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Understanding and Practicing Research with Dooyeweerd's Help

by Andrew Basden

This chapter is for researchers, to briefly show how they may employ Dooyeweerd in their research, outlining the discussion in my book of 2020, Foundations and Practice of Research: Adventures with Dooyeweerd's Philosophy. It contains research-style argument and referencing.

Introduction: What Is Research?

Research is for finding things out. Suppose we wanted to research people having breakfast, as depicted in the previous chapter. The very first question we face is: What do we research (want to find out) about breakfast—the social relationships around breakfast; the taste of breakfast food; its nutritional value; expectations people have about breakfast; generosity at breakfast; economy of breakfast? Similarly, several questions arise when we study physics, though perhaps fewer in number, concerning for example quantities, spatial arrangements, movement, and forces. Research usually focuses on one kind of issue—one aspect of the complicated reality that faces us when we study it.

Figure 1 shows a researcher studying people having breakfast, using a diagram similar to the one in the previous chapter on Everyday Life. Both researcher and those researched function in the same set of aspects—within an "ocean" of diverse mean-

ingfulness. The significance of this, and the lines and various labels, are explained below.

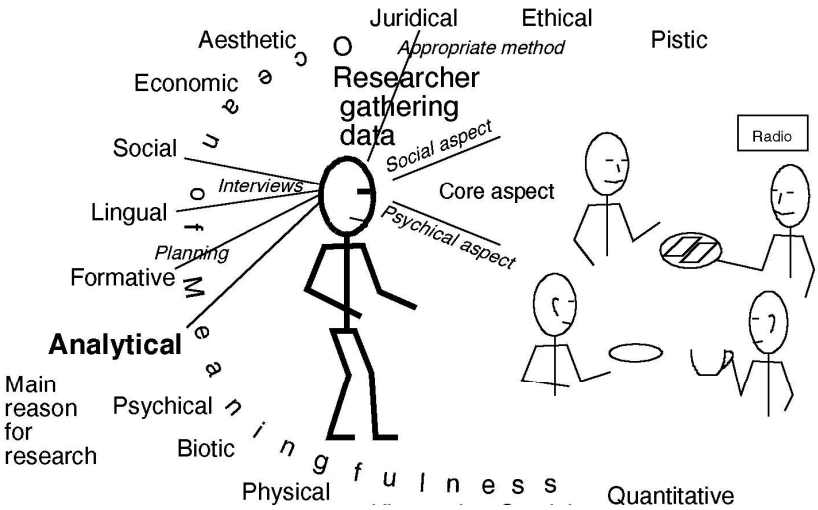

Figure 1: Researching people eating breakfast.
See Figure 1 in previous chapter

Contrary to popular assumptions, research does not yield certain *truths* so much as *beliefs* about reality on which it is reasonable to rely. These reasonable beliefs are what we call theories. For example, it is reasonable to rely on Newton's theories of (beliefs about) physics, except when going to extremes, when Einsteinian or Quantum theories are more reasonable. Different fields—physics, psychology, sociology, theology, and so on—yield different kinds of theory, with different criteria for reasonableness.

Oversimplifying perhaps, there are two main types of research. What we might call *professional research* tries to understand individual situations: "Why did our profits fall last year?" *Academic research* seeks understanding of the way the world works in general: "Why do profits fall?" Some research mixes the two. Notice the question "Why?" in both types: most research

seeks to understand "laws" according to which reality operates.

This chapter is mainly about academic research, though most of it applies also to professional research. The *mandate of academic research* (main reason for doing it) is to build up humanity's bodies of knowledge by offering generalized understanding of how reality works—whether physically, socially, or whatever. Contributing to humanity's bodies of knowledge places an onerous responsibility on research, so the findings of our research are submitted for critical (usually peer) review, so that they can be made robust and understandable before being published. They are then refined further by means of subsequent public debate of the published work.

To ensure reasonableness of reliance on theories, research involves systematic methods of study. These are different for each field—experiment in physics, surveys in sociology, etc.—and below we will see why that is so.

Dooyeweerd's extensive philosophical discussion of theoretical thought in his 4-volume work *A New Critique* is surprisingly useful in guiding research practice. What we call research is included in what Dooyeweerd called "theoretical thought."

The Many Aspects of Doing Research

Despite pretensions otherwise, real research ("theoretical thought") exhibits an everyday complexity. Just as eating breakfast involves many aspects, so does doing research. The main aspect of research is, of course, the analytical, because it is that aspect which makes theoretical thinking meaningful and possible. In quantitative research, the quantitative aspect is also very important. Research involves method, planning and technology, and hence has an important formative aspect. It involves reading, communication and dissemination (lingual), other people (social), resources (economic), truthfulness and accuracy (juridical), willingness to share (ethical), and commitment, courage

and belief (pistic). Less visible, until a breakdown occurs, are the biotic and psychical aspects (bodily and mental health) and physical aspect (e.g., power outages, climate change).

Taking account of all aspects in such a way helps us understand the full reality of research and guides us in planning and executing it.[1] Whereas some see this multi-aspectual reality as a departure from an ideal, Dooyeweerd argued that it is fundamental to what makes all research possible. However, Dooyeweerd wanted to understand the nature of research more clearly than this.

Dooyeweerd's Understanding of the Nature of Research

Since ancient Greece, thinkers have presupposed the superiority of theoretical thought over pre-theoretical, as a way to knowledge. They presupposed its neutrality and authority in which, in particular, emotion and religious commitment have no place.

Dooyeweerd disagreed. By extensive immanent critique, he demonstrated that religious commitment in particular always has played a part in theoretical thought (including research). By deep transcendental critique, he argued that it always will do so, as fundamental and universally necessary to theoretical thought.[2] We can see this, for example, in commitment to paradigms, and there are also deeper commitments. Dooyeweerd's view is variously supported by several twentieth-century thinkers, including Husserl, Heidegger, Habermas, Kuhn, Polanyi, Foucault, and others. Arguably, Dooyeweerd's account of theoretical thought is deeper and more comprehensive than theirs.

The starting-point for Dooyeweerd's transcendental exploration of the nature of theoretical thought was to accept its embeddedness within everyday experience and the full humanness of

1. For a fuller discussion, see Chapter 10 of Basden, *Foundations and Practice of Research*.
2. Dooyeweerd, *A New Critique*, I, 37.

the thinker. This led Dooyeweerd to pose a seldom-asked question, "What is the difference between theoretical and pre-theoretical (everyday) attitudes of thought?" His answer: While pre-theoretical (everyday) thought adopts an "integral vision of the whole" in which all aspects play their part, theoretical thought abstracts aspects from the whole, thus narrowing its focus.[3] Dooyeweerd called this an "antithetical attitude" to the situation we are researching or a "Gegenstand relation," in which the thinker "stands over against" what is being thought about in order to observe it clearly.[4]

By asking fundamental questions about the very nature of theoretical thought itself, he identified three "transcendental problems," in each of which faith plays a fundamental role, manifested in several ways.

- TP1.[5] In theoretical thinking we select an aspect that we believe to be important. By focusing on it (the "*Gegenstand*"), isolating (abstracting) it from the others, we can study its laws without confusing them with laws of other aspects. Each field has its own different aspect; see Table 1. (Dooyeweerd aligns this with Kant's *theoretical analysis*.)
- TP2.[6] Such isolation "sets asunder" the selected aspect, obscuring its coherence with the others, hence preventing the thinker from gaining a full understanding. But to properly build humanity's bodies of knowledge necessarily involves reuniting aspects. On what grounds may this reuniting be done and then subjected to critique?

3. Ibid., I, 84.
4. For fuller views, see Basden, *Foundations and Practice of Research*, § 6-3.2, and Clouser, *The Myth of Religious Neutrality*.
5. Dooyeweerd, *A New Critique*, I, 38–35.
6. Ibid., I, 45–52.

Many answer, "By analytical logic," but Dooyeweerd argued that each aspect has a distinct rationality, as Winch[7] and Habermas[8] also argued, and that logical rationality has no privileged place among them, and no authority to judge between them. Instead, Dooyeweerd's answer: We must harmonise the rationalities in ways that do not yield antinomies (such as Zeno's Paradox: Achilles racing a tortoise). Ultimately, doing this involves responsibility, a self-critical attitude, and belief.

- TP3.[9] What makes proper self-critique possible? Dooyeweerd argued that it can only be done, ultimately, by reference to a presupposed Origin of Meaning, which is self-dependent and on which all else depends—what Clouser calls the "Divine."[10] This necessarily involves faith of a religious kind. Dooyeweerd discusses four ground-motives that operate as origins of meaning, the Greek motives of form versus matter, the biblical motives of creation, fall, redemption, the Scholastic motives of nature versus grace (or supernature), and the humanist motives of nature versus freedom.[11]

Dooyeweerd developed these arguments painstakingly for philosophy,[12] but he believed they apply to scientific thought too, and later[13] he briefly applied them to sociology. Further development, it seems, was left to us, as for example in Basden.[14]

7. P. Winch, *The Idea of a Social Science and Its Relation to Philosophy* (1958).
8. J. Habermas, *The Theory of Communicative Action*, vol. I (1986).
9. Dooyeweerd, *A New Critique*, I, 52–68.
10. See Chapter 1 in this book.
11. See the discussion in Chapters 2 to 5 of this book and the explanation in Chapter 5 of my Foundations and Practice of Research.
12. Dooyeweerd, A New Critique, I, 38–68.
13. Ibid., III, 168–171
14. As, for example in my *Foundations and Practice of Research*.

Applying Dooyeweerd's Ideas to Research

I have found that Dooyeweerd's starting-point and his three transcendental problems closely match what occurs in the realities of research, and can help us understand research in all fields. Let us go through each in turn.

1. Dooyeweerd's idea of a *Gegenstand* relationship is about clearly identifying a *research aim*. To Dooyeweerd, *Gegenstand* is one aspect, though interdisciplinary research has more than one. Identifying which aspect(s) makes our aim meaningful, and untangling it from others is a good route to clarity. This is the *core aspect* of the research. Each field of research has a different core aspect (see Table 1 below), which defines its boundaries. It is useful to express the aim as a question that the research seeks to answer, as in column 3 of Table 1.

2. In research, TP1, of abstracting aspects, is about *collecting data*. From the multi-aspectual reality being studied, researchers gather data that is meaningful to the core aspect and exclude data meaningful in other aspects. Examples: economists study costs, markets, etc. which are meaningful in the economic aspect; physicists study forces, meaningful in the physical aspect. For each aspect, different data collection methods are appropriate, such as experiment for the physical aspect, and interviews for the social (see column 4 of Table 1). Sometimes we collect data that is meaningful in other aspects, on which the laws of our core aspect most directly depend, especially in interdisciplinary research. For this, open interviews are useful because what interviewees say often ranges over several aspects, which can be identified when analysing interview text.

3. TP2, of reuniting the abstracted aspect with others, emerges in research when *analyzing data to generate findings*. Inappropriate application of the rationality of one aspect to things meaningful in another can result in distorted, misleading research findings. For example, in economics a purely *quantitative*

measure like GDP (Gross Domestic Product) is wrongly treated as a measure of *economic* health.[15] So, in good research, we take account of the distinct rationalities of different aspects. (This is why research papers should clearly describe analysis in full.)

I have found other, non-core aspects present themselves in four ways during analysis. Dooyeweerd's warning to avoid antinomies applies mainly to the first. 1. When studying how the core aspect depends on others, for example social aspect on lingual or pistic, or biotic on physical or psychical. 2. When thinking about future application of the findings of the research in the wider world—in which every aspect is potentially relevant. 3. When preparing data for analysis, especially the judgement about which data are to be removed as outliers, for example, once physical data has been abstracted from measuring equipment, we must take into account the possibility of equipment malfunction (formative aspect) or even malicious sabotage (juridical-pistic). 4. From methods chosen for analysis. In quantitative methods, the quantitative aspect is obviously important, but in two ways, counting or modelling. Counting items can give useful statistical overviews, but quantitative modelling often distorts, because it assumes the laws that govern the core aspect may be reduced to quantitative laws. Though sometimes valid in physics, it is less valid in economics,[16] such as the value of a rainforest. In qualitative analysis, the analytical aspect is important, enabling us to distinguish and identify factors. Often this involves analysis of texts, such as interview transcripts, when the lingual aspect becomes important, and using aspects to identify what the source means has proven very useful.[17] In prototype development, used in the design sciences, the formative aspect is

15. M. Carney, *Value(s)* (2021).

16. Ibid.

17. See extensive discussion of this in my *Foundations and Practice of Research*, §11.7.

important. Awareness of aspects can help the researcher remain aware and responsible in employing the multiple rationalities involved. We must be careful because, often, the influence of some aspects is hidden.

4. TP3, of origin of meaning, arises when setting the research *in the wider context*, where the multiple spheres of meaning that impinge on the entire field are debated. This is self-critique by the community and can operate at several levels.

At an overview level, Dooyeweerd's idea of ground-motives as origin of meaning may be used to bring some harmony in a field riven with conflicts between supposedly mutually exclusive and antagonistic paradigmatic approaches. Paradigms / approaches express what a community finds fundamentally meaningful[18] and this shifts from time to time.[19] In the information systems field, for example, positivist approaches were first adopted, which are driven by the nature pole of the humanist ground-motive. An interpretivist reaction towards the freedom pole grew during the 1990s. Later, a socio-critical reaction set in against both. Supporters of the three approaches tended to talk past each other. During the 2000s, some sought integration and eventually Dooyeweerd was called upon to assist. The operation of the dualistic nature-freedom ground-motive was unveiled[20] and a suggestion made that the three mutually opposed approaches could all be understood as emphasising different aspects, which makes their integration possible.[21]

18. Basden and Joneidy 2019, "Dooyeweerd's Understanding of Meaning (2): Some Implications."
19. See my article on "Engines of Dialectic."
20. D. Eriksson, "Identification of Normative Sources for Systems Thinking: An Inquiry into Religious Ground-motives for Systems Thinking Paradigms" (2003).
21. Basden, "Enabling a Kleinian Integration of Interpretivist and Critical-social IS Research: The Contribution of Dooyeweerd's Philosophy" (2011).

At the level of the research project, the incorporation of other aspects needs to be discussed and justified, not just unquestioningly accepted. Such discussion is carried out by reference, usually implicit, to a ground-motive. This is seen in the following example.

Example

We may see the roles TP1, TP2 and TP3 play in the following example.[22]

In the field of information systems, Davis published a landmark paper which began to answer the question of how to predict the actual usage of information technology.[23] He suggested a Technology Acceptance Model, TAM, in which actual usage (U) is viewed as behavior determined by Intention to Use (IU), which is in turn influenced by Perceived Usefulness (PU) of the technology and Perceived Ease of Use (PEoU). In turn, PU and PEoU are derived from External Variables such as "Quality of Work," the choice of which depends on the context. See Figure 2.

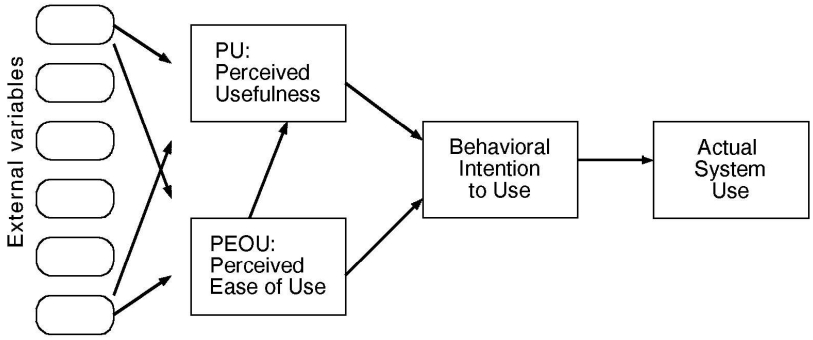

Figure 2. The Technology Acceptance Model

22. For a fuller account, see my *Foundations and Practice of Research*.
23. F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology" (1989).

We may first notice that TAM is based solely on psychology, in fact on the Theory of Reasoned Action and Theory of Planned Behavior. All its variables are meaningful in the psychical aspect, so its TP1 is about abstracting the psychical aspect from the diversity of reality. Its rationality (TP2), expressed for example by the links between variables, is also purely psychical. This aspectual homogeneity lends the model both a harmony and a parsimony that partly explains its great popularity and success.

The genius of Davis, however, was that other aspects are not entirely excluded, but are allowed to be represented in the anonymous External Variables. In employing TAM, appliers of the theory would select a set of variables that they believe are meaningful in situations they will research and by which PU and PEoU can be measured, and use these as questions to IT users. Davis demonstrates how.

Once TAM was published, use, critiques and refinements over 20 years generated three major new versions. Bagozzi's account of this development is useful because it shows the roles played by TP1, TP2, TP3, even though he knew nothing of Dooyeweerd.[24]

TP1. In the earliest critiques, researchers began adding variables to TAM, for example age and gender, thus widening the range of aspects to abstract during data collection, adding the biotic aspect alongside the psychical. One of the later models has 41 variables and, over time, more than 80 external variables were proposed. Yet, "Even here, arguments can be made that important independent variables have been left out."[25] This is "because few of the included predictors are fundamental, generic, or universal, and future research is likely to uncover new predictors not subsumable under the existing predictors." By contrast, Dooye-

24. R. P. Bagozzi, "The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift" (2007).

25. Ibid., p. 244.

weerd's aspects are "fundamental, generic, or universal", and this is why they are good at uncovering what is hidden (see the previous chapter) and can be used to classify the variables added.[26]

TP2. Bagozzi discusses each of the links in TAM. For example, when he remarks that "the intention-behavior linkage is probably the most uncritically accepted assumption" in TAM,[27] he is questioning whether other aspectual rationalities should be recognized. Yet,

> little theoretical insight is provided into the mechanism, or "the why", behind proposed interaction effects, and a potentially infinite list of such moderators exists, making such broadenings of TAM both unwieldy and conceptually impoverished. The consideration of moderating variables is one way of deepening any model, but introductions of these should be grounded in theory and with an aim toward including policy variables whenever possible.[28]

Light can be shone on such "interaction effects" and "moderators" by Dooyeweerd's penetrating exploration of inter-aspect dependency and analogy, of anticipations and retrocipations. For example, does the link involve social, economic, aesthetic, juridical, ethical and pistic impacts on the psychical?

TP3. Critiques related to TP3 tend to emerge more slowly, as the community opens itself to the question of why other aspects (kinds of meaningfulness) are to be considered, by (usually implicit) reference to an origin of meaning. This reference may be detected in Bagozzi, and that of two kinds. On the one hand, in opposing a "control"[29] presupposition Bagozzi is almost explicit in appealing to the humanistic nature-freedom ground-motive.

26. See Table 7.1 in my *Foundations and Practice of Research*, where nearly all aspects are represented.
27. Bagozzi, "The Legacy of the Technology Acceptance Model," p. 245.
28. Ibid., 244.
29. Ibid., 251.

Table 1. Fields meaningful in each aspect, with typical main research questions and appropriate research method

Aspect	Science / Discipline	Typical research questions	Typical research methods
Quant'ive	Arithmetic, Algebra, Statistics	Is every even integer the sum of two primes (Goldbach Conjecture)?	Reductio ad absurdum Computation
Spatial	Geometry, Topology	How to fill a rectangle with different-sized squares?	Geometric proofs
Kinematic	Kinematics, Mechanics, Dynamics	How can we get linear motion from rotary motion?	Differential calculus
Physical	Physics, Chemistry (Quantum, Material, Fluid, Geo-, Astro-, ...)	What is the electric charge radius of the proton?	Laboratory experiment
Organic / Biotic	Life sciences, Biology, Ecology, Taxonomy, Surgery	How do cells determine when to divide? Why do trees need fungi?	Experiments, Dissection, Field studies
Psychic / Sensitive	Psychology, Behavioural sciences	How does experience alter behaviour? How do young cuckoos know migration routes?	Stimulus-response trials Experiments with control grpups
Analytic	Logic, Analysis Some cognitive science	What are the limits of understanding thinking as a form of computing?	Thought experi ments, Logic, Cognitive methods
Formative	'Sciences of the Artificial' Design science, Engineering, History	How to optimally cut cake so that each recipient receives a fair piece?	Game playing, Puzzle-solving, Build + test Forensic analysis History analysis
Lingual	Linguistics, Semiotics, Hermeneutics, Literature, Language studies, Information Systems	Grammaticalization: how does it function?	Text analysis, Discourse analysis
Social	Sociology, Organisational science	Does social media make us lonely?	Opinion surveys Interviews Focus groups
Economic	Economics, Management science	Why is it that many institutions hold only modest amounts of foreign equity?	Input-output analysis Statistical analysis
Aesthetic	Aesthetics, Art, Music, Sport science, (Systems thinking?)	What is the line between art and non-art?	Observing, analysing creative practice
Juridical	Jurisprudence, Political Science	How may we compare Indian and Iranian laws?	Review of cases and histories,
Ethical / Attitudinal	Ethical theory	Why do people pursue hedonistic lifestyles?	Anthropological studies of attitude
Pistic / Faith	Theology, Some anthropology	What is the relationship between belief, commitment, courage and motivation?	Studies of beliefs, Exegesis of 'sacred' writings, Apologetics, Hermeneutics

Physiology

Sociolinguistics

Important note: Dooyeweerd warned that no suite of aspects is ever final. So we must use aspects with due caution. We should not be dogmatic about what aspects there are, what their kernel meanings are, nor how they are manifested above.

But, on the other, in arguing for various aspects, what he actually does is to implicitly presuppose a pluralistic origin of meaning. Dooyeweerd names the biblical ground-motive as a pluralistic ground-motive, perhaps the only one possible

In this way, Dooyeweerd's analysis of ground-motives with aspects could contribute significantly to such post-publication debates. He urged that presuppositions should be openly declared when publishing research—which, interestingly, prefigured many subsequent socio-critical and feminist thinkers.

Research in Different Fields

The above discussion applies, as far as I know, to all fields. Different fields center on different core aspects, as shown in Table 1. Each aspect makes a different kind of aim or research question meaningful (column 3), and type of research method appropriate (column 4).[30]

Conclusion

This chapter has briefly outlined how Dooyeweerd's ideas can help research in many fields from the mathematical and natural sciences, through the psychological ones to social sciences and humanities. We showed how awareness of aspects can help us find our way amidst the complexity of real-life experience of doing research, looked at how Dooyeweerd's transcendental critique of theoretical thought can help us understand what is going on in research, and looked at the range of fields by aspect.

Much more can be said, but these could make our research more systematic and productive, especially for interdisciplinary

30. For a fuller discussion of this, see A. Basden, "Understanding the Relationships between Fields of Research," *The Electronic Journal of Business Research Methods*, 19, no. 1 (2021): 27-41, Chapter 8 in Basden, *Foundations and Practice of Research*, or http://dooy.info/science.html.

research. A fuller discussion may be found in Basden,[31] with Chapter 11 giving examples of actual research using Dooyeweerd. To date, however, experience of doing so is patchy, so the challenge lies before us of expanding it.

31. Basden, *Foundations and Practice of Research*.