal and vertical departmentalization which trigger a further seven-page discussion on the interrelation between systems of departmentalization (pp. 31–37).

One need not delve too far into Gulick's details for the cracks in Simon's critique begin to appear when appreciating Gulick's (pp. 21–30) discussion of the advantages and disadvantages of each organizational mode. Fourteen advantages and 16 disadvantages are mentioned explicitly across all four modes, resulting in a total of 30 variables that must potentially be considered when thinking about bottom-up planning. Each of these is described at some length, either through explorations of hypothetical, but practically relevant, configurations, or with reference to actual administrative practice, especially that evidenced in government. Additional advantages or disadvantages may be gleaned from these explorations, adding to the 30 explicit variables.

Given Gulick's detailed delineation of advantages and disadvantages, consider the five issues raised by Simon, enumerated earlier. If Simon claims that no guidance is offered as to how to choose between the four modes of organization, then one must beg to differ: what is Gulick's detailed discussion but a guide into the complex web of choices to be made when thinking about organizational planning? Furthermore, even if the discussion

TABLE 1 *Gulick's main considerations in organizational planning*

Organizational planning		
Top-down	**vs.**	**Bottom-up**
	Interest	
Executive and problems of central management		Individual services and activities
	Perspective	
The organization is a system of subdividing the enterprise under the chief executive		The organization is a system of combining the individual units of work into aggregates which are only then subordinated to the chief executive
	Weakness	
Danger of sacrificing the effectiveness of the individual services in the zeal to achieve a model structure at the top		Danger of thwarting coordination in an eagerness to develop effective individual services
	Orientation	
Span of control		Organizational homogeneity
	Consequence	
Development of an organizational structure extended from the top downwards		Development of the apex of an organization structure built from the bottom upwards
	Potential conflict	
In planning simultaneously top-down and bottom-up there may occur a conflict between span of control and homogeneity		

lacks the amount of 'data' that Simon would advocate for 'empirical' evidence (undefined by Simon), the hypothetical and real-world references offered by Gulick contextualize an analysis that is not merely theoretical, but a theory itself to which those who tackle organization planning may refer. One recalls Argyris' (1973, p. 354) observation that 'Simon's *Administrative Behavior* would have never become a classic if people judged its contribution on the basis of empirical scientific evidence'. Granted, Gulick's thesis may not be comprehensive – but then again, when does one know that one has saturated a field as human, and therefore as dynamic, as administrative theory?

Due to incomprehensiveness we may additionally grant that the theory is inconclusive, but Gulick's balanced discussion of advantages and disadvantages absolves him of any charge of biased logic. At most, one can ask if there are not more modes of organizational bases than the four to which he refers – and this is not a question of biased logic, but an appeal to further development of the theory (an appeal, one may add, that Simon does not make since he is intent on proposing a socio-psychological research agenda removed from Gulick's thesis).

Consider also the further questions added earlier to the enumerated list. It is obvious from Gulick's arguments that he is not in search of some superiority in any one of the four modes, nor the forcing of a choice between them. Instead, by detailing the advantages and disadvantages of each mode he simultaneously offers the parameters for nesting analyses – analyses which can only be undertaken within particular contexts, with particular blends of objectives, and which, furthermore, are liable to change over time and due to technology and size, as he himself continuously points out throughout the 'Notes'. Indeed, whereas Simon attacks Gulick through a linearly inspired charge of

means and ends, Gulick never ceases to remind one of the non-linear complexity that emerges rather quickly when beginning to consider the interrelationships between the four modes, and especially when they are applied to systems of departmentalization. This complexity is charmingly described by him (p. 29) when, having discussed potential formal geographical configurations, he adds:

> the true picture is more like a piano duet in which the treble of one player overlaps the base [*sic*] clef of the other, and in which the score is far from distinct, and 'swing' is the rule!

He adds, quite realistically, that 'there is apparently no one most effective system of departmentalism' (p. 31). Any organization today has elements of Gulick's thesis, no matter otherwise contextual improvisations. One has to ask: what evidence is there that Simon's critique 'blasted' any of this away?

In summary, when considering this fourth principle, the enumerated issues raised by Simon, and the related questions outlined earlier, fare little better than the attempted impact of the earlier critiques. Simon's argument betrays false reproaches regarding issues of choice and bias, misguiding charges of theoretical weakness, and an aetiological approach to what is essentially a much more complex web of interrelationships. Meier (2010, p. S288) goes so far as to say that, here, Simon's critique 'is not only irrelevant to the work of Luther Gulick, but also it is far less sophisticated than Gulick's own discussion of departmentalization'.

It is, however, worth noting that there are a couple of points where Simon's accusations of bias and inconclusiveness might well be relevant. Gulick (pp. 12–15) asserts, for instance, that the functions of the executive are best summarized in POSDCORB (planning, organizing, staffing, directing, coordinating, reporting, and budgeting) – an assertion qualified in that the need for POSDCORB arises in proportion to the size and complexity of the organization. The idea is developed from Fayol (1949) and is, therefore, not without precedent; but it still begs the question: why POSDCORB and not something else? Furthermore, Gulick does not offer any guidance to resolving the potential conflict, noted in table 1, arising by planning simultaneously downwards and upwards. On both POSDCORB and conflictual planning, however, Simon is silent.

RELATED POINTS

Simon (1946) concludes his critique with a series of points which may lead one to believe that the 'blast' has indeed destroyed the target. He begins by claiming that, due to his critique, none of the four principles have

> survived in very good shape, for in each case there was found, instead of an unequivocal principle, a set of two or more mutually incompatible principles apparently equally applicable to the administrative situation. (p. 61)

The discussion above has highlighted the irrelevance, if not the error, of searching for a single unequivocal principle, or (as Taylor would say) a 'one best way', due to the contextual richness and differences between organizational situations. Furthermore, Simon's claim that he 'found' mutual incompatibility in each principle is questionable: the discussion demonstrated how Simon's argument is flawed when attacking specialization; how he evades the focus in unity of command; how his argument is fundamentally incommensurate with that of Gulick's when discussing span of control; and how Gulick trumps him in the wider organizational issues regarding purpose, process, clientele, and place.

Simon's next point is that the '''principles of administration'' . . . are really only criteria for describing and diagnosing administrative situations' (p. 62). Perhaps it is unfortunate that they were ever termed 'principles', for their content undeniably makes of them criteria. For what is Gulick's careful delineation of advantages and disadvantages but the offering of helpful criteria that may be used for organizational design? What is Gulick's continuum of span of control, as appreciated through various contextual factors, but the furnishing of criteria against which such control may be realistically planned? Granted, unity of command, inherited from Taylor and Fayol, is an unresolved principle. But despite (what Gulick (1937, p. 9) himself called) the 'absurdities' it implies, it can still be used as a diagnostic starting point for redesigning command communication channels.

As for specialization, the discussion has referred to Gulick's treatment of this principle, and especially of his delineations of its limitations, making of this, too, a descriptive and diagnostic criterion. Simon reveals nothing by playing upon the idea of criteria. Indeed, he argues against himself since, as cited, he already acknowledged that the principles are accompanied by 'the conditions under which one or other mode might best be adopted' (p. 61). Once again, Simon has no issue with Gulick.

Simon continues by writing that 'no single one of these [principles] is of sufficient importance to suffice as a guiding principle for the administrative analyst' (p. 62). This reverts to the misguided search for the 'one best way'. Simon immediately follows this complaint by offering his own single guiding principle:

> In the design of administrative organizations, as in their operation, over-all efficiency must be the guiding criterion.

Even if the relevance, and possibility of definition and measurement, of efficiency in horizontal organizational designs is granted, it remains a highly elusive ideal in 'the design of administrative organizations', which, by definition, require interrelated vertical and horizontal structures. The variables are too many, the dimensions as numerous as there are opinions on processes, purposes, clients, and space (to borrow but four relevant variables). How such multidimensionality can be reduced to single-minded efficiency has remained an open question ever since Woodrow Wilson (1887) hinted at the interrelationship between administrative technocracy and the pluralism inherent in policy making (a discussion which itself is appreciable as approaching the complex relationships between horizontal and vertical exigencies). Simon's writings have offered no viable route to this reductive objective.

Simon suggests, immediately afterward, that weights can be assigned to adjudicate between criteria. This may lend some opening towards efficiency, but it does raise the question of how weights may be decided, and how overall efficiency may be measured. Besides, he soon adds:

> A valid approach to the study of administration requires that *all* [Simon's original emphasis] the relevant diagnostic criteria be identified; that *each* [author's emphasis] administrative situation be analyzed in terms of the *entire* [author's emphasis] set of criteria; and that research be instituted to determine how weights can be assigned to the several criteria when they are, as they usually will be, mutually incompatible. (Simon's italics; underlining added)

There is an undeniable hint of rational comprehensiveness permeating Simon's suggestion, which raises the further issue of how any of this reconciles with bounded rationality which is touched upon in the penultimate section of his article – and of which Simon (1979) would make a cornerstone of his research during the course of his career, no less when writing on economics.

Simon rounds off with three additional claims. First, he notes that if his critique is valid, it 'constitutes an indictment of much current writing about administrative matters'. The above has sought to demonstrate that his critique is far from valid on numerous grounds. Any indictment, therefore, is of questionable constitution. Second, and by pointing to the examples he furnishes, he writes that 'much administrative analysis proceeds by selecting a single criterion and applying it to an administrative situation to reach a recommendation'. The discussion has shown that this is far from the case when setting Simon's examples and arguments against Gulick's thesis. Furthermore, this claim is incoherent when considering that it is Simon who seeks the 'unequivocal principle', the 'optimum point', and who sets efficiency as 'the guiding criterion'. There may be a case for Simon's reductive search, but the point is that, in wanting to pursue it, he leaves Gulick's thesis intact. Third, and related to this, Simon states that 'the fact that equally valid, but contradictory, criteria exist which could be applied with equal reason, but with a different result, is conveniently ignored'. The 'fact' may stand, but the discussion has shown that Simon is far from demonstrating that Gulick has ignored anything.

CONCLUSION

In summary, whereas Simon (p. 61) believes he has uncovered 'the impasse of administrative theory', the present analysis of his arguments indicates that no such impasse has been demonstrated. The analysis has shown that Simon's argument against specialization is flawed and misleading, and is accompanied by semantic incoherence, naïve simplicity, and disproportionate emphasis. His argument against unity of command betrays misdirected logic and is set within a historical misinterpretation which leads him to overshoot the context described by Gulick. Simon's argument against span of control may be relevant in itself, but it has been shown to be methodologically incommensurable with Gulick's treatment of the issue. Finally, when it comes to Gulick's discussion of organization by purpose, process, clientele, and place, Simon's argument falsely reproaches Gulick, asserts misguided charges of theoretical weakness, and indicates a preference for an aetiological approach unequipped to deal with complex webs of interrelationships.

Given the analysis, therefore, and with an eye on the praise lavished upon Simon's attack on the principles movement, the tether of what the literature describes as his 'logical critique' has been found wanting. What the literature describes as Simon's 'dissection' is really but an initial skinning which fails to point to 'fundamental' flaws within the issue at hand. Simon's supposed 'blast' did not 'devastate' Gulick's 'Notes', nor did he deal a 'final blow' to the principles movement which Gulick was seen as representing. Any purported 'significance' in Simon's critique is therefore compromised on logical grounds. Uncritical assessments of Simon's attack have led to erroneous conclusions – conclusions, it should be added, to which Simon never subscribed.

The analysis has shown that Simon did not, as some assert, 'demonstrate' the contradictions inherent in the principles. What Simon did was join an existing number of critics (Roberts 1998) who raised awareness that neither Gulick's paper, nor the then state of administrative theory, offered the final word. What set Simon apart from those critics was his pointing to an apparent 'impasse of administrative theory' couched within a seemingly 'logical critique'. This was effective and, furthermore, sufficient to enable him to convincingly introduce other possibilities for organizational research: the possibility of decision making as a variable for such research, as well as the idea of bounded rationality as a viable research issue.

In so introducing such possibilities, they were less solutions to the apparent 'impasse' and more diversions from Gulick's thesis: they opened up a new research subfield, removed from that represented by the principles movement. Where the latter focused on administrative structure, the new possibilities focused on the socio-psychological behaviour of those within administrative structures (although, it should be added, Gulick appreciated the relevance of behavioural factors, and especially of bounded rationality, in his 'Notes', not only when referring to cognitive limits, but also in the last section of the paper entitled 'Co-ordination and Change' (pp. 39–45)).

The behavioural research introduced by Simon forced attention away from the principles movement, and especially from Gulick's 'Notes', and ran a singular course over the second half of the twentieth century in order to establish itself. During this time, the two perspectives were seen to be in conflict, with behavioural research enjoying the limelight. Perhaps due to the strength of Simon's influence, or at least of those who pushed forward the possibilities he offered, resurgence of interest in structural research, especially that based on Gulick's 'Notes', was slow in coming (Bendor 1994; Egeberg 1999; Sharp and Housel 2004). Today, given the establishment of both perspectives, a combined methodological approach to researching organizations and administration is available: for it seems only logical that research in administration should account for both the organizational design structures inside which administration is undertaken, as well as the cognitions which give rise to observable administrative undertakings.

Simon's 1946 critique of Gulick's 'Notes' and the principles movement allowed him to offer new research possibilities with fresh perspectives. The analysis undertaken above shows that this offer rested on fragile arguments. At best, Simon's arguments against the principles school were glancing blows: they hardly addressed any seeming problems of the old tenets. In such tenets, however, he found inspiration for something greater. It is well to remember that, if the behavioural school rose to prominence based on shaky argumentation, the principles movement's prominence was based on equally fragile arguments.

The principle movement's emphasis on administrative structure rested on Frederick Taylor's (1911, p. 7) confident introductory assertion in *The Principles of Scientific Management*: 'In the past the man has been first; in the future the system must be first.' Edwards (1912, p. 359), in a detailed analysis of the state of the literature up to and including Taylor's *Principles*, perceived 'platitudes, truisms and proverbs'. This did not stop Gulick from finding in such proverbs inspiration for something greater. The lesson seems to be that, in social scientific thought, analyses of argumentation may clarify the logical fog, but it would be unwise to use them as dynamite for blasting the inspirations of those who contributed positively in so many ways to so much.

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