

Abhidharmakosa Chapter 5: Anusaya – Latent Defilements

Overview: The path to liberation, and to some extent, enlightenment itself, is defined in terms of the elimination of the defilements (*anusaya*). The “knowledge of the destruction of outflows” is one of the most significant features of the fully awakened ones. The defilements are the afflictions of the mind and freedom from the defilements is freedom from suffering. The decisive elimination of the defilements is based on “discerning the dharmas” (*dharmapravicara*) – including a thorough investigation into the nature, extent and functioning of the defilements (how they function, what they are, what is their object, how are they abandoned, etc.).

Anusaya: from *anu* - sleep, lie down. Main meanings for Sarvastivada: “to adhere and grow concordantly [with the object],” *anu* connotes the tenacity of the defilement and *si* is not as latency but subtlety. An *anusaya* is that which has or does *anusayana*, i.e., the function of growing or intensifying in accord with an impure object.

4 meanings in Kosa: 1. subtle; 2. following along/adhering; 3. Grow in accord with the object & caitta; 4. binding with (K39)

IMAGE: Like a bird flying in the sky, thinking it can cross an ocean, and a fish swimming in the water, following its shadow until it eventually the bird falls to its demise. It is very difficult to become free from the defilements.

Kosa Ch 5: “We said that the world, in all its variety, arises from action (iv.1). Now it is by reason of the *anusayas* or latent defilements, that actions accumulate: in the absence of the *anusayas*, actions are not capable of producing a new existence.”

K1a: The roots of existence, that is, of rebirth or of action, are the *anusayas*.

When a *klesa* or defilement enters into action, it accomplishes ten operations:

1. it makes solid [or firm] its root, its *prapti*—the possession that a certain person already had of the *klesa* (ii.36,38a)—preventing it from being broken;
2. it places itself in a series (that is, it continues to reproduce itself [establishing a series]);
3. it accommodates its field, rendering the person (*asrava*, ii.5, 6,44d) fit for the arising [or abiding] of the *klesa* [and also makes one inapt to change];
4. it engenders its offspring, that is, the *upaklesas* (v.46): hatred engenders anger, etc. [“engenders a poisonous emanation”, see *upaklesas* in 2nd table below];
5. it leads to action [leads to *karma-bhava*, induces the *karma* for new existence];
6. it aggregates its causes, namely, incorrect judgment [gathers up its own requisites, repeatedly giving rise to improper mental application];
7. it causes one to be mistaken [deluded] with regard to the object of consciousness [harms proper understanding];
8. it bends the mental series towards the object or towards rebirth (iii.30) [conducts the stream of consciousness, induces consciousness on the objects of rebirth];
9. it brings about a falling away of good [opposes the virtues, makes one go astray]; and
10. it becomes a bond (*bandhana*, v.45d) and prevents surmounting of the sphere of existence to which it belongs.

Further, the defilements can generate all forms of suffering.

The Defilements Adhere and Grow (K39): One defilement causes the whole citta-caitta complex to be defiled by way of influence and contamination. For this reason, the Sarvastivada teach that the defilements “adhere and grow”. The defilement and the aggregate of mind and mental factors (*citta-caitta*) mutually support and deepen each other. The *citta-caittas* become defiled and the defilement becomes more intense. The defilement also adheres and grows in relation to its object, unless the object is pure (*anasrava*, outflow-free): the 3rd and 4th noble truths of *nirvana* and the path. Such pure objects do not support the growth of the defilements but are opposed to them.

Modes and Categories of Abandonment of the Defilements (K4-5)

When a defilement can be abandoned simply by the insight into the Four Noble Truths, it is *darsana-heya*, susceptible of being abandoned by the path of seeing (or vision: *darsana*). Otherwise, the defilements are susceptible of being abandoned by seeing and cultivation (*bhavana-heya*). See Table 1. The 5 views and doubt, being cognitive in nature, are solely abandoned by the path of seeing (*darsana-marga*). The other 4 defilements, attachment, anger, pride and ignorance, are cognitive and affective in nature and thus are not abandoned by insight alone. Cultivation, that is, repeated practice and realization of insight, and deepening of meditation, is required. The Sarvastivada distinguishes 5 categories of abandonables:

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| 1. by seeing the 1 st noble truth of suffering (<i>dukkha-satya</i>) | [completely abandons view of self & view of extremes] |
| 2. by seeing the 2 nd noble truth of origin (<i>samudaya-satya</i>) | [universal defilements are abandoned by seeing 1 st & 2 nd truths] |
| 3. by seeing the 3 rd noble truth of extinction (<i>nirodha-satya</i>) | [ignorance, false views (<i>mithya-drsti</i>) & doubt abandonable by seeing the 3 rd & 4 th truths have pure (<i>anasrava</i>) objects.] |
| 4. by seeing the 4 th noble truth of the path (<i>marga-satya</i>) | |
| 5. through cultivation (<i>bhavana</i>) | [these 4 <i>anusaya</i> have 9 grades: weak-weak to strong-strong] |

Further, the Sarvastivada distinguishes defilements in terms of the 3 spheres: 1. Kamadhatu (desire-realm), 2. Rupadhatu (fine-material-realm), and 3. Arupyadhatu (non-material-realm). Taking into account the 5 categories of abandonables, the 3 spheres, the 10 *anusayas* are elaborated into a list of 98 defilements – see Table 1, “6, 7, 10 & 98 Defilements.”

Abandonment (*prahana*), at certain stages, is basically synonymous with: disjunction (*visamyoga*), cessation (*nirodha*), truth (*satya*), complete knowledge (*parijna*), fruit of the spiritual life (*sramanya-phala*).

Klesa: defilement, impurity - they perturb, vex & afflict Anusaya: binding, fine, subtle, latent, adhere, growing with D#=# in the list of 75 dharmas.		Table 1: 6. 7. 10 & 98 Defilements – Kosa Ch 5. K1-10		98 anusaya:	in kamadhatu abandoned by:					in rupadhatu abandoned by:					in arupyadhatu abandoned by:				
		10 anusaya/klesa defilements		Path of seeing/vision (<i>darsana</i>) is 15 moments (see Ch 6). Path of cultivation (<i>bhavana</i>) may last a lifetime or more, repeated cultivation developing insight (mainly meditation)	seeing suffering	seeing origin	seeing extinction	seeing path	cultivation	seeing suffering	seeing origin	seeing extinction	seeing path	cultivation	seeing suffering	seeing origin	seeing extinction	seeing path	cultivation
6 anusaya/klesa defilements		7 anusaya/klesa defilements		[on the unskillful roots (<i>akusala-mula</i> : 1., 2. & 4. below): root here means “cause” - all unskillful mental states spring from these three roots, because of these 3 roots, the 10 courses of unwholesome action are generated. Ignorance/delusion is always present in an unwholesome state. Greed & anger may or may not be and they cannot co-exist (their modes of activity are opposed).]															
1. <i>raga</i> – attachment, greed (D55)	1. <i>kamaraga</i> - sensual greed 2. <i>bhavaraga</i> - existence-greed	1. <i>raga</i> – attachment, greed, associated with pleasure & satisfaction (refers to attachment to objects, synonym: <i>lobha</i> (covetousness). one of the 3 unskillful/evil roots) [greed, anger, pride & ignorance are both cognitive & affective in nature, not abandoned by insight alone. intrinsically more tenacious and resilient than the cognitive defilements (5.-10. below), persistent effort/repeated cultivation (<i>bhavana</i>) is required to abandon them.]			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2. <i>pratigha</i> – anger (D56)	3. <i>pratigha</i> – anger, hostility	2. <i>pratigha</i> – anger, hostility, associated with displeasure & dissatisfaction (intending to harm beings, only exists in kamadhatu, synonym: <i>dvesa</i> (hate), one of the 3 unskillful roots)			x	x	x	x	x										
3. <i>mana</i> – pride (D57)	4. <i>mana</i> – pride, conceit	3. <i>mana</i> – pride, conceit, arrogance (7 types: ordinary pride, extraordinary pride, extreme pride, exaggerated pride, pride of inferiority, wrong pride, ignorant pride (see K10).)			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4. <i>avidya</i> – ignorance (D33)	5. <i>avidya</i> - ignorance	4. <i>avidya</i> – ignorance (non-cognizance/non-knowledge of the four noble truths, error, non-clarity, synonym: <i>moha</i> (delusion), one of the 3 unskillful/evil roots. ignorance is the root cause for all defilements, including greed and hatred, in 12-fold dependent-co-arising, ignorance (the 1 st limb) is the collective name for all the defilements of the past existence giving rise to present karmic formations. Sarvastivadins teach that ignorance is not merely the absence of cognizance, but a distinct force (a dharma, real/efficacious).)			x u	x u	x	x	x	x	x	x	x	x	x	x	x	x	x
5. <i>drsti</i> - views (D18: subsumed under <i>mati</i> , views are defiled understanding (<i>prajna</i>).)	6. <i>drsti</i> – views	5. <i>satkayadrsti</i> – a belief in self, view of self and what pertains to self (false view that the five skandhas of grasping constituting the person is the real self. It is the view of Self superimposed on the skandhas. Only abandoned by seeing dukkha as the five skandhas of clinging are primarily an expression or result of this truth. Undefined-neutral (in contrast to ignorance).)			x u					x					x				
		6. <i>mithyadrsti</i> – false views, view of negation (false view denying causal efficacy, 4 NT etc. main significance: it is responsible for the cutting off of the roots of good.)			x u	x u	x	x		x	x	x	x		x	x	x	x	
		7. <i>antagrahadrsti</i> – a belief in extremes, view of eternity & annihilation (grasping self as eternal or subject to complete annihilation. 2 extremes (<i>anta</i>). this view presupposes <i>satkaya-drsti</i> . 5. & 7. are not classified as unskillful but as veiled-non-defined, found in all 3 spheres. These views are based on <i>satkayadrsti</i> , they too are only abandoned by seeing suffering.)			x u					x					x				
		8. <i>drstiparamarsa</i> – esteeming views, holding as high that which is low (attachment to or esteeming of one's own views as being true and superior and in particular, obstinate attachment to the 3 views above (5., 6., & 7.).)			x u	x u	x	x		x	x	x	x		x	x	x	x	
		9. <i>silavrataparamarsa</i> – esteeming morality & ascetic practices, holding as cause & path that which is not cause & path (attachment to religious vows and observances by those who undertake them as a means for purification and liberation. Like <i>satkayadrsti</i> & <i>antagrahadrsti</i> above, abandoned by seeing the truth of suffering, but also, as it mistakes asceticism as the path of purification, it also arises with regard to the path and hence is subsumable under seeing the truth of the path (<i>marga-satya</i>) as well.)			x u			x		x			x		x			x	
6. <i>vicikitsa</i> – doubt (D58)	7. <i>vicikitsa</i> - doubt	10. <i>vicikitsa</i> – doubt, understanding two thesis, one doubts [which is true]. (Cognitive in nature, like the 5 views: these 6 are abandoned completely through seeing the truths.)			x u	x u	x	x		x	x	x	x		x	x	x	x	
Total: 6	7	10		98=	10	7	7	8	4	9	6	6	7	3	9	6	6	7	3

Table 2: Analysis of Categories of Defilements

10 defilements (<i>anusaya</i> / <i>klesa</i>)			Secondary defilements (<i>upaklesa</i>)			Table 2: Analysis of Categories of Defilements					9 fetters (<i>samyojana</i>) [3 bonds (<i>bandhana</i>)]	5 hindrances (<i>nivarana</i>)		
	10 envelopments, wrappings (<i>pariyavasthana</i>)	6 “filth of defilement” (<i>klesa-mala</i>)	3 Cankers, outflows (<i>asrava</i>)		4 floods (<i>ogha</i>) / 4 yokes (<i>yoga</i>)	4 clingsings (<i>upadana</i>)								
1. Raga – Attachment, greed (D55)	→1. disrespect (<i>ahrikyā</i> D39) →5. dissipation (<i>auddhatya</i> D38) →4. avarice (<i>matsarya</i> D47) →10. hypocrisy (<i>mrakṣa</i> D46)	→1. cheating (<i>mayā</i> D48) →3. drunkenness of pride (<i>mada</i> D49)	the defilements of Kamadhātu (except the ignorances) & the 10 wrapping ignorances (36-5+10=41) Rupadhātu & Arupadhātu (except the ignorances) (31-5+31-5 = 52)		1. flood of sense-pleasure (<i>kamaugha</i>) & 1. yoke (<i>kamayoga</i>) defilements of Kamadhātu (36-5-12+10=29) 2. flood of existence (<i>bhavaugha</i>) & 2. yoke of existence (<i>bhavayoga</i>) defilements of 2 higher dhatus (31-17+31-17=28)	1. clinging to sense-pleasure – defilements of Kamadhātu & 10 wrappings (<i>kamopadana</i>) (36-12+10=34) [includes ignorance because it does not “grasp”] 4. clinging to a belief in a self – defilements of 2 higher dhatus (<i>atmavadopa-dana</i>) (31-12+31-12=38)								
2. Pratigha – Anger, hostility (D56)	→3. envy, jealousy (<i>irsya</i> D44)	→5. enmity (<i>upahana</i> D42) →6. hostility (<i>vihimsa</i> D50)												
3. Mana – Pride (D57)	-	-												
4. Avidyā – Ignorance (D33)	→7. torpor (<i>styāna</i> D37) →8. languor (<i>middha</i> D52) →2. absence of fear (<i>anapatrapya</i> D40) →10. hypocrisy (<i>mrakṣa</i> D46)	-	3. canker of ignorance (<i>avidyā-asrava</i>) (as it “is the root”) (5+5+5 =15)		4. flood of ignorance (<i>avidhaugha</i>) & 4. yoke of ignorance (<i>avidyadyoga</i>) (5+5+5=15)									
5. Satkaya-drsti – Belief in self (D18)	-	→2. crookedness (<i>sathya</i> D43)	↑ Canker of sense-pleasure (<i>kamasrava</i>) consists of... [views are not a separate canker as they are not “favorable to installation” whereas <i>asravas</i> “seat” themselves] 2. Canker of existence (<i>bhavasrava</i>) consists of the defilements of... ↑		3. flood of views (<i>drstyogha</i>) & 3. yoke of views (<i>drstiyoga</i>) “views constitute a separate flood and a separate yoke by reason of their acuteness” (views of the 3 dhatus: 12+12+12=36) [the numbers in these columns refer to the distribution of 108 defilements: 98 <i>anusaya</i> + 10 <i>pariyavasthana</i> .] [included in floods & yokes of sense-pleasure & existence above]	2. clinging to views (<i>drstyupadana</i>) (36-6=30) 3. clinging to morality & ascetic practices (<i>silavratopadana</i>) (6)								
6. Mithyadrsti – False views	-	-												
7. Antagraha-drsti – Belief in extremes	-	-												
8. Drsti-paramarsa – Esteeming views	-	→4. esteeming evil (<i>pradasa</i> D45)												
9. Silavrata-paramarsa – Esteeming morality & ascetic practices	-	-												
10. Vicikitsa – Doubt (D58)	→6. regret (<i>kaukrtya</i> D51) →9. anger (<i>krodha</i> D41)	-												
The <i>anusayas</i> are atomic, for they are subtle; they adhere & are nourished by objects & associated mental factors; they continually bind, reappearing despite efforts to block them (K39).	The <i>upaklesas</i> are distinct dharmas derived from the <i>anusayas</i> as delineated above. There are varying opinions regarding hypocrisy (proceeding from <i>raga</i> , <i>avidyā</i> , or both) (K46-50). <i>Pariyavasthanas</i> (wrappings) envelop one's psychophysical series, like a prison. 75 Dharmas: <i>anusayas</i> & <i>upaklesas</i> : Mahaklesa (3 of the 6): 33,37,38 (missing 34.pramada 35.kausidya 36.asraddhya) Maha-akusala (2 of 2): 39,40 Paritta-klesa (10 of 10): 41-50 Aniyata (6 of 8): 51,52,55-58 (missing: 53.vitarka 54.vicara)		These categories encompass all the defilements. 1. By means of the <i>anusayas</i> , the mental series flows into the objects; the <i>anusayas</i> are thus <i>asravas</i> or cankerous influences (strong current) 2. When they are very violent, the <i>anusayas</i> are called <i>oghas</i> ; in fact they carry away, as in a flood, those who are bound to them... 3. When they do not enter into activity with an extreme violence, the <i>anusayas</i> are called <i>yogas</i> , because they yoke (attach) one to the very many sufferings of transmigration... 4. The <i>anusayas</i> are called <i>upadanans</i> , because, through their action, one clings (seizes) to things of the senses, etc. (forceful, burning) (K35-40).					Not all-encompassing. Samyojana : Binding. Also see next page (K41-45). Bandhana : Lust creates <i>anusayana</i> : it grows in agreeable sensation; hatred in disagreeable; & all 3 in indifference (K45). Nivaranas only function in Kamadhātu & are purely unskillful (<i>akusala</i>). They are obstacles to the noble path, detachment and the roots of skillfulness (K59).						

The Basic Method of the Abandonment of a defilement is complete knowledge of its object. The defilements are not themselves destroyed, but through understanding the object the defilement no longer gives rise to any fault in relation to the object. Through complete knowledge of the object, the acquisition produced by the defilements cannot continue. One is defiled by a defilement when it arises in oneself and comes to be connected with one's series by a concomitant acquisition (*prapti*). When the defilement and the acquisition both cease (become past) one continues to be defiled on account of one's ongoing connection with the defilement, which though past is still existent (*sarvastiva*), effected by the homogeneous (*nisyanda*) series of acquisition perpetuated by the original acquisition. When one abandons the defilement, one has severed the linkage of the acquisition. As long as the defilements are not abandoned, the intrinsic natures of past and future defilements continue to exist as realities. In the path of seeing, it is not that the path operates on the defilement as the two are opposed in nature. Rather, the path of seeing knows the object which then causes the defilements bearing on the object to be abandoned. The defilement does not cease to exist, but its acquisition ceases and with that, its afflictive potential. (Dhammajoti) Abandonment is done once and for all – there is no partial or repeated abandoning. However, the acquisition of disjunction (*visamyoga*) from the defilement can be repeated, becoming firmer & deeper (K63).

Universal (sarvatraga) Defilements (K12):

The universal defilements can arise and function in relation to all objects of their sphere (*dhatu*) and also serve as the cause for the production of further defilements (similar and dissimilar). There are 11 universal defilements (7+4):

7 = under the defilements abandoned by seeing the truth of suffering in Kamadhatu: ignorance, the 5 views & doubt

4 = under seeing the truth of origin in Kamadhatu: ignorance, false views, esteeming views & doubt

In Table 1, these are marked with a “u”. Of these 11 universal defilements, 9 (by excluding the view of self & view of extremes) also serve as universal defilements in relation to the higher spheres (Rupadhatu & Arupadhatu).

Latent and Manifested Forms of the Defilements (K1): Vasubandhu supports the view that the *anusayas* are latent tendencies of defilements: “What is called *anusaya* is the *klesa* itself in a state of sleep, whereas the *pariyavasthana* is the *klesa* in an awakened state. The sleeping *klesa* is the non-manifested *klesa*, in the state of being a seed; the awakened *klesa* is the manifested *klesa*, the *klesa* in action. And by ‘seed’ one should understand a certain capacity to produce the *klesa*, a power belonging to the person engendered by the previous *klesa*.” The *anusaya* are then strictly speaking only abandoned at *vajrapama-samadhi* (the final *samadhi* before becoming an arhat or Buddha). The manifest defilements (*pariyavasthana*) can be gradually suppressed without abandoning the *anusaya* at earlier stages of practice. The Vaibhasikas argue against the view of *anusaya* as latent defilements, interpreting *anusaya* rather as “subtle” and “tenacious”.

Defilements arise from 3 Causes (K34): “The *anusaya* (1) is cause; the *dhammas* are its object (2); and incorrect judgment (3) is its immediate preparation: three distinct forces”:

- 1) On account of a cause (*hetu-balena*): *anusayas* in one's *samtana* (series) have not been abandoned or known so the defilements can arise when the corresponding conditions assemble.
- 2) On account of the object (*visaya-balena*): external stimuli conducive to defilements enter one's field.
- 3) On account of preparatory effort (*prayoga-balena*): This refers to improper mental application (*ayoniso-manaskara*, Pruden: “erroneous judgement”).

Defilements can arise without the 2nd cause (object) if the 1st (not abandoned) and 3rd (improper mental application) are active. The 2nd (object) cannot make a defilement arise if there is proper mental application (the opposite of the 3rd cause).

Other Classifications of the Defilements: Table 2, “Analysis of Categories of Defilements”, relates a number of classifications of the defilements from the Sutra teachings to the Sarvastivada Abhidharma elaborations of the *anusayas*. **Notes:** — **108 Defilements:** A total of 108 defilements is arrived at by adding the 98 *anusayas* (Table 1) to the 10 envelopments (*pariyavasthana*, Table 2). The *pariyavasthanas* and *klesa-malas* are derived from the *anusayas* (see Table 2) but come to constitute distinct forces. The outflows (*sasrava*), floods (*ogha*), yokes (*yoga*) and clings (*upadana*) are alternate ways of classifying these 108 defilements. Table 2 includes the basic math, e.g. for the canker (outflow) of sense-pleasure, starting with the defilements of Kamadhatu (36), subtract the 5 ignorances of Kamadhatu (as they are part of the canker/outflow of ignorance) and add the 10 *pariyavasthanas* = 41.

— **With-outflow (*sasrava*)** is a key term. All conditioned dhammas are subsumable as being either with or without outflows. This is the first major distinction among the dhammas discussed in the Kosa (Ch I, K4-5). In addition to the “etymology” in Table 2 (by the *asravas*, the mental series flows into objects), Kosa offers two alternate explanations: 1. they keep beings in 3 realms, causing beings to flow around (*asravanti*) the realms (from the highest heaven, *Bhavagra*, to the lowest hell, *Avici*); 2. they incessantly discharge inexhaustible impurities through the six wound-like entrances of beings (6 sense-faculties).

— **Fetters, Connections (*samyojanas*):** The list of 9 fetters in Table 2 includes just two of the 10 *pariyavasthanas*: envy and avarice, as they are “completely bad and independent [of ignorance]” (K42). Further, there is a teaching of 2 sets of 5 fetters: 1) “Five are inferior. Two (sensual-desire & malice (*vyapada*)) cause one not to get out of Kāmadhātu; three (self-view, esteeming morality & ascetic practices & doubt) cause one to return there” (K43). These five pertain to Kamadhatu. 2) “Five are ‘superior’, namely two lusts, those which arise from Rūpadhātu and from Ārūpadhātu, namely dissipation (restlessness), pride and ignorance.” These five pertain to the higher spheres.

— **Bonds (*bandhana*)**, associated with the 3 sensations, emphasize how defilements bind beings to the 3 spheres of existence.

K29-31: “How many *anusayas* attach themselves (*anuserate*) to each object? We would never finish were we to examine this problem in detail. The Vaibhasikas give a summary exposition of this. In general one can say that there are sixteen types of *dharmas*, objects to which the *anusayas* attach themselves: for each sphere there are five categories (categories to be abandoned through the Seeing of Suffering, etc.); plus the pure *dharmas*. The consciousnesses are of the same sixteen types. When we know which *dharmas* are the objects of which consciousness, we are then able to calculate how many *anusayas* attach themselves to these *dharmas*. [K29...] In all, these *dharmas* are the object of five consciousnesses. The three consciousnesses of Kamadhātu are abandoned through the Seeing of Suffering, through the Seeing of Arising, and through Meditation (*abhyasa* = *bhavana*). One consciousness of Rupadhātu is abandoned through Meditation.”

The following table presents the analysis of K29-31:

...are the object of the following consciousnesses:		Dharmas abandoned through Seeing Suffering & Arising, & through Meditation in			Dharmas abandoned through the Seeing of Extinction and the Path in						Pure
		Kamadhatu	Rupadhatu	Arupyadhatu	Kamadhatu	Rupadhatu	Arupyadhatu				
Kamadhatu abandoned by:	Seeing Suffering	X	X	X	X	X	X	X	X	X	
	Seeing Arising	X	X	X	X	X	X	X	X	X	
	Seeing Extinction				X						X
	Seeing Path					X					X
	Meditation	X	X	X	X	X	X	X	X	X	X
Rupadhatu abandoned by:	Seeing Suffering		X	X			X	X	X	X	
	Seeing Arising		X	X			X	X	X	X	
	Seeing Extinction						X				X
	Seeing Path							X			X
	Meditation	X	X	X	X	X	X	X	X	X	X
Arupyadhatu abandoned by:	Seeing Suffering			X					X	X	
	Seeing Arising			X					X	X	
	Seeing Extinction								X		X
	Seeing Path									X	X
	Meditation		X	X			X	X	X	X	X
Pure		X	X	X	X	X	X	X	X	X	X
Total		5	8	10	6	6	9	9	11	11	10