

ORDERED MODEL PROCESSES, REFERENCE DECLARATION AND THE ECONOMIC ORGANIZATION: IMPLICATIONS FOR A BALANCED SCORECARD CONTEXTUAL FRAMEWORK

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<u>Résumé</u>

Les Tableaux de Bord de la Performance ont été acclamés avec raison depuis leur introduction en 1992, mais les intellectuels continuent encore à étudier leurs aspects pragmatiques. Ce papier contribue à la littérature sur les Tableaux de Bord de la Performance, tout d'abord, en offrant une explication logique quant à leur succès et ensuite, en présentant un cadre de travail contextuel de tableaux de bord de la performance pour une structure de gestion hiérarchisée.

Le cadre de travail contextuel réforme la perspective d'apprentissage et de croissance du tableau de bord de la performance (i) en effectuant la transition de référence (subjective/objective), et (ii) en reconnaissant que la Perspective d'Apprentissage et de Croissance implique avant tout une incidence de formulation stratégique d'une extra-entité. Le transfert de l'incidence (intra-entité/extra-entité) réconcilie l'évolution de la position de politique de gestion non ordonnée [Contenu: (Contenu: Contexte): Contexte] qu'est la Perspective d'Apprentissage et de Croissance Concomitante.

Le cadre de travail supplante également les Perspectives des Tableaux de Bord de la Performances développés par Kaplan et Norton en ajoutant la perspective de politique sociale qui manquait. La perspective manquante implique une transition de référence objective [(position endogène, perspective exogène): (position exogène, perspective exogène)]. De tels signaux de transition [Contenu: (Contenu: Contexte): Contexte] ordonnent l'évolution de la position de politique de gestion.

ABSTRACT

Since its 1992 introduction, the Balanced Scorecard has received deserving accolades while academics continue investigating its pragmatic aspects. This paper contributes to the Balanced Scorecard literature, first, by proffering a logical explanation for its successful acclaim and, second, by setting forth an ordered management structure Balanced Scorecard contextual framework.

The contextual framework reforms the Balanced Scorecard's Learning and Growth Perspective by (i) effecting (subjective: objective) reference transition, and (ii) recognizing that the Learning and Growth Perspective involves first instance extra-entity strategy formulation incidence. The (intra-entity: extra-entity) incidence shift reconciles unordered [Content: (Content: Context): Context] management policy position progression that is Learning and Growth Perspective concomitant.

The framework also supplants the Kaplan and Norton Balanced Scorecard Perspectives with the missing social policy perspective. The missing perspective involves [(endogenous-position, exogenous-perspective): (exogenous-position, exogenous-perspective)] objective reference transition. Such a transition signals ordered [Content: (Content: Context): Context] management policy position progression.

Keywords: Social Choice Theory; Balanced Scorecard; Ordered Conflict Resolution; Contextual

Framework; Ethics and Economics

JEL classification: D60, D74, D78, Z13

I. INTRODUCTION

Kaplan and Norton's 1992 Balanced Scorecard introduction supplanted the traditional management practice of using historical financial measures to evaluate performance with forward-looking non-financial performance measures termed, "drivers." (Kaplan and Norton 1992, 71). Since its introduction, the Balanced Scorecard has received wide acclaim. (Kaplan and Norton 2001).

This paper introduces the concept that the Balanced Scorecard's widespread acclaim results from the transition of former management control derivation and strategy formulation practices involving an endogenous perspective to the Balanced Scorecard's predominant exogenous perspective. This perspective migration is tantamount to a (subjective: objective) reference transition. (Jenkins 2006). The Balanced Scorecard (subjective: objective) reference transition is a social choice theory model concept on loan.

1 Id.

Indeed, reference ethics not only accounts for the Balanced Scorecard's philosophical success but serves as the economic organization's ordered management structure mandate. An appropriately defined contextual framework drives Balanced Scorecard empowered financial and non-financial content measures.

This paper yet includes five sections. Section II explains why reference ethics underscores the Balanced Scorecard's success acclaim. Section III characterizes Kaplan and Norton's Balanced Scorecard Four Perspectives in (revenue-maximization, cost-minimization) management policy terms. Section IV introduces and characterizes the ordered management structure. Section V aligns Balanced Scorecard perspectives with the economic organization's ordered management structure [context, (context: content), content] interrelationship.² Section VI concludes the [context, (context: content), content] ordered management structure framework supplants the Balanced Scorecard academic literature with its missing philosophical context.

II. REFERENCE ETHICS: THE REASON FOR THE BALANCED SCORECARD'S SUCCESS

Reference ethics fundamentally underpin the scripture writers' social choice theory model. (Jenkins 2006). Specifically, this section overviews reference ethics and how it accounts for the Balanced Scorecard's success acclaim.

¹ Social choice theory involves (individual: societal) well-being transitivity. (Sen 1999). The difference between the scripture writers' social choice theory model and the tastes or values-based social welfare function models of contemporary economists is that the former recognize only ordered conflict resolution tactics (*i.e.*, ordered objective references) should be employed in an ordered conflict environment. (Jenkins 2006). The contemporary economists employ unordered conflict resolution tactics (*i.e.*, ordered subjective references) in an ordered conflict environment. (*Id*; *citing*, Arrow 1951, 1963). This fundamental distinction accounts for the general impossibility of the contemporary economists' models while the scripture writers' model is impossibility-resolved. (Jenkins 2006).

² Context is (ordered transition, ordered position) defined; (context: content) is (unordered transition, ordered position) defined; and content is (unordered transition, unordered position) defined.

A. Reference Ethics

The scripture writers' social choice theory model involves ordered and unordered models. Id. Threshold reference ethics arises in the ordered conflict environment. Unordered model processes involve endogenous unordered conflict resolution while ordered model processes involve both endogenous, (endogenous: exogenous) and exogenous ordered conflict resolution. Such ordered model processes distill Pareto optimality, equilibratory alignment and the economic complement. Other than explaining that the philosophical context for the Balanced Scorecard's acclaimed success derives from objective reference declaration, ordered conflict resolution and unordered model processes are not at issue in this paper.

The reference ethics line function and management policy distinction is unordered versus ordered model processes distilled. Unordered model processes involve the Balanced Scorecard's [(Customer's Perspective), (revenue-maximization)] versus [(Shareholder's Perspective), (cost-minimization)] unordered conflict resolution. While unresolved unordered conflict involves the (endogenous-position, endogenous-perspective) ethics statement and the non-model process (non-economic)-perspective; unordered conflict resolution involves the (unordered endogenous-position, unordered exogenous-perspective) ethics statement and the unordered model processes (unordered microeconomic)-perspective.

When unordered conflict resolution is ordered conflict resolution transformed, unordered model processes are concomitantly ordered model processes transformed. This pivotal transformation distinguishes the line function from management policy. That is, management policy is a function of ordered conflict resolution and ordered model processes. However, unordered management policy is specific manager sensitive while ordered management policy is specific manager insensitive, defining the management practice notion.

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³ The scripture writers' ordered and unordered models involve the devolution of certain processes, to wit: (Functions: Progressions: Positions). (Jenkins 2006). This is analogous to [context: (context: content): content] transitivity.

⁴ Ordered conflict derives from ordered subjective reference declaration. *Id.* (Function: Progression) Model devolution is $\{[Z = f(X, Y); S.T. Z_k, X_k]: [Z = f(X \text{ and } Y); S.T. Z_i, X_k]\}$ defined and (ordered: unordered) infinite statement reduced. Id. (Progression: Position) Model devolution is $\{[Z = f(X \text{ and } Y); S.T. Z_i, X_k]: [Z = f(X \text{ or } Y); S.T. Z_i, X_k]\}$ S.T. Z_i , X_i } defined and (unordered infinite: unordered finite) statement reduced. *Id.* That is, for a given value Z_i , the initial value declared by X or Y necessarily defines X_i and resolves the statement as finally unconfused. Id. Initial value determination is labeled, "reference declaration." Id. The ethical conflict involves the reference question, "Who gets to declare the initial value, X or Y?" Id. The confounded $[Z = f(X \text{ and } Y); S.T. Z_i, X_k] \text{ model}$ progression is unconfused by either the subjective or objective reference. Id. The reference resolves the confounded progression by initially determining the value of either X or Y and then determining the remaining element's value by taking the difference between the given Z value and the declared initial value. Id. Notwithstanding whether X or Y first declares the reference, X_k : X_i transition is complete. *Id.* The subjective reference is position Z = f(X or Y); S.T. Z_i , X_i defined as either the X-perspective adduced from the X-position or the Y-perspective adduced from the Y-position. Id. The objective reference is position Z = f(X or Y); S.T. Z_i , X_i defined as either the Y-perspective adduced from the X-position or the X-perspective adduced from the Y-position. Id. Subjective reference declaration leaves the position Z = f(X or Y); S.T. Z_i , X_i conflict unresolved such that it matters who declares the reference first, X or Y, because the declaration is effected through the endogenous perspective. Id. On the other hand, objective reference declaration makes it indifferent who declares the reference first, X or Y, because the declaration is effected through the exogenous perspective. *Id*.

⁵ The scripture writers reconcile equilibratory alignment as endogenous, ordered and objective Pareto optimality occurring at a given hierarchical level. Similarly, they reconcile the economic complement as exogenous, ordered and objective Pareto optimality at a given hierarchical level.

(Unordered manager policy)_i involves the (unordered endogenous-position, ordered exogenous-perspective)_i ethics statement and the ordered model processes (ordered microeconomic)_i-perspective.⁶ It is coextensive with management policy unordered content in the [context: (context: content): content]_i devolution. It is also coextensive with the scripture writers' social choice theory model subjective Pareto optimality (PO) notion. Subjective PO involves reference ethics generalization. It results when the question "Who gets to Pareto optimize first, X or Y?" is answered with a subjective PO reference.

(Unordered management practice policy, ordered manager policy)_i involves the (ordered endogenous-position, ordered exogenous-perspective)_i ethics statement and the return of empowerment ordered model processes [ordered (microeconomic: macroeconomic)]_i- perspective.⁷ It is coextensive with management policy unordered (context: content) transition in the [context: (context: content): content]_i devolution. It is also coextensive with objective PO. Objective PO is where the reference ethics generalization question "Who gets to Pareto optimize first, X or Y?" is answered with an objective reference. Such PO is referred to as subjective "Equilibratory Alignment" or "EA" such that reference ethics generalization answers the question "Who gets to equilibratorily align first, X or Y?" with a subjective EA reference.

(Ordered management practice policy)_i involves the (ordered exogenous-position, ordered exogenous-perspective)_i ethics statement and the ordered model processes (macroeconomic)_i-perspective. It is coextensive with management policy unordered context in the [context: (context: content): content]_i devolution. It is also coextensive with objective EA where the answer to the question "Who gets to EA first, X or Y?" is answered with an objective EA reference. Such EA is referred to as the subjective "Economic Complement" or "EC" such that reference ethics generalization answers the question "Who gets to access the economic complement first, X or Y?" with a subjective EC reference.

(Ordered management practice policy) $_k$ involves the (ordered exogenous-position, ordered exogenous-perspective) $_k$ ethics statement and the ordered model processes (macroeconomic) $_k$ -perspective. It is coextensive with management policy ordered context in the [context: (context: content): content] $_k$ devolution. It is also coextensive with objective EA where the answer to the question "Who gets to EA first, X or Y?" is answered with an objective EA reference. Such EA is referred to as the subjective "Economic Complement" or "EC" such that reference ethics generalization answers the question "Who gets to access the economic complement first, X or Y?" with an objective EC reference.

Based on the foregoing, reference ethics underpins social choice theory competent management policy. The Balanced Scorecard's reference ethics symptoms explain its success acclaim to date.

B. The Fundamental Cause of the Balanced Scorecard's Success

Kaplan and Norton report the Balanced Scorecard, as a management practice, replaces prior management practices based primarily on control and strategy formulation through financial measures. (Kaplan and

illusionary in terms of defining unordered progressive positions.

⁶ The "i" subscript defines the given management policy setting.

⁷ This statement invokes an important characterization of the Balanced Scorecard's contextual derivation. (Macroeconomic: microeconomic)-perspectives signal empowerment statements. The return of empowerment (microeconomic: macroeconomic)-perspective must align with the empowerment perspective to achieve endogenous equilibratory alignment. This alignment is the only means for accessing the economic complement. The economic complement or state of exogenous equilibratory alignment is scripture's notion of prophets and is the only place where empirical evidence may be adduced to define unordered progressive positions. The state of endogenous equilibratory alignment is scripture's notion of false prophets because, although equilibratory alignment has been achieved, any endogenous equilibratory alignment adduced evidence is inherently subjective and, as a result, is

Norton 1992, 2001). A reference ethics examination of these prior management practices supports a conclusion same substantively involved subjective reference declaration.

A reasonable reference declaration statement reconciling such prior management practices might be: "To understand how we are performing, we will evaluate our financial performance measures." The first clause in the foregoing statement, "To understand how we are performing," reflects a reference statement endogenous position. The second clause in the foregoing statement, "we will evaluate our financial performance measures," reflects a reference statement endogenous perspective. Ergo, such declaration statements involve subjective reference (endogenous-position, endogenous-perspective) statements.

The Balanced Scorecard involves four perspectives. (Kaplan and Norton 2001). The Customer's Perspective is defined as "the strategy for creating value and differentiation from the perspective of the customer." *Id.* The Financial Perspective is defined as "the strategy for growth, profitability, and risk viewed from the perspective of the shareholder." *Id.* The Internal Business Processes Perspective is defined as "the strategic processes for various business processes that create customer and shareholder satisfaction." *Id.* The Learning and Growth Perspective is defined as "the priorities to create a climate that supports organizational change, innovation, and growth." *Id.*

The most important Balanced Scorecard characteristic is that it does not involve content, *per se*; rather, it posits a change in management practices context. The contextual change is reflected in perspective reformation. Assuming the customer and shareholder satisfaction context is defined from the customer and shareholder perspective, three out of four Kaplan and Norton Balanced Scorecard perspectives can be reasonably interpreted as involving reference declaration exogenous perspectives: (Financial, Shareholder Perspective), (Customer's, Customer Perspective) and (Internal Business Processes, Customer and Shareholder Perspective). Only the Kaplan and Norton Balanced Scorecard Learning and Growth Perspective is not clearly articulated as an exogenous perspective. Therefore, three out of four Balanced Scorecard perspectives create an objective reference context.

The transition from the endogenous perspective of prior management practices to the exogenous perspective of the Balanced Scorecard is (subjective: objective) reference transition analogous. The scripture writers' social choice theory model teaches such transitions implicate (illusionary: actual) significant economically (inefficient: efficient) consequences. (Jenkins 2006). Ergo, it can be said the Balanced Scorecard acclaimed success is ascribed to the (subjective: objective) reference philosophical context transition.

Given this analytical conclusion, enhancing the Balanced Scorecard Perspectives ought to lead to further (illusionary: actual) significant economically (inefficient: efficient) consequences. For example, if the Learning and Growth Perspective were reformulated and articulated in an objective reference, improved economic consequences are reasonably foreseeable. Moreover, since an economic organization's ordered management structure is social choice theory (individual: societal)-well being transitive, articulating an objective reference ordered management structure Balanced Scorecard also will result in reasonably foreseeable significant economically efficient actual consequences.

III. CHARACTERIZING THE BALANCED SCORECARD'S FOUR PERSPECTIVES IN (REVENUE-MAXIMIZATION, COST MINIMIZATION) MANAGEMENT POLICY TERMS

By closely examining the Kaplan and Norton Balanced Scorecard's four perspectives, (Rev-Max, Cost-Min) ordered line conflict issues become transparent. First, the Customer's Perspective posits strategy

formulation in terms of "creating value and differentiation from the perspective of the customer." (Kaplan and Norton, 2001). This statement is revenue-maximization analogous. Second, the Financial Perspective posits strategy formulation in terms of "growth, profitability, and risk viewed from the perspective of the shareholder." *Id.* This statement is cost-minimization analogous. The [(Rev-Max), (Cost-Min)] conflict invokes the classic management strategy formulation struggle.

The Entrepreneurial Policy Management Practice and Manager are designed to manage (Rev-Max or Cost-Min) unresolved line conflict policy; the Tactical Policy Management Practice and Manager are designed to manage contextually formulated (Rev-Max and Cost-Min) resolved line conflict policy; the Strategic Policy Management Practice or Manager are designed to manage how contextually (Rev-Max and Cost-Min) resolved line conflict policy is formulated; and the Executive Management Practice or Manager are designed to manage the context for how (Rev-Max and Cost-Min) resolved line conflict policy processes are formulated.

The Balanced Scorecard's Four Perspectives derive from the (macroeconomic)-perspective's management control derivation and strategy formulation (*i.e.*, the "economic control systems product" or "ECSP") context. However, there is no evidence in the Balanced Scorecard literature that enables its ascription to context, *per se.* Such evidence would reflect a reference formulation shift from (endogenous-position, exogenous-perspective) to (exogenous-position, exogenous-perspective) ethics. Therefore, none of its four perspectives can be ascribed to the lower order executive management practice function. Based on the foregoing, the Balanced Scorecard's four perspectives are organized in descending quaternary order [*i.e.*, Lower Quaternary Order] as [(Primary: Secondary: Tertiary: Quaternary), (---: Learning and Growth Perspective: Internal Business Processes Perspective: Financial Perspective and Customer's Perspective), to wit:

Order	Management	Balanced Scorecard Perspective	Kaplan & Norton Explanation	Management Characterization		
Primary	Executive _{PQ}			Manages (Rev-Max and Cost- Min) Line Conflict Resolution Process Formulation Context Policy		
Secondary	Strategic	Strategic Learning and Growth The priorities to create a climate that supports organizational change, innovation, and growth For				
Tertiary	Tactical	Internal Business Processes	The strategic processes for various business processes that create customer and shareholder satisfaction	Manages (Rev-Max and Cost- Min) Line Conflict Resolution Process Policy		
Quaternary	Entrepreneurial	Customer's or Financial	The strategy for creating value and differentiation from the perspective of the customer or The strategy for growth, profitability, and risk viewed from the perspective of the shareholder	Manages (Rev-Max or Cost-Min) Line Conflict Resolution Policy		

Table 3.1
Balanced Scorecard (Revenue-Max, Cost-Min) Characterization

A. The Lower Order Secondary, Strategic Policy Management Practice Learning and Growth Perspective Context

The Learning and Growth Perspective correlates with the practice of Strategic Policy Management. The Norton and Kaplan explanation, "The priorities to create a climate that supports organizational change, innovation, and growth," is reasonably interpreted to subsume the Internal Business Processes, Financial and Customer's Perspectives.

The "Learning" element of the perspective can be reasonably ascribed to the role of the strategic manager as processing the executive manager's empowerment in the setting of leading the economic organization in its industry policy-making function. The industry policy-making function is fulfilled because the strategic manager shifts the incidence of the economic organization's management control system derivation and strategy formulation to the economic organization's industry; a threshold extra-entity incidence. The "Growth" element of the Learning and Growth Perspective describes the strategic manager's role in formulating industry policy-making processes to be managed by the economic organization's tactical managers. Those processes are Internal Business Processes Perspective and Financial Perspective inclusive.

B. The Lower Order Tertiary, Tactical Policy Management Practice Internal Business Processes Perspective Context

The Internal Business Processes Perspective is Norton and Kaplan characterized as, "The strategic processes for various business processes that create customer and shareholder satisfaction." Customer satisfaction in the Internal Business Processes Perspective setting can be reasonably characterized as subsuming the Customer's Perspective. The Customer's Perspective frames a revenue-maximization, lower order quaternary Entrepreneurial Policy Management practice as discussed in the next part. By subsuming the Customer's Perspective as Internal Business Processes Perspective inclusive, the dimension of the tactical manager's intra-entity policy-making function supplants the entrepreneurial manager's Customer Perspective.

Shareholder satisfaction necessarily involves (Rev-Max, Cost-Min) trade-offs. As a result, it necessarily implicates the Financial Perspective inasmuch as shareholder satisfaction financial performance measures are the cost-minimization cornerstone. By subsuming the Financial Perspective as Internal Business Processes Perspective inclusive, the dimension of the tactical manager's intra-entity policy-making function supplants the entrepreneurial manager's Financial Perspective. Based on the foregoing, the Internal Business Processes Perspective establishes the intra-entity ordered unit management practice.

C. The Lower Order Quaternary, Entrepreneurial Policy Management Practice Financial and Customer Perspectives Context

The economic organization's lower order quaternary Entrepreneurial Policy Management practice is unordered unit management defined. The lower order tertiary, tactical manager's empowerment is bifurcated into its unordered elements: [(Internal Business Processes Perspective): (Financial Perspective, Customer's Perspective)]. As a result, the lower order quaternary, Entrepreneurial Policy Management practice is cost-minimization and revenue maximization distinguished.

IV. ORDERED MANAGEMENT STRUCTURE CHARACTERIZATION

Since the economic organization's access to the economic complement's (macroeconomic)-perspective through [(macroeconomic: microeconomic)-perspective, (microeconomic: macroeconomic)-perspective] equilibratory alignment defines its return of empowerment efficiency, its ordered management structure parallels the Equilibratory Alignment_(k, i) quaternary order. The economic organization's characterization is a function of management control system derivation and strategy formulation, or ECSP, incidence. The primary economic organization dichotomy distinguishes intra-entity and extra-entity incidence. The secondary economic organization dichotomy is an [(Extra-Entity, Intra-Entity): (Among, Within)] function. This distinction is {[Extra-Entity: (Inter-Industry, Intra-Industry)], [Intra-Entity: (Inter-Unit, Intra-Unit)]} characterized. The foregoing primary and secondary economic organization dichotomies result in a quaternary order management practice characterization; specifically, [(Primary, Executive Policy Management), (Secondary, Strategic Policy Management), (Tertiary, Tactical Policy Management) and (Quaternary, Entrepreneurial Policy Management)], to wit:

		t Control Systems n and Strategy	Management Practice			
	Formulat	tion Incidence	Incidence	Characterization		
Economic Organization	Extra-Entity	Inter-Industry	Extra-Entity	Executive Policy Management		
	,	Intra-Industry	Intra-Entity	Strategic Policy Management		
	Intra-Entity	Inter-Unit	Intra-Entity	Tactical Policy Management		
		Intra-Unit	Intra-Entity	Entrepreneurial Policy Management		

Table 4.1

Quaternary Order Management Practice Characterization

In the [Context, (Context: Content), Content] setting, extra-entity ECSP incidence is threshold context concomitant inasmuch as (i) incidence context is threshold {[(Ordered Transition, Ordered Position)], [(Intra-Unit: Intra-Unit: Intra-Industry)]} defined, (ii) incidence (context: content) is threshold [(Unordered Transition, Ordered Position), (Inter-Unit: Intra-Unit)] defined, and (iii) incidence content is threshold [(Unordered Transition, Unordered Position), (Intra-Unit)] defined. That is, in the scripture writers' social choice theory model setting, first instance extra-entity incidence is always a threshold context definition consequence.

In this paper, the scripture writers' seven-level hierarchical structure of each Star of David triangle is articulated in terms of seven managerial levels.⁸ First instance [Unordered Context] is HS Strategic

⁸ Each Star of David triangle is comprised of seven ordered conflict resolution theatre models. Each model is comprised of a quaternary lower order, representing resolved ordered conflict; and a quaternary higher order, representing resolved unordered conflict. The lower versus higher order distinction involves a hierarchical level shift, reconciling the ordered and unordered distinction. As a result, the first five levels of each Star of David triangle is accounted for as the endogenous (lower order, higher order) ordered conflict resolution theatre. There are four endogenous theatres (*i.e.*, the ENDOG theatres) in each Star of David triangle. There are two exogenous ordered conflict resolution theatres (*i.e.*, the EXOG theatres) at the sixth level in each Star of David triangle, each including two endogenous models. There is one (exogenous, exogenous) ordered conflict resolution theatre (*i.e.*, the GOXE theatre) at the seventh level in each Star of David triangle; it includes the two EXOG models. The [(GOXE, EXOG, ENDOG), (1, 2, 4)] ordered conflict resolution theatre model relationship is derived from Lamech's genealogy as reported in Genesis 4:19-24 (*i.e.*, Lamech, his two wives and their four children). Lamech's Genesis

Manager defined inasmuch as (i) [Unordered Content] is Entrepreneurial Manager defined, and (ii) [Unordered (Content: Context)] is Tactical Manager defined. As a result, the quaternary order Executive Managers are all Ordered Context defined. The [Unordered Context] Strategic Manager articulates ECSP incidence in extra-entity (endogenous-position, exogenous-perspective) terms. The [Ordered Context] Executive Managers articulate ECSP incidence in extra-entity (exogenous-position, exogenous-perspective) terms. For convenience, Table 4.2 correlates the seven managers with Unit, Entity, Industry and Economic Organization characterization, to wit:

LVL	Manager	Unit	Entity	Industry	Economic Organization
1	Executive _P	I _R -Unit	E_X -ENT	I_R -IND $_P$	EO _{XP}
2	Executive _S	I _R -Unit	E_X -ENT	I_R -IND _S	EO _{XS}
3	Executive _T	I _R -Unit	E_{X} -ENT	I_{R} -IND _T	EO_{XT}
4	Executive _Q	I _R -Unit	E_{X} -ENT	I_R -IND _Q	$EO_{\mathit{DP}},EO_{\mathit{XQ}}$
5	Strategic	I _R -Unit	E_X -ENT	I_A -IND	EO _{DS}
6	Tactical	I _R -Unit	I_A -ENT	I_A -IND	EO_{DT}
7	Entrepreneurial	I _A -Unit	I_A -ENT	I_A -IND	EO_{DQ}

Table 4.2 Manager Characterizations

The quaternary order management practice henceforth described in this paper includes Executive_Q Policy, Strategic Policy, Tactical Policy and Entrepreneurial Policy.

The Ordered Model Function process establishes model context. The Ordered Model Progression process establishes model (context: content) transitivity. And, the Ordered Model Position process establishes model content. Further and for example, there is no substantive difference between Ordered Inter-Industry Policy and Unordered (GS)-Social Policy; meaning the difference is one in form. While both Ordered Inter-Industry Policy and Unordered (GS)-Social Policy substantively reference the same phenomenon, Ordered Inter-Industry Policy does so in the language of Inter-Industry Policy while Unordered (GS)-Social Policy does so in the language of Policy.

Executive_Q Policy management involves {[Ordered (Given Subjective) Social Policy]-Function: [Unordered (Given Subjective) Social Policy, Ordered Inter-Industry Policy]-Progression: [Unordered Inter-Industry Policy]-Progression: [Unordered Inter-Industry Policy]-Progression: (Unordered Inter-Industry Policy, Ordered Intra-Industry Policy)-Progression: (Unordered Intra-Industry Policy)-Position] model processes. Tactical Policy Management involves [(Ordered Intra-Industry Policy)-Function: (Unordered Intra-Industry Policy, Ordered Inter-Unit Policy)-Progression: (Unordered Inter-Unit Policy)-Position] model processes. Entrepreneurial Policy Management involves [(Ordered Inter-Unit Policy)-Function: (Unordered Inter-Unit Policy)-Position] model processes. The quaternary order management policy ordered processes are Figure 4.1 depicted.

^{4:24} vengeance reconciled as seventy-seven-fold reflects the two triangles of the Star of David penultimate to their equilibratory alignment that forms the shape of the Star of David.

V. ALIGNING THE BALANCED SCORECARD PERSPECTIVES WITH THE ECONOMIC ORGANIZATION'S ORDERED MANAGEMENT STRUCTURE

Aligning the Balanced Scorecard perspectives with the economic organization's ordered management structure establishes the ECSP (macroeconomic)-perspective context. Such a context results in actual consequences defined as significant economically efficient. This context is {[macroeconomic]-position, [(macroeconomic: microeconomic), (microeconomic: macroeconomic)]-perspective} economic reference defined [i.e., the "macroeconomic reference"]. Aligning the Balanced Scorecard perspectives with the economic organization's ordered management structure, therefore, is macroeconomic reference derived.

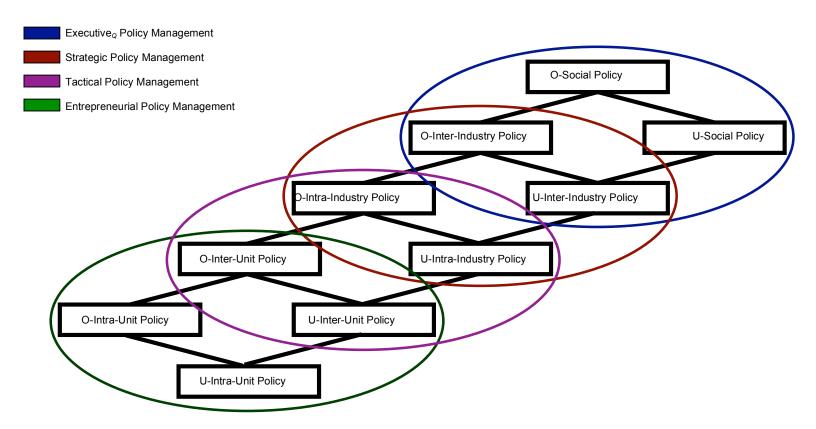


Figure 4.1
Quaternary Order Management Policy
Ordered Model Processes

A. Aligning the Social Choice Theory Seven-Level Hierarchical Structure with an Ordered Management Structure

Transforming the seven-level hierarchical structure to an ordered management structure enables defining economically efficient Balanced Scorecard perspectives. ECSP incidence is, initially, an intra-entity function; but, eventually shifts to ever-increasing extra-entity domains as the economic organization takes on ever-increasing industry and social policy-making roles. Second, since policy is {[(Ordered, Lower Order), (Unordered, Higher Order)], [(Revenue-Maximization), (Cost-Minimization)]} resolved line conflict characterized, policy reference declarations are either (endogenous-position, exogenous-

perspective) or (exogenous-position, exogenous-perspective) defined. As a result, intra-entity ECSP incidence is defined in intra-unit and inter-unit policy contexts; while extra-entity ECSP incidence is defined in intra-industry, inter-industry and [(Given Subjective)_i, (Any Subjective, Given Objective)_i, (Any Objective)_i] social policy contexts. *Q.v.*, Table5.1.

B. Transforming the Ordered Management Structure into Ordered Model Processes

The Balanced Scorecard perspective definition penultimate step involves transforming the ordered management structure into ordered model processes. The definition of hierarchical structure ordered model processes is followed by their characterization.

Higher Order Policy Manager	Lower Order Policy Management Practice	Unordered Management Structure	Ordered Management Structure	Unordered Policy Manag e r	Ordered Policy Management	Unordered Subjective EA	Ordered Subjective EA	Unordered Subjective SSD	Ordered Subjective SSD	Level
Executive _P	Executive _s		(AO) _i Social Policy						LP	1
Executive _S	Executive _T	(GO) _i Social Policy	(AS) _i Social Policy				LP	НQ	LS	2
Executive _T	Executive ϱ	(GS) _i Social Policy	Inter-Industry Policy		LP	НQ	LS	нт	LT	3
Executive _Q	Strategic	Inter-Industry Policy	Intra-Industry Policy	НQ	LS	НТ	LT	HS	LQ	4
Strategic	Tactical	Intra-Industry Policy	Inter-Unit Policy	НТ	LT	HS	LQ	НР		5
Tactical	Entrepreneurial	Inter-Unit Policy	Intra-Unit Policy	HS	LQ	НР				6
Entrepreneurial		Intra-Unit Policy		НР						7

Table 5.1 (Social Choice Theory Model, Ordered Management Structure) Alignment

1. Ordered Model Processes and Philosophical Context

It appears the scripture writers distilled ordered relations, the ethics of reference declaration and ordered conflict resolution by recognizing economic model processes involve (Function: Progression: Position) devolution. In {[(Ordered, Lower Order), (Unordered, Higher Order)], [(Rev-Max, Cost-Min)] resolved line conflict space, the processes are [(Philosophical Context), (Will-Product, Will, Will-Perception)] defined and correlated as [(Will-Product, Function), (Will, Position), (Will-Perception, Progression)]. In

the ordered model processes setting, it is generally said the regressive product is a combination of the extant will and a perception of the progressive will.

For reasons outside the scope of this paper, the scripture writers ascribe (3, 4, 2) subscripts to the [(Will-Product, Function)₃, (Will, Position)₄, (Will-Perception, Progression)₂] philosophical context. (objective: subjective) empowerment involves (234) ordered model ascription where the right-to-left serially descending number respectively defines (Objective: Subjective) transition and empowerment. (Objective: subjective) return of empowerment involves (243) ordered model ascription where the right-to-left non-serial number respectively defines (subjective: objective) transition return of empowerment.

Similarly, (resolved: unresolved) line conflict empowerment is (432) ascribed where the left-to-right serially descending number respectively defines (resolved: unresolved) line conflict transition and resolution empowerment. (Unresolved: resolved) line conflict return of empowerment is (342) ascribed where the left-to-right non-serial number respectively defines (unresolved: resolved) line conflict transition and resolution return of empowerment.

In the scripture writers' social choice theory model, the (234, 432) serial ascriptions represent empowerment to the extent progression is foreclosed until the ordered conflict is resolved. The non-serial (243, 342) ascriptions represent ordered conflict resolution and enabled progression.

The empowerment double-lock represents the notion that Empoweree_n is unable to progress solely based on fulfilling any notion of unilateral progression criteria. Rather, the double-lock represents the notion Empoweree_n must inspire Empoweree_{n+<1>} to progress in Empoweree_n's stead to enable Empoweree_n to concomitantly progress to the Empoweree_{n+1} position. In other words, the 324 double-lock is a (234: 243) return of empowerment constraint condition.

An example illustrates the scripture writers' model-based sufficient mathematical algorithms. The hierarchical structure ascribes (Objective: Subjective) SSD empowerment and return of empowerment as a $10^2 f(x)$, (Resolved: Unresolved) line conflict resolution (*i.e.*, policy management) empowerment and resolution return of empowerment as a $10^1 f(x)$ and (Unresolved: Resolved) line conflict resolution return of empowerment as a $10^0 f(x)$. Ergo, (234: 324: 432) empowerment is $[(234 \cdot 10^2) + (324 \cdot 10^1) + (432 \cdot 10^0)] = 27072$; (342: 243) return of empowerment is $[(342 \cdot 10^0) + (243 \cdot 10^1)] = 2772$; 27072 - 2772 = 24300 where (243 · 10^2) represents the (objective: subjective) discernment confirmation of policy management's return of empowerment such that progression is enabled.

Importantly, the (234: 324: 432) empowerment and (342: 243) return of empowerment ascriptions tell how to organize the contextual statements. The model process hierarchical structure's relation to the contextual statement setting is 324 double-locks articulated, to wit:

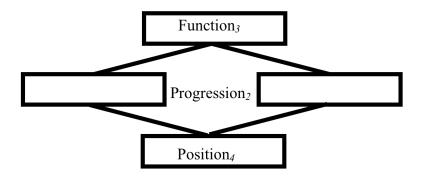


Figure 5.1
324 Double-Lock Ascribed Ordered Model
Function, Progression and Position Processes

Given the [(Function, Product)₃, (Will-Perception, Progression)₂, (Will, Position)₄] ascriptions, contextual (432, 324, 432, 342 and 243) statements can now be formulated for the Executive_Q, Strategic, Tactical and Entrepreneurial Policy Management Practices. *E.g.*, q.v., Table 5.2, Lower Order Primary Executive_Q Policy Management (Empowerment, Return of Empowerment).

2. Contextual Translation of the Reference (Position, Perspective) Model Statements

For each [(Primary, Secondary, Tertiary, Quaternary), (Executive_Q, Strategic, Tactical, Entrepreneurial)] Policy Management orders, the (342, RETEMP) statement provides the context reference-position while the (243, RETEMP) statement provides the context reference-perspective. By isolating these factors, contextual translation can then be formulated. E.g., q.v., Table 5.3, Lower Order Primary Executive Policy Management [(342 RETEMP, Position), (243 RETEMP, Perspective)] Contextual Statements.