PADI, PUNS AND THE ATTRIBUTION OF RESPONSIBILITY [1]

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One of the more intriguing forms of symbolism in Bali is based upon a somewhat uncommon use of nature. In certain agricultural ceremonies, various species of widely-found plant, otherwise ostensibly unimportant, are accorded a temporary ritual prominence. This is largely, it seems, because their normal designations refer in some way to the conditions of ideal cultivation, in particular to the phases of growth and the harvest yields, of irrigated rice. In each instance, there is a terminological association which relies on the systematic employment of homonymy or assonance, in a broad sense. While this does not preclude the possibility of other types of link so far untraced, it suggests the relevance of language and sensory resemblances, in the formation of symbolic connexions, in a manner which may previously have been overlooked.[2]

An examination of the theme and stated purpose of these cyclical rituals - the re-enactment and encouragement of successful agriculture - poses broader questions about their sociological function. Although the concerns are not unfamiliar, some of the more obvious approaches seem to fall short of providing an appropriate answer. This is so, for example, for arguments in terms such as the re-affirmation of social solidarity; as mystical alternatives in the face of technological inadequacy (Beattie 1964: 207); as a method of mnemonics and ordering experience (Douglas 1966: 58-72; 1968: 369); and, additionally, as a regulating mechanism for cultivation (Geertz 1967: 233; 1972*a*: 30-32; cf. 1966*a*: 6-9; 28-9; 1966*b*: 52). For, most agricultural ceremonies are performed by individual farmers alone on their rice fields; capital investment in technical installations offers a potential means of substantially reducing risks and uncertainty; while the frequent disjuncture between the timing of offerings and the developmental stages of rice, with its concomitant work schedules, points to the weaknesses of hypotheses based on either the naive instrumentality or the organisational character of these rites. Under such circumstances, an interesting interpretation is suggested by the contrast of cultural statements of belief with an analysis of economic relationships in practice. On the one hand, religion emphasises the attribution of final responsibility for the fertility of the crop to supernatural agencies; on the other, ethnographic evidence indicates that insufficiency stems in no small part from the problems in social cooperation and in the democratic constitution of irrigation associations. For their structure tends to lead to the dominance of small-scale farmers, to a relatively low level of investment and possible conflicts of interest which are denied public expression. Agricultural ceremonies may, therefore, embody an alternative explanation

for the deficiences of, and stresses within, the basic productive groups, and so may indirectly help to maintain them and the accompanying ideal of the strict equality of members of a corporation.

The organisation of irrigated agriculture in certain parts of Bali has been described in some detail.[3] In most features, the region round the settlement of Tengahpadang in Central Gianyar, from which the information used here is drawn, corresponds with existing accounts. Rice forms the main subsistence product and is obtained through an intensive system of annual double-cropping of a number of varieties, most of which take some five months from seed to harvest, and just under six to complete a cycle (cf. *Adatrechtbundels* XV: 50). Irrigation is controlled by a special group, the *subak*, composed of persons whose terraces are fed from a single source. In this case, most riceland owned by the villagers lies on a long sloping ridge supplied by a local association known as Subak Langkih. From a river dam about five miles upstream, the water is led a tortuous route between ravines, through an intricate system of aqueducts, canals and dividing-blocks of different sizes, eventually to individual plots. The irrigation works are technically ingenious, but rely far more on the extensive use of labour to maintain the simple conduits, generally of earth or mud and stones, than on capital for secure, nowadays concrete, structures (Liefrinck 1969: 47-57). As a result, patching breaches is an almost incessant activity, especially in the rainy season (nor is this an isolated instance, see Liefrinck 1969: 21).

This whole system is under the management of the *subak*, which allocates water, collects its own agreed taxes and supervises much of the day-to-day administration. Owing to its size and topography, Subak Langkih is divided into five territorially discrete, but adjacent, sections, or *tèmpèk*, each with its own sub-channel, council and officials, under an overall head, the *klian pekasèh*. It is from these that the peasant farmers acquire water in units of *tenah*, a proportion of the total flow, adequate here to irrigate on average roughly a third of a hectare (Geertz 1967: 230-31; but cf. *Adatrechtbundels* XV: 44; in Tengahpadang this is commonly known as *(bi)bit tenah*, see *Adatrechtbundels* XV: 37). Unlike the settlement wards, or *banjar*, persistent factionalism does not seem to be a salient feature of *subak* in this area. The main informal cleavage is between the restricted number of large cultivators and the majority with one *bit tenah* or less, including some share-croppers who undertake the obligations of members as part of their agreement.[4] While the association assesses its own levies according to the quantity of water obtained, labour and voting rights are *per capita*, not dependent on the size of holdings. Thus, 'subsistence farmers' comprise most of the membership, preponderate at the meetings where collective decisions are reached and influence the direction of public policy.

The timing of agriculture generally is regulated through the head of the *subak* in conjunction with its temple priest, or *pemangku*, and may form part of a regional arrangement for staggering the distribution of water supplies (*Adatrechtbundels* XV: 51-2; Geertz 1972*a*: 30-31; cf. Liefrinck 1969: 62-3). For ritual, this is complicated by the existence of two separate calendars in Tengahpadang and elsewhere (see Goris 1960*a*: 118; Grader 1960: 276-8) which are of some importance in the following discussion. The first is the Hindu system (Goris 1960*a*: 115-6) of twelve solar-lunar months, in which the principal dates of religious significance are the full moon, *purnama*, and the new moon, *tilem*. The second is the so-called Javanese-Balinese, or *uku*, calendar, based on the numerical computation of a set of concurrent weeks, ranging in length from one to ten days, in which the combination of the three most important weeks, of five, six and seven days, defines a fixed 210-day cycle. The *uku* system in particular is completely divorced, therefore, from the flow of observable natural events and seems to form a separate taxonomic and conceptual framework (Geertz 1966*b*: 42-53), in which the permutations emphasise its distinct, abstract mathematical order.[5] Apart from their mundane application, these two schemes between them establish the dates for scheduled religious holidays and temple festivals, and indicate auspicious or dangerous periods for a wide variety of activities. In Subak Langkih, *both* calendrical systems intersect in the organisation of the rice-cycle rites.[6] So, for example, the main temple festival, *(pi)odalan agung* occurs on *Purnama Kedasa*, or every full moon of the tenth solar-lunar month; whereas the regular offerings in the ricefields normally fall on every fifteenth day, or *kajeng-manis*, by the overlap of *kajeng*, the third day of the three-day week, with *umanis*, the first day of the five-day week. Although Geertz has argued that the ceremonies are synchronised with the stages of cultivation (see below), in Tengahpadang at least, there is no simple correspondence, for the rites follow a largely predetermined pattern.

There is another complexity. The agricultural seasons alternate in this area between a rigorously supervised cycle, referred to as *kertamasa*, in which all work and ritual are co-ordinated in theory through the head of the association on pain of punishment, and an open one, *gegadon* (Liefrinck 1927: 153; Wirz 1927: 249), when each farmer is notionally free to decide his own schedule. In effect, the difference is not always so great, as the peasants fear increased damage from migrating pests if the harvesting is serial. One concomitant of this seasonal oscillation is that certain major ceremonies are performed in full only during *kertamasa*;[7] and, to confuse neat theories of timing still further, one of these, *nyungsung* (supposedly co-ordinated with the 'pregnancy' of the rice, *beling*, when the growing panicle causes the plant to swell, Grist 1953: 46; see Table 1) should follow the solar-lunar calendar in *kertamasa*, but the *uku* system for *gegadon*!

An attempt to analyse the entire series of ceremonies, offerings and prayers would prove a daunting, if not impossible, task and is beyond the scope of the present work. One small part of this complex, however, does contain a relatively discrete set of ritual elements, which are of some theoretical interest, for their novelty if nothing else, as they appear to be based on the recognition of different forms of sound association, in particular homonymy and assonance, and the possible applications of these in a more or less ordered fashion in symbolisation. Nor is the use of such types of correspondence restricted to agricultural rites alone. A similar development of language forms is evident in other contexts, for example in verse and proverbs, in the traditional 'romantic operettas', *arja* (McPhee 1966: 7; cf. 294-303), or even the humble, but inveterate, Balinese habit of punning.

The verse form of the quatrain, known among the Malays as the *pantun*, is also found in Bali (sometimes under the name of *sesenggakan*; cf. van der Tuuk 1897). This consists of two couplets, arranged so that ideally there is systematic assonance between the first and third lines, and also the second and fourth. The opening couplet may provide an allusive reference to a theme taken up more directly in its successor, or they may be effectively unrelated (for a more detailed discussion, see Wilkinson & Winstedt 1957). Commonly the first two lines alone are spoken in Bali, the audience either knowing or being left to infer the remainder through assonance.

Significantly perhaps, quatrains may be found in a religious setting. For instance, the temple of Duur Bingin in Tengahpadang possesses a pair of deities, the *Barong Landung*, who are manifest as gigantic puppets in the guise of a black male and a white female (Covarrubias 1937: 287 & 355-6). This couple has, it is believed, the power to confer fertility on childless marriages and are recognised throughout much of the island. In the month following the religious holiday of *Galungan* (according to the Javanese-Balinese calendar; Goris 1960*a*: 124-5), they are carried around the villages and animated from inside by trained members of a voluntary association, accompanied by an orchestra. A speciality of this pair is the paid performance of songs, not infrequently with explicitly sexual overtones! In the example which follows, the structure can be seen clearly, although there is no particular link between the couplets. Here, the initial two lines are essentially nonsense phrases which provide the pattern for the closing section. A rough translation follows:

> Sok pècok pedemin cicing,
> Memula lateng di Bangkiangsidem,
> Nyaka bocok, nyaka tusing,
> Lamun suba anteng ajak medem.

> A dented basket slept on by a dog,
> Planting nettles in Bangkiangsidem (a village in East Bali),
> I like her whether she is ugly or not,
> Provided that she is prepared to sleep with me.

A similar, if simpler, form is found in some proverbs, *sesongaan*, such as:

> Celabingkah di batan biyu,
> Gumi linggah ajak liyu.
>
> Broken potsherds (or tiles) beneath a banana tree,
> The world is big (broad) with much (in it).

Deliberate plays on homophones, or homonyms, in punning is found in village conversation and exchanges, particularly in public on the roads and in coffee-stalls. A simple illustration from one of the most adept perpetrators in Tengahpadang should suffice. The standard form of greeting in Bali is to ask the other person where they are going, which elicits a reply varying with the amount of information it is wished to convey. In ordinary Balinese this is '*bakal kija?*' (literally: where will you (go) to?), normally shortened to '*ka(l) kija?*', with the terminal *-l*, elided. On being addressed once, the punster chose to misinterpret this as '*kaki ja?*', or 'where is your grandfather?'. So he riposted accordingly with '*di semaé!*', 'in the graveyard!' - to hoots of laughter from bystanders. On another occasion, with a political undercurrent, he shamed publicly an unpopular local official,[8] notorious for muddling Balinese and Indonesian (the national language), by treating the same question as a linguistic hybrid. Here, '*ka(l) kija?*' was construed as the Indonesian *kaki* (foot) and low Balinese *ja* (where), or 'where are your feet?'. The man was promptly put down with the response: '*di atas tanahé*', 'on the ground', in an equal confusion of languages. These retorts were duly circulated around the village with evident approbation.

In a more serious vein, sound association occurs in certain rituals. The most elaborated use is found in *mantenin padi*, the main ceremony after the completion of the harvest, when the padi has already been stored in the granary, with offerings, *banten*, to the goddess of rice, Dèwi Sri, in effigy in a decorated bundle of rice placed by the eastern wall (for a synopsis of the rice-cycle rites, see Table 2, and for the significance of the directions: 'The Path of the Soul', in this volume). A different form is found in two earlier rituals: *nuasèn*, planting the *duwasa* (for the linked meanings, see van der Tuuk 1897), sacred clumps of padi used later to make the figure of the deity; and a small rite commonly held at the end of *mebiyu kukung*, which is considered to effect the 'marriage' of the rice, and sometimes ward off pests as well. Finally, identical plants are included in the marriage ceremony, *mesakapan*, with a similar interpretation.

Mantenin padi is performed some time after the harvest and drying of the grain (in Bali, this is with the ears still on the stalks, which requires early reaping). In theory, no rice can be sold beforehand (Grader 1960: 277-8), although it is not unusual, in fact, for poor families to ignore this injunction out of economic necessity, for the rite may take place months later, each household acting independently. Offerings of a relatively elaborate character are placed in the granary, and at ritual sites throughout the compound, particularly in the ancestor shrines. Some of the names are interesting, for example *lumbung bek*, meaning simply: full granary. These compose part of a formidably complex and locally variable system which, as Hooykaas has pointed out, remains largely unstudied (C. Hooykaas 1973*a*: 169; for an introduction see: Belo 1953; J. Hooykaas 1961).

My concern here is instead with some of the ritual appurtenances in the form of a set of plants which are placed at a remove from the principal offerings, on the outside walls of the granary. The classification of botanical species in Bali has been little examined, although some of these are listed and their medicinal properties designated in the palm-leaf manuscript, the Taru Pramana which states how a culture hero Mpu Kuturan distinguished them.[9] Other woods are differentiated according to their purity, and hence suitability for ritual use. Many of the common names provided in the Taru Pramana are related to ordinary Balinese words in some form. For instance, the manuscript includes: *buyung-buyung putih* (lit: white flies), or *uyah-uyah* (*uyuh* = salt). In certain cases, there is an apparent reference to morphological or physiological features of the species, so that *tebel-tebel* (*tebel* = thick) has both thick leaves and spreads fast (van der Tuuk 1897). For others, informants were aware of no explanation. For present purposes, it is adequate to note these unexamined aspects of classification.

The species chosen for use in *mantenin padi* vary somewhat across the island (cf. Wirz 1927: 316-7). In Tengahpadang, twelve plants seem to comprise the available pool, from which those actually incorporated may be drawn.[10] All were found growing either in the house compounds, lanes or dry fields; but it is to be noted that many were not to be found in the vicinity ofriver-banks and none were distinguished for thriving in, or near, ricefields. It is possible that this may serve symbolically to underline the conceptual separation of the growing padi on the terraces from the dry product stored in the compound for consumption.

The question arises as to why these twelve species in particular should be selected from all those known to adorn the sides of the granary. To the best of my knowledge, they are not used on any other ritual occasion. Wirz (1927) has suggested that one reason may be their bitter taste or poisonous effects, which are believed to deter evil spirits and demonic influences, although he admits that this cannot furnish a complete explanation. However, in his version the plants are hung around the doorway as a barrier, not on the sides as in Tengahpadang. This view also does not account for the many species which are neither toxic nor considered potent against malevolent supernatural beings. Further, one of these, *kayu sugih*, is in fact an ingredient of porridge and a dye-stuff as well; while *tebel-tebel* is a compound in ear medicine. Apart from this, they are apparently of little nutritional or practical value. So there are no obvious clues as to any systematic grounds for their inclusion to be gleaned from a study of their use, habitat or qualities, which I could discover. Some might be included if a diverse, and unsatisfactory, set of characteristics were made: as an example, *inih-inih* is assumed to be propitious if it grows in the ancestral shrine area, but this merely compounds the difficulties.

There is, however, one important way in which all these plants form a single class. This is their terminological value for sound association. When I first documented the ceremony, this was indicated to me with pride by some villagers. For, in contrast to much religious knowledge, held to be the preserve of the high caste priests, *Pedanda*, and about which the peasants generally professed ignorance, they stated that they were aware of the significance of the leaves. In native exegesis, these are seen mainly as homonyms or assonants of terms referring to the attributes of proper, or ideal, agricultural production which it is intended to induce. It is worth examining the series in some detail to show just how perspicacious this commentary is.

As the investigation of a number of different performances of the rite showed no discernible pattern in the order in which the plants were arranged, I shall take them as they occurred in the most inclusive instance. *Tebel-tebel* may be related to *tebel*, thick (repetition in Balinese indicates, among other things, plurality or emphasis).[11] *Tegteg* has a range of meanings, including fixed or substantial; while *paku kenying* can be linked with *paku*, fern, and *kenying*, to smile or laugh. *Inih-inih* is of interest, as *inih* signifies: not quickly finished, used sparingly (van Eck 1876). *Nasi-nasi*, in a similar fashion, can be treated among its other meanings as a possible reduplication of *nasi*, cooked rice, hence food. There follow three plants: *kayu padi*, *kayu emas* and *kayu sugih*; *kayu* is the ordinary Balinese word for wood, *padi* is the English paddy, *emas* is commonly translated by gold (both the metal and the colour), while *sugih* means wealthy or rich. Next is the curious *sengseng catu*, for *sengseng* generally stands for a stopper and *catu* is a measure for rice (with a hole in the bottom).

The remaining terms are more complex. *Sri benben* seems here to refer to *Sri*, the goddess of rice, but also a word which

TABLE 1. The terminological significance of plants in Mantenin Padi

Designation of Plant	Analysis of Terms	Indigenous Exegesis	Comments
Tehel-tebel	*tebel* = thick	so that the contents of the granary will be thick	also called *kayu urip*, the tree of life.
Tegteg	1) fixed, substantial 2) repair, recuperate 3) *metegtegan* = relax	1) so that the padi will not be diminished, even if drawn upon often 2) the recuperation or relaxation after work	
Paku Kenying	*paku* = fern, vegetable *kenying* = smile, laugh	1) to be happy 2) *kenying* is also *kuning*, yellow the colour of ripe padi	
Inih-inih	*inih* = not quickly finished sparingly used	so that the padi in the granary cannot be finished	propitious if this grows in the area for the ancestor shrines
Nasi-nasi	*nasi* = cooked rice, food	if there is rice, then there is food	
Kayu padi	*kayu* = wood, tree *padi* = the rice plant	if there is padi, we are very happy	
Kayu emas	*(e)mas* = gold (metal and colour)	1) so that the padi will he yellow like gold 2) then there will be riches like owning much gold	its leaves are an ingredient in some offerings
Kayu sugih	*sugih* = rich, wealthy	so that we become rich	the leaves are used in sago porridge and give a green colour to some cakes
Sengseng catu	1) *sengseng* = cork, stopper 2) *catu* = measuring container for dehusked rice (*beras*) with a small hole in the base	if the hole in the *catu* is closed up, then rice cannot pour out, so it stays full and brings wealth	
Sri benben	*Sri* = Déwi Sri, goddess of rice, also name of rice *benben* = wasp, (populous)	1) *benben* is *emben*, leafy, voluminous or much 2) so that the growing rice will have thick leaves 3) if there is much rice, then our feelings are happy	

TABLE 1 (Continued)

Designation of Plant	Analysis of Terms	Indigenous Exegesis	Comments
Dingding ahi	*dingding* = trellis woven from coconut-leaf sometimes *dinding* = wall, screen *a(h)i* = sunlight, daylight	1) so that the padi will be surrounded by sunshine to make it dry 2) so that there will be a screen to protect the padi from pests and bad weather 3) *dingding* stands for *dèngdèng*, to dry in the sun, so that the padi will dry in the sun	
Pati(h) kala(h)	*pati* = handle of knife (among varied meanings) *patih* = minister of a prince *kalah* = defeated, lost *kala* = type of demonic spirit	1) the *patih* is defeated 2) a bad *patih* is defeated and driven away, and no longer oppresses the people 3) the knife-handle is defeated by the rice-stalks because they are so thick and numerous 4) the rice is so thick, a knife gets lost in it 5) *pati* is *mati*, dead; evil demons are destroyed so that there is peace	

may be used to indicate padi; while *benben* can be a wasp. Of significance, though, the latter is held to be an assonant of *emben*, leafy or voluminous. Similarly *dingding ahi* appears to be literally: *dingding*, a woven coconut-leaf trellis and *a(h)i*, day- or sun-light. With a slight shift of the vowel-sounds, however, one obtains *dèngdèng*, to dry in the sun. (This has been noted by van der Tuuk (1897) and is also the villagers' interpretation.) It may be worth recording that *ding* and *dèng* are the terms for two notes in the Balinese pentatonic scale, the others being suitably: *dong*, *dung* and *dang* (McPhee 1966: 58-61). Of these plants, those which are given in the Taru Pramana tend to be identified there as cool, *etis*, a quality applied *inter alia* to a household to indicate the absence of acrimony and an adequate supply of food, with a granary which diminishes slowly (popular opinion maintained that the second of these characteristics was the determinant of the first!).

The final, and apparently least used plant is *pati(h) kala(h)*, the main one to present problems, not least as the Balinese were uncertain whether it should be read as *pati* or *patih*. The latter is commonly applied to a traditional royal court official, but the former has a vast range of referents (see van der Tuuk 1897). *Kalah* may be translated as defeated or lost. In contrast, others thought that the word should be *kala*, a class of demonic spirit. At least one family did not include this species, as they were undecided as to its meaning and said that they feared the consequences were it to turn out to be 'defeated minister'. An ingenious, if unsubstantiated and somewhat ungrammatical, argument was put forward by some of the more pensive, who surmised that it referred *pati* as the handle of a knife (or of the blade used to cut padi, *anggapan*) and *kalah*, as either defeated or lost, to give: to lose the knife-handle (as the rice is so thick), or to defeat the knife (for the same reason). If nothing more, this example should at least provide some insight into the processes of reasoning in symbolism developed by villagers.

This discussion indicates then that the names of the plants included in *mantenin padi* may signify, among other things, the following: the fertility of the rice plants, the full maturation and subsequent drying of the crop, prolific yields and a secure supply of food which does not run out quickly, and so brings prosperity, happiness and relaxation from work. It may be recalled that some of the terms for offerings inside the granary referred to similar concerns. These themes are expatiated upon by villagers, and the more frequent associations are outlined in Table 1. Among the interesting features are the ways in which indigenous commentaries emphasise the recapitulation of the later stages of the agricultural cycle, and the material qualities desired in the harvest, with its less tangible benefits. Whereas it would be difficult to explain the selection of plants in terms of their observable characteristics, an

analysis of the sound associations points to a remarkably consistent system.

A not dissimilar theme occurs in *nuasèn*, but in contrast, the number of plants is much smaller and more clearly circumscribed. After the bunches of young shoots have been planted to provide the sacred rice, lengths of about a foot of the foliage of the following species are temporarily inserted in the mud together with them: *da(p)dap* (? *Erythrina lithosperma*, a leguminous plant), *kunyit*, turmeric, *keladi*, taro and *andong* (unidentified, but see descriptions in de Clercq 1909: 210; Wirz 1927: 271). A shoot of *pinang*, areca-nut palm is an optional addition. Wirz (1927: 296) has suggested that it is the type of growth of these particular plants which lends itself to symbolization. For instance, *dadap* is considered to be very fast-growing and the vertical stem of the areca-nut palm may exemplify the ideal form of the ripening padi plant. On being taxed with this view, my informants readily conceded that fast-maturing, thick leaves and so forth might be involved. They argued in response, though, with a certain logic, that this applied to innumerable other species which might have served equally well. Instead, they referred me once again to the terminology, pointing out that this was not so easily substitutable. The choice was expressed in terms of a short ditty:

don dadap apang etis,
kunyit mara mekelenyit,
keladi apang nadi,
andong megelendong.

which they translated, somewhat roughly, as:

dadap leaves so that (the ground) will be cool*
kunyit, it lives (or sprouts on planting),
keladi so that it will grow,
andong - it becomes pregnant.

(* *etis*, the state of ritual coolness discussed above, is highly desirable and a generally believed quality of *dadap*.)

The last three lines demonstrate the assonance between the term for the plant on the one hand, and the appropriate development of the rice on the other. *Dadap* once again stands apart, but Wirz's explanation in terms of its natural features is weak, as *dadap* is perhaps the most widely-used plant in ritual to suggest coolness in contexts where growth is hardly involved, varying from *wayang lemah*, the more or less purely religious form of the shadow-play, to *metelah-telah*, the purification of the house compound after death.

The same ingredients (*kunyit*, *keladi* and *andong*) are included in the rite of *mebanten tipat balang ring tipat kukur sidayu*, commonly tacked onto *mebiyu kukung* (Table 2). In this case, they are suspended together with cakes, different types of rice and comestibles from a miniature (*dadap*) shoulder-pole,

tegen-tegenan, and carried three times (properly clockwise) round the ricefield containing the sacred rice. This is said to complete the 'wedding' of the padi which is now permitted to become 'pregnant', *beling* (see above). The same ritual shoulder-pole is borne by the male, while circumambulating the bride, during the marriage ceremony for human beings. In these last two instances, the rhyme can reasonably be construed as a reference to the fecundity appropriate to matrimony, but an interpretation of the order suggested by Wirz above, would seem curously indirect and complicated. The occasions for use of this set of plants poses a problem. On the one hand, the same triad is found at two separate stages of the rice cycle - at the moment of transplanting and then again before the emergence of the panicle and flowering. On the other, while *mebanten tipat . balang ring tipat kukur sidayu* is generally agreed to be a necessary pre-condition for the successful fertilisation of the rice-flowers, at others it is stated that the purpose of the rite is to ward off pests at the time that the seeds are maturing! One possible resolution of this difficulty may lie in a possible difference of time-scale implied in agricultural ritual.[12]

This discussion has, I hope, shown that there is some evidence of the organised use of sound association in a range of social contexts, including the formation of symbols in Balinese ritual. This is not to deny the possible existence of other, or even prior, connexions. There may also be differences between the various ceremonies recorded above, and there is undoubtedly a degree of flexibility in the repertory of plants adopted in different regions, which I have not been able to study in detail. Nonetheless, associations based on verbal similarity do seem to be an important element in certain symbolic sets in Bali. This approach also has the advantage that it is able to provide a relatively simple key to the system underlying the selection.

This symbolic use of common plants is one of the most coherent and explicit aspects of the complex of rice-cycle rites. As a whole, these reiterate similar concerns to those discussed above, by invoking the assistance of supernatural beings in the re-enactment of the stages of development of the rice crop, through prayers and offerings. The form of participation and the timing of the ceremonies point, however, to the inadequacies in a number of frequently assumed, or apparently promising, interpretations of ritual. Whether or not there is synchrony between rite and rice growth may be critical to the applicability of some types of argument, but it is effectively irrelevant to a consideration of the ritual cycle in terms of providing an explanatory framework for the success or failure of agriculture, by ascribing authority to agencies of posited, but unverifiable, influence. At the same time, this offers an alternative to the public recognition of the underlying structural problems of irrigation associations. It should be stressed immediately though that what is being proposed here is essentially a functional view, with its attendant limitations.

One of the rather unusual features of most of these rice-cycle rites is that, with the exception of the temple festivals, *nyungsung* and *ngesaba* which involve both collective performances in the *subak* temple, the *Pura Mascèti*, and individual ones in the fields, there is no real gathering nor corporate ritual action on the part of the association during which solidarity might be re-affirmed.[13] For the ceremonies are generally carried out on the given occasion for each household separately by a member at the shrine in its own fields. They have in many ways the character of private rites, in which the collective is restricted to subordination to a set of common ritual regulations (Goody 1961: 146). The theory that these are mystical devices to deal with practical deficiencies presents problems in turn, in so far as they 'may provide a way of coping with situations of misfortune or danger with which there are no other means of dealing' in the absence of empirical knowledge (Beattie 1964: 207). On the one hand, the Balinese have developed an intricate pre-industrial technology for handling the problems of irrigation, fertilisation of the soil and so forth, even if it is not always fully utilised; on the other, there is often a discrepancy between the timing of crisis and remedy.

For many misfortunes, there are clearly laid down and immediate ritual mechanisms of avoidance or redress. This applies in the face of uncertainty or danger. So, before trucks or buses cross some of the more rickety bridges which span the innumerable gorges, offerings are not uncommonly made at the wayside. More dramatically, ten days before the National Elections in 1971, the head of the administrative village decided to organize a mass prayer in Tengahpadang to ask for the safety (*selamet*) and well-being of the community. Equally, in the event of falls, illness or occasionally other mishaps, ritual responses are evoked. When a giant banyan, *waringin*, tree in the settlement cracked open one night during a storm, the village senior officials rapidly summoned the priests to deliberate and it was concluded that forty-two days[14] (the product of a six- and seven-day week cycle) of public ritual was necessary to ensure the neutralisation of possible adverse consequences. Here, ceremonies are held in anticipation of danger, or in prompt reply to it.

In sharp contrast, rice-cycle ceremonies are scheduled according to calendars which define religiously auspicious periods, and so do not, in fact, necessarily fit the critical stages of agriculture. This creates certain difficulties for arguments about ritual which are based on their function of ordering attention or experience. Even Douglas' view that ritual in general

'provides a focussing mechanism, a method of mnemonics and a control for experience' (1966: 63), applied to agricultural rites of this sort, appears a little odd. For, it would seem to imply framing the wrong moment, and a mnemonic device for an eminently visible, and more or less inevitable, natural process.

In a not entirely incompatible argument, Geertz has referred more than once briefly to the question of the functions of agricultural ceremonies as a whole in Bali. From my reading of him, it appears that these are seen not only as arranged to fit the various stages of rice-farming, but at the same time as providing the temporal framework in terms of which cultivation is organised within the *subak*, so that the rice cult, 'matching with fine precision the actual flow of agricultural activity, is one of the major regulating mechanisms.' (1967: 233). Thus, on the one hand, 'these stages follow in a fixed order at a pace generally determined, *once the first stage is initiated*, by the intrinsic ecological rhythms of rice growing.' (1972*a*: 30, his italics). On the other, 'these various ceremonies are symbolically linked to cultivation in a way which locks the pace of that cultivation into a firm, explicit rhythm.' (1972*a*: 30).

It may be worth, however, examining the ethnographic evidence in some detail, for it shows that there are obstacles to the unqualified acceptance of these different views. After some months in the field, I enquired at some length about the ceremonial cycle in Subak Langkih of the priest of the association, together with the head of the local religious community (*désa adat*). Their ideas are incorporated in brief in Table 2, under the heading: 'Subak Priest's Interpretation'. This shows the link between the ritual schedule and the development of the rice crop. The system in this region is far more elaborate than the general outline presented by Geertz (1972*a*), but there is nonetheless a definite order in the way in which the rites are presented as coinciding with the successive phases of agricultural work and the main stages of padi maturation. According to this account, the early ceremonies initiate work, while the later ones keep pace with the developing crop. So, before any activity can begin in the fields, *muat emping* must be performed without fail (see also Wirz 1927: 297); the same holds for the later rites for planting seeds, *memulih*, and for transplanting the seedlings, *nuasèn*. The following three performances of *mubu(h)in* parallel the vegetative growth of the rice, until *nyungsung* which should be held just as the panicle causes the plant to swell and become 'pregnant'. After this, *mapinunas* is given twice, so that *mebiyu kukung* then falls at about the time of flowering. Fifteen days later, *ngesaba* indicates that the padi is ripening. Finally *nyehetin*, the decoration of the sacred *duwasa* rice, occurs, after which harvesting may start. It is, at first sight, an elegant and perfectly tailored system.

Unfortunately, on closer inspection, this pattern proves

TABLE 2. An outline of the rice-cycle rites in Subak Langkih

Name of Rite	Outline of Main Features	Subak Priest's Interpretation	Timing	Comments
(Me)muat Emping	Giving offerings of *pemuat emping* to Batara Ibu Pretiwi at the point where the water enters the top field. A branch of a plant selected according to the season of the solar-lunar calendar is properly included (cf. Wirz 1927: 298)	Opening the water and the ground. Before this rite, no work of any sort may be performed in the ricefields. Asking permission to begin work.	According to the calendar of the *subak* priest, or possibly of the Parisada Hindu Dharma (see footnote 6 in text)	May well occur long after work has started, both in open and coordinated seasons
Memulih *(Mebulih)*	A very small rite in the N.E. corner of the seedbed.	Asking permission to plant the seeds	Properly as above	Commonly held before *muat emping*
Nuasèn	1) Planting a variable number of clumps of padi, in the corner of the highest field 2) Offering *cau petik, cau mum(b)ul* and *panak cau*, also called the 'mother', 'father' and 'children' *cau** (*petik* = pick fruit; *mumbul* = rise up; *panak* = child) 3) Placing of the ritual plants see text.	To make the rice take root in the soil, grow and have children. Invoking the gods: Sri, Pretiwi, Wisnu and Rambut Sidana. Before this it is forbidden to transplant.	As above	Often takes place *after* transplanting; in practice the date of performance seems relatively open and at the convenience of the household
Bekèkèhan	A very small rite (which consists largely of 'the claws and feathers of a chicken')	Like the scratching, *ngèkèh*, of a chicken, as men check seedlings	3 days after *nuasèn*	Not performed by all families
Mubu(h)in	Three successive rites varying in core offering: 1) porridge with *dadap* leaves 2) porridge with grated coconut 3) the *cau* as above	To ensure that the padi grows well	On successive dates of *kajeng-manis* (15 days apart) which start on the first correct combination after 12 days from *nuasèn*	May sometimes be performed before 12 days have elapsed after *nuasèn*

TABLE 2 (Continued)

Name of Rite	Outline of Main Features	Subak Priest's Interpretation	Timing	Comments
Nyungsung	The main ceremony is in the *subak* temple and resembles a small *odalan* (*vide infra*). A smaller rite in individual fields with *(ke)tipat* offerings of different names,** referring mainly to the desired attributes of the crop	Occurs just as the padi becomes *beling*, pregnant (the swelling of the rice plant). This is to ensure that the flowering will be successful	In theory, this is varied specially to coincide with the 'pregnancy'. It may be held on one of several propitious dates. but if possible *Angarkasih* or *Buda-kli(w)on* (combinations of the 7 and 5 day weeks)	During the *kertamasa* cycle, this should be held to coincide with the *Odalan Agung*, but on the occasions observed, it was not. In practice, this is often performed on the *kajeng-manis* after *mubuin III* as part of a strict 15-day series but not in phase with the padi (see text)
Odalan Agung	The full three day temple festival held in the *subak* temple, which requires the offices of a *Brahmana* priest, *Pedanda* to perform the rite of *ngaturang piodalan* (see Belo, op.cit.) The *odalan alit* (lit: small *odalan*) is a simpler version of this	This happens just when the padi is about to form seeds	Held according to the Hindu-Balinese calendar on *Purnama Kedasa* (full moon of 10th month). The *odalan alit*. in contrast, occurs once every 210 days, so they follow separate cycles.	Apparently both are always performed on the correct date; as the *Odalan Agung* follows the solar-lunar calendar, it tends in fact regularly to fall closer to pregnancy than the other rites. With *nyungsung* and *ngesaba*, these resemble standard temple ceremonies more than they do the other rice-cycle rites
Mapinunas	Simple rites held on two successive *uku* dates; they include a small number of *tipat*.	To ask for the safety *(selamet)* for the maturing crop	Held on two successive *kajeng-manis* dates following *nyungsung*	In practice, the first may be performed with *nyungsung*, the latter with *mebiyu kukung*.

TABLE 2 (Continued)

Name of Rite	Outline of Main Features	Subak Priest's Interpretation	Timing	Comments
Mebiyu Kukung	A large ceremony which includes a range of *tipat*, of all the animals said to be found in the fields; also contains the offering *isin sawah* - the contents of the ricefield - consisting of the meat of certain land, water and airborne animals. This ends with *tipat balang ring tipat kukur sidayu* (or *penundung merana*) which requires the use of the same ritual plants as in *nuasèn* (see text)	To ensure the safe swelling of the rice seeds. To drive away pests by giving them offerings.	Held on the *kajeng-manis* after the second performance of *mapinunas*	Sometimes this is far too late, when the padi is more or less ripe
Ngesaba	A festival in the *subak* temple again. A small rite is held on the following day in the plot of each farmer.	To make certain the the padi turns yellow and ripens.	Held 15 days later on the next *kajeng-manis*	This must often be advanced off its correct scheduled time, to enable harvesting to proceed without delay. Interestingly, this timing change is known as *ngemaling* = to steal
Nyehetin	Decorating the *duwasa*, sacred rice in the form of Déwi Sri	-	Performed on the *kajeng-manis* after *ngesaba*	Rarely carried out on the proper date as it would be far too late. Also pulled forward (*ngemaling*)
Manyi	A very simple rite performed on each plot just before the harvesting begins	Asking permission to cut Déwi Sri	Not organised by ritual calendars; fixed practically	-
Nuduk Déwa	Cutting the sacred padi and carrying it back home on the head, to be placed in the ancestral shrines	Taking Déwi Sri back home from the fields to pay her honour	Performed at the same time as *manyi*	-

TABLE 2 (Continued)

Name of Rite	Outline of Main Features	Subak Priest's Interpretation	Timing	Comments
Nuasèn Menekang Padi	When the padi is dry, the offering of *cau* once again in the N.E. corner of the granary, using 11 *cau petik* and 2 *cau mumbul*	To prepare the granary for the padi and for Déwi Sri	On a propitious day according to the printed calendar	-
Mantenin Padi	The rite performed in the granary of dressing the effigy of Déwi Sri and presenting offerings to her in front of, and in, the granary. Also offerings are laid out in each building and ritual site in the compound	To give thanks for Déwi Sri for the harvest. Before this date no rice may be sold or used in the house	As above	Properly the effigy is dressed before being placed in the granary, but often not. Padi is commonly sold before this rite to pay debts, etc.; but it seems not to be eaten at home. This rite is performed by households independently on dates over a period of several months.
Nonang Taèn Asep	Changing the offerings in the compound and granary - to remove the ash (lit: faeces) of the incense	No reason known for this ceremony	3 days after *mantenin padi*	The end of the cycle

Notes: Unless indicated otherwise, all offerings before *nyungsung* are placed on a low shrine, the *sanggah duwasa* beside the sacred rice. Afterwards, they are placed in the *sanggah limasan*, the raised offering table, commonly but not always, by the point of entry of water or in the N.E. corner of the top field.

* *Cau* are a special type of offering, woven in Tengahpadang from young coconut-leaf (cf. van der Tuuk 1897) and used in rice-cycle rites, with a variable number of 'children' determined by the calendrical date.

** (Ke)tipat, also made from coconut-leaf, are shaped in many instances like animals and designated accordingly (see J. Hooykaas 1961: 54, for an illustration).

to fit rather badly. First, the scheme corresponds to the physiological development of the rice more often than it does to agricultural activity. There is little connexion between the concentration or frequency of work and ceremonies. The heavy labour from the first hoeing, *m(eb)akal*, to harrowing, *ngelampit*, then an optional but not uncommon second hoeing, *mangkalin*, and the careful levelling of the fields, *melasah* (cf. *Adatrechtbundels* XV: 33-4) takes place with no rites at all.[15] The later organisation of drying, *ngenyaatin*, and flooding, *metengin*, of the fields to encourage tillering and growth, does not coincide with *mabuin*. Similarly, *ngaduk* and *ngiris*, clearing the weeds by hand and with a hoe, about a month and one to two months after transplantation respectively, depend on the state of the plants and each farmer's energy, not on the ritual calendar. In fact as Table 2 demonstrates, a large proportion of ceremonies occur after 'pregnancy' when agricultural work has effectively finished until harvest.

There are further problems in the scheduling of the ideal system. The spacing of the later ceremonies strictly fifteen days apart (on the combination of *kajeng* and *umanis*) means that, after *nyungsung*, there should be at least a minimum of sixty-one to seventy-five days before harvest, which is roughly twenty or thirty days too long, although the exact excess depends on weather conditions and how much reaping is advanced.[16] Again, neither in the regulated *kertamasa*, nor the open *gegadon* cycle, does theory necessarily correspond to practice; for not everyone performs all the rituals on the proper day, even when coordination is ideally enforced. In part, this deviation is explicable by reference to the procrustean problems of fitting a basically numerical calendar to the variability of actual conditions, and also by its intersection with the solar-lunar system. While most rites follow the former, the major temple festivals, *odalan*, fall according to the latter calendar (with the complicating exception of one, the *odalan alit*, which happens once every 210 days on Anggarkasih Dukut, and is completely out of phase with everything else). As a model, it seems at times to be more complicated than the reality to which it is supposed to refer.[17]

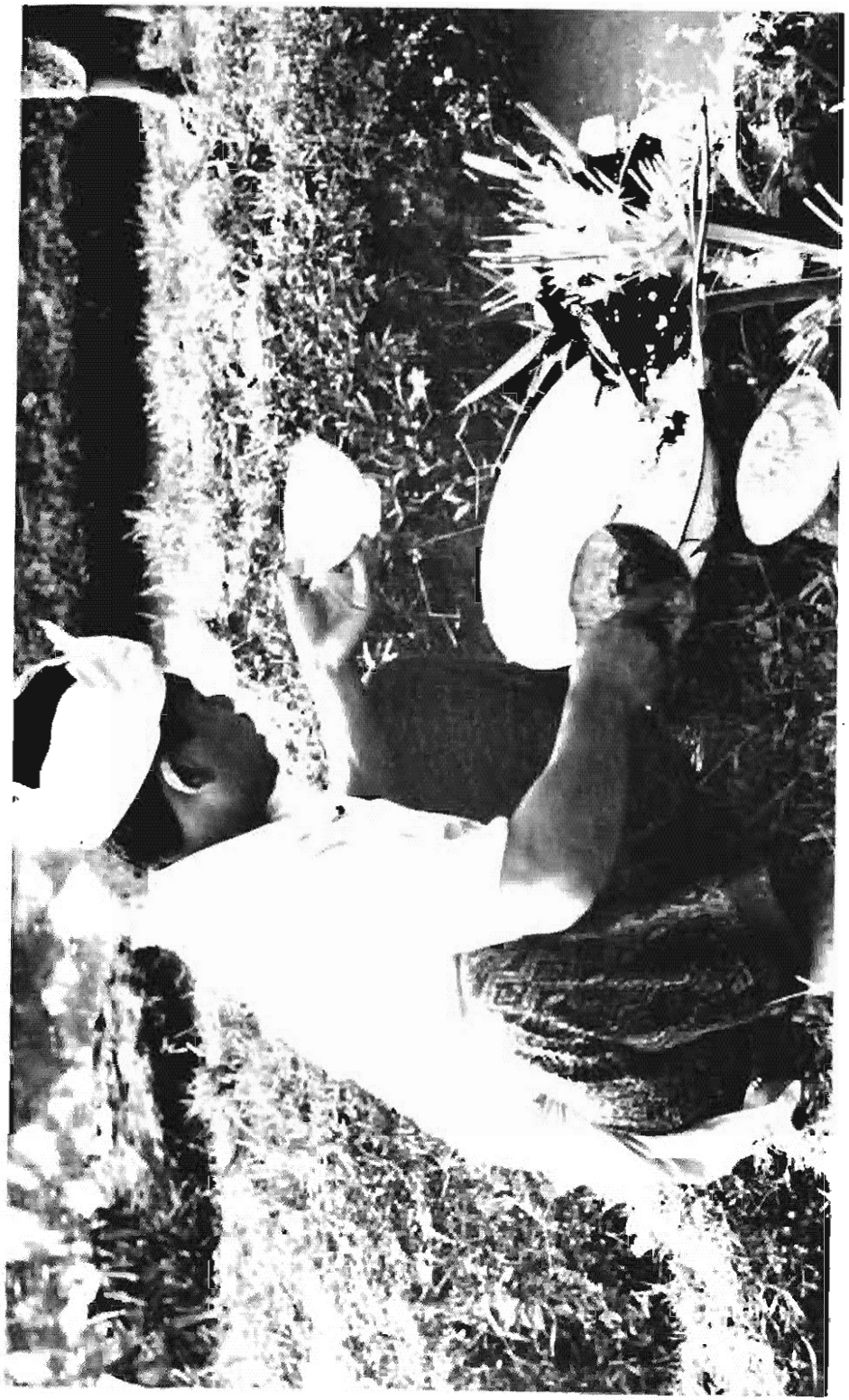
This can perhaps best be substantiated and illustrated with a few examples. In Subak Langkih the season starting in December 1971 was *kertamasa* and supposedly coordinated throughout the association.[18] *Muat emping*, the starting-signal for the whole cycle, was held not only after (21.12.71) the ceremony of *memulih*, to open the seed beds (29.11.71), but in fact when the main hoeing was already over (by mid-December). Then *nuasèn* which initiates transplanting, was performed by different peasant families during a period of over a week, in many cases well after work was finished. Nor, unfortunately, does the ritual match comfortably the growth of the rice. A year earlier, in the previous synchronised cycle, *ngesaba*, the rite to mark the ripening

of the padi, was conducted *a week after harvesting had begun*! Equally seriously, in the same season, *nyungsung* fell on 9.3.71, sixty-six days before harvest; while the padi actually became 'pregnant' at the time of *mapinunas II* on 8.4.71, an entire month later. The following *gegadon* cycle saw the rite held still earlier, eighty days before harvest; whereas in the subsequent *kertamasa* it was only forty-seven days before and, for once, remotely on target. This list could be continued, but the evidence adduced should, I trust, be sufficient to show that seasonal variation and actual timing do not present as neat a picture as the ideal would imply.

It seems then that for some parts of Bali at least, analyses of agricultural ritual simply in terms of technological alternatives, mnemonic devices, or as masterplans for the cultivation system seem to fall short. While the ritual cycle was presented initially by informants as serving in part as a labour schedule, or as a marker of the phases of rice growth, further scrutiny suggests that the correspondence is poor. Such interpretations may have a certain validity at a formal or abstract level. On the ground, however, the result is less a 'model of' or 'model for', than a muddle.

The incomplete character of these arguments raises problems for which no full solution can be offered here. It does suggest, however, that it may be useful to return and re-examine the relationship between the ritual complex and the organisation of cultivation. One of the features which emerges is the striking contrast between the conception of agricultural production expressed in common belief and ritual, and the results acquired through observation. The former repeatedly emphasises the inadequacy of technology alone to produce successful crops by allocating responsibility in the last resort to supernatural beings; whereas, in practice, it seems that the variations in yield depend in no small part on the efficiency of individuals and upon the workings of the irrigation association itself. It would appear, then, that the view of cultivation propounded in ritual offers a mode of explanation (Parkin 1975: 137-9), which may be misrepresentative (Bloch 1975: 203-22).

In the first part of this paper, it was remarked that the indigenous interpretation of the sets of symbols based on sound association suggests the stages of ideal agriculture, and that the use of plants in some way helps to bring about the desired result. This is stressed in the employment of *mantra*, ritual formulae which invoke the various gods involved in agriculture, in particular Ibu Pretiwi, Batara Wisnu and Déwi Sri, the deities of earth, water and rice, and supplicate them to bring about the ends desired at each stage in the cycle. The forms vary greatly from farmer to farmer, depending on their knowledge of the traditional ritual language,[19] from the local priest's recitation during *nuasèn* to Déwi Sri, ending with an exhortation repeated



9. Laying out offerings for the ceremony of *Nuasen*

three times of *mum(b)ul*, rise (or spring) up, to the simple prayer of a peasant recorded at *mebiyu kukung*: 'Déwi Sri, make the rice give fruit!'

In so doing, the villagers are not denying the importance of technology in bringing about fertility, which is hardly surprising in view of their acknowledged expertise. It is said, quite simply, though, that this is a necessary, but not sufficient condition. As they readily point out, pragmatic considerations do not always explain why one farmer has a better yield than another, nor why rain flattens one man's crops, but not his neighbour's. Agriculture relies ultimately on the performance of the standard rites, although this in itself is no guarantee of a full harvest, as successful communication with the gods is not certain. A reflection of this aetiology is found perhaps in the fact that the irrigation association does not impose sanctions for failure to observe the ceremonies on individual plots, as it is felt that the omission will provoke its own retribution.

Nor is this view of the ascription of responsibility to the gods simply a theological doctrine, remote from the everyday ideas of peasant farmers. Divine involvement in agriculture is recognised in popular thought, as the following case should demonstrate:

> In 1969, the level of water reaching Subak Langkih began to drop seriously (according to all the informants who were agreed on the outline of the story given here). This was attributed to the permission granted by the government irrigation officer, *sedahan agung*, to three new *subak* upstream to tap the existing supply. Shortly after the third, and largest, of these began to irrigate, the medium of the *Pura Duur Bingin* went into trance and announced that *Ratu Gedé* (the male *Barong Landung* mentioned above) wished to go with his consort to visit his 'brother', the deity of the watershed temple near the river source at Apuh. This was taken as a sign by the villagers that the god was intervening publicly in the disagreement over water. So, when the day came, the two *Barong* were accompanied in procession by over 400 people up to the mountains where they stayed in the temple overnight. Immediately afterwards the water-level is said to have returned to normal, or even increased. Over a year later, people still insisted on taking me to the main feeder canal to demonstrate the improvement.

This suggests that the role of the gods in agriculture is not merely as vague forces who must be supplicated in the hope that they will respond with routine benefits, but as important agents who may step in of their own accord unanticipated, so that their intervention may be part of an immediate framework of action.

In contrast, ethnographic enquiry suggests a different interpretation to that offered in village religious belief. In reality, there are a number of common threats to the crop within the traditional technological limits of wet rice cultivation, not all of which stem from the uncontrollable forces of nature. Perhaps the most serious, but fortunately rare, hazard is rain during the short flowering period, which may prevent fertilisation of the flowers. More frequent is a reduction in yield due to rain (and sometimes wind) just before harvest, which flattens the top-heavy stalks and may result in premature germination and difficulties in reaping. The other main problem is the depredation of pests, *merana* (principally mice, birds and insects), but this is rarely severe, as the widespread practice of synchronising crop cultivation reduces the damage per unit area. As was noted in Tengahpadang, there are no immediate remedial rites in the event of these dangers materialising. The great ceremony to ward off pests, *nangluk merana*, is held for the region as a whole on the coast at Lebih in December (on *Tilem Kanem*, between the sixth and seventh Hindu-Balinese months) when the fields are empty anyhow.[20]

As a few villagers were willing to admit privately, the factors most widely responsible for reducing productivity are of two principal types: the sheer incompetence of, and social pressures on, individuals; and the inefficiency, for various reasons, of the *subak* association. Farmers differ in their skill and diligence. They are also under moral obligation to engage in various forms of labour exchange, ranging from co-membership of special agricultural voluntary associations, through mutual help, to straight mobilisation of clients. To evade this may well be economical, but carries with it high social costs (Barth 1963: 8-9). While these constraints may help to account for individual variation, they are not directly relevant to the working of the irrigation association as a corporate group.

Although Tengahpadang lies some way up the sloping plateau of South Bali and has an adequate supply of water in theory, as it is not too far from the river source, the pattern of co-ordinated but fluctuating demand results in shortage (*Adatrechtbundels* XV: 50). Despite an elaborate penal code (*awig-awigsubak*) reinforced by sizeable fines, the deficiency leads to, and is exacerbated by, universal theft (see Liefrinck 1969: 52). This is normally achieved by blocking off all one's neighbours' supplies at the dividing-blocks for some distance back up the irrigation channel. It also creates the possibility of conflict in periods of acute shortage. The scale of pilfering is such that application of the rules is more or less infeasible. The constantly changing forms of guard duty which attempt to cope with the problem are ineffective in dealing with the innumerable daily infractions, and may indeed fuel the disagreements (see below). As a consequence, a significant drain on labour stems

10. Repairs on minor damage to an irrigation channel in Subak Langkih

11. Reconstruction in progress on the weir at Mundak Bolo

from the demands of surveillance and from the continual erection and destruction of diversions with serious implications for those with riceland at the lower extremities of the channels. The simple administrative problems of organising the equitable distribution of water, and ensuring obedience to the rules, is almost insoluble in practice. Nature is, in many ways, a far more remote threat to the Balinese peasant than are his agricultural neighbours; but it is the former which is magnified in ritual, while the disruption caused by the latter receives no cultural expression.

A graver danger still is posed by the lack of capital investment in irrigation works. For example, Tengahpadang and the mountainous regions behind receive heavy and uneven rainfall, with the perennial risk of sudden inundation. This may result either in the silting-up of the ingenious, but simple, system of sluices and over-spills and send sand or mud spewing through the irrigation network, or in sections of the channels being washed away entirely. The frequent rupture or blockage of the ducts can deluge certain fields and damage terracing and, at the same time, leave others dry. On several occasions, whole parts of Subak Langkih were waterless for days on end during critical periods of the cycle. In one *tèmpèk* (Langkih) alone, in the first sixteen days of December 1971 (admittedly a worse time than most as it is at the beginning of the rainy season), there were four incidents of broken canals and one landslide which destroyed an entire length of conduit. A few years earlier, after a particularly disastrous series of collapses, concrete dividing-blocks and banks were introduced at the worst points, but almost all the system still consists of simple mud and stone channels, which breach easily and require constant, and often difficult, repair. While Balinese indigenous technology is remarkably sophisticated (*Adatrechtbundels* XV: 29-37; Liefrinck 1927: 70 & 76-91, or 1969: 47-57), actual investment seems to vary greatly between *subak* and to be far lower than the potential.[21] To understand some of the reasons, it is necessary to turn to the structure of the irrigation association itself.

Langkih, as all the other *subak* in the area, is run according to a strictly democratic set of rules, backed up by the ideal of the equality of all members, regardless of status or wealth. In general, for example, Balinese ritual may be conducted at a number of different levels categorised into *nista*, low, *madya*, medium, and *utama* as the highest. The choice for individuals in most situations varies with considerations of prestige and available resources. It is of interest then that I was informed that all agricultural rites conducted in the fields should properly be *nista*; although this is partly to be explained by the fact that a larger ceremony would be pure inconspicuous consumption, as they are performed alone. Equally, contributions to association temple ceremonies, labour obligations and voting rights are the same for all members, independent of differences in land or water holdings.

The structure and ideology of the *subak* disguise, however, under a jural and normative cloak, the profound inequalities, divergences in economic interests and internal tensions which stem from real discrepancies in the command of resources. The formal and legal equality of association members serves, in fact, to suppress and deny the differences in wealth and power which exist. In contrast to the local residential groups, the *banjar*, which have somewhat similar constitutions, but where a number of different factors encourages the development of patron-client ties (Hobart 1975), such informal groupings do not seem to emerge here. Instead, for the most part villagers are atomised and set against one another by their competing concerns in water. In certain situations, though, decision-making is influenced by sub-sections of the *subak* with rival demands, and more importantly, by informal groupings with allied economic interests. For the major decisions, not uncommonly, centre on the problem of improving the irrigation system which requires in turn capital investment. This tends to split the group in terms of wealth for, despite the rules that contributions are scaled according to the amount of water contracted, the payments weigh far more heavily on the poor subsistence farmers who have have few, if any, spare funds. In this case, as they are generally in the majority (see n.3 above), the usual pattern is for the plans for amelioration to remain shelved until a sufficient crisis impels the members to minimal action.[22] Underneath the seeming equality of the irrigations assocation (Birkelbach 1973: 165-9), there are profound differences.

These problems can perhaps be seen more clearly by a consideration of the example below:

> Tèmpèk Langkih possesses six branch canals which feed its various sub-sections. One of these, Munduk Bolo, obtains water from the main stream by means of a weir which raises the level by some three metres above its natural course, and consists of simple tree trunks supporting a bed of volcanic sand. The construction is unstable but cheap, and it tends to get carried away in heavy rain storms. On the occasion which I witnessed, in early December 1971, the weir broke and flooded a number of fields lower down. This had the effect of cutting off Munduk Bolo's supply of water just at the time that the fields required soaking, in order to soften them for hoeing, so that work was interrupted. After a brief consultation of the *tèmpèk* council officials, it was decided that the responsibility lay with Munduk Bolo, which consistently refused to install a more permanent structure for reasons of cost. Intense discussion ensued during which the three reasonably wealthy members (with two *bit tenah* each) tried to persuade the sixteen others (with one *bit*, or fractions) to raise the money for a concrete dam, while they negotiated simultaneously for support from the *tèmpèk*. The plans came to nothing and more time passed before the poor members

> eventually scraped together their contributions (in more than one case, this was lent by the rich to speed matters up) to purchase the cheapest, but least durable, tree trunks available. Five days after the initial breach, the weir was working again, but it took several days before the limited supply could soak the fields sufficiently to enable normal work to proceed, now seriously off-schedule. Within ten days the canal broke higher up, and a few months later the weir collapsed once more.

On this occasion, a certain degree of tension was evident between the richer farmers who had the ready cash to invest in a solid irrigation dam and stood to benefit proportionately more if it were built, and the poor who in some instances had not even spare padi to sell from the previous harvest.

This opposition came out in another context, in the arguments over changes in the system of guard duty, *telik*. For three seasons, this had been performed by the *tèmpèk* as a whole, divided into teams, *regu*, who took turns to patrol the ricefields. Unsurprisingly, this led to abuses, when people tended to fine their personal enemies but ignore the dubious activities of their friends. In addition, the big landowners seemed to be penalised far more often than the poor. Following a violent altercation which blew up unexpectedly one evening in June 1972, the *tèmpèk* meeting agreed to appoint officials specially for the task. It is interesting that each of these happened to come from a family with extensive ricelands.

Although there are numerous gradations in the size of peasant holdings in Subak Langkih so that there is no simple dichotomy in local thought, evidence points to a trend towards conflict between relatively small- and large-scale farmers, in the pattern of serious quarrels which break out in the ricefields. In all I have records of five recent incidents which led to violence or a complete breach of social relations. This is hardly an adequate sample for substantial generalisation, but it may still be significant that, of these, four were between men who owned two and five *bit tenah* (or from 0.57 to 1.43 hectares of irrigated riceland) on the one hand, and those with one *tenah* or even less (between 0.11 and 0.37 hectares of land) on the other. The remaining disagreement was between two notoriously cantankerous neighbours both with small plots. It would appear that there is a tendency, if nothing more, for the eruption of disputes to follow the lines of economic difference, which is arguably a reflection of underlying tension within the association.

So it seems that there is a significant discrepancy between the view of agricultural production codified in ritual and that which emerges from an analysis of economic institutions and relationships in practice. The series of rice ceremonies appears, in some ways, to provide a representation of an ideal cycle of cultivation, in which an instrumental role is ascribed to the

participation of certain deities. This suggests one possible interpretation of the common use of calendars which reflect a pre-ordained ritual time-scale, rather than the actual maturation of the crop. One of the effects is to stress the separation of the changeable seasons of the natural world, where agricultural success depends on a range of more or less controllable factors, from the perfect order embodied in the calendars, where the idealised re-creation of farming is placed securely and unequivocally under the authority of supernatural forces. This apart, belief and ritual accentuate human dependence on the appropriate deities for fertility and in avoiding the uncertainties of nature. In fact, however, nature is only one among many hazards and far more proximate are the difficulties caused individually by co-members of the irrigation association and by the shortcomings of its constitution, which lead to a de-emphasis on policies for investment in technically efficient equipment and to the muting of any expression of basic economic differences.

The culturally elaborated message of ritual attributes responsibility for agricultural prosperity to the gods and, in so doing, provides a convenient collective interpretation of difficulties. Thus, it can be seen as a traditional mode of explanation (Parkin 1975: 137-9) of the fertility of the rice crop; but in recent years other views are becoming apparent with the increasing public discussion about technological innovations.[23] The former remains, however, a particularly attractive alternative to the potentially disruptive examination of the administrative and constitutional weaknesses of the irrigation association itself. Within this, there appear to be conflicts which derive in part from the disparity between the pattern of land-ownership and public influence, or between the reality of divergent economic interests on the one hand, and the ideology of equality on the other. To the extent that ritual provides an alternative representation and diverts thought away from the inherent structural problems of democratically constituted groups, it may be said to support the existing social system and preserve egalitarianism by denying its defects.

As a final note, there is an interesting contrast between the argument outlined earlier in this volume in 'The Path of the Soul' and in the present contribution. In different ways, they each suggest that symbolic forms and ideology may produce incomplete or inaccurate representations of the state, and implications, of social relationships, and hence obscure certain types of underlying process, in what has variously been termed 'mystification' (Cohen 1969: 220-21; 1974: 31-32), 'misrepresentation' (Bloch 1975: 204ff.), or the creation of a 'culturally alternative explanatory mode' (Parkin 1975: 137). In the first of these two papers, nature is used to justify the inequality between Balinese descent groups by representing the cultural in natural terms; in the latter, nature is used to reaffirm equality within a group by portraying the dangers to it as natural (and their resolution as

supernatural), rather than cultural. In the discussion of the caste system, cosmological conceptions help to support and legitimate ideas of hierarchy; in the irrigation association, ritual symbols appear to support and protect the values of corporate solidarity. The notion of 'mystification' has generally been applied to the study of systems of inequality. If nothing else, I hope to have indicated here that it may be just as applicable to the opposite.

NOTES

1. I would like to express my thanks to Dr Maurice Bloch, M.R. Kaplan, Professor Adrian Mayer and Dr David Parkin for making extremely valuable comments on the original version of this paper. My gratitude is also due to Dr C. Hooykaas for being so kind as to assist me not only in my attempts to decipher some of the ritual formulae mentioned here, but also in making available references to certain of the plants and to transcriptions of the different editions of the Taru Pramana. The system of pronunciation of Balinese words is given in 'The Path of the Soul' (n.3) also in this volume.

2. The exceptions which spring to mind include Leach 1964, and perhaps also Fox 1974, while sensory associations feature in a somewhat different fashion in Lévi-Strauss 1966: 12-22.

3. These include: *Adatrechtbundels* XV: Nos.8, 10, 11, & 27; XXIII: Nos.42-45; XXXVIII: No.72; Birkelbach 1973; Geertz 1967 & 1972*a*; Grader 1960; Liefrinck 1927, partly translated in 1969; Wirz 1927.

4. The official records for June 1971, of the levies and membership for the five *tèmpèk* of Subak Langkih indicate that, in each, the proportion of peasant farmers with one *bit tenah* (the modal figure) or less is roughly three-quarters, or even more. The actual percentages (from upstream to down) are:

Tèmpèk	%
Sukabayu	70.2%
Langkih	74.1%
Uma Dalem	73.9%
Telun Ayah	86.9%
Keraman	86.9%

The range can be accounted for partly by differences in the wealth of the members of the various wards in the settlement. Although there is no official connexion between irrigation and residence (Geertz 1959: 995-6), there is a fairly clear informal association as the *tèmpèk* in this area tend to be dominated numerically by a single *banjar* which also provides a convenient site for holding its meetings.

5. There appear to be more or less systematised alternatives

for representing or expressing time in Bali, among which the calendars mentioned are important in defining the ritual time-table, and the time-scale. Whether or not their formal qualities can usefully be described as cyclical, or even 'particulate' (see the discussion in Geertz 1966*b*: esp. 81, n.31) does not necessarily imply that the Balinese are incapable of also recognising that time may be seen as sequential, or non-repetitive (Leach 1961: 125). The views of the villages were summed up succinctly by the priest of the local *Pura Dalem*. He pointed out that, in his official capacity, he used the above two calendars to estimate ritual dates; whereas to the majority of people, as they were farmers, the cycle of seasons was seen as the most immediately relevant. For other matters, there was a chronology based on a series of well-remembered events, including wars, earthquakes, and volcanic eruptions, and more recently the official (Gregorian) calendar. An idea of the irreversibility of time would appear to be implied in the local version of the Hindu theory of *karma(pala)* (see 'The Path of the Soul'), or in proverbs or popular sayings, such as: 'words spoken can never be replaced in the mouth!'

6. In addition, the priest had an unfortunately largely illegible manual, the provenance of which he did not know. It appeared that, for the limited occasions of its use (see below), it was gradually being replaced by a printed compendium, produced by the Hindu movement in Bali, the Parisada Hindu Dharma (Geertz 1972*b*: 77-8).

7. These are *nyungsung* and *ngesaba* in Table 2.

8. For the background to this, see Hobart 1975: 90-91, where he is referred to as Candidate N.

9. There are several versions, in which the number of listed plants varies. In one, translated by Weck (1938: 250-81) there are 168.

10. They seem to be mainly common woodless species, although regrettably I did not have the equipment in the field to permit a detailed botanical examination or classification.

11. Most of the translations are to be found in the invaluable dictionary by van der Tuuk (1897-1912). In addition, he gives other homonyms for some of the names, which are in no way relevant here. Van der Tuuk, however, is not comprehensive on this subject and other terms were given by local informants, or are to be found in van Eck 1876.

12. Within the actual periodicity of performance, the rites may portray an order in which there is juxtaposition or repetition of successive phases of agriculture, in a manner reminiscent in some ways of Becker's recent argument (1976) about the qualities of plot and time in the Javanese shadow-theatre.

13. Members may meet fleetingly, or at least pass through the same village temples (in particular, the *Pura Balé Agung* and *Pura Mascèti*; see Goris 1960*b* and 1960*c*) during the preparation or collection of holy water, *tirtha*, made by the priests before some, but not all, of the individual rites.

14. According to Geertz (1966*b*: 46), this is the product of the six- and seven-day weeks; but C. Hooykaas (personal communication) has argued in response that this is, in fact, the common thirty-five day cycle (*tumpek*; Goris 1960*a*: 117) with an extra seven-day week added.

15. The soil is thought to be unsuitable for ploughing in this part of the island.

16. Some interesting features of the rice cycle in the region of Tengahpadang emerged from a helpful discussion with Dr Ronald Ng. First, the vegetative period seems to be extended by the practice of regular drying of the fields. Then the time from the emergence of the panicle to flowering, and till harvest appear to be foreshortened in the same way. Harvesting itself is advanced as the traditional varieties of padi are reaped and carried still on the stalk to be dried at leisure in the compound.

17. There is little reason to think that the problem of timing can be explained by recourse to a theory of historical diffusion or by reference to possible changes in the varieties of padi. The two calendars between them offer great flexibility and the particular use varies widely from area to area. Whereas in Subak Langkih the rites are held for the most part at fifteen day intervals, in the lowland region round Sukawati in South Gianyar, this is less frequent. In one instance, the ceremonial cycle is scheduled strictly every 35 days, on either *Sukra-manis* or *Buda-kli(w)on*, by combination of the seven- and five-day weeks to produce five ceremonies in all between transplanting and harvest.

18. Geertz (1967: 233-5) reports a different type of system involving staggered cycles between *tèmpèk* in Klungkung and referred to just as *masa* (but cf. Korn 1932: 72 & 609).

19. The *mantra* used by the local priest, which he stated to be in Sanscrit (cf. C. Hooykaas 1973*b*: 14-5) turned out unfortunately to be largely unintelligible. In the one mentioned here, part was in Balinese, and so was translatable.

20. For brief notes on this rite, see Swellengrebel 1960: 38.

21. The type of problems differs with local topography. Further complexities which are not discussed here, emerge in the past, as there is the question of exactly how investment in the irrigation system came about. This seems to be more by princely intervention at times (*Adatrechtbundels*

XV: 40-42, or Happé 1919: 185-91) than Geertz perhaps implies (1973: 338).

22. This may be one reason why the irrigation associations around Tengahpadang seemed to control fewer funds than the residential wards, where factions tended to dominate decision-making and their leaders encouraged saving and investment for a variety of ends.

23. These have been encouraged by public speeches in the settlement from the district agricultural officer and by the growing availability of information and new strains of rice and fertilisers.

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