Coding Articles for Researcher Perspective

Explanation of and Guidelines for the Coding Process

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## 1.	Purpose

This document describes the codes applied to articles (section 2, pp.1-3), and the process whereby the codes are assigned (section 3, pp.4-5)

## 2.	The Codes

The purpose of the coding process is to document the researcher perspective adopted by each article, together with additional information of value to the analysis. This section explains the codes.

### •	Discipline-Internal

Articles are coded DI if they do not have substantial and direct relevance to any real-world stakeholder, and hence the concept of Researcher Perspective does not apply.

Articles coded DI do not have any other codes assigned.

Examples include papers on:
•	research techniques
•	citation analysis / scientometrics
•	education methods
•	career progression
•	issues and opinions that have limited relevance to stakeholders in the research domain

Development, calibration and adaptation of an artefact, process or method that is for use by researchers falls within this classification. If, on the other hand, the artefact, process or method is for use by a real-world entity (such as a business process analysis technique, or a prototype intended for trial deployment by a business), then it is not DI, and needs to be allocated codes as follows.

### •	Researcher Perspective

This is the primary focus of the research. It is defined as follows:

> **A Researcher Perspective** is a particular stakeholder perspective that is adopted by a researcher as the, or a, viewpoint from which to observe phenomena during the conduct of a research project

The concept is distinct from the object of study, although of course a particular entity (such as an organisation, a work-group or a category of individuals such as consumers or employees) may be both the object of study and the stakeholder whose viewpoint is being adopted.

Most commonly, the viewpoint adopted is that of one of the stakeholders in the activities within the research domain.

A particular perspective that is frequently adopted in IS research is that of the System Sponsor, which is defined as follows:

> The **System Sponsor** is the entity that develops, implements or adapts a system, process or intervention, or causes it to be developed or implemented, or for whose benefit the initiative is undertaken

Rather than being a single entity, it may be a category of entities (e.g. 'corporations using ERP systems').

Two other circumstances arise, however. One is where the interests that the work addresses are not those of any stakeholder in the phenomena, but instead the purpose is entirely related to academic endeavour. If so, then the article is coded Discipline-Internal (DI), as discussed above.

The other circumstance is where the researcher recognises and addresses the interests of more than one stakeholder.

One such pattern arises where the object of study is a dyad and the researcher actively considers the interests of both sides of that dyad. Examples include buyer and seller in a B2B or C2C marketspace, marketing organisation and consumer, employer and employee, government service delivery agency and client, and government regulatory agency and regulatee.

Another pattern involves more than two stakeholders. For example, in cascaded supply-chains, and in networks of organisations such as those involved in international trade, a study of information system designs to achieve 'win-win-win' outcomes is multi-perspective in nature. Another multi-perspective context is public policy settings, which inherently involve multiple stakeholders with interests that are at least partly in conflict, and in which pareto optimality is difficult or impossible to achieve.

In order to capture all relevant aspects of researcher perspective, two kinds of codes are applied to each article. The first of the two codes records the **cardinality**. The three possible values are:
SP Single-Perspective
where the research exclusively or dominantly reflects the interests of one stakeholder
DP Dual-Perspective, where two perspectives are actively considered
MP Multi-Perspective, where more than two perspectives are actively considered

The second code records **the specific perspective(s)** adopted. The three possible values are:
SS System Sponsor. Depending on the context, various characterisations are possible:
- the organisation (or entity or unit) that develops, implements or adapts a system, process or intervention,or that causes it to be developed or implemented, or that adopts a service, or for whose benefit the initiative is undertaken
- the organisation that will most likely and to the greatest extent benefit from the research
- the primary real-world organisation to which the results are addressed
- the organisational entity that is central to the research context

The system sponsor may be a single corporation, government agency or not-for-profit; or a sub-organisation within one of those entities; or a collective of organisations such as a joint venture, a supply chain, or an industry segment or sector; or a category of organisations (such as organisations that use ERP systems, or organisations that adopt a service such as a particular CRM or on-line office suite or accounting facility)

O Other than the System Sponsor
This may be another organisation, individuals such as social media users, a community, etc.
In this case, a noun, noun-phrase or short explanation is to be provided, identifying the entity whose interests the researcher is reflecting

G Greater than 1 Perspective (i.e. where the cardinality was coded as DP or MP)
In this case, two or more nouns, noun-phrases or short explanations are to be provided,identifying the entities whose interests the researcher is reflecting

- **Dimension**

This documents the nature of the reflected interests. The distinctions to be drawn broadly reflect the 'triple bottom line' and 'corporate social responsibility' literature.

In general, a business enterprise's interests are Economic. Exceptions arise, however, where an action is taken that potentially compromises the normal business objectives of profit, revenue and/or market share. One example is affirmative action employment on the basis of gender, ethnicity, socio-economic deprivation or disability. Another is pro bono work, such as that undertaken by a law firm.

The interests of government agencies, not-for-profit organisations and individuals are also in many cases on the Economic dimension, where the objectives relate to operational efficiency, or effective achievement of an economic objective. Rather more exceptions arise in the case of these categories of organisations, however, because the purpose of their mainstream activities is commonly a social or environmental service or outcome.

Where a paper examines how social intentions or activities fulfil an economic purpose, it should be coded as Economic.

Where a paper exhibits both Economic and Social dimensions (e.g. a Dual Perspective paper that considers not only pricing issues but also consumer wellbeing, e.g. privacy or equity), then it should be coded as Social, because the intention is to distinguish papers that have at least a material degree of orientation to other-than-economic interests.

The possible codes and associated keywords are:
Ec Economic revenue, costs, profit, market-share, growth
Soc Social wellbeing, fairness, equity
Env Environmental resources, waste, pollution, ecology

Trust is most likely Economic (e.g.trust in a supplier), but in some cases may be Social (e.g. trust in an online counsellor). Gender may be Economic (e.g. differences in workplace performance) or Social (e.g. differences in personal responses to stress). Communities may be Economic (e.g. training for the workplace) or Social (e.g. services to the physically disabled).

- **Object of Study**

This refers to the entity about which research is performed.

The possible codes are:
Org Organisation(s)
H Human(s)
T Technology/ies

The level of abstraction or 'unit of study' is not relevant to the coding.

Hence Organisation includes all sizes of formal organisation, and any kind of organisational sub-unit, such as department, section or team. It also includes organisational roles that make decisions on behalf of formal organisations, including for example CEO and CIO. This code is also applied where the object of study comprises

more than one organisation, as occurs with dyads (inter-organisational systems), and chains and networks (multi-organisational systems).

The Human category includes not only individuals, but also social collectives of small, medium or large scale (i.e. groups, communities and societies) that are formed on any basis of some commonality (e.g. of interest, language, belief or location), but <u>excludes</u> humans operating on behalf of formal organisations (e.g. corporations, business partnerships, incorporated associations). Hence, in a study of the behaviour of CIOs in relation to decisions about business, technology or management, the Object of Study is Organisation not Human. In a study of employee compliance with organisational policy, on the other hand, the Object of Study is Human.

Technology includes information systems, elements of them, software tools, user interfaces, and hardware, but also methods and processes. This code is applied where the focus is specifically on the technology.   If the focus is on the strategic or operational use of technology by an organisation, it should be coded 'Org'. If the focus is on the operational use of technology by an individual, the paper should be coded as 'H'.

• **Type of Research**

This refers to the approach adopted by the researcher.

The possible codes are:
Th   Theoretical
Emp Empirical
C   Constructive

The reason for coding articles in this manner is that the purpose of the research is expressed differently in each case, in particular:
•   Empirical research addresses **a Research Question**
        (which may or may not be articulated into **Hypotheses**)
•   Constructionist research, notably design science and action research,
        usually express **an objective** rather than a question
•   Theoretical research may express neither, and may be better described as
        addressing **a topic or domain**

Of course, many articles embody elements of two or more of these approaches, e.g.:
•   a great deal of empirical research commences (or in some cases concludes) with a
        discussion of relevant theory, and may be driven by that theory; but the primary
        contribution that the authors seek to make is based on the empirical analysis
•   theoretical research may include a modest amount of empirical content, for
        example using a real instance as a means of exemplifying, demonstrating or
        applying a theoretical proposition (as distinct from using the data to test the
        theory); but the primary contribution that the authors seek to make is theoretical
        rather than being directly based on observations

Of particular significance in distinguishing between theoretical and empirical research is the degree of significance of the empirical component. In empirical research, the purpose of the empirical component is to answer the research question or test the hypotheses. In theoretical research, the purpose of any empirical component is to illustrate the application of the theory.

All forms of model-building, and simulation using artificial data (including Monte Carlo simulation even if the weighted random selections draw on empirical data), are treated here as theoretical not empirical.

- **Researcher Perspective where the Object of Study is Human**

This relates to an aspect of particular relevance to the research that this coding is intended to support. It is a derivative code, based on the Researcher Perspective and the Object of Study.

The possible codes are:

null where the Object of Study is Organisation(s) or Technology/ies

HSS where the Object of Study is Human and the Researcher Perspective is SS (System Sponsor)

HO where the Object of Study is Human and the Researcher Perspective is O (Other)

HG where the Object of Study is Human and the Researcher Perspective is G (Greater than 1)

3.   The Process

There are several possible modes in which the coding may be performed:
- based on the title and abstract alone
- based on the title and abstract, but with reference to the full text where one or more codes cannot be confidently assigned from title and abstract alone
- based on the article as a whole

The process commences by examining the target text for relevant passages. The term 'passage' is used in its conventional sense, to refer to a text-segment of any length, including word, word-group. phrase, clause, sentence, paragraph or paragraphs. (For example, the Macquarie Dictionary defines a passage as "an indefinite portion of a writing, speech, or the like, usu. one of no great length ...").

In the case of title and abstract only examination, the whole of those texts is carefully examined. To facilitate validation within the research team, and to enable replication and audit, it is beneficial to highlight key passages that influenced the characterisation of the article.

Where the entire article is considered, the title, abstract, introduction, implications and conclusions sections are commonly the most informative sources of insight into the nature of the article for the purposes at hand. In this case, it is preferable to extract the key passages into the coding sheets.

Codes can be assigned in whichever order supporting evidence is gathered. However, it will commonly be most helpful to categorise in the following sequence:
- **identify the Type of Research** as Empirical (Emp), Theoretical (Th), or Constructive (C)
- **isolate the research question** (in the case of Empirical articles), **objective** (Constructive articles) **or topic-definition** (Theoretical articles). This may be explicit, or at least implicit in various key passages, but may have to be inferred
- **identify the Researcher Perspective(s)** that has/have been adopted, by isolating:
    - passages that indicate the interests that are being represented; and/or
    - passages that indicate the audience to which the outcomes are addressed
- **determine the cardinality of the perspective** and allocate a code accordingly: Single-Perspective (SP), Dual-Perspective (DP), or Multi-Perspective (MP)
- **determine the nature of the perspective** and allocate a code accordingly: System Sponsor (SS), Other (O), or Greater than 1 Perspective (G). In the cases of O and G, record the nature of the entity/ies
- **identify the Dimension on which the relevant stakeholder's interests lie**, by isolating passages that indicate whether that stakeholder's objectives are of an economic (Ec), social (Soc) or environmental (Env) nature. Considerable care

may be needed in order to reliably distinguish the stakeholder's objectives from factors that the stakeholder perceives to constrain the achievement of those objectives

- **identify the Object of Study**, by isolating passages that indicate the phenomena that were the focus of attention – Organisation(s) (Org), Human(s) (H) or Technology/ies (T)
- **where the Object of Study is Humans (H), allocate the derivative code** that corresponds to the Researcher Perspective (HSS, HO, HG)

Where any material uncertainty remains, highlight the entry to indicate the probable need for detailed discussion among the members of the research team.