

We may also indicate several cases which witness that graphic tools are also occasionally used in academic study of Buddhism. Alexander Wynne used diagrams in his *The Origin of Buddhist Meditation* to demonstrate sequences of meditative objects in early Buddhism and Brahmanism.¹¹ Andrew Huxley in the article *Buddhist Case Law on Theft* states that a two-dimensional table presentation of offense types is very simple as compared with *Vinaya* casuistry.¹² Rupert Gethin in his *Path to Awakening*, when analyzing the meaning of 4 right efforts (*sammappadhāna*), presents “the schema of *samaṇamaṇḍika-sutta*”.¹³ He also builds up a chart of connections between various *mātikā* (canonical lists of terms) in another article of his.¹⁴

There are also a number of *Sutta* visualizations outside of an academic framework.

Dmytro Ivakhnenko, a translator of texts of the Pāli Canon into Russian, has built up a chart of conditioned arising (*paṭicca-samuppāda*), summarizing links given in various *Suttas*.¹⁵ Authors of the Wikipedia online encyclopedia developed several diagrams based on the Pāli Canon. The Wikipedia chart of 5 aggregates generally resembles Ivakhnenko’s diagram, but Ivakhnenko’s work seems to be much more elaborate.¹⁶ Another Wikipedia diagram is based on *Chachakka-sutta* (MN 148).¹⁷ Tables of *jhāna* factors are found in Wikipedia,¹⁸ materials of Leigh Brasington¹⁹ and other sources.²⁰

Andrew Olendzki published a series of *Sutta* translations rendered as tables in the *Insight Journal* of the Barre Center for Buddhist Studies. Particularly, he translated and tabliflicated *Brahmajāla-sutta*, *Satipaṭṭhāna-sutta*, *Anāthapindikovāda-sutta* and *Mahārāhulovāda-sutta*.²¹ As well as Bodhi, Olendzki combined material of several *Suttas* for a table when describing various aspects of 5 hindrances.²²

Some modern traditions of Buddhist practice do also use graphic models to present information. This is especially true to the tradition of Ven. Pa Auk Sayadaw, whose disciples Stephen Snyder and Tina Rasmussen designed a chart demonstrating possible ways of progression in the practice of meditation.²³ Tables and diagrams are extensively used in the “*Vipassanā Bhāvanā*” manual of Boonkanjanaram Meditation Center (Thailand).²⁴

The Buddha's Matrices and Tables: Inquiring into Structures of *Suttas*

Our basic hypothesis is that *Suttas* of the Pāli Canon in many cases represent certain information structures that in modern culture are usually represented as diagrams, tables and flowcharts (algorithms).

For the purposes of the present article we have decided to focus on table-related material. Diagrammatic material has already been well-represented in the above-mentioned works. Neither will we cover in this paper the topic of algorithms in the Buddha's teaching.

By table-like or table-related material we mean a certain type of repetitions included by Ven. Bhikkhu Bodhī in the "third kind". Namely, in some *Suttas* Buddha "multiplies" two or more lists, naming all the possible combinations of the elements of these lists. In a simple example, a list of two elements "beneficial and not beneficial" and another list of two "pleasant and unpleasant" taken together will make up four possible combinations: "beneficial and pleasant", "beneficial and unpleasant", "not beneficial and pleasant" and, finally, "not beneficial and unpleasant".

Depending on the *Sutta*, for each of the combinations Buddha gives a definition or recommends what to do in such a situation. We will call these two varieties "descriptive" and "prescriptive" respectively. In designing a table we will take one of the lists as a horizontal heading and another list as a vertical one. A definition or a recommendation of the Buddha for a particular combination will make up the content of a respective cell of a table.

We will also use the word "matrix" for this type of information structure. E.g. "2*3 matrix" will mean that this exposition involves two lists, one of two elements and another one of three. The word "table" will be used for the graphic representation of a matrix. We may also use words "two-dimensional", "three-dimensional" and so on as another way to refer to the number of lists involved in an exposition.

We have limited our research to *Suttas of Majjhima* and *Dīgha-nikāyas* as well as of the *Sutta-nipāta*. Having worked through this material we have found that the

Dīgha-nikāya and the *Sutta-nipāta* almost do not contain the types of exposition we were interested in, while the *Majjhima-nikāya* has a great deal of relevant *suttas*. Therefore, in this article we will deal with *Majjhima-nikāya* material only.

We are also aware that *Samyutta* and *Anguttara-nikāya* contain a significant number of relevant passages²⁵, but we decided to limit our research to MN due to time limits, leaving work with these two collections as an opportunity for further research. Although we refer to several AN *Suttas* just as analogous in structure to *Suttas* of *Majjhima-nikāya*.

And we will definitely not go into structures of *Paṭisambhidāmagga* and *Abhidhamma* which may give a vast amount of the material for analysis. Anyway, to our point of view, cases met in the *Majjhima* may well represent the whole variety of given text structures and are enough to come to certain conclusions concerning this type of *Sutta* structures.

Due to limitations of space in table format we usually reformulate *sutta* expressions, e.g., by writing “four *jhānas*” instead of the full formula of reaching these states. For the same reason we sometimes will not include in tables certain portions of the text (such as similes) which are although present in the *Suttas* in respective places.

In our renderings of *Suttas* we will follow the English terminology developed by Ven. Bhikkhu Bodhi and give quotations from *The Middle Length Discourses of the Buddha*.²⁶

So, one of the basic table structures met in many parts of the Canon is 2*2 matrix. In such a matrix two criteria are taken, and the absence or presence of each of them makes up 4 logical possibilities.

Criteria for building a 2*2 matrix in the *Cūḷadharmmasamādāna-sutta* (MN 45)²⁷ are pleasantness of a certain undertaking now and in the future. So, we take this example for building the first 2*2 table.

Table 1. *Cūḷadhammasamādāna-sutta* (MN 45)

	Ripens in the future as pain	Ripens in the future as pleasure
Painfull now	Harsh asceticism	Lead holy life despite pain and grife
Pleasant now	Divert themselves with women wanderes seeing no harm in sensual pleasures	four <i>jāhāns</i>

Many variations of this template are met in the Canon, and we will name just some of them. Matrix of MN 5²⁸ is built on the criteria of whether one “has a blemish” and if one understands this. MN 142²⁹ distinguishes donations asking whether they are purified by the giver and the receiver. AN 4.94³⁰ gives advice to those who have developed *samatha*, but not *vipassanā*, vice versa, both of these and neither of them. In the MN60³¹ people are divided into four types on the criteria of whether they torment themselves and others.

AN 4.96,³² 4.99³³ and MN 51³⁴ together follow almost the same pattern, questioning, if a certain deed brings benefit to oneself and to others. In the MN57³⁵ dark and white actions, although seemingly being antagonists of each other, are regarded in this matrix as two distinct criteria (Table 2).

Table 2. *Kukkuravatika Sutta* (MN 57)

Table 2. *Kukkuravatika-sutta* (MN 57)

	Dark	dark
Bright	Dark and bright with dark-and bright	bright with bright result
Not bright	Dark with dark result	Neither dark nor bright with neither-dark-no-bright result, action that leads to the detruccion of action

Sometimes a 2*2 matrix is specially used to demonstrate that only one of the criteria taken matters, while another one should be ignored, as in MN 7.³⁶

We may find an example of 3*3 matrix in MN13³⁷ (*Mahādukkhakkhandha-sutta*) presented in the Table 3. Two lists that form this matrix are “sensual pleasures, material form and feelings” and :“gratification,danger,escapes”.

Table 3. *Mahādukkhakkhandha-sutta* (MN 13)

	Sensual Pleasures	Material Form	Feelings
Gatification	5 cords of sensual pleasure	Pleasure and joy of arising dependent on beauty of a girl	4 <i>jhānas</i> with feeling free from affiliation
Danger	Losing property, quarreling, fighting, crimes, tortures, low rebirth	The same woman old or her body as a corpse	Feelings are impermanent, suffering, subject to change
Escape	Abandonment of desire and lust for sensual pleasures / material form / feelings		

With the addition of another pair of possibilities to 2*2 matrix we receive a three-dimensional matrix with eight cells (2*2*2). Three-dimensional matrices will be visualized here by adding subheadings to the template of 2-dimensional matrix.

Particularly interesting example of such matrix is present in MN 58³⁸ (*Abhayarājakumāra-sutta*) in which Buddha explains his criteria for saying or not saying a certain thing. Three pairs of criteria are taken: if the statement is true or untrue, beneficial or not, and, finally, pleasant or unpleasant (Table 4).

The first thing that attracts our attention is that the *Sutta* lists only 6 possibilities out of a mathematical 8. The two excluded are at the intersection of “untrue” and “beneficial”. This might be explained by the fact that the categorical ethics of early Buddhism consider telling lies unskillful under any circumstances.

The second interesting point of this matrix is that the criterion of pleasantness does not influence the content of the table's cells. Any speech not beneficial is avoided

and for any beneficial one the *Tathāgata* knows proper time to say. Presumably this may mean that the “proper time” for saying a pleasant thing differs from the “proper time” to speak of something less acceptable to the addressee.

Table 4. *Abhayarājakumāra-sutta* (MN 58)

		True	Untrue
Beneficial	Pleasant	Knows proper time for saying	This option is not mentioned: obviously impossible
	Unpleasant		
Not beneficial	Pleasant	Doesn't say	
	Unpleasant		

The next step in the complexity of table-like expositions of *Suttas* is MN 61⁸ (*Ambalaṭṭhikarāhulovāda-sutta*), which mathematically is a 3*3*2 matrix (Table 5). The content of the matrix's cells depends on only two of these three coordinates, namely on the future, present or past time and (un)wholesomeness, with the only exception. In other cases the third element shows that the action determined by above-mentioned criteria concerns every type of activity, either bodily, verbal or mental.

Table 5. *Ambalaṭṭhikarāhulovāda-sutta* (MN 61)

	Bodily action	Verbal action	Mental action
Future	Un-wholesome	“you definitely should not do” so	
	Wholesome	“you may do” so	
Present	Un-wholesome	“you should suspend” it	
	Wholesome	“you may continue” it	
Past	Un-wholesome	“you should confess... reveal it, lay it open... having confessed it... you should undertake restraint for the future”	“you should be repelled...” by it, “...undertake restraint for the future”
	Wholesome	“you can abide happily and glad, training day & night in wholesome states”	

Table 5. *Ambalaṭṭhikarāhulovāda-sutta* (MN 61)

The *Samaṇamañḍika-sutta* (MN 78) contains a 2*2*4 matrix (Table 6).⁴⁰ While first two lists are “habits and intentions” and “wholesome and unwholesome”, the third list follows the model of four noble truths, representing object, its origin, cessation and a path to the last.

Table 6. *Samaṇamañḍika-sutta* (MN 78)

	Habits		Intentions	
	Unwholesome	Wholesome	Unwholes	Wholesome
What they are	Unwholesome / wholesome bodily, verbal actions and evil / purification of livelihood		Intentions of sensual desire / renunciation, (non-) ill-will, (non-) cruelty	
Their origin	Mind (un)affected by lust, hate or delusion		Perceptions of sensual desire / renunciation, (non-) ill-will, (non-) cruelty	
Their cessation	Abandonment of bodily, verbal, mental misconduct and evil livelihood for their antagonists	A <i>bhikkhu</i> is virtuous, but does not identify himself with his virtue; deliverance of mind, deliverance by wisdom	1 st <i>jhāna</i>	2 nd <i>jhāna</i>
Way to the cessation	4 right efforts			

In the *Indriyabhāvanā-sutta* (MN 152)⁴¹ we see 4 methods of the development of faculties that are:

1. the method of *Brāhmin Pārāsiriya*, rejected by the Buddha;
2. the method in the discipline of a noble one, described in 3 parts: the method itself; 6 similes for its application to states arisen conditioned by each of sense-

- media; and, finally, the result of application;
3. the method used by a person in training;
 4. the method of a noble one with developed faculties, which is described as 5 opportunities to control way of perception.

Each method is repeatedly applied to each of 6 sense-media. The expositions of the methods are identical with each of 6 sense-media with two exceptions. First, the method of *Brāhmin Pārāsiriya* is explained only in relation to the senses of sight and hearing, leaving out the other four sense-doors. Second, a unique simile is present in the second method in each of the six iterations.

So, if we represent it as a table, we have various methods of development of faculties on one axis and six sense-media on the other (Table 7).

Table 7. *Indriyabhāvanā -sutta* (MN 152)

	<i>Brāhmin Pārāsiriya</i>	Supreme development of the faculties in the Noble One's Discipline	Disciple in higher training, one who has entered upon the way	Noble one with developed faculties
Seeing	This action is not performed	Understands thus: "There has arisen.... But that is conditioned, gross, dependently arisen; this is peaceful, ... sublime, that is, equanimity" ... cease in him and equanimity is established	"He is repelled, humiliated, and disguised by... arisen agreeable thing... disagreeable thing... agreeable & disagreeable thing."	5 ways of controlling perception
Hearing				
Smelling	(No description)			
Tasting				
Touching				
Cognizing				