How to Transcend Duality?

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ABSTRACT

This topic is taught in Lecture Series #3 in Year-1 of the AWE Buddhist university level curriculum. Sentient beings evolved to recognize phenomena in this universe by duality concepts, [二邊] whereby realities are perceived in contrasting pairs such as light/dark, hungry/full, hot/cold, life/death, good/evil, heaven/hell, Yin/Yang, samsara/nirvana, etc. Whether the universe is finite or infinite is arguably the most mind-boggling question that the Sakyamuni Buddha refused to answer. Notably, members in a contrasting pairs are opposites [對立] and mutually exclusive [不相融]. Enlightened beings have transcended the contradiction of duality. The 6th Patriarch, Huineng, stressed transcending duality is central to the Chinese Zen tradition. How can we enter the "Dharma Door of Non-duality [入不二法門]"? Open mind is the key.

An open mind is the prerequisite for learning Buddhism. Human has a tendency to function within their own thinking boxes. Yet, all enlightened beings exhibit enormous open mindedness, wide enough to encompass all phenomena in the dharma realm (dharma-dhatu [法界]). If opening up our mind is such a crucial fundamental, where is the curriculum to open our mind? The teaching is found in the Avatamsaka Sutra [大方廣佛華嚴經], "Enter the dharma realm [入法界品]" Section 12 [善財童子第十二參]. The *Juvenile Master of Self-reliance* [自在主童子] taught the *Juvenile Master of Value* [Sudhana 善財童子] to count increasingly large numbers. He started from one koti unit (10 million = 10,000,000 = 8 digits) to unspeakabe^2 unit [不可說轉] (1860919194098882222065329884392482406 5 digits) over 123 operations of squaring. At every square step, each infinitesimal number was quantified by the provision of a unit of measurement for that product. This exercise accomplishes the following learning objectives:

1. The students discover emotional resistance or close mindedness to this dull/repetitive process of counting numbers, which requires concentration of the mind.
2. Close mindedness can be quantified by discovering one's thinking box at the point when the huge number is regarded as infinity.
3. Recognize that infinity is a concept created by the close mind or limited thinking box.
4. The quality/quantity dual is transcended as the abstract term "unspeakable" becomes a concrete "speakable" unit. To accomplish this simple yet difficult task (another transcendental pair) of counting numbers monotonously, the student must be in a state of concentration, focus and unlimited attention span; a Samadhi state [入定].
5. In Samadhi, the student experiences firsthand that finite/infinite is relative to one's own life-force; that finite/infinite can co-exist and not mutually exclusive; and yet comfortable with the traditional definition of finite versus infinite.

This commentary unites Avatamsaka teaching and Dhyāna/Zen teaching. In order to simplify these profound teachings, this article presents three modules prerequisite to the Avatamsaka module.

Key words: Transcend duality, enlightenment, metaphysics, thinking box, open mind, Avatamsaka, "Enter the dharma realm", Sudhana, Zen, 6th Patriarch Platform Sutra, Lankavatara Sutra.

INTRODUCTION

The topic of "How to Transcend Duality" is taught in Lecture Series #3 in Year-1 of the AWE university level curriculum. Sentient beings recognize phenomena by duality concepts [二邊] whereby realities are perceived in contrasting pairs such as light/dark, hot/cold, heaven/hell, samsara/nirvana, etc. The Sakyamuni Buddha refused to answer duality questions such as the "Ten Inexpressible" (Walpola Rahula 1958).

Fig. 1. Non-duality door with high steps signifying an elevation of life force is both the required cause and the beneficial effect of passing through this door.

1. Is the universe eternal?
2. Is the universe not eternal?
3. Is the universe finite?
4. Is the universe infinite?
5. Is soul the same as body?
6. Is soul one thing and body another thing?
7. Does the Tathagata exist after death?
8. Does the Tathagata not exist after death?
9. Does the Tathagata both (at the same time) exist 是 and not exist 非 after death?
10. Does the Tathagata both not exist 非是 and not not 非非 exist?

The inexpressible constitute contrasting pairs. Each dual is opposite and mutually exclusive. How can enlightened beings transcend the contradiction of duality? The etymology of the Chinese word for "enlightenment [開悟]" is "open [開] my [吾] heart [心]", which literally means open mindedness. Over time, "Open my heart [開心]" has become synonymous with "joyful", which is an attribute of nirvana or liberation from sufferings. How can we enter the "Dharma Door of Non-duality [入不二法門]"? The key is to open our minds.

Fig. 2. Non-duality door with long passage signifying the first correct step entering Buddhism but still a long way from enlightenment, which is represented by the Main Palace Hall of the Buddha 大雄寶殿.

Transcending duality is such an important prerequisite for Buddhism that this critical concept/teaching is preserved and conveyed by the temple architecture. The door of duality is the arch before entering the path to the temple (Fig. 1).

After entering the door of non-duality, it is still a long way to enlightenment (Fig. 2). In Fig. 1 and 2, the door of non-duality in Chinese language is written as "The Not-Two Dharma Door 不二法門".

After passing through the non-duality door, the path lead to the Maitreya Palace Hall where the four kings of the first level of heaven reside. The esoteric meanings of Maitreya and the four kings are outside the scope of this article, which is only focus on passing through the door of non-duality. After the Palace of Maitreya and the four kings, the path eventually lead to enlightenment, which is represented by the Main Palace Hall of the Buddha 大雄寶殿?

Since opening our minds is such a fundamental and crucial key to open the "Dharma Door of Non-duality", where is the curriculum to open our mind? The teaching is found in the Avatamsaka Sutra

[大方廣佛華嚴經], "Enter the dharma realm [入法界品]" Section 12 [善財童子第十二參]. A similar teaching is repeated in the same sutra, Scroll #45, Asamkhya Article, Chapter 30 (卷四十五，阿僧祇品，第三十章) where the Tathagata instructed the Bodhisattva *Ruler of Heart* (心王菩薩). In fact, the early foundation of this teaching can be located in the Lankavatara Sutra Scroll #1, Chapter 1, Section 1, "Speaking about the Heart by All Buddha" (楞伽阿跋多羅寶經卷第一, 一切佛語心品第一之一) in the conversation between the Bodhisattva *Great Awareness* (Mahamati 大慧) and the Tathagata. Why are these teachings not popular? The reason is that without prerequisite steps, the teaching is too profound to grasp. Furthermore, the profundity in the sutra is due to combining the two lessons as one. The two difficult lessons are "How to open our mind" and "How to transcend duality". This article identifies the missing prerequisites and arranges them in three modules prior to the Avatamsaka module. In addition, this article separates the Avatamsaka method of "How to open our mind" from "How to transcend duality". The flow of this article is laid out as follows:

Section 1. How to open our mind

As mentioned above, opening up our mind is the key to transcend duality. The question becomes how to open our mind? How to expand our horizon? What tool can we use? From ancient times up to the digital age today, the most simple and universal tool is using numbers. In this section, three arithmetic modules are employed to illustrate the same mind-opening technique. The common theme throughout is to use simple mathematics to measure intellectual maturity.

Fig. 3. Baby has no concept of numbers.

Section 1.1 The Childhood Development Module

This module is best to illustrate the maturation process of intellectual development. The module explains how the formation of numerical concept parallels intellectual maturation. Let us start from the beginning as babies. The newborn learn about the world by the 5 senses; seeing, listening, smelling, tasting, and touching. These 5 senses stimulate the brain to produce the 6th sense. At this initial stage, the baby's 6th sense has no concept of numbers yet (Fig. 3).

The baby's concepts are based on the quality of the experience, i.e. full/hungry, pleasant/unpleasant, warm/cold, etc. In other words, the baby learns about life by forming duality concepts. Duality concepts are qualitative, not quantitative.

Fig. 4. Toddler begins to learn concepts through playing.

As the infant grows, it begins to learn and think by play, observation and exploring the environment (Fig. 4). The toddler's thinking process begins to develop to include semi-quantitative concepts at this stage, i.e. how pleasant/unpleasant, how full/hungry, how warm/cold. For example, somewhat pleasant, unbearably unpleasant, very full, a little bit hungry, comfortably warm, extremely cold, etc. Note that

these concepts are best described as feelings, although they convey a connotation of "more or less". The concept of duality still prevail but becoming less distinct/obvious. Quantitative concept (how much) such as number and value is entirely lacking (Fig. 4).

As the child progresses to pre-school and school age, quantitative concept beginning with counting numbers 1, 2, 3... are taught (Fig. 5).

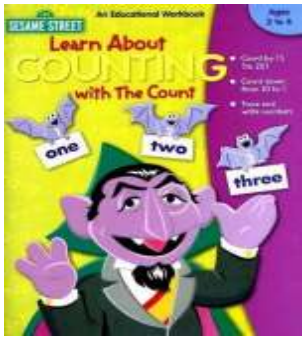

Fig. 5. Early childhood mathematical education..."The count in Sesame Street".

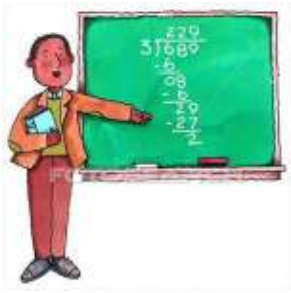

Fig.6. Grade school mathematic consolidating quantitative concept based on pure numbers.

As a child, we learn how to count, first with our fingers and later on with teaching devices.

In grade school, we are taught numbers and simple computation with addition, subtraction, multiplication and division (Fig.6). Finally, higher abstract mathematics such as algebra, calculus is developed to allow our mind to process and understand quantities of enormous complexity (Fig. 7).

Fig. 7. complex mathematics.

The above illustration from newborn to adulthood serves to explicate several important points:

1. Numbers are just numbers, no matter how simple (Fig. 5) or how complicated (Fig. 6)
2. An important aspect of the development of intelligence involves conceptual maturation from qualitative (Fig. 3) to semi-quantitative (Fig. 4) to quantitative (Fig. 5-7).
3. Quantification is merely a sophisticated process of analysing/dissecting a qualitative abstract concept into its finite components by means of relative degree or scale.
4. Although most of us are not interested in comprehending complex mathematics (Fig. 7), we would concur that such complicated mathematics are valid and comprehensible if we choose to learn it.

Section 1.2 The 10^{n+1} Module

This module is best to illustrate "Thinking Boxes". In the following exercise, we will use simple numbers to illustrate what we mean by "thinking boxes" and eventually, how the exercise breaks through the thinking boxes. This module employs very simple arithmetic by adding one zero at a time to the number, step-by-step, following a flawless logic. Let us start with the small number ten with 2 digits (Table 1, first row below the header row). By adding one zero to the number 10, it becomes one hundred with 3 digits (Table 1, second row below the header). This easy-to-follow process creates a series of numbers with ever increasing values. If we keep on going continuously, we can count up to very large numbers without any problems. The problem arises when most people do not have the large number concept or patience. Consequently, they create fictitious names for the large numbers that they are unfamiliar with, e.g. Jillion and Gazillion (Table 1, second and third row

from the bottom). If the person refuses to continue counting, he/she might regard the next 10^{n+1} as infinity (Table 1, last row). This simple module illustrates the 10^{n+1} series is a logical progression that has no end. To stop the progression by suddenly introducing the concept of "infinity" at any step is entirely illogical. According to this logical deduction, the entire concept of infinity is invalid. If a person regards trillion is the largest meaningful unit, then that person is boxed inside the trillion thinking mode. Similarly, if a person regards quadrillion as the largest unit, then that person has broken through the trillion thinking box but is still boxed inside the quadrillion thinking box. It follows that Table 1 can be depicted as layers of thinking boxes (Fig. 8).

Table 1. The 10^{n+1} progression

Unit	Log increments	Digits
Ten	10	2
Hundred	100	3
Thousands	1000	4
Millions	1,000,000	7
Billions	1,000,000,000	10
Trillions	1,000,000,000,000	13
Quadrillion	1,000,0000,000,000,000	16
Gazillion	1,000,000,000,000,000,000	19
zillion, jillion, and gazillion, are fictitious names		
"Infinity"	1,000,000,000,000,000,000,000	**22**

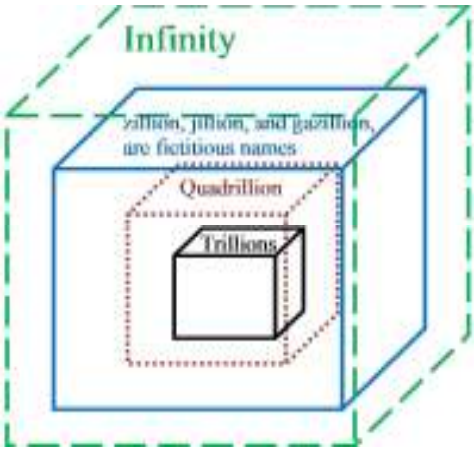

Fig. 8. The thinking boxes

Fig. 8 illustrates that if our thinking boxes expand, our limit goes beyond zillion, to jillion, to gazillion, and to any fictitious names that we are willing to assign. Ultimately, when we reach the limit of our thinking boxes, any larger number beyond that thinking box is given the name "INFINITE". Therefore, Fig. 8 clearly assert that the concept of infinity represent just another layer of thinking box. Note that the infinity thinking box can be after the trillion-box or gazillion-box or anywhere depending on the individual.

Section 1.3. The 10^2 Module

This module is best to open up the mind which is the same as breaking through thinking boxes. This module is simply the square of the numbers (Table 2). The square operation produces a rapid progression to huge numbers thereby forcing the mind to confront its own thinking box quickly. Two examples are given. The first example is the squaring of the number 10. The second one is the module described in the Avatamsaka Sutra. The 10^2 Module begins with squaring the number 10 (Table 2). It serves to bridge between the previous 10^{n+1} Module and the Avatamsaka Module in the next section.

Table 2. The 10^2 Module

Unit	Square Increment	Digits
Hundred	10 x 10 = 100	3
Ten thousand	100 x 100 = 10,000	5
Hundred million	10,000 x 10,000 = 100,000,000	9
Hundred quadrillion	100,000,000 x 100,000,000 = 10,000,000,000,000,000	17
"Infinity"	10,000,000,000,000,000 x 10,000,000,000,000,000 = infinity	**33**

With the Square Increment, the numbers are increasingly much larger and faster. i.e., for Hundred quadrillion (Table 2, second last row), it is Hundred million x Hundred million, (100,000,000 x 100,000,000 = 10,000,000,000,000,000) and contains 17 digits. The next operation is already Hundred quadrillion x Hundred quadrillion (10,000,000,000,000,000 x 10,000,000,000,000,000). Merely 5 operations are required before arriving at the "Infinity" thinking box (Table 2, last row).

Today, 17% of the world population surf the internet or about 1.2 billion internet users. The most popular search engine is Google. The word Google is actually derived from the word "googol". One googol = 1.0×10^{100} which is a very huge number. Google uses the significance of this huge number as the vision and the signature for the company.

Section 1.4. The Avatamsaka Sutra Module

This module is best for transcending duality, a topic that will be detailed in Section 2.1. This section focuses on the "mind-opening" feature conveyed by this module. The text is found in the 80 Scroll Avatamsaka Sutra [大方廣佛華嚴經, 八十卷], Scroll #65, "Enter the dharma realm [入法界品]" Chapter 39, Section 6 [善財童子 (Sudhana) 第十二參]. *The Juvenile Master of Self-reliance* [自在主童子] taught Sudhana (*the Juvenile Master of Value*) [善財童子] to count increasingly large numbers. He started from one koti unit [俱體] (10 million = 10,000,000 = 8 digits number) to unspeakabe[2] unit [不可說轉] (1860919194098882222065329884392482406 5 digits number) over 123 operations of squaring. In Table 3–18, the first column designates every square step; the second column provides a unit of measurement for that product; the third column quantifies each infinitesimal number. The Sutra text (Hsüan Hua 1981) reads:

> *Good man, I am also capable of Bodhisattva's knowledge of numeration, specifically that: A hundred Lakshsa is one Koti. A Koti squared is one Ayuta. An Ayuta squared is one Nayuta. A Nayuta squared is one Vimura...An Upagma squared is one Incalculable. An incalculable squared is one Incalculable Turning. An Incalculable Turning squared is one Limitless. A Limitless squared is one Limitless Turning. A Limitless Turning Squared is one Boundless...An Uncountable Squared is one Uncountable Turning. An Uncountable Turning squared is one Inestimable. An Inestimable squared is one Inestimable Turning. An Inestimable Turning squared is one Inconceivable...An Ineffable squared is one Ineffable Turning. An Ineffable Turning squared is one Ineffably Ineffable. Again this Ineffably squared is one Ineffably Ineffable Turning. Good man, by employing a Bodhisattva's method of calculation I can compute vast collection of sand grains piled measureless vojanas high.*

At this point, students are asked to counting the numbers together verbally following Table 3 through Table 18. By counting the number out loud, one can gauge the energy level of oneself. Some may feel excited and some may feel bored, depending on one's energy level and the level of one's thinking box. All the reaction from the participants will be noted and observed. This is very important for reaping the benefits of Avatamsaka Zen (Section 2.2).

The sutra employed the n^2 module to force open our mind in a way similar to the previous three modules. But, what does this have to do with "transcend duality"? This is explained in section 2.

Table 3. The Avatamsaka Sutra Module

	Avatamsaka Sūtra	**Number of Digits**
1	10,000,000 = 10 million = 1 koti	8
2	koti x koti = ayuta	15
3	ayuta x ayuta= niyuta	29
4	niyuta x niyuta = bimbara	57
5	bimbara x bimbara = kinkara	113
6	kinkara x kinkara = agara	225
7	agara x agara = pravara	449
8	pravara x pravara = mapara	897

Table 4. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
9	mapara x mapara = tapara	1793

10	tapara x tapara = sima	3585
11	sima x sima = yama	7169
12	yama x yama = nema	14337
13	nema x nema = avaga	28673
14	avaga x avaga = mrgava	57345
15	mrgava x mrgava = viraga	114689
16	viraga x viraga = vigava	229377

Table 5. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
17	vigava x vigava = samkrama	458753
18	samkrama x samkrama = visara	917505
19	visara x visara = vibhaja	1835009
20	vibhaja x vibhaja =vijangha	3670017
21	vijangha x vijangha = vishoda	7340033
22	vishoda x vishoda = vivaha	14680065
23	vivaha x vivaha = vibhakta	29360129
24	vibhkata x vibhakta = vikhata	58720257

Table 6. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
25	vikhata x vikhata = ilana	117440513
26	ilana x ilana = avana	234881025
27	avana x avana = thavana	469762049
28	thavana x thavana = viparya	939524097
29	viparya x viparya = samaya	1879048193
30	samaya x samaya = viturna	3758096385
31	viturna x viturna = hetura	7516192769
32	hetura x hetura = vicara	15032385537

Table 7. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
33	vicara x vicara = vyavasta	30064771073
34	vyavasta x vyavasta = abhyundgata	60129542145
35	abhyudgata x abhyudgata = vishishta	120259084289
36	vishishta x vishishta = nilamba	240518168577
37	nilamba x nilamba = harita	481036337153
38	harita x harita = vikshoba	962072674305
39	vikshoba x vikshoba = halita	1924145348609
40	halita x halita = hari	3848290697217

Table 8. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
41	hari x hari = aloka	7696581394433
42	aloka x aloka = drshvanta	15393162788865
43	drshvanta x drshvanta = hetuna	30786325577729
44	hetuna x hetuna = ela	61572651155457
45	ela x ela = dumela	123145302310913
46	dumela x dumela = kshemu	246290604621825
47	kshemu x kshemu = eluda	492581209243649

48	eluda x eluda = bhaluda	985162418487297

Table 9. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
49	bhaluda x bhaluda = samata	1970324836974593
50	samata x samata = visada	3940649673949185
51	visada x visada = pramatra	7881299347898369
52	pramatra x pramatra = amantra	15762598695796737
53	amantra x amantra = bhramantra	31525197391593473
54	bhramatra x bhramantra =gamantra	63050394783186945
55	gamantra x gamantra = namantra	126100789566373889
56	namantra x namantra = nahimantra	252201579132747777

Table 10. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
57	nahimantra x nahimantra = vimantra	504403158265495553
58	vimantra x vimantra = paramantra	1008806316530991105
59	paramantra x paramantra = shivamantra	2017612633061982209
60	shivamantra x shivamantra = delu	4035225266123964417
61	delu x delu = velu	8070450532247928833
62	velu x velu = gelu	16140901064495857665
63	gelu x gelu = khelu	32281802128991715329
64	khelu x khelu = nelu	64563604257983430657

Table 11. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
65	nelu x nelu = bhelu	129127208515966861313
66	bhelu x bhelu = kelu	258254417031933722625
67	kelu x kelu = selu	516508834063867445249
68	selu x selu = pelu	1033017668127734890497
69	pelu x pelu = melu	2066035336255469780993
70	melu x melu = sarada	4132070672510939561985
71	sarada x sarada = bherudu	8264141345021879123969
72	bherudu x bherudu = kheludu	16528282690043758247937

Table 12. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
73	kheludu x kheludu = maludu	330565653800875164958 73
74	maludu x maludu = samalu	661131307601750329917 45
75	samalu x samalu = athava	132226261520350065983489
76	athava x athava = kamala	264452523040700131966977
77	kamala x kamala = agava	528905046081400263933953
78	agava x agava = ataru	105781009216280052786 7905
79	ataru x ataru = helura	211562018432560105573 5809
80	helura x helura =mirahu	423124036865120211147 1617

Table 13. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
81	mirahu x mirahu = carana	846248073730240422294 3233
82	carana x carana = dhana	169249614746048084458 86465
83	dhana x dhana = pramada	338499229492096168917 72929

84	pramada x pramada = nigama	676998458984192337835458 57
85	nigama x nigama = upavarta	135399691796838467567091713
86	upavarta x upavarta = nirdesha	270799383593676935134183425
87	nirdesha x nirdesha = akshaya	541598767187353870268366849
88	akshaya x akshaya = sambhuta	108319753437470774053673 3697

Table 14. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
89	sambhuta x sambhuta = mamama	216639506874941548107346 7393
90	mamama x mamama = avada	433279013749883096214693 4785
91	avada x avada = utpala	866558027499766192429386 9569
92	utpala x utpala = padma	173311605499953238485877 39137
93	padma x padma = sankhya	346623210999906476971754 78273
94	sankhya x sankhya = gati	693246421999812953943509 56545
95	gati x gati = upama	138649284399962590788701 913089
96	upama x upama = aupamya	277298568799925181577403 826177

Table 15. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
97	aupamya x aupamya = incalculable	554597137599850363154807 652353
98	incalculable x incalculable = incalculable^2	110919427519970072630961 5304705
99	incalculable^2 x incalculable^2 = incalculable^4	221838855039940145261923 0609409
100	incalculable^4 x incalculable^4 = measureless	443677710079880290523846 1218817
101	measureless x measureless = measureless^2	887355420159760581047692 2437633
102	measureless^2 x measureless^2 = measureless^4	177471084031952116209538 44875265
103	measureless^4 x measureless^4 = boundless	354942168063904232419076 89750529
104	boundless x boundless = boundless^2	709884336127808464838153 79501057

Table 16. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
105	boundless ^{2} x boundless ^{2} = boundless ^{4}	141976867225561692967630 759002113
106	boundless^4 x boundless^4 = incomparable	283953734451123385935261 518004225
107	incomparable x incomparable= incomparable^2	567907468902246771870523 036008449
108	incomparable^2 x incomparable^2 = incomparable^4	113581493780449354374104 6072016897
109	incomparable^4 x incomparable^4 = uncountable	227162987560898708748209 2144033793
110	uncountable x uncountable = uncountable^2	454325975121797417496418 4288067585
111	uncountable^2 x uncountable^2 = uncountable^4	908651950243594834992836 8576135169
112	uncountable ^{4} x uncountable ^{4} = unequalled	181730390048718966998567 37152270337

Table 17. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	**Number of Digits**
113	unequalled x unequalled = unequalled^2	363460780097437933997134 74304540673
114	unequalled^2 x unequalled^2 = unequalled^4	726921560194875867994269 48609081345
115	unequalled^4 x unequalled^4 = inconceivable	145384312038975173598853 897218162689
116	inconceivable x inconceivable = inconceivable^2	290768624077950347197707 794436325377
117	inconceivable^2 x inconceivable^2 = inconceivable^4	581537248155900694395415 588872650753
118	inconceivable^4 x inconceivable^4 = immeasurable	116307449631180138879083 1177745301505
119	immeasurable x immeasurable = immeasurable^2	232614899262360277758166 2355490603009
120	immeasurable^2 x immeasurable^2 = immeasurable^4	465229798524720555516332 4710981206017

Table 18. The Avatamsaka Sutra Module continue

	Avatamsaka Sūtra	Number of Digits
121	immeasurable ^{4} x immeasurable ^{4} = unspeakable	93045959704944111103266494219624120 33
122	unspeakable x unspeakable = unspeakable^{2}	18609191940988822220653298843924824065
123	unspeakable^{2} x unspeakable^{2} = unspeakable^{4}	37218383881977644441306597687849648129
124	Unspeakable^{4} x Unspeakable^{4} = unspeakably unspeakable	74436767763955288882613195375699296257
125	unspeakably unspeakable x unspeakably unspeakable = untold	?

Section 2. How to Transcend Duality

Section 2.1 Method to Transcend Duality according to the Avatamsaka Sutra

The dictionary definitions of the dualistic terms, finite and infinite, are as follows:

Finite – having bounds or limits; **measurable**; capable of being completely counted; not infinite or infinitesimal; not zero.

Infinite – unlimited or **immeasurable**; indefinitely or exceedingly great.

By dictionary definitions, the terms finite and infinite are mutually exclusive; what is finite cannot be infinite and *vice versa*. Yet, all 4 mathematical modules assert a flawless logic that infinity does not exist. Therefore, the duality concept of finite versus infinite has been transcended by following the logic of the four modules. Although the first 3 modules presented today also embed this message of transcendence, the Avatamsaka module is the original grandfather module some 2000 years ago.

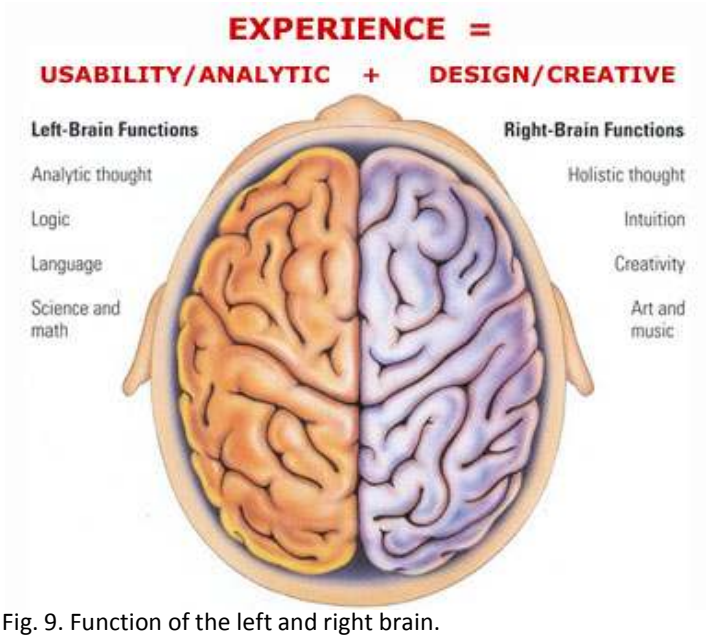

Fig. 9. Function of the left and right brain.

A unique feature exclusive to the Avatamsaka module that is absent from the preceding 3 modules is elucidated below. At Row 97 of Table 15, the word "incalculable" is actually a calculable number. The Sutra continues this irony of deliberately using immeasurable terms to designate measurable numbers. These terms span from Row 97 "incalculable" to Row 125 "untold" including terms such as measureless, boundless, incomparable, unequalled, inconceivable, immeasurable, unspeakable, unspeakably and untold. We can appreciate the intention of the Sutra. It shows us how to transform the above abstract, qualitative descriptive terms into concrete, quantitative measurable values. Buddhism is to transform both qualitative and quantitative knowledge into wisdom. The wisdom of the Sutra is in the irony of using the same word to carry a dual meaning of both quality and quantity. The Sutra uses duality to transcend duality; fight fire with fire! In doing so, the same word is simultaneously interpreted qualitatively by the right brain and quantitatively by the left brain (Fig. 9). When the left and the right brain work together, the wise mind emerges (Fig. 10). Whether the universe is finite or infinite is arguably the most mind-boggling question. Now we can understand why the Sakyamuni Buddha refused to answer the 10 Inexpressible questions (listed in the Introduction). The questions are phrased in the duality trap. The person asking the questions wants to

hear a preconceived, over-simplified answer within the yes/no thinking box. If the teacher points out this thinking box narrow-mindedness, the student would feel insulted. Answering such duality questions is impossible unless the questioner has been taught the four modules and has transcended duality. That is why, the only appropriate response would be for the teacher to keep silent.

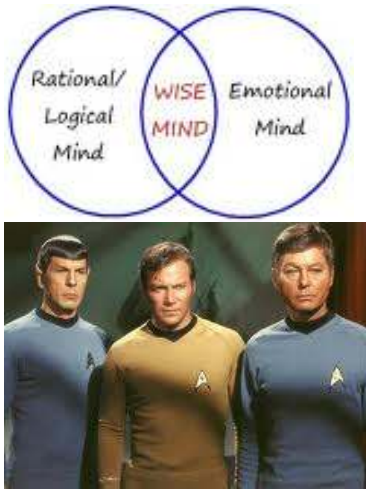

Fig. 10 The wise mind

Let us deal with a pair of inexpressible questions, for example, is the universe finite or infinite? The answer is the universe appear infinite to most people with small thinking box throughout history. The advance of science today has open up our mind and broken through thinking box confinement. Scientific cosmology educated us that our universe is finite since the Big Bang. Therefore, these questions are regarded as inexpressible during Sakyamuni's time. About 500 years after Sakyamuni, Lankavatara Sutra and Avatamsaka Sutra provided modular answers.

Section 2.2 Avatamsaka Zen

Students who experienced the teaching by the Avatamsaka module will enjoy the following benefits:

1. The dull and repetitive process of counting numbers forces the student to experience his/her own emotional resistance to this dharma teaching. This resistance is a measure of close mindedness.
2. The degree of close mindedness is quantifiable by the student's refusal to continue this simple mathematical operation. Rejection occurs when the student decides at a certain point that the value of the one number has exceeded his/her thinking box and thus has become irrelevant, meaningless, and useless and might as well be infinity.
3. Recognize that infinity is a concept created by the close mind or limited thinking box.
4. When the student continues expanding this infinitesimal numbering scheme, every number is quantifiable no matter how large. The quality/quantity dual is transcended as the abstract term "unspeakable" becomes a concrete "speakable" unit. To accomplish this simple yet difficult task (another transcendental pair), the student must be in a state of concentration, focus and unlimited attention span; in other words, in a Samadhi state [入定] when the life force is strong while the mind is relaxed and focused.
5. In this state, the student experiences firsthand that finite/infinite is relative to one's own life-force; that finite/infinite can co-exist and not mutually exclusive; and yet comfortable with the traditional definition of finite versus infinite. Duality is relative, transcendence is absolute.

Upon detail examination of the five benefits, one discovers that the Avatamsaka module is in fact a Zen training exercise. Benefits #1 & 2 are akin to Anapanasati (數息觀) by which the student gauges his/her life force by the contemplation of feelings. Benefit #3, 4 & 5 are Zen visualization by contemplation of Dharma. Benefit #4 is Samadhi by contemplation of the mind. Therefore, this subtle/hidden Avatamsaka Zen practice may be regarded as Avatamsaka esoteric teaching as well.

According to the 6th Patriarch of the Chinese Zen tradition, Huineng (六祖惠能), he professed that wisdom and Samadhi are two sides of the same coin; a dual that occurs simultaneously.

> *"...do not be confused and say that concentration and wisdom are different. Concentration and wisdom are one substance, not two. Concentration is the substance of wisdom, and wisdom is the function of concentration. Where there is wisdom, concentration is in the wisdom. Where there is concentration, wisdom is in the concentration..."* (Hsüan Hua 2001, Chapter 4 Concentration and Wisdom 定慧品第四).

Upon close inspection of the five points benefit, each of the points actually includes both Samadhi and wisdom. In fact all five can be integrated into a single Samadhi-Wisdom expression in accordance with the teaching of Master Huineng. This is how the teachings of the Avatamsaka school and the Chinese Zen school can be harmonized and unified. The subtle teaching in the Avatamsaka module can also be regarded as esoteric because it requires three preceding modules to elucidate it exoterically. This prospective offers an integrated understanding of teachings among the Avatamsaka school, the Zen school and the Esoteric school.

Section 3. Critical Chinese Zen Teaching according to the 6th Patriarch Huineng (六祖惠能)

The 6th Patriarch of the Chinese Zen tradition, Huineng (六祖惠能) has been hailed as a fully enlightened master. Before he passed away, He willed his critical method on how to pass along the teaching of the Zen school. The text is found in the "The Sixth Patriarch's Dharma Jewel Platform Sutra [六祖壇經]" Chapter 10, FINAL INSTRUCTIONS [付囑品第十]. According to the translated version by Hsüan Hua 2001, page 379 onwards read:

> *One day the Master summoned his disciples... and said to them...After my passage into extinction... I will now teach you how to explain the Dharma without deviating from the tradition of our school....Should someone suddenly ask you about a dharma, answer him with its opposite. If you always answer with the opposite, both will be eliminated and nothing will be left, since each depends on the other for existence...External insentient things have five pairs of opposites: heaven and earth...light and darkness, yin and yang...In speaking of the marks of dharmas one should delineate twelve opposites: speech and dharmas, existence and non-existence...form and emptiness...largeness and smallness. From the self-nature nineteen pairs of opposites arise: length and shortness...permanence and impermanence...the Dharma-body and the Form-body...If you can understand and use these* ***thirty-six pairs of opposites*** *you can connect yourself with the dharmas of all the Sutras and avoid extremes...If someone asks you about a meaning, and the question is about existence, answer with non-existence; if you are asked about non-existence, answer with existence...Since in each case the two principles are interdependent, the meaning of the Middle Way will arise between them. If you answer every question with an opposite, you will not stray from the basic principle. "Suppose someone asks, 'What is darkness?' You should answer, 'Brightness is the cause and darkness the condition. When there is no brightness, there is darkness. Brightness reveals darkness and darkness reveals brightness.' Since opposites are interdependent, the principle of the Middle Way is established. Answer every question that way, and in the future, when you transmit the Dharma, transmit it in the way I am instructing you. Then you will not stray from the tradition of our school.*

From the above passage, we can witness that the concept of duality and its transcendence is central and critical to the ideology of the Chinese Zen tradition. The four modules expounded in this article agree, support and elucidate this Zen ideology.

DISSCUSSION

A paramount feature in the evolution of human intelligence is the maturation of concepts from qualitative to semi-qualitative to quantitative. This feature is illustrated by the childhood development module in Section 1.1. The infant first learns about life based on developing duality concepts, which are black and white. The toddler begins to see grey area between black and white, and eventually different shades of black and white (semi-quantitative). The school age child quantifies the shades of black and white by learning the number system. One may say that childhood development from age 0 to age 6 recapitulate the evolution of human civilization from the stone age (no numbering concept) to the "Babylonian" type of society (when numeral systems are invented throughout ancient civilizations).

Module 2 to 4 force the conclusion that Infinity is a concept founded on within-the-box limited

thinking mode. Finite and Infinite are not opposite and not mutually exclusive terms. They are arbitrary concepts dependent on how open our mind is. Abstract concepts such as Infinity (a qualifier) can be quantified by introducing newer and larger units of measurement. When one introduces additional units to measure large numbers, the immeasurable becomes measurable. With that, one can break through duality by understanding finite and infinite are opposites according to dictionary definition only. Opposites are product of small mindset, i.e., X is inside the box, Y is outside the box, therefore they are opposites. But, if there is no box, there is no opposites (think outside the box).

Verbally counting numbers is very important when learning the Avatamsaka module. Avatamsaka Sutra's merit is to guide us how to mature from the infantile qualitative concept to the adult quantitative concept. Subtle Zen and esoteric trainings are embedded in the Avatamsaka module.

CONCLUSIONS

Curriculum of Buddhist education at the university level must include two critical teachings; how to open the mind and how to transcend duality. The importance of transcending duality is affirmed by the final critical teaching of the 6th Patriarch of the Chinese Zen, Huineng (六祖惠能). The Avatamsaka Sutra combines these two teachings into one. This article serves as a commentary to the Sutra to illustrate (1) how to open the mind by introducing three modules prerequisite to the Avatamsaka module; (2) how to transcend duality as a next step separate from how to open the mind. This is because transcending duality is much more difficult and complicated than opening the mind.

Concerning how to open the mind, the Childhood Development Module asserted that qualitative concepts are infantile; semi-quantitative concepts are juvenile; quantitative concepts mature out of arithmetic education. The validity of this statement is seen both from the egocentric development of a single child and the evolution of the entire human civilization.

This article demonstrates the unification of fundamental ideology of the Avatamsaka school, the Chinese Zen school and the Esoteric school.

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