Vol. 13 1937

JOURNAL

OF THE

BOMBAY BRANCH

OF THE

ROYAL ASIATIC SOCIETY

(New Series)

EDITED BY

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PUBLISHED BY THE SOCIETY
SEPTEMBER 1937

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A ṢŪFĪ ALPHABET

By A. J. ARBERRY

In the list of works ascribed to the great mystic al-Junaid (d. 298/910) in Brockelmann's *Geschichte der arabischen Litteratur*[1] mention is made of a tract entitled *al-Sirr fī anfās al-Ṣūfīya*. This tract is preserved in a unique manuscript in the possession of the Egyptian Royal Library (*Dār al-kutub al-Miṣrīya*).[2] Recently, through the kindness of my friend and former colleague, Dr. Manṣūr Bey Fahmī, I have received rotographs of this manuscript. A detailed examination of the work has proved that it is *not* from the pen of al-Junaid. It is in fact a small collection of sayings of famous early Ṣūfīs, prominently among them al-Junaid, but also including persons of the fourth century A.H. such as Abū 'Alī al-Rūḏhabārī (d. 322/934). Though not belonging, therefore, to the Junaid *corpus*, this work is of considerable value and interest, and it is my hope later to publish it.

Appended to this treatise, and written in the same hand, is a very short tract of a rather curious nature. Entitled *al-Mu'jam fī ḥurūf al-mu'jam*, it consists of twenty-nine definitions of the term *taṣawwuf*, one for each letter of the Arabic alphabet—in which is included the compound *lām-alif*—and each definition beginning with the letter to which it is attached. The name of the author is given as Abū 'l-Ma'ālī As'ad b. 'Abdi 'l-Raḥmān b. 'Abdi 'l-Malik b. 'Abdi 'l-Raḥmān b. Ṭāhir b. Yaḥyā al-Shāfi'ī al-Nihāwandī.[3] This name does not appear in any of the usual works of reference, and of the tract itself no other copy appears to be preserved. The

[1] I, p. 199 ; *Supplementband* I, p. 354.

[2] Old catalogue II, p. 87 ; New catalogue I, p. 316. In the New catalogue the work is described as being anonymous.

[3] Of Nihāwand in the province of Hamadhān (*Encyclopædia of Islām* III, pp. 911-12), from which al-Junaid also derived a *nisba*.

tract is itself of little or no scientific value : as a curiosity of literature, however, it deserves to be rescued from oblivion. As for the date at which the tract was written, this is too problematical a matter to be resolved in lack of other evidence. Below is furnished an edition and translation of the text.

بسم الله الرحمن الرحيم

قال الفقير أبو المعالى أسعد بن عبد الرحمن بن عبد الملك بن عبد الرحمن بن طاهر بن يحيي الشافعى النهاوندى رحمه الله هذه ألفاظ ألّفتها على أحوال أهل الصفوة، الذين صفت سرائرهم عن أكدار الهفوة، ولقّبتها المعجم فى حروف المعجم و بالله التوفيق ٭

الالف التصوّف اكتساب الفضائل، و محو الرذائل ٭

الباء التصوّف بذل الروح، وترك الفتوح ٭

التاء التصوّف ترك الفضول، و حفظ الأصول ٭

الثاء التصوّف ثبوت القلب، عند خدمة الربّ ٭

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الخاء التصوّف خلو الأيدى من الأموال، و صفاء النفوس من الآمال ٭

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تمّ الكتاب و الحمد لله وحده ٭

In the Name of God, the Merciful, the Compassionate.

Thus said the poor Abū 'l-Ma'ālī As'ad ibn 'Abdi 'l-Raḥmān ibn 'Abdi 'l-Malik ibn 'Abdi 'l-Raḥmān ibn Ṭāhir ibn Yaḥyā al-Shāfi'ī al-Nihāwandī (God have mercy on him):

These are phrases which I have composed to describe the spiritual conditions of the people of election, whose hearts were clear of sin's impurity. I have entitled it 'The Dictionary'; and God is my help.

Alif. Ṣūfism is the acquisition of virtues and the effacement of vices.

Bā. Ṣūfism is the striving of the soul and the eschewing of gains.[1]

Tā. Ṣūfism is the abandonment of trifles and the keeping of principles.

Thā. Ṣūfism is the steadfastness of the heart in the service of the Lord.

Jīm. Ṣūfism is striving with the carnal soul and watching over stray thoughts.

Hā. Ṣūfism is the guarding of secrets, the love of the pious, and the avoiding of sinners.

Khā. Ṣūfism is having the hands empty of possessions and the soul clear of expectations.

Dāl. Ṣūfism is persistent recollection and guarded thoughts.

(١) لاجتنى ٭ (٢) ناقص من الاصل ٭ (٣) الاسرار ٭

[1] Apparently this is the meaning, cf. Steingass s.v. فتوح. Perhaps however we should emend ترك (which occurs in the next phrase) to درك, translating 'the attainment of divine favours'.

Dhāl. Ṣūfism is liveliness of intellect and abstention from complaining at times of trial.

Rā. Ṣūfism is the rejection of evil desire and assiduity in the fear of God.

Zā. Ṣūfism is the visiting of brethren and the respecting of friends.

Sīn. Ṣūfism is treading the paths of the unseen in expectation of exemption from faults.

Shīn. Ṣūfism is gratitude for blessings and patience under punishments.

Ṣād. Ṣūfism is guarding against temptations when doubts assail.

Ḍād. Ṣūfism is the body's ceaseless quest [1] that the cups of sorrow may be drunk to the dregs.

Ṭā. Ṣūfism is casting away the carnal soul in servanthood and the attachment of the heart to masterhood.[2]

Ẓā. Ṣūfism is the manifesting of joy and gladness at the occurrence of sorrows and tribulations.

'Ain. Ṣūfism is lofty intentions together with ceaseless divine bounties.

Ghain. Ṣūfism is jealousy for things sacrosanct [3] and pleasure in the gifts of divine favours.

Fā. Ṣūfism is the passing-away of the attributes of humanity and the manifestation of the attributes of Godhead.

Qāf. Ṣūfism is standing in the stations of dawn to read the scroll of supplication for forgiveness.

Kāf. Ṣūfism is the gaining of realities and the rejection of worldly ties.

Lām. Ṣūfism is persisting in unification (with God) and assiduity in isolation (from all else).

Mīm. Ṣūfism is observing the soul during (all) motions and examining it during passing thoughts.

Nūn. Ṣūfism is impatience to attain that one may gather the fruits of one's desires.

Hā. Ṣūfism is quietude of mind during the assault of God's decree.

Wāw. Ṣūfism is the attainment of the Real by keeping close to the principles of truthfulness.

Lām-alif. Ṣūfism is the flashes of the secrets of the unseen which is guarded from the defilements of uncertainty.

Yā. Ṣūfism is prosperity of resolution in the effacing of the causes of sin.

The book ends, praise be to God alone.

[1] Cf. the well-known proverb (Lane s.v.) الحكمة ضالّة المؤمن.

[2] Sc. in the realization that the mystic is the servant (عبد) and that God is his Lord (رب).

[3] Sc. the eschewing of things forbidden.

AL-KINDĪ'S TREATISE
ON
THE CAUSE OF THE BLUE COLOUR OF THE SKY

By Otto Spies

1. Introduction

Although traces of the speculations of the Greek philosophers regarding the theories of colour in general are found scattered here and there in their works, it was not before Aristotle that a comprehensive treatise dealing with the general theory of colour was written.[1]

Even this important book of Aristotle seems to contain very little about the theory of the colour of the sky. As no authoritative explanation seems to have been offered before Alhazen began his experimental studies of the refraction of light, it would be worth while to study the treatise of the famous Arab philosopher Ya'qūb bin Isḥāq al-Kindī (died c. 873 A.D.)[2] on the blue colour of the sky. It would not be out of place to mention the results obtained by modern physicists like Maxwell, Rayleigh and others that lead to the conclusion that the blue colour of the sky is due to the refraction of the rays of the sun in the atmosphere. When we compare the modern point of view with the idea of al-Kindī we feel more and more admiration—specially when we read his bold statement put forward in an elegant way about the colour of the sky which runs as follows:

> 'The shadowy air above us is visible by that which the light of the Earth and the light of the stars mix into a colour in the middle of the shadow and light and this is the blue colour. So it has become evident that this colour is not the colour of the sky, but it is a thing which is exposed to our sight when light and shade encounter it . . . .'

Al-Kindī begins the explanation with the statement that the colour is a thing which appears to the sight. He then explains the presence and absence of light from a sunny and shaded place and says that, if it be possible to draw straight lines from the place to the sun the place gets lighted, otherwise it is shaded. The light reflected by the sun or by the small particles in the air lights also the bodies in the shade. As regards the light, it has no colour, but

[1] Works of Aristotle—Opuscula, Vol. VI, Oxford, 1913, p. 791*a*.

[2] Cf. G. Sarton, Introduction to the History of Science, Vol. I, p. 559 sqq.; Brockelmann, Gesch. d. Arab. Lit., Vol. I, p. 209; Supplement, p. 372 sqq.; H. Suter, Die Mathematiker u. Astronomen der Araber, Leipzig, 1900, p. 23 sqq.; Encyclop. of Islam, s.v.

it takes some colour when material substances are burnt in it. Later on with the help of the four great elements (water, air, fire, and earth) which he divides in two groups only i.e. the fiery and earthly, he takes into consideration the heat rays and the light found under different conditions on the surface of the Earth. Dealing in a different way he does not leave behind the question of the substances that get lighted easily and dealing with each of them separately he puts forward the statement that the blue colour of the sky is due to the action of light of the extra-terrestrial bodies (sun, stars, etc.) on the upper regions of the earth, and the colour is only a thing perceptible to our sight. It is interesting to note that al-Kindī is independent from Aristotle in his arguments.

The edition of the text is based on the only two extant manuscripts :

(1) The newly discovered manuscript Aya Sofya Nr. 4832, fols. 7*a*-8*a* in Constantinople. This manuscript containing 29 treatises of al-Kindī is not dated, but according to H. Ritter it was copied in the fifth century A.H., although I am not fully inclined to believe that it is as old ; it might be a little younger also. The script is old naskhī-Kūfī, almost without nuqṭa. The manuscript has been described by H. Ritter in his paper ' Schriften Ja'qūb ibn Isḥāq al-Kindī's in Stambuler Bibliotheken ' (Archiv Orientalni, Vol. IV, 1933, p. 363 sqq.). In general I have adopted the text from this manuscript and denoted it by the letter **A** in the edition.[1]

(2) The second manuscript is preserved in Oxford, Bodleiana Nr. 877, fol. 395–98. This manuscript, denoted in this edition by the letter **B**, is much younger than **A**. For the description cf. J. Uri, Cat. Bodl., Vol. I, p. 190.

Our treatise is mentioned, e.g. by Ibn Nadīm, *Fihrist*, p. 258_{17} with the title : كتاب رسالته فى مائية الفلك و اللون اللازم اللازوردى المحسوس فى جهة السماء

See further: Ibn abī Uṣaibi'a, Vol. I, p. 211_{24}; Ibn al-Qiftī, p. 372_{4} Flügel, Al-Kindī, genannt der Philosoph der Araber, p. 27, Nr. 125. Sarton, *loc. cit.*, has not mentioned this treatise of al-Kindī. There seems to exist, however, a Latin translation of it (cf. Encyclopædia of Islam, s.v. *al-Kindī*) which is not available to me in India.

Dr. Zakiuddin, M.A., Ph.D. (Alig.), Dr. Phil. (Bonn), Muslim University, Aligarh, had requested me to translate the treatise for him. When we began our work at Aligarh he soon left the Muslim University for higher studies in Europe. So we left the work incomplete. While our study of the text was in the initial

[1] I am grateful to Dr. H. Ritter for sending me the rotographs of it from Istanbul.

stage Dr. Zakiuddin prematurely published a short note on our work in 'Current Science', 1934. After his departure I copied, collated and translated the text. Through C. Brockelmann, Supplement, p. 373 I got to know that E. Wiedemann (Festschrift für J. Elster und H. Geitel, Braunschweig, 1915, p. 118 sqq.) had translated this treatise into German. I could utilize this translation before sending my manuscript to the press and correct it in several places. Professor F. Krenkow was so kind as to go through my translation and to suggest some improvements. I wish to acknowledge to him my best thanks.

Professor Krenkow, moreover, has drawn my attention to *Tanqīḥ al-manāẓir*, Vol. II, pp. 377-78 of Ibn al-Haitham who has a chapter on 'The Cause of the Blue Colour of the Air' as an appendix to his theory of shade. Ibn al-Haitham seems to believe that the colour is caused by small particles of dust. Anyhow, the mathematician Ibn al-Haitham is mistaken and is much below the standard of al-Kindī in this matter. An English translation of Ibn al-Haitham's chapter on the cause of the blue colour of the sky is given below.

2. Arabic Text

رسالة يعقوب[1] بن اسحق الكندى الى بعض اخوانه فى علّة اللون اللازوردى الذى يرى[2] فى الجوّ فى جهة السماء ويظنّ انه لون السماء

حاطك الله بتوفيقه وسدّدك بصنعه ، سألت ان اوضح لك علّة ما يرى من اللون اللازوردى فى جهة السماء ويظن انه لون السماء ، وقد رسمت لك[3] فى ذلك ما ظننته لك كافيا بحسب موضعك من النظر وبحسب فهمك ، و بالله توفيقنا وعليه توكلنا ٠

(١) يعقوب بن اسق : om A الى بعض اخوانه : om A

(٢) يرى : يرا AB

(٣) لك : om B

فنقول ان السماء كانت ذات لون أو غير ذات لون فان ادراك ،[1]
لونها على ما هو موجود فى الخبر الصادق من بعدها عن[2] الارض وما
يوجده القياس ايضا بالصناعات الرياضية ، من ذلك غير ممكن ان يحسّ ٣
و انما ذلك شيء يعرض للابصار و ذلك ان جميع الاجسام التى ليست
منحصرة كالماء والهواء والنار والفلك المشفّة لا تنفعل مضيئة[3] انفعالا
تاماً وانما المنفعل مضيئا انفعالا تاما الجرم المنحصر من ذاته فقط اعنى ٦
الارض وجميع ما كان مثلها اعنى منحصرا كالذى هو مشاهد بالحسّ
فانا نرى المواضع التى يمكن ان تخرج منها خطوطا[4] مستقيمة الى
الشمس قابلة للضياء قبولاً تامًا ونرى المواضع التى جاورت تلك المواضع ٩
المشاركة لها فى حدّ واحد الا انه لا يمكن ان يخرج منها الى الشمس
خط مستقيم بل منفصلة منها انفصالاً بيّناً كالمواضع ذوات الاظلال
والمواضع المشرقة عليها الشمس ، فانا نجد الشروقية نيّرة نوراً تامًا ١٢
ونجد الظلّ المجاور لها بالاضافة اليها مظلمًا ونجد قدر قبول هذه
الاظلال للضياء ضعيفا ولا نجد فيها من تأثير الشمس الحرارة كالمحرارت
بالشمس ما نجد فى المواضع الشروقية و نجد تفاوت ما بينها فى الحرارة ١٥
والضياء كثيرا ، فبيّن انه لو كان انفعال الهواء الذى فى المواضع المظللة
من الشمس بلا توسّط لم يكن بينها وبين الشروقية فى البعد من الشمس
قدر له فى بعدها من الشمس اثر[5] بل ربما كانت الاظلال أقرب الى ١٨

(١) ادراك : اراك A
(٢) عن : من A
(٣) مضية : مصيا B
(٤) خطوطا : خطوط B
(٥) أثر : om A

الشمس من بعض المواضع الشروقية بالوضع الصحيح المحادة لها ، ولو كان انما هو لقدر أبعادها من الشمس لكانت فى الضياء فى حالة واحدة ٭

فبيّن اذًا ان الهواء الذى فى المواضع المظلمة انما يقبل القدر الذى به يحسّ بالبصر ما فيه من الاشخاص ويعدم الضياء التامّ الذى هو موجود فى المواضع الشروقية من سطح الارض وما فيها من المنحصرات التى فى المواضع الشروقية لانعكاس الضياء الضعيف الى الاجرام المظللة المنحصرة من هذه المنحصرة الشروقية فيقبل الهواء الذى بينهما فى المواضع التى ليس بشروقية انارة ضعيفة لما فى الهواء المحيط بالارض من جسم الارض البخارى المتحلل من الارض والماء اى [1] الممتزج به ، فيقبل تلك الاجزاء ايضا على اقدارها من الضياء والحمى الضعيف فترى باللون الذى يرى به الهواء المظلل ٭

ولهذا البخار نهاية فى البعد من الارض لا يمكن ان يجوزها لبعده عن الحرّ المنعكس [2] من الارض فانه كلما بَعُدَ المسخن من الجرم المسخن له بالفعل ضعفت قوة المسخن عن اسخانه حتى ينتهى فى البعد عنه الى موضع لا يقبل منه تأثير البتة من الاسخان فاذا بلغ البخار الى النهاية التى لا يقبل منها تأثير حمى الارض فيه [3] عدم الحرارة العرضية التى فيه فلم يجز تيك النهاية لانه يستحيل عن الطبع الحار الصاعد بطباعه الوسط فيكون ذلك الجوّ غير قابل للاجرام المتحللة من الارض فلا يكون فيه شروق كالذى يكون فى المواضع التى لم تعدم ذلك كالذى هو موجود

(١) والماء اى : والماى A (٢) المنعكس : المعلس B
(٣) فيه : فيه حرارة A

بالحسّ فى النار ، فانها اذا كانت لهبا [1] كان لونها على قدر ما يخرج من امتزاج طبع النار ولون المادة لان مادة النار اجسام ارضية أو مآئية تظهر فيها اللزوجة الارضية كالادهان والصموغ و هذه أشدّ انحصارا من باقى الاجرام ، فان كانت الادهان كان فيما يعلو من اجزائها التى استحالت نارية فسلكت بحركتها مسلك النار بالحركة النارية والحار أجمع اعنى من الوسط فكان قبول تلك الاجزاء لشروق [2] النار عليها بلون أصفى من الوان الارضية التى تشرق عليها النار اعنى الاجزاء الارضية التى تتحلل فى النار كارضية الخشب وارضية المعادن فتصير الوان بعضها الى الخضرة وبعضها الى الحمرة وبعضها الى السواد وغير ذلك من الالوان فيرى لذلك النار [3] الملتهبة جسم ذو لون ساتر لا مستشفّ له لا نها ليست بنار صافية من الاجسام الارضية بل مشوبة بالاجزاء الارضية التى استحالت نارية من مادة النار وسلكت مسلك النار ممتزجة بها اذ صادرت لها القوة النارية والفعل النارى وليست بنار محضة ☆

وهذا من أعظم دليل على ان اللون من جميع الاجسام المنحصرة لا غير ، و من الدليل على ان هذه الالوان التى ترى فى اللهب الارضية وبالارضية انا اذا [4] ادنينا جسمًا مما له الالتهاب و الاستحالة ناريا الى الجوّ القريب من الجمر الذى قد تحلل لطيفه السيّال وبقى منحصره الذى هو اغلظ التهب نارا من غير ان يماس الجمر اذا كان على سمت سيلان النار من ذلك الجمر اعنى على سمت الخط المستقيم الذى يخرج من مركز

(١) لهبا : لهب A
(٢) لشروق : الشروق B
(٣) لذلك النار : ذلك النار B
(٤) انا : ان A

الارض ويخرق ذلك الجر ، فهذا دليل واضح على ان الملهب نارًا نارٌ فالجسم الذى على الجر نارٌ وقد يرى البصر ينفذ فيه ولا يرى له لون البتة لانه قد عدم ممازجة كثرة و جسم المادة [1] سيلانه معه ، وانما يستحيل فى تلك الحال المادة بكمال نارا اولا اولا حتى لا يبقى فيها من الجسم الذى يمكن ان يستحيل نارا البتة كما يكون فى بدو مماسة النار للمادة ، فانها تحيل بعض المادة نارا و بعضها جسما ناريا يتحرك حركة النار ويسيل ممتزجا بها اذ هو بالطبع سريع التحلل كثير الهوائية فيرى بامتزاجه بالنار التامة بشروق النار عليه ما وصفنا من الالوان وكذلك النار الكلية المحيطة بالهواء لا يحس [2] لها لون ايضا وهى معدن النار التى لا دثور لها حتى يشاء باريها جل ثناؤه [2] ان يدثرها معاً كما خلقها معاً ٭

فاذ طبيعة الجو كلّه غير قابلة للضياء الا ما كان منه منحصراً فان طبيعته اذا [3] الاظلام فاذا كانت طبيعة الاظلام و كان الضياء بانفعال [5] المنحصرات من قوة الشمس اعنى الارض وجميع الارضيات التى عليها والاشخاص السماوية المنحصرة [6] اعنى اجسام الكواكب فانه بين انها منحصرة اذ بعضها يكشف بعضا فانا نرى القمر يسترها [7] جميعا بجسمه ٭

فبين انه منحصر لا مستشفّ له ، وقد رأينا بعض الخمسة المتحيرة يستر بعضها بعضا الأسفل منها للاعلى وهى الثابتة [8] ٭

(١) وسيلانه معه ، وانما يستحيل فى تلك الحل : om B
(٢) لا يحس : فى أخرى لا يحصل on the margin of A
(٣) ثناؤه : وجل B
(٤) اذًا : om B
(٥) بانفعال : بالفعل B
(٦) اعنى ..... منحصرة : om B
(٧) يستر : يسترها B
(٨) الثابتة : للثابتة B

وكان الجوّ المحيط بالارض ينفعل مضيئا ضياء ضعيفا بما فيه من الاجزاء المتحللة الارضية النارية بالحرارة التى قبلتها من انعكاس الشعاع من الارض رئى [1] ما فوقنا من الجوّ المظلم بما يمازجه من الضياء الارضى والضياء الكوكبي لونا متوسطا بين الظلام والضياء وهو هذا اللون اللازوردى ٭

فاذًا قد تبيّن ان هذا اللون ليس لون السماء وانما هو شيء يعرض لأبصارنا لما لاقاها من الضياء والظلام كالذى يعرض لأبصارنا اذا نظرنا من وراء جسم مشفّ من الاجسام الارضية ذى لون الى الاشياء المضيئة اعنى التى فى الشروق فانا نراها ممتزجة الالوان [2] من الوانها الخاصة بها واللون المشف معًا كالذى يرى اذا نظرنا من وراء زجاجة فانا نرى ما خلفها يكون بين لون الزجاجة ولون المنظور اليه من وراء الزجاجة ، وهذا فيما سألت عنه علة ما يحسّ من هذه اللازوردية التى ترى فى جهة السماء كافٍ ٭

كفاك آلله المهم من جميع أمورك والحمد لله [3] رب العالمين حمدا كفى بعمّه على جميع خلقه وبما هو مستحق بجلالة ربوبيته ٭

تمت الرسالة و الحمد لله [3] رب العالمين والصلوة على محمد وآله اجمعين ٭

(١) رئى : راى AB

(٢) والالوان : والوان A

(٣) والحمد ..... اجمعين : بجزت بحمد الله و منه وصلوته على سيدنا محمد النبى وآله وسلم تسليما B

3. Translation

The letter of Ya'qūb b. Isḥāq al-Kindī to one of his brethren regarding the cause of the azure-blue colour which is seen in the atmosphere in the direction of the sky and which is considered to be the colour of the sky.

God may protect you with his help and direct you aright with his beneficence.[1] You have requested that I should explain to you the cause of the azure-blue colour that is seen in the direction of the sky and which is considered to be the colour of the sky. I have written for you about it what I thought sufficient for you according to your knowledge and understanding. And God is our help and in Him is our trust.

We say that the sky may be coloured or colourless. Verily its colour is apprehended according to what is found by correct information about its [2] remoteness from the Earth and as well what the analogy finds out by the mathematical sciences.[3] It is, therefore, impossible that it (the colour) should be perceived ; and it is simply a thing which appears to the sight and this is the reason that all the bodies which are not solid [4] like water, air, fire, and the transparent sky do not get completely lighted, but what gets completely lighted is the solid body only in itself, I mean the earth and all like it, namely solid like that which can be perceived.

We see the places from which it is possible to draw straight lines to the sun able to accept the light completely. And we see the [other] places which lie close to those places and sharing with them the same boundary except that it is not possible to draw a straight line from them to the sun ; they are completely separated from them like the shaded places and the places upon which the sun shines. So we find the places exposed to the rays of the sun [5] bright and fully lighted while we find the shade near them dark in comparison with them and we find the capacity of these shaded places weak for accepting light ; and we do not find in them the heat as effected by the sun like the sun-heated things which we find in the places exposed to the rays of the sun and we find the difference between them as regards heat and light to be great.

Then it is evident that if the action on the air which exists in the places shaded from the sun were direct, then there would be no effect upon those (i.e. shaded [6] places) and the sunny places in proportion to their remoteness from the sun, but sometimes

1 I read bi-ṣun'ihi, not bi-ṣan'ihi.

2 I.e., the sky.

3 The colour of the sky can be apprehended by two methods, the empiric and the deductive.

4 Munḥaṣir means 'compact, solid, opaque' i.e. an object having a substance however little it may be. Professor Krenkow suggests to translate it by '*Opaque*' because the matter in question are optical arguments.

5 *Shurūqiyya* = places exposed to the rays of the sun.

6 I.e., the shaded places.

the shaded places are nearer to the sun than some of the sunny places on account of their proper position in a line with the sun.

And if it had only been in proportion to their remoteness from the sun, then they would have been in the same condition as regards the light. Then it is clear that the air which is in the shadowy places can only accept that quantity [of light] by which objects can be perceived by the sight and it (the air) lacks the complete light which exists in the sunny places on the surface of the earth and on all solid objects which exist in the sunny places because the weak light is reflected to the solid shaded bodies from these solid sunny bodies. So the air which exists between these two in the places which are not sunny, accepts weak light, because in the air surrounding the earth there exists a vapoury body of earth dissolved from earth and water, namely mixed with it. So these particles also, according to their capacity, accept light and weak heat. So they are seen in the colour in which the shaded air is seen.

And this vapour has such a limit of distance from the Earth which does not permit it (the vapour) to pass beyond it on account of its remoteness from the heat reflected from the Earth ; for whenever the heated body is away from the heating body the power of the heating body becomes weak for being heated till it reaches, in the distance from it, a place from which any effect of heating is not accepted at all.

When the vapour reaches the limit from where it does not accept the effect of the warmth of the Earth then it will lack the accidental heat which is in it. So it has not passed beyond the limit because it has changed its hot nature that rises on account of its nature from the intervening space. Then this atmosphere becomes unable to absorb the particles dissolved from the earth. So there is in it (the atmosphere) no sunlight like that which is in those places which did not lack that like what is found by means of touch in the fire. When the fire is in the form of a flame its colour is in proportion to what comes out from the mixture of the nature of the fire and from the colour of the substance, because the substance of the fire consists of earthly or watery bodies in which the earthly viscosity appears like greases and gums, and this is stronger with regard to a solid substance than the remaining substance. If the greases among the particles which rise are transferred into fire they take in their movement the way of the fire by the fiery movement and the heat is more compact, i.e. in the middle. Those particles accept the light of the fire on them in a colour clearer than the earthly colours on which the fire shines namely the earthly particles which are absorbed in the fire like the earthly material of wood and minerals. Then you will see the colours of some of them green, some red and some black and so on in other colours ; therefore this is seen in the blazing fire as a body of opaque colour which is not transparent, because they are not pure fire (free) from earthly bodies, but mixed with the earthly substances which have become fire due to the substance of the fire, and took the

way of fire mixed with them, since they have got the power and the action of fire, but are not pure fire.

This is one of the strongest proofs for the fact that colour originates from all solid bodies and nothing else. Another proof for the fact that these colours which appear in the flame consisting of earthly particles are (caused) by the earthly ones is that when we bring a body which has the capacity of being inflamed and transformed into fire to the atmosphere which is near to the burning coal the liquid delicacy of which has been dissolved and its compact part has remained because of its being solid will become inflamed with fire without touching the coal, when it is in the direction of the fire flowing out of this coal, i.e. in the direction of the straight line that comes out from the centre of the Earth and transverses this coal. So this is a clear proof for the fact that what inflames fire is fire, and the substance (i.e. air) which is above the coal is fire ; the eye sees penetrating into it (the substance near the coal, i.e. the air), but a colour is not at all visible for it, because it lacks the intermixture of the abundant substance matter and its flowing together with it, and it changes only in this state the substance completely into fire gradually so that there remains in it nothing of the body which can be changed at all into fire, just as it is when the fire begins to touch the material. For some of the material is transformed into fire and some of it into fiery substance which moves like fire and flows mingled with it ; then it is by nature quickly changed and very airy. So the colours which we have described are visible by the mixture with the complete fire on which the light of the fire falls. Similarly also no colour is perceived in the entire fire that surrounds the air and this is the origin [1] of the fire that is indestructible till its Creator—His praise be glorious—may destroy it together as He has created it altogether.

The nature of the whole of the air does not accept the light save when solid substances are in it. Its nature, therefore, are the shadows ; and if the shadows are its nature the light is caused by the effect of the power of the sun on the solid substances, I mean the earth and all the earthly things which exist in it (Earth) and the solid celestial objects, i.e. the bodies of the stars because it is clear that they are solid substances, because some of these cover others. So we see the full moon hiding all by her body.

Then it is evident that she is solid and not transparent. We have seen the five planets concealing one another, the lower of them the higher ones which are the fixed stars.

The air surrounding the earth gets weakly lighted by the earthly particles dissolved in it and changed in fiery ones due to the heat which they have accepted from the reflection of the rays of the earth. The shadowy air above us is visible by that what the light of the Earth and the light of the stars intermingle into a colour in the middle of shadow and light [2] and this is the azure-blue colour.

[1] *Ma'din* = source, origin.

[2] I.e. a light colour.

So it has become evident that this colour is not the colour of the sky, but only something which is exposed to our sight when light and shade encounter it, such as what is exposed to our sight when we see from a transparent body which is one of the earthly coloured bodies, towards lighted things, namely those which are in the sunny places. Then we see them mixed with colours particular to them and at the same time a transparent colour just as that which we see from behind a glass. Then we see what is behind it, between the colour of the glass and the colour of the object that is seen beyond the glass.

And this is sufficient for what you have enquired about, namely the reason why the azure-blue colour is observed which is seen in the direction of the sky.

God Who cares for all your affairs may satisfy you and praise is due to God, the Lord of the worlds—a praise which, by its comprising the whole, suffices all the creatures and by that what He deserves on account of the glory of his sovereignty.

4. Appendix

From Ibn al-Haitham, *Tanqīḥ al-manāẓir* (ed. F. Krenkow), Hyderabad 1347, Vol. II, p. 377.

Profitable Remark [1] concerning [the Cause of] the Blue Colour of the Air.

The blue colour of the air is stronger than the dusty [2] colours, nay than many kinds of red and blue (or green).[3] This is because, when you look into water of little depth, there appears to the eye what is on its bottom ; while it was coloured with one of the aforesaid (colours) and this colour is mixed with the water as is the case with the waters of spring and that of the swamps [4] while it was stagnant and its surface was extensive. So when you approach it you will perceive the colour of the water or what is on the bottom of it, but you do not perceive the blue colour of the water by the reflection. Then when you begin to go away from it, it begins to appear gradually and the colour is latent until the distance becomes wider. Then you perceive the blue colour, pure and without admixture. This is only because the blue colour is stronger, but when the colour is near to the beginning [5] it (i.e. the colour)

[1] *Fā'ida* means ' aphorism, profitable remark ', cf. also DOZY, Suppl. II, 293.

[2] I.e. grey and brown.

[3] *Khuḍra* is the dark-green colour of branches and herbs, and, at the same time, the dark-blue colour of the water of the sea. It is a well-known fact that the Arabs can hardly distinguish between dark-green and dark-blue. Cf. Der Islam, Vol. XIII (1923), p. 112.

[4] For *ajama* cf. DOZY, Suppl. II, 11.

[5] He means the surface of the water.

dominates over it (i.e. the blue colour). And when it (i.e. the colour) is at a distance, it (i.e. the blue colour) dominates over it on account of its increased distance and its reflection. There have been numerous instances about this point and this is what undoubtedly proves that the blue colour is an existing colour.

If it be objected, why this should not be on account of the weakness of the light and the colour, we reply, because we perceive at that time the colour of the substance which is adjoining the water from the sides and its colour is the colour of the water. Nothing is perceived of the water except the colour of the sky. Then when the distance of the length of the rays from the particles of the atmospherical sphere [1] is different to the sight ; that which is towards the zenith is shorter and that is towards the horizon is greater, so the perceived blue colour in that which is towards the zenith is purer and nearer to darkness than that which is towards the horizon. If there are solid substances in the air like the vapour and the smoke and the light flashes upon them, there appear colours like the colours of the clouds and so on, according to their grades as regards thickness, thinness, clearness, and turbidness.

If it be objected that, when the blue colour is the result of the first light of the sun and the light of the morning and the twilight from the second light of it and how do the morning light and twilight eclipse it ?—we reply, that the blue colour of the air is thinner in colour and clearer in light on account of the little inclination of the sunrays. Several times we have witnessed the light of the sun at the time of the becoming yellow on the walls after the falling of the rains or clearing away of the clouds, and we found it coloured with pure colour and we have seen contrarily to this when no rain fell, which forces the conclusion [2] that it is so on account of the horizon being surrounded by the thick vapours and the freeness of the air from the dusty-coloured particles.

As regards the first, it requires inclination of the sunlight to the face of the Earth, then it requires weakness (of light) and changing the colour into the redness as we witness on the corners of the curved things because the sunlight, at the limits of the day, reflects only upon an enormous spherical inclination as it was ascertained.

As regards the second, it requires the power of the colour and its clearness and perhaps the sombre colour which is seen in times dust is only that clear colour which the dust has made turbid and the prevalence in the matter of the yellow colour over the dusty colours has apparently taken place because this is more ethereal,[3] otherwise the proof is what we have mentioned and God knows what is right.

[1] *Nasīm* means in the language of Ibn al-Haitham *al-jaww*, i.e. the ether, the air surrounding the Earth.

[2] Liter. ' guess, conjecture '.

[3] I do not understand *aktharī*, there must be some confusion in the text. I propose to read *athīrī*.

THE SPURIOUS GURJJARA GRANTS OF THE ŚAKA YEARS 400, 415 AND 417

By H. D. Sankalia

Fleet and Bhagwanlal Indraji declared the Gurjjara Grants, Umeta, Bagumra and Hao [1] dated in the Śaka era 400, 415 and 417 respectively, spurious on the grounds that :—

(1) their perfect agreement in character and forms shows them to have been written by one and the same person ;
(2) they closely resemble the admittedly forged grant of Dharasena II, dated Śaka Saṁvat 400 ;
(3) that the writer of *I* is stated to be the same person as that of Kaira plates I and II [2] ;
(4) the description of Dadda I in *I* and *U* agrees literally with that given in *K* I and II of Dadda II ;
(5) the *K* I and II offer better readings in the passage dealing with the description of Dadda I in *I* and *U* ;
(6) the reference to the solar eclipse in the *I* in no way harmonizes with our calculation of the date and the year referred to in the *I* ; hence the forger seems to have made a mistake in putting the date.[3]

Bühler, against these, contended that they were genuine and pointed out that :—

(1) though *U* and *I* were similar, still many differences in detail were observable ;
(2) both *U* and *I* materially differed palæographically from the forged Valabhi grant ;
(3) the identification of the writer of *I* with that of *K* I and *K* II is not justified ;
(4) though the description of Dadda I in *I* and *U* agrees literally with that of Dadda II in *K* I and *K* II, and though the latter offer better readings in the passage of the description of Dadda II, still, they are no arguments against the genuineness of *I* and *U* ;
(5) there may be an error in referring to the eclipse or an invisible eclipse might have been regarded as visible.

Moreover, he put forward three points supporting their genuineness :—

[1] Hereinafter referred to as *U*, *B*, and *I*, respectively.
[2] Referred to as *K* I and *K* II.
[3] Above is a summarized statement of the arguments collected by Bühler in *Ind. Ant.*, XVII, 188–191.

(1) the characters in which they were written were ancient ;
(2) the statement that the first—Umeta—was written by Mādhava, the son of Gilaka, and the second by Reva, the son of Mādhava, was of some importance, as a forger would not think of such a collateral circumstance ;
(3) their historical contents, taken by themselves, were perfectly believable.[1]

Yet, in spite of this, Fleet regarded them as forgeries, and even grouped the newly discovered Bagumra grant with them, adding that neither Bagumra nor Ilao were satisfactory on the date-question, and suggested that the forger had possibly forgotten to substitute the *pūrṇimānta* arrangement for the *āmānta* months in his results and hence the mistake in dates.[2]

From a close comparison of the contents of ' forged ' grants with those of the genuine, I find that the ' forged ' grants :—

(1) do not say anything about the religion of the kings ;
(2) are silent about contemporary events ;
(3) give *birudas* of kings which are contradictory, e.g. Sāmanta and Mahārājādhirāja ;
(4) mention donees who are residents of far off places—Kānyakubja and Ahichhatra—while the villages granted to them are in Gujarat [3] ;
(4*a*) grant a whole village ;
(5) mention Rāṣṭrapatis first and Viṣayapati afterwards ;
(6) give dates in the middle of the inscription and in words only.

(1), (2) and (3) show ignorance about the Gurjjaras ; (5) and (6) ignorance about the Gurjjara inscriptions—their method of writing.

(4) and (4*a*) give the motive. The donees were obviously foreigners, who wished to possess charters under kings who had no control over them ; and secondly, whole villages were granted which was never the practice with the Gurjjaras.

For these reasons also, the Umeta, Bagumra and Ilao may be regarded as ' forged ' grants.[4]

[1] *Ind. Ant.*, XVII, 191.
[2] *Ind. Ant.*, XVIII, 91–93.
[3] The argument holds good comparatively only. It would lose its force if the Gurjjaras of Broach commanded an empire like the Cālukyas of Badami in whose epigraphs such donations are met with.
[4] The comparison of sizes of the ' forged ' grants with those of the genuine does not yield any fruitful result. It may be, however, noted that the size of the Umeta plates is unusually large.

STUDIES IN THE APADĀNA

By B. C. Law

Introduction

The word *Apadāna* means ' pure action ' or ' heroic deed ' and every *apadāna* gives an account of the life of its hero or heroine in one or more previous births.[1] An ' *apadāna* ' has both a story of the past and a story of the present. It differs from a *Jātaka* in that the latter refers always to the past life of a Buddha whereas an *apadāna* deals usually, not always, with that of an arahat.

The *Apadāna* is the 16th and last book of the *Khuddaka-Nikāya* of the *Sutta-Piṭaka*. It is no doubt a canonical anthology of legends in verse which describes the great deeds of the Buddhist arahats. The text contains biographies of 550 male members and 40 female members of the Buddhist Order in Buddha's time. Many extracts from the biographies of the bhikkhuṇīs are found in the *Therīgatha Commentary*. The Pali Text Society of England have succeeded with the help of Mary E. Lilley in successfully editing this text in two volumes. The text attaches great importance to formal aspects of religion, e.g. *pūjā*, *vandanā*, *dāna*, etc. It is exemplified in this book by lives of *theras* and *therīs* how the heavenly rewards so obtained continue until arahatship is attained.

The text shows the importance of shrines, relics, and topes and emphasizes the charitable and humanitarian aspects of the faith. The text further supplies us with an interesting list of birds, fish, animals, plants, fruits, flowers, people, tribes, professions and the like. References to architecture, sculpture, etc. are scattered throughout this work. We have here attempted to deal with the principal contents of this book, which have not hitherto received much attention of scholars. An account of birds, fish, reptiles and animals, plants, fruits, and flowers as given in the *Apadāna*[2] and mostly supplemented by other works of the Canon and Pali Commentary is given below.

Cakkavākas (Ruddy geese), (*Barhut*, Pl. xxxix)—They are called *Anas Casarca* (*Jātaka*, Nos. 451 and 502). Young geese inhabiting in large numbers on the top of the *Citrakūṭa* mountain flew about in search of food and returned again to their habitat. After resting a while, they again flew to collect more food.[3]

Dindibhī (name of a bird, probably a partridge)—A fowler caught a decoy partridge and putting it in a cage, carefully trained it

[1] Vide ' *Avadāna, Apadāna* ' by M. Winternitz, *Journal of the Taisho University*, Vols. VI–VII.

[2] *Apadāna*, pp. 15ff., 340-347, 362-363, 368, 383, and 394.

[3] Cf. *Jātakas*, Nos. 187, 370, and 429.

and looked after it. When it was taken to the wood, its cry decoyed all the other partridges that came near.[1] It may be same as *Tittibha* or *Titira* well known in Bengal.

Haṁsā (Swans, ordinary), (*Barhut*, Fig. 107)—In the *Vimānavatthu commentary* (p. 57) golden swan is mentioned. Sun-swans (*Ravi-haṁsā*), a kind of swan.

Jīva-Jīva (different readings *Jīvaṁ-Jīva*)—a kind of pheasant.

Kokilā, Karavikā[2] (Indian Cuckoo)—These are sweet-voiced birds (*madhurassarā*).[3] *Kokila* is of two kinds, *kāla* and *phussa*, black and spotted cuckoos.[4] The *Jātaka* (No. 536) mentions three kinds of Indian cuckoos, namely, *Parābhūta, Celāvaka* and *Bhiṁkāra*.

Koñca[5] (Heron)—In the commentary on the *Vimānavatthu* (p. 75) *Sārasā* or crane is mentioned as the synonym of koñca. There is a kind of crane called the tufted crane. There is a curious superstition that the cranes are conceived at the sound of thunder, hence thunder is called their father and the thunder-cloud their grandfather.[6]

Kāla Kaṇṇikā—a bird of evil omen. It is the same as *sakuni*.[7]

Kosikā (Owl)—It always takes shelter in a thicket of bamboos and frequently hides itself in it, being very much afraid of crows. An owl was attacked by a flock of crows which pecked it with their beaks till it fell to the ground.[8]

Kukkuṭi[9] (Hen)—It is interesting to note that the hens after stretching their wings take their seats on their eggs and keep them warm. The eggs are then properly hatched and they then transmit their own character into them. At first the head comes into existence and then grow the feet, nails, wings, face, etc. Thus the eggs become mature. On account of the thinness of the shells, light penetrates into them. Then the chickens try to come out of the shells by giving out their necks and striking their heads with their legs, and thus they come out.[10]

Kukutthā (Phasianus gallus).

Kurara (Sea-Eagle).

Mora (Peacock, ordinary)[11] (*Barhut*, Fig. 91).

[1] *Jāt.*, No. 319.

[2] Cf. *Papañcasudanī*, III, 382-383: this bird has been described as sweet-voiced. It eats ripe mango by striking it with its beaks and tastes the sweet juice. It then flaps its wings and begins to roll and sing songs.

[3] *Vimānavatthu commentary*, p. 57: Cf. *Papañcasudanī*, III, 382-383.

[4] *Vimānavatthu commentary*, p. 57.

[5] *Jāt.*, No. 506.

[6] *Jāt.*, No. 274.

[7] *Jāt.*, No. 206.

[8] *Jāt.*, No. 226.

[9] Pea-hen in a border country, *Jāt.* No. 491.

[10] *Papañcasudanī*, PTS., Pt. II, p. 70.

[11] Cf. *Jātaka* (Fausböll), VI, pp. 497 (Where the peacock is described as having a blue coloured neck), 539, 540 where the names of some of these birds occur. Golden peacock. (Cf. *Jātaka*, No. 159). Peacocks with rare plumage (*Jāt.* No. 535).

Pārevatā[1] (Pigeons) (*Barhut*, Fig. 94).
Pokkharasātakā (a species of crane, *Ardea Siberica*).
Ravi-haṁsā—*Vide* under Haṁsā.
Satapatta (woodpecker) (*Barhut*, Fig. 103).—It is mentioned in the *Jātaka*[2] perching on the tree-top. It is a kind of crane.
Senaka (Hawk).—*Senakas* are also known as falcons fierce in their nature.[3] They generally frequent the slaughter house.[4]
Sikhi (Crested peacock).
Suka Sāri (Parrot).—*Sāḷika* is known as *Śālika* bird in Bengal. Parrots fly with great swiftness. When they become old, it is the eye that weakens first. Their former habitat was on the seaward side of the Himalayas.[5] A well-grown parrot with perfectly formed limbs was given honey and parched corn to eat and sugar-water to drink.[6]
Tambacūḷaka (Cock).

According to the *Papañcasudanī*,[7] the commentary on the *Majjhima Nikāya*, there are some birds which cry during the day, e.g. crows, etc. and there are some birds which cry during the night, e.g. owls, etc.

The *Apadāna* list does not mention the following birds: *Maynā*,[8] Vultures,[9] *Kuṇāl* bird,[10] *Mayhaka*[11] and *Ciriṭikā*.[12] *Maynā* is a very intelligent bird and very useful. Vultures generally frequent the cemetery and they take the flesh of cows and the like. The bird known as *Mayhakā* lives in a mountain cave and it rests on pepul-trees. 'Mine! Mine!', the cries they give. Mention is made of the mythical bird Garūḍa in the *Jātaka*[13] found in the silk-cotton trees in the Himalayan region.

Fish

Maggurā—Indian *Māgura* found in ponds, *bhills* and *khals*.
Muñjarohita (*Cyprinus Rohita*), a kind of fresh water fish. *Muñjarohita* and *Rohicca* are identical. It is called *Ruhi fish* in Bengal.
Pāṭhīna known as Silurus Boalis.[14]
Pāvusa—a kind of fish.
Saṅkula—difficult to be identified.
Vālaja—can't be identified.

Ganges fish and Jumna fish are mentioned in the *Jātaka* as fine.

The list does not mention *Timi* (*Barhut*, Fig. 85, *timiṅgila*) fish which lives in the great ocean as mentioned in the *Sumaṅgalavilāsinī*,

[1] Cf. *Jāt.*, No. 375.
[2] No. 206. Cowell translates *satapatta* as woodpecker which is doubtful.
[3] Cf. *Jāt.*, No. 168.
[4] Cf. *Jāt.*, No. 546.
[5] *Jāt.*, No. 255, cf. No. 429.
[6] *Jāt.*, No. 329.
[7] Pt. I, 121-122.
[8] *Jāt.*, No. 546.
[9] *Jāt.*, No. 399.
[10] *Jāt.*, No. 536.
[11] *Jāt.*, No. 390.
[12] A little bird (*vide* Charak, 1. 27, 26; *Jāt.*, No. 526).
[13] *Jāt.*, No. 543.
[14] Cf. *Jāt.*, No. 451.

a commentary on the *Dīgha Nikāya*.[1] There is a kind of fish mentioned in the *Jātaka*[2] known as the *Vohāra* or the monster fish.

Kulirakā (Crab). Golden crab is mentioned in the *Jātaka*,[3] specially living in the place called the crab-tarn.[4]

Reptiles

Ajagarā—serpent known as *Ajāgara* (Boa constrictor).

Kinnarī (Nymphs)—mostly aquatic as they live in water.

Kumbhilā (Crocodiles) (*Barhut*, Fig. 77).

Ogahā—unidentified.

Rakkhasā. It may be demons.

Sappa (Snakes) (*Barhut*, Fig. 116)—there are four royal races of snakes :

(1) Virūpakkha's snake, (2) Erāpatha snake, (3) Chabbyā-putta snake, and (4) Kaṇhā-Gotama's snake.[5]

Suṁsumārā (Crocodiles).

Tantiggāhā—unidentified.

It is interesting to note that fish and tortoises know by instinct when the year will be rainy and when there will be a drought.[6] The *Apadāna* list does not make mention of frogs and water-snakes. In the *Jātaka*[7] there is a mention of green frog (*Barhut*, Fig. 117) and water-snake living on fish. The *Apadāna* list does not mention otter which is an aquatic carnivore with long body, webbed feet and brown short fur chiefly living on fish.[8]

Animals

Acchakoka (Bear).

Assā, Horses, (*Barhut*, Fig. 13A and in Fig. 77, the horse stands as an attribute of a female deity).—The *Valāha* and *Sindhu* are the horses of superior breed (*Barhut*, Pl. XXVI, Fig. 136). *Sindh horse*, a warrior horse always fed on exquisite food and reared up with great care.[9]

Chestnut horse is mentioned in the *Jātaka*.[10]

Flying horse (*Barhut*, Pl. XXVI, Fig. 136) is all white and beaked like crow, with hair like grass, able to fly through the air.[11]

Dīpī[12] (Panthers)—Speckled panther is mentioned in the *Jātaka* (No. 547).

[1] Pt. II, 487 : Cf. *Barhut Inscriptions* by Barua and Sinha, p. 61.
[2] No. 529. [3] No. 267. [4] Cf. *Jāt.*, No. 389.
[5] *Jāt.*, No. 203 ; cf. *Āṭānāṭiya Suttanta*, *Dīgha*.
[6] *Jāt.*, No. 178 ; cf. *Dhaniya Sutta*, *Sutta Nipāta* commentary.
[7] No. 239. [8] *Jāt.*, No. 316. [9] *Jāt.*, No. 23.
[10] *Jāt.*, No. 158. [11] *Jāt.*, No. 196. [12] Cf. *Jāt.*, No. 510.

Eṇi—a kind of antelope. There is another kind of antelope known as the wind-antelope which is a very timid animal. It will never revisit a spot where it has seen a man, even for a whole week. If it has once been frightened anywhere, it never goes back there again all its life long.[1]

Mātaṅgā[2] (Elephant) (*Barhut*, Figs. 32, 50).—When elephants grow up, they kill even those who foster them.[3] A *Jātaka*[4] story refers to elephant lore (*hastisūtra* or *hastiśikkhā*) and elephant festival. In the elephant festival, hundred elephants were set in array, well decorated with golden trappings, golden flags and net-work of fine gold, and the place where this festival was held, was decked out.[5] The *Chaddanta* as a superior class of elephant for ivory is represented by name in *Barhut*, Fig. 128. There is a mention of ten species of elephant without any detail.[6]

Migā (ordinary deer[7]). There is a kind of deer called *Dapple deer* (*cittamiga*, *Barhut*, Figs. 88, 89, etc.), which is of the colour of gold.[8]

Pasadā (spotted deer).

Sīhā (Lions), (*Barhut*, Figs. 4, 13A, 13B, and 54).—According to the *Sāratthapakāsinī*, the commentary on the *Saṁyutta Nikāya*, there are four kinds of lion: (1) lion which lives on grass, (2) black lion, (3) light yellow lion, and (4) lion having a big mane. The lion which lives on grass is like a cow having the colour of a pigeon. The black lion is like the black cow living on grass. The light yellow lion is like the cow having the colour of a *palāśa* tree living on flesh and the last kind of lion has a very big mane on the shoulder and its face is of the colour of lac and its tail extends up to its feet. The mane is divided into three rows, resting on the right side and going along the back.[9]

Suggapotā—unidentified.

Taracchaya (Hyena).

[1] *Jāt.*, No. 14.

[2] Cf. *Brahmajāla Suttanta*, *Dīgha*, I, where there is a reference to combats of elephants, horses and buffaloes.

[3] *Jātaka*, No. 161.

[4] No. 163. [5] No. 163.

[6] *Papañcasudanī*, II, p. 6.

[7] A forest about a li in area was surrounded by the townsfolk who set out into the forest armed with sticks and weapons to catch the deer. They proceeded to beat the trees, bushes and ground with their sticks till they drove the herds out of their lairs. They then rattled their swords and spears and bows with the effect that they drove the deer into that area and shut the gate (*Jātaka*, No. 12). The *Jātaka* mentions a peculiar kind of stag of the colour of gold. Its fore and hind feet were covered with a preparation of lac. Its horns were like a silver wreath, its eyes resembled round jewels and its mouth was like a ball of crimson wool (No. 359). From the description it appears that this animal must be mythical. Deer flesh used to be sold in the market of Benares (*Jātaka*, No. 315).

[8] *Jātaka*, No. 501. [9] Part 2, p. 283.

Vakabheraṇḍakā (Wolves) (*Barhut*, Fig. 109), and (*Jackals*) (*Barhut*, Fig. 97).—According to the *Jātaka*[1] there are he-jackals and she-jackals. There was a cross breed between a lion and a she-jackal with the result that the cub was just like its father in toes, claws, mane, colour and figure but in voice it was just like its dam.[2]

Vānarā (Monkeys).

Varāhā[3] (Hogs).

Vyagghā (Tigers) (*Barhut*, Figs. 55, 70).

Plants, Fruits, and Flowers

Aḷaka—probably *Morinda citrifolia*.

Āḷula—If it is *āḷuka*, it is either *Dioscorea alata* or *Dioscorea globosa*.

Amalaka (*Phyllanthus emblica*), tree, elegant; flowering time beginning of hot season.

Amba (Mango).

Ambāṭaka—It is *Āmḍā* (*Hogplum*) found in Bengal.

Aṅkola (*Alangium lamarckii*) flowers during hot season, a thorny plant.

Aśoka (*Saraca asoca*) handsome tree, flowers at the beginning of the hot season; flowers pretty large in clusters; when first opens, the flower is of a beautiful orange colour, gradually changing to red, forming a variety of shades, fragrant during the night. It is a medicinal plant.

Aśvakarṇa.—Same as *sāla*, a timber tree, flowering time hot season.

Atimutta—Atimukta—Mādhavīlatā, flowers during the rainy and cold seasons; flowers uncommonly beautiful and exceedingly fragrant.

Atimukta has also been used as a synonym of *Tinisa* (*Diospyros glutinosa*) on account of its pearl-white flowers.

Bandhujīva (*Pentapetes Phoenicea*)—a kind of plant having red flowers. It is called *Bandhuli* or *Bandhuka* flower in Sanskrit.

Bel (*Aegle marmelos*), *Śreephal*.

Bhallāṭaka (*Semecarpus anacardium*), *Bhelā*, marking nut.

Bibhiṭaka—Baheḷā (*Terminalia belerica*), flowering time beginning of hot season; flowers of a dirty grey colour. Its fruits are the commercial Beleric myrabolans. *Haritaka*, *Bibhitaka* and *Āmalaka* form the three commercial myrabolans. They are known as *Triphalā* in Bengal.

Bimbijāla—Bimbī or *bimbikā* is *Telākucā* (*Cephalandra indica*) flowers white, large; fruit when ripe brilliant red.

Campaka—(*Campā*).—It is found in Bengal, a pretty large tree, flowering time rainy season; delightfully fragrant.

Dhava (*Conocarpus latifolia*)—a timber tree; flowering time cold season. It is called *Dhāyibāblā*.

[1] No. 77.

[2] Cf. *Jāt.*, No. 188.

[3] Cf. *Jāt.*, No. 186, wild boar.

Giri-Punnāga—probably *Mallotus philippinensis*.

Haritaka (*Terminalia chebula*) a large tree, flowering time hot season ; flowers small ; its fruits form the commercial chebulic myrabolans.

Isimugga—There are two plants in Bengal called '*Śvet moorga*' and its red variety the '*Lāl moorga*'. They are *Celosia argentea* and *Celosia cristata* respectively. Both of them are erect annuals. They thrive best in the rainy and cold seasons.

Jambu (*Eugenia jambolana*)—It is both a fruit and timber tree ; flowering time hot season. It is *Kālajām* (blackberry).

Jīvaka—is used as a synonym of *Piyāla* by Amara.

Kadali—Banana (*Barhut*, Figs. 121 and 127).

Kalamba—If it is *Kalambi*, it is *Ipomoea reptans*, flowers large, beautiful rose colour. It is used as a synonym of Sara by Amara. Amara again uses the word Kalamba as a stalk (*Vaiśyavarga, śloka*, 101).

Kandali—flowering time rainy season ; underground creeper, flowers blue. According to Medinī, *Kadali* and *Kandali* are one and the same plant.

Kara (*Punica granatum*)—There is only one plant of the name '*Karaka*' used as a synonym of *Dālim* (pomegranate).

Karanda (*Carissa carandas*)—large shrub ; flowering time February, March, April ; fruit eaten, pickled and made into tarts.

In Orissa carissa diffusa is called *Kurunda* (*Karañcā*).

Karṇikā-Agnimantha (*Premna integrifolia*) medicinal plant.

Karṇikāra (*Cassia fistula*) small tree, flowers large, bright yellow, fragrant.

Ketaka (*Pandanus odoratissimus*) flowers chiefly during the rainy season ; male and female plants, male flowers sweet scented.

Kevuka (*Costus speciosus*) a herb with stout leafy stem. One of the most elegant looking plants of the family ; flowers during wet season.

Kola (*Ziziphus jujuba*) flowering time rainy season. There are at least three varieties of *Kula*. Fruits of *Ziziphus jujuba* are particularly known as *Kola*.

Kovilāḷa (*Bauhini variegata*)—flowering time February to March, flowers large.

Kuṭaja (*Holarrhena antidysenterica*)—a deciduous shrub, flowers white in clusters, fragrant.

Labuja (*Artocarpus lakoocha*)—fruit tree.

Madhuka (*Bassia latifolia*) a middle sized tree, flowers in March and April ; flowers sweet, fragrant, eaten raw.

Mallikā (Jesmin) flowers during rainy season, flowers white and fragrant.

Mātuṅga (*Citrus medica*)—The citron.

Nāga (*Nāgakesara*)—*Mesua ferrea*, elegant tree, flowering time beginning of hot season ; flowers large, delightfully fragrant.

Nigrodha—Banyan tree (*Barhut*, Fig. 31).

Nimba—Melia azadirachta—a beautiful and very useful tree, its flowers are sweet scented.

Nīpa (*Kadamba*)—a large tree, flowering time hot season.

Paduma—The lotus (*Nelumbium speciosum*).

Palāsa (*Butea frondasa*) a tree, flowering time March, April, flowers beautiful, deep red shaded with orange, and silver coloured down.

Panasa (*Artocarpus integrifolia*)—a large over-green fruit tree (*Barhut*, Pl. xxiv).

Pāṭali (*Pārula*), (*Barhut*, Fig. 26)—*Bignonia Suaveolens*—a middle-sized tree, flowering time hot season, exquisitely fragrant.

Piyāla (*Buchanania latifolia*) a large tree, flowers in January and February ; flowers small, of a whitish-green colour ; fruits eaten.

Puṇḍarika—white lotus.

Punnāga (*Calophyllum inophyllum*) a most elegant tree, flowers pure white, fragrant, flowering most part of the year.

Sāl (*Shorea robusta*) (*Barhut*, Fig. 28).

Salala (*Pinus devadara*)—probably a pine tree.

Simula (*Bombax malabaricum*)—a Rg. Vedic plant, flowering time end of winter, flowers very large, bright red.

Sindhuvanta (*Nisindā*) (*Vitex negunda*) a small elegant shrub, flowers all the year round, a medicinal plant.

Tagara (*Tabernaemontana coronaria*) flowers pure white, delightfully fragrant during night.

Tilaka (*Tilvaka*) (*Symplocos racemosa*) Sanskrit *Lodhra*.

Tiṇasulika—If it is a scented grass, then it is either *Andropogan nardus* or *Andropogon squarrosus* (*Khaskhas*).

Tiṇḍuka [*gāva*—(*Diospyrus glutinosa*)]—middle sized tree, flowering time March, April : flowers white, large, fruits eaten.

But Ebony is also called 'Tindoo' by the Hindus. Its scientific name is *Diospyrus melanoxylon*.

Uddālaka—Cāltā (*Dillenia indica*), when in flowers one of the most beautiful trees ; flowers very large, delightfully fragrant.

It is also used as synonymous with *Ślesmātaka* which is *Cordia myxa* : pretty large tree.

Udumbara (*Ficus glomerata*) *fig*, (*Barhut*, Fig. 30).

Vakula (*Mimusops elengi*) tree, flowering time, hot season ; flowers white, fragrant.

Peoples and Tribes

An account of peoples and tribes mentioned in the Apadāna is interesting.

Alasandakā—People of *Alexandria*.

Andhakā—same as *Andhras*, one of the powerful tribes inhabiting the place south of *Kaliṅga* with its chief capital at *Dhanakaṭaka* or *Amarāvatī*.

Aparānta—The people of Western India.

Babbarā—*Babbara* and *Barbaras* are identical. They are associated with the *Kambojas*, *Gandhāras* and *Kirātas* who are all located in the *Uttarāpatha*.[1]

Bhaggas—The *Bhaggas* or *Bhargas* were a republican tribe that existed in Northern India in Buddha's time in the 6th century B.C.[2]

Cīnaraṭṭhā—The people living in the kingdom of *Cīna* or China. Only reference to China in Pāli Canon hitherto noticed.

Damiḷā—The *Damiḷas* commonly known as the *Tāmils* were a powerful South Indian tribe.[3]

Hatthiporikā—probably the people of *Hastināpur*, the capital of the north-east of Oudh.

Isiṇḍā—Cannot be identified.

Kārūṣas or *Karūṣas*.—They were a well-known tribe of ancient India. They figured prominently in the *Kurukṣetra war*.[4]

Kāsikā—The inhabitants of Benares (*Bārāṇasī*) in the United Provinces of Agra and Oudh.[5]

Kolakā—probably the Kolarians.

Kosalakā—Inhabitants of *Kośala*, a powerful kingdom of Northern India but it had already been occupied by the growing power of Magadha.

Madhurakā—probably people of *Mathurā* in the United Provinces of Agra and Oudh. *Mathurā* or *Madhurā* is generally identified with *Moholi*, five miles to the south-west of the present town of *Mathurā* or *Muttra*. There was a second *Mathurā* or *Madhurā* in ancient India. It was the second capital of the Pāṇḍya kingodm on the river Vaigi in the Province of Madras. It was called *Dakṣiṇa-Mathurā* to distinguish it from *Mathurā* of the north.[6]

Malaya—*Soṇṇabhūmakā*.—People of Malaya and Pegu.

Malayālakā—The people inhabiting the Malayan region.

Mallas of *Kuśīnārā*—They were a republican people.[7]

Matthalā.—Cannot be identified.

Mekalā—They were a small tribe inhabiting the tract of country comprising the modern *Amarakaṇṭaka hills* and the surrounding region.[8]

Muṇḍakā—probably *Muṇḍās* living in wild mountain tracts and they are also found in *Santhal Perganas*, *Chota Nagpur*, *Central Provinces*, *Madras* and *the slopes of the Himalaya mountains*.

Oḍḍakā—same as *oḍrā* or *uḍrā*, originally inhabited Western *Midnapur* and probably *Manbhum*, eastern *Singbhum* and Southern *Bankura*.

1 *I.C.*, Vol. I, p. 380. 2 *Ibid.*, p. 301.
3 *Vide* my paper '*A Short Account of the Damiḷas*' published in the *Quarterly Journal of the Mythic Society*, Bangalore, Vol. XXVII, Nos. 1 and 2.
4 *Vide* my book, *Ancient Indian Tribes*, Vol. 2, pp. 31–33.
5 *Vide* my *Ancient Indian Tribes*, Ch. I.
6 Law, *Geography of Early Buddhism*, p. 21.
7 *Vide* my '*Some Kṣatriya Tribes of Ancient India*', pp. 147 foll.
8 *Vide* B. C. Law, *Ancient Indian Tribes*, Vol. 2, p. 28.

Pallavakā—were a South Indian people, a people of northern origin and most probably the same as the *Pahlavas* of the Inscriptions of *Rudradāmana* I. *Kāñcipura* (*Conjeeveram*) was the capital of the *Pallavas*.[1]

Sākulā—probably the people of *Sākala* identical with *Sāgala*, the capital of the Bactrian king, Menander.

Śavarā—a non-Aryan tribe dwelling somewhere in the *Daksiṇāpatha*.[2]

Suddakā—*Śūdrakas* of the Mahābhārata known as *Oxydrakai* to Alexander's historians. Their capital was *Uch* (*Kulch*).[3]

Suppārikā—The people of *Surpāraka* or *Sopārā* in the district of Thana, 37 miles north of Bombay and about 4 miles north-west of Bassein.

Suraṭṭhā—The people of *Saurāṣṭra* or *Guzerat* or *Kathiawad*.[4]

Velavakā—cannot be identified.

Yonakā—Greeks.

Occupations

The Apadāna gives a list of following occupations generally adopted by the people of those days to earn their livelihood :—

Anikaṭṭhā—king's body-guards, life guardsmen. *Cammakārā*—workers in leather, tanners, harness-makers. *Cāpakārā*—bow-makers, archers. *Dovārikā*—gate-keepers. *Dussikā*—cloth merchants. *Gandhikā*—perfumers. *Haṭṭhāruhā*—elephant drivers. *Haṭṭhipālā*—keepers of elephants or elephant-guards. *Kammārā*—smiths. *Kaṭṭhahārā*—firewood gatherers. *Kumbhakārā*—potters. *Lohakārā*—blacksmiths, coppersmiths. *Manikārā*—jewellers. *Nalakārā*—basket-makers. *Pesakārā*—weavers. *Pessikā*—servants. *Puppha-chaddakā*—removers of (dead) flowers. *Rajakārā*—washermen. *Soṇṇakārā*—goldsmiths. *Supikā*—cooks. *Tacchakā*—carpenters. *Telikā*—oil manufacturers. *Ṭipukārā*—tinsmiths. *Tunnavāyā*—'needle-weavers', tailors. *Udahārā*—water-carriers. *Usukārā*—arrow-makers, fletchers.[5]

The list does not mention cultivators and cow-keepers.[6]

Geographical Data

The geographical information supplied by the Apadāna is noteworthy. We append here a brief note on the geographical references scattered throughout the work.

[1] *Vide* '*The Early Pallavas*', by D. C. Sircar.

[2] *I.C.*, Vol. I, p. 305—my paper entitled '*Some Notes on Tribes of Ancient India*'.

[3] *Vide* N. L. De, *Geographical Dictionary of Ancient and Mediæval India*, p. 195.

[4] *Ibid.*, p. 183.

[5] Cf. the list of professions given in *Buddhist India* by T. W. Rhys Davids, p. 88.

[6] Cf. *Papañcasudanī*, I, p. 111.

Bhāgirathī—Same as *Gaṅgā*, the most holy river of the Hindus.

Candabhāgā.—The *Chenab* river. It issued forth from the Himalayas. On its bank a water nymph lived and saw the Buddha.[1]

Cinatā—This river was seen by the Buddha.[2]

Gaṅgā—The Ganges which passes through Bengal, Behar, United Provinces of Agra and Oudh and the district of Saharanpur. It falls into the sea near the Sāgar island.

Jumnā—It is as sacred as the Ganges.

Mahī—It is one of the Punjab rivers, a tributary of the Gandak.

Narmadā—It rises in the *Amarakaṇṭaka* mountain and falls into the gulf of Cambay. The junction of this river with the sea is a sacred place of pilgrimage of the Hindus.

Sarasvatī—It is one of the most sacred rivers of the Hindus. It rises in the hills of Sirmur in the Himalayan range called the Sewalik and emerges into the plain in Ambala. It also flowed through *Bansberia*, in the district of Hughly and *Triveṇī*. It is now silted up.

Sarabhū—Same as *Sarajū*. The Ghogra or Gogra in Oudh. The ancient town of Ayodhyā is situated on this river.

Sindhu—The river Indus.

The following are the hills in the Himalayan region :—

Anoma, Aśoka, Bhūtagana, Cāvala, Gotama, Hārita, Kukkura, Lambaka, Romasa, Sobhita, Vasabha, and *Vikaṭa*.

Not far from the Himalayas there was a mountain called *Cāvala* where the Buddha *Sudassana* dwelt in a cave.[3]

On the top of the *Nisabha hill* there was the hermitage of *Subhūti* decorated with leaf-huts.[4] On the *Kukkura pabbata* there lived a Brahmin who was well versed in mantras. He had a large number of disciples.[5] At the foot of the *Vasabha* hill a brahmin had a hermitage. The brahmin was well versed in mantras and used to deal with the noble instructions of the Buddha.[6] On the top of the *Sobhitapabbata* a hermitage was built for *Bakkula* who dwelt there with his disciples.[7]

Cittakūṭa—It is *Kamptanāth giri* in Bundelkhand. It is an isolated hill on the river *Mandākinī* where Rāma dwelt for some time during his exile. It is about four miles from the *Chittakūṭa* station on the G.I.P. Railway.

Gandhamādana parvata—A part of the *Rudra* Himalaya. According to some, it is a part of the *Kailas* range. It is on the southern side of the *Kailas* mountain. *Badarikāśrama* is situated on this mountain. A portion of this mountain is said to have been brought by *Hanumāna*.

[1] *Apadāna*, p. 450. [2] *Ibid.*, p. 428. [3] *Apadāna*, p. 451.
[4] *Ibid.*, p. 67. [5] *Ibid.*, p. 155.
[6] *Ibid.*, p. 167. [7] *Ibid.*, p. 328.

Vebhāra parvata—It is a mountain in Magadha. The city of *Girivraja* is encircled by the five hills and it is one of them.

Bandhumatī—difficult to identify. There was a royal garden in this town.[1]

Campā—Campā, the ancient capital of Aṅga, is probably marked by two villages *Campānagara* and *Campāpura* that still exist near Bhāgalpur.[2]

Giribbaja—Ancient capital of Magadha, known as old *Rājagṛha* near Rājgir among the hills near Gayā.[3]

Haṁsavatī—difficult to identify it with any known locality in India. Some therīs whose verses are recorded in the *Therīgāthā* were born in this city. It was visited by the Buddha where a potter saw him.[4] It is on the bank of the Ganges.[5] It has been mentioned in the Apadāna as a town inhabited by a brahmin named Sujāta who was well versed in three Vedas. He was wealthy and regarded as a prominent preceptor.[6]

Jetavana—It was visited by the Buddha who gave a religious instruction there.[7] It was a gift of *Anāthapiṇḍa* to the Buddha and his Order. It is one mile to the south of Sāvatthī which is identified with modern Sahet-Maheth.[8]

Pubbavideha—Rungpur and Dinajpur districts.

Sāgala or *Śākala*[9]—A famous city in the country of the *Madras*. Here *Sucimatī*, daughter of the brahmin *Kapila*, lived. She was instructed by the Buddha in his Dhamma.[10]

Sāvatthī[11]—Kassapa was brought up in the family of an upasaka (lay devotee) in the excellent city of *Śrāvastī*. He then listened to the instruction of the Buddha and took refuge in him.[12]

Uruvelā—six miles to the south of *Gayā*, known as *Buddha Gayā*.[13]

Uttarakura—the northern portion of Gharwal and Hūṇadeśa. It originally included the countries beyond the Himalayas. Tibet and Eastern Turkistan were included in it. According to the Jātaka,[14] it was situated in the Himalaya.

Vaṅga—Born in Vaṅga he was known as *Vaṅgīsa* and as he was perfect in his voice he was also called *Vaṅgīsa*.[15]

[1] *Ibid.*, p. 456.
[2] *Vide* B. C. Law, *Geography of Early Buddhism*, pp. 6-7.
[3] *Ibid.*, pp. 8 foll.
[4] *Apadāna*, p. 444.
[5] *Ibid.*, p. 599.
[6] *Ibid.*, p. 37.
[7] *Ibid.*, p. 470.
[8] *Vide* B. C. Law, *Geography of Early Buddhism*, p. 44.
[9] Law, '*Some Kṣatriya Tribes of Ancient India*', pp. 217ff.
[10] *Apadāna*, p. 583.
[11] *Vide* B. C. Law, '*Srāvastī in Indian Literature*' (Memoirs of the Arch. Sur. of India).
[12] *Apadāna*, p. 614.
[13] *Vide* N. L. De, *Geographical Dictionary of Ancient and Mediaeval India*, pp. 212-213.
[14] Cowell, Vol. V, p. 167; vide also N. L. De, *Geographical Dictionary of A and M. India*, pp. 213-4.
[15] *Apadāna*, p. 470.

Supernatural beings[1]

Dānavas—demons; *Gandhabbas*—heavenly musicians; *Guhyakas*—a class of demi-gods who are attendants of *Kuvera*; *Kumbhaṇḍas*—a class of fairy; *Nāgas*—dragons; *Vijjādharas*—sorcerers.

References to Buildings and Architecture[2]

Aggisālā—halls with fire places in them; *Āpāna*—shop; *Caccara*—courtyard; *Caṅkama*—walking place; *Dvārakoṭṭhaka*—store-room over the gateway; *Guhā*—caves; *Jantāghara*—bathroom; *Kūṭāgāra*—pinnacled house; *Maṇḍapa*—pavilion; *Nahāna-ghara*—same as Jantāghara; *Pākāra*—boundary wall; *Parikhā*—moat; *Pāsāda*—palace; *Rājuyyāna*—royal garden; *Saṅghā-rāma*—monastery.

[1] *Ibid.*, pp. 72 and 287.

[2] *Ibid.*, pp. 39 and 43; cf. the list given in B. C. Law's '*Śrāvastī in Indian Literature*' (Memoirs of the Archæological Survey of India, No. 50), p. 23.

REVIEWS OF BOOKS

Pāṇini and the Veda. By Dr. PAUL THIEME, translated from the German (Globe Press, Allahabad), 1935. Pp. 15+132.

This is a penetrating study of Pāṇini's famous grammar in relation to Vedic literature. It deals with Pāṇini's rules that specially bear on Vedic usage and tries to deduce the principles observed by Pāṇini. It controverts and examines many of the views expressed by such distinguished scholars as Whitney, Goldstücker, Liebich. Generally it presents a well balanced and judicial turn of mind and is modest and cautious in the opinions expressed. It determines the sense of such words as 'Chandasi' and 'Mantra' used by Pāṇini. It points out what Vedic texts were exploited by Pāṇini and settles, in opposition to Goldstücker, the relation of Pāṇini's grammar to the Shukla Yajurveda. The work is altogether a mine of information and deserves careful study at the hands of all those that are interested in the science of language and particularly Sanskrit grammar.

P. V. K.

Svara-siddhānta-chandrika. By ŚRINIVĀSA YAJVAN. Edited by K. A. Sivaramakrishna Sastri (Madras Law Journal Press, Mylapore), 1936. Pp. 12+472. Rs.5.

This is a publication of the Annamalai University Sanskrit Series. The work is a commentary on that part of Pāṇini's Aṣṭādhyāyī which deals with Vedic accentuation (Svarasutras). There is a Sanskrit and an English introduction, which exhaustively deal with accentuation and the views of scholars like Whitney. At the end there is a very useful index of Vedic texts cited in the work. The printing and get-up are excellent. The work will be of great interest to students of Vedic accentuation and its treatment in Pāṇini's grammar.

P. V. K.

The Origin and Development of Religion in Vedic Literature. By P. S. DESHMUKH, M.A., D.Phil. Pp. xvi+378. Published by the Oxford University Press, 1933. Price Rs.15.

This book represents a thesis submitted by the author for the degree of D.Phil. It gives in four parts very useful information on subjects such as Definition and Origin of Religion, Indo-European and Indo-Iranian Religion, Vedic Religion and

Brāhmanism. The value of this work lies evidently in the fact that it tries to present the salient features of different phases and aspects of religion in the form of sketches carefully prepared from scholarly works of European authors which are generally not accessible to all Indian students of Vedic religion. The book as a whole leaves the impression that the author has based his conclusions mostly on second-hand sources and has not tried to go deeper into the original texts. One would ordinarily have expected in a work bearing this title a critical and learned discussion of the theory of sacrifice as propounded by the Mīmāṁsā writers ; for it is generally agreed that the study of Vedic religion is mainly concerned with the institution of Sacrifice, its development and causes, and its far-reaching effects on the entire field of Indo-Āryan Culture. Of course one would readily admit that dogmatism on a subject like this is not likely to lead to a correct solution of the problem.

Coming to the first part of the book where different definitions of religion are discussed by the author, we realize how difficult it is to define precisely and adequately the term religion ; still the author's heroic attempt to offer a new definition of religion namely : (1) that it is and must be a social institution, (2) that it must contain certain cardinal doctrines and beliefs, and (3) that it must contain certain rules of conduct based on these doctrines and beliefs, does not yield any very satisfactory results. Thus what he proposes to do turns out to be not a definition but a description.

After reading the chapter dealing with the origin of religion a student of Vedic religion will not fail to experience a sigh of relief that Dr. Deshmukh has vigorously tried to refute, with not a little measure of success, the theory current among European scholars that religion develops out of magic. It is indeed interesting to note that Prof. Keith in his Foreword comes to 'feel that it is an impossible task to explain the evolution of religion from magic in any form, and that we must accept as ultimate the religious sentiment'.

In treating the subject of Indo-European religion and that of Indo-Irānian religion, the author shows a clear grasp of basic principles underlying these two religions, and his thoroughly scientific approach to the subject from a historical point of view paves the way for a comparative study of Vedic literature and culture to which the second part of the work is mostly devoted. It is this part which should have offered ample scope for the author's originality, but strangely enough what the reader finds is nothing but a conventional treatment of Vedic literature ; especially the subject of Brāhmanism is disposed of, to our utter disappointment, in not more than twenty pages. Considering the fact, however, that the book was offered as a thesis for the degree of D.Phil. and that the author had not sufficient leisure and facilities to revise it afterwards, it cannot be denied that it is a creditable performance.

V. A. Gadgil.

Indo-Āryan Literature and Culture (Origins). By PROF. NAGENDRANATH GHOSE, M.A., B.L. Published by The Book Company, Ltd., Calcutta, 1934.

This brilliant and thought-provoking work is divided into fourteen sections. In the first nine sections the author endeavours to work up his theory about the fusion of two cultures—the Āryan and the Non-Āryan, and in the remaining five sections he proceeds to explain in the light of his theory how the various stages of Indo-Āryan literature and culture came into existence as a result of this fusion. The main thesis he tries to establish is this: The Indo-Āryan literature-cum-culture is not the outcome of a pure-blooded Āryan organism but a synthetic product of the Vedic Āryan civilization and the Non-Āryan Eastern Vrātya civilization. Of these two civilizations the former had its origin in the Punjab, the Western part of India where the Āryan settlements were scattered in the form of tribal states headed by their chiefs, whereas the latter was established in the East (Magadha land) inhabited by the Vrātyas. The Vedic Āryan stock was more or less nomadic and the Non-Āryan Vrātya stock, on the other hand, was stable. At a very early stage the Vedic Āryan settlers were faced with two problems—that of self-preservation mainly dependent on the strength of the man power which was solved through the invention of the Conversion Vrātyastoma and that of internal peace and security threatened by the rivalry between the Kṣatriya and the Brāhmin classes aspiring after the leadership of the settlements. It is as a result of the second problem that, according to the author, the two cultures came into contact. A few cunning and intelligent Brāhmins being disgusted with the attitude of their Kṣatriya chiefs left the Āryan settlements and migrated to the Vrātya Empire of the East consisting of the Anūpdeśa and Magadha. These clever dissatisfied Brāhmins formed an alliance with the Vrātya king as a result of which they got high social position superior even to that of their Vrātya rivals. This position they could maintain in the later stages by their wonderful power of assimilation of the Vrātya culture mostly of esoteric nature with the result that the Atharva-Veda came to be accepted as the authoritative text of the Āryan priests officiating in the Vrātya land. The author would have us believe that the Trayī-Collection came into existence later as a result of the reaction of such tactics of the Vrātya Brāhmins on the minds of Āryan priests in the Āryan land and as such is basically of purely Vedic Āryan origin, and that the Upaniṣads and the Purāṇas were basically derived from purely Eastern Vrātya sources.

Coming to the cultural aspect the author further maintains that the caste was essentially an Eastern Vrātya institution originally unknown among Vedic Viśas. Āryan Brāhmins did not make castes but propounded theories to explain them away after they had come upon the fully formed institution in the Vrātya land.

This, in short, is the main thesis which Prof. Ghose tries to base on the Vrātya Book of the Atharva-Veda, some other Brāhmaṇa texts notably the Pañchavimśa Brāhmaṇa and the Jaiminīya Brāhmaṇa texts, and the Vrātyastoma texts from different Śrauta Sūtras. In the light of the main thesis thus advanced the author proceeds, in the last section of the book, to interpret the Mahābhārata and 'to isolate the original Draupadī Saga as the only historical central theme from the massive Brāhmanizing entanglement in which it lies enmeshed in the Mahābhārata Epic'. In this process of cutting out the Brāhmanized accretions to the Epic, *Niyoga* is declared to be a fabrication as it was not an Āryan practice but casually found in Vrātya countries.

Apart from the fact that this highly imaginative but suggestive picture of Indo-Āryan literature and culture drawn by Prof. Ghose opens out a wide vista of possibilities in other directions and presents quite a new and bold outlook in a very charming and forcible style, it is not difficult for a critical reader to detect flaws in the arguments that seem to have unduly weighed with the author in drawing these conclusions. We cannot resist the impression created by the book as a whole that before us stands an advocate fighting for his brief. He may be, to some extent, justified in drawing the general outlines of the picture but his reasoning is vitiated by a number of assumptions. The thesis hangs on one peg namely the Vrātyastoma material which has led the author to an ingenious conception of Āryan life by a hypothetical reasoning, and with a mind obsessed with this conception and in a way biased against Āryan Brāhmins by incessant thinking in western phraseology and ideas the author ventures to value unrelated pieces of material evidence from his own point of view and draws conclusions of a far-reaching character with a passionate pleading.

It is interesting to notice in this connection some of the assumptions the author makes to reach a particular conclusion. First and foremost is the assumption of a stable Vrātya empire with roads and such other means of communication in contrast with the nomadic Āryan tribal states. Further (1) the easy passage of a few dissatisfied intriguing Brāhmins from a place of turmoil to another scene namely the Vrātya territory inhabited by peace-loving people and governed by almost a despotic ruler, (2) the subsequent contact and fusion of two cultures tending to the transformation, as though at one stroke, of the whole country into a new centre of gravity of Neo-Āryanism, and lastly (3) the region chosen for such a dramatic change being the Vrātya land—all these are assumptions the reader is asked to take for granted in order that the picture be complete. After thus hastily drawing the outline of his picture the skilful advocate Professor seeks to explain the inter-relations of the Trayī Collection, the Atharva-Veda, the Upaniṣads and the Purāṇas in the light of his thesis; even the historical aspect of the great Epic Mahābhārata and the sociological

factor namely the institution of caste are given quite a new interpretation. This process of remaking a lost world must indeed be as strangely exhilarating as Viśvāmitra's process of making a new creation.

V. A. GADGIL.

The Mahābhārata. Analysis and Index. By EDWARD P. RICE. Oxford University Press. 1934. Pp. xvi+112. Price Rs.5.

This booklet by the Rev. Mr. Rice is indeed very useful to the students of the Mahābhārata. It contains a very brief summary giving a detailed analysis of all the chapters followed by two Indices: an Index of Names and an Index of Subjects. The book is not primarily intended for specialists but for the students of Indian culture who can get information at a glance on diverse subjects treated in the Mahābhārata. It can, therefore, hardly be called an original contribution. Nevertheless it does supply a real need of the reader by presenting a map, as Mr. Rice points out in the Preface, of a jungle of information contained in the Mahābhārata. The Index of Names even though not an improvement in any way on Söresen's scholarly Index is easily accessible to the reader of ordinary means. The Index of Subjects at the end of the booklet gives very meagre information. A more detailed and exhaustive Index is highly desirable. In spite of minor defects here and there the author has well succeeded in his modest purpose of lightening the labour of future students of the great Epic.

V. A. GADGIL.

The Jasmine Garland (Kundamālā). Translated into English by A. C. WOOLNER, C.I.E., M.A. (Oxon), Hon.D. Litt. (Panjab); Vice-Chancellor of the University of the Panjab. Panjab University Oriental Publications, No. 27. Oxford University Press, London. 1935. Pp. v–xiv+50. Price 6 shillings.

This translation of Kundamālā by the late Dr. Woolner is a welcome addition to a stock of valuable literature already published on this subject. The author does not mention the text he has used for his translation but it appears that it is mainly based on the text edited for the first time by M. Ramkrishna Kavi, M.A., and S. K. Ramanath Shastri. This is an improvement on the translation of the same play by Messrs. Veda Vyasa, M.A., LL.B., and S. D. Bhanot, M.A. in that it gives a free rendering in an elegant language, but for understanding the original text both the translations are equally useful. The chief interest of this book lies, however, in the scholarly introduction by the learned author who had already made his contribution to the subject (the Annals of the B.O.R.I., Vol. XV, 1933-34, pp. 236–239). Many other scholars joined him later in this research (Dr. S. K. De—

Annals of the B.O.R.I., Vol. XVI, 1934-1935, p. 158 and K. A. Subramania Iyer—Proceedings of the 7th Oriental Conference, Baroda, pp. 91–97).

One thing specially noteworthy about this play is that the question of its date and author has been the bone of contention amongst scholars owing to the fact that out of the four manuscripts the two Tanjore MSS. mention Dhīrnāga as the author of the play whereas the two Mysore MSS. state (in the Prologue) that Diṅnāga composed the play. Both the first and the second editors of the Kundamālā believed the statement in the two Mysore MSS. and consequently hailed this play as a work of a great poet Diṅnāga, a rival of Kālidāsa because they were under an impression that a Manuscript copy of Vallabhadeva's Subhāṣitāvalī ascribed the second verse of the first Act of this play to Diṅnāga. Dr. Woolner, however, points out in the introduction that ' we are not told the date of this MS. (Subhāṣitāvalī) which differs from the printed edition '. There are many references to the Kundamālā in later literature but Diṅnāga as the author is not mentioned. Even Dr. F. W. Thomas has thrown doubt on the attribution of this work to Diṅnāga (J.R.A.S., 1924, p. 261). The other name suggested for the authorship namely Dhīrnāga may as well be not seriously considered as the statement of Messrs. Veda Vyasa and Bhanot, on which the late Dr. Woolner seems to have relied, that a Dhīrnāga styled Bhadanta is mentioned in the Sūktimuktāvalī of Jahlaṇa, is not corroborated by a very detailed description of the MS. of Sūktimuktāvalī by the late Sir R. G. Bhandarkar. It is interesting to note that the Nāṭyadarpaṇa (Gaekwad Oriental Series, No. XLVII, 1929) mentions a Kundamālā by Vīranāga. As regards the mention of Kundamālā composed by Nāgayya by Burnell (cf. Aufrecht under Nāgayya) Dr. S. K. De points out (B.O.R.I., XVI) that Prof. Levi's conjecture about the identity of the Kundamālā under review with the one by Nāgayya lacks corroboration as the latter consists of five acts only. Now the second verse of Act I of this play quoted in the Saduktikarṇāmṛta of Śrīdharadāsa (published by Motilal Banarsi Dass, Lahore, 1930) is attributed to Ravināga. In this connection Dr. Har Dutt Sharma's contention that Ravināga erroneously stands for Vīranāga mentioned in the Nāṭyadarpaṇa has much to recommend itself. After all whether Dhīrnāga or Vīranāga or Ravināga is granted as the name of the author of the Kundamālā, the theory of Diṅnāga being the author of the play is no longer very seriously supported by scholars.

In view of this discussion Dr. Woolner rightly holds in his introduction that the play seems to have been written some time later than the date of the Uttara-Rāmacarita. Certainly the account of Sītā's misery in the Kundamālā is more sophisticated than either the simple pathos of Vālmīki's story or the natural and sublime depiction of the same by Bhavabhūti in the Uttara-Rāmacarita. Even the *Chāyā* scene in the Kundamālā is more

ingenious and unnatural than the corresponding scene in the Uttara-Rāmacarita where Rama is deprived of the pleasure of the sight of Sītā owing to the enforced invisibility of her form. The exchange of mantles on the part of both Rāma and Sītā reminds one of a somewhat similar scene in the Mṛcchakatika. Of course it must be admitted that in the latter there is no exchange in the real sense because Vasantasenā alone puts on the mantle thrown by Cārudatta, but the idea is common to both the scenes. Moreover the scene in the audience hall in the last act of the Kundamālā seems definitely to be an inferior copy of a similar scene in the Vth Act of the Śākuntala. In place of Kaṇva's disciples in the Śākuntala the author introduces in the Kundamālā Vālmīki himself and makes him chide Rāma for his treatment of Sītā. It is, therefore, more likely that the play under review must have been written later than the Śākuntala as well as the Uttara-Rāmacarita.

V. A. GADGIL.

The Buddhacarita or Acts of the Buddha : Part I—Sanskrit Text ; Part II—English Translation with Introduction and Notes. Edited and translated by E. H. JOHNSTON, D.Litt. Published for the University of the Panjab, Lahore, 1936.

This new edition of the first 14 cantos of Aśvaghoṣa's Buddhacarita is mainly based on an ancient palm-leaf manuscript preserved in the Kathmandu Library of the Nepal Durbar, which is described by MM. H. P. Sastri in JASB., 1909, p. 47. Though other MSS. of this portion of the poem—for, the poem actually consists of not less than 28 cantos—have been mentioned and utilized by others before this time, all of them undoubtedly appear to be direct or indirect copies of this one, as has been shown conclusively by the Editor on pp. VIII to X and XVIII-XIX of Part I. It is obvious that the Sanskrit text of the remaining portion of the Buddhacarita is irretrievably lost to us, and we must be thankful to Dr. Johnston for attempting to give us the existing part of the original Sanskrit poem in as pure a form of it as was possible in the present state of affairs.

Dr. Johnston's task was certainly not an easy one. A defective manuscript with a bewildering variety of pure conjectures in difficult places where the MS. did not afford any help is certainly not a very welcome material for editing an old Sanskrit poem written in an artificial style. The poem indeed has been translated into the Tibetan and Chinese languages in the early centuries of the Christian era and an editor might well turn his eye to these for help ; but for obvious reasons, even these translations would not offer material assistance to one who is not well acquainted with the peculiarities of the style and language of the original poet. Dr. Johnston was however very well fitted for the task on account of his good working

knowledge of the Tibetan and Chinese languages coupled with a close and critical study of Aśvaghoṣa's other works. And we are glad to note that the text now offered to us is definitely superior to any of the previous editions, although the correct restoration of the original text of a few stanzas still seems to be a hopeless task.

In the second Part, Dr. Johnston gives an accurate translation of the poem edited in Part I with helpfully critical footnotes and discusses in an exhaustive introduction the life, the works, the doctrines, the scholarship, the style and the language of the great poet Aśvaghoṣa. His analysis of Aśvaghoṣa's grammatical practices (Pt. II, pp. LXVII to p. LXXIX) is admirable and would surely prove very helpful for the textual criticism of Aśvaghoṣa's works. We also believe that a complete index of words occurring in the two poems of Aśvaghoṣa might prove a still more helpful source for the correct restoration of at least some of the lost portions of them. The orthodox view that Aśvaghoṣa was a clumsy imitator of Kālidāsa (cf. Nandargikar, Introduction to his edition of Raghuvaṁśa, Poona, 1897) has now to be abandoned, particularly in view of a thorough analysis of his style and grammar given by Dr. Johnston and we easily agree with him when he says on p. XCV that 'Aśvaghoṣa's insistence on symmetry, his exposure of the framework and his non-functional decoration are characteristic of early work, not of a time when the greatest art is so to conceal the art that the reader is unconscious of its presence pervading the whole poem. The correct view, I would maintain then, is that Aśvaghoṣa is a primitive in his art, just as he is in religion and philosophy.'

H. D. VELANKAR.

Ṛgveda-Saṁhitā, with the Commentary of Sāyanācārya, Vol. II (Maṇḍalas 2–5). Published by the Vaidika Samshodhana Mandala (attached to the Tilak Maharastra University), Poona, 1936. Price Rs.12.

We most heartily welcome this 2nd part of a new critical edition of Sāyana's commentary on the Ṛgveda, undertaken by the Vaidika Samshodhana Mandala of Poona. This Part contains Maṇḍalas 2 to 5. No pains have been spared by the Managing Editor either in collating the MSS. and printed editions of the Sāyana-Bhāṣya or in consulting relevant Vedic Literature for establishing a reading in the text of Sāyana's Bhāṣya. The conjectural readings adopted and recommended by Max Müller in his well-known edition have been rejected when necessary, only after a careful consideration of the new and old MSS. material.

In the selection of readings in the Bhāṣya, the editor sometimes seems to have been indefinite and uncertain at the time of printing; but in the Sanskrit notes given at the beginning of the Book, he has definitely improved in his choice (cf. for example, his notes on 22.10; 22.12; 39.24; 88.16; 90.14, etc.). These Sanskrit

notes are very valuable and clearly show on the one hand, the extent of labour done by the editor and on the other, the great necessity of the present edition of the Bhāṣya, which is certainly an improvement upon the older editions of the same. It would have been far better however, for the reader, if these notes had been printed as footnotes on the respective pages of the book. But this was perhaps impossible for the present Part, since evidently they were not completely prepared at the time of printing of the Bhāṣya. See e.g., how the readings of the Bombay Edition are not mentioned in the footnotes on pp. 9(6); 11(10); 22(10); 88(16); 90(14) etc., though they are mentioned and preferred in the Sanskrit notes referred to above. We hope they will be so printed if possible, in the following Parts of the Book.

As regards the text of the Ṛgveda Saṁhitā of which the Bhāṣya is a commentary, the editor tells us that he has 'followed the traditional recitation of the Samhita and the Pada Patha', and that he does not 'think that there can be differences with regard to these two'. This in our opinion is not a very right attitude. We indeed understand well when he says that he would not attach any importance to manuscripts in such a matter. But there are other sources from which these variant readings in the text of the Ṛgveda Saṁhitā can be determined. The most important among these is the Sāyana's Bhāṣya itself. Sāyana's authority in this respect is certainly not negligible. It cannot *always* be maintained that he adopted the different readings of the Ṛgvedic Text in his Bhāṣya through negligence and carelessness, though this possibility is not *wholly* excluded. Ordinarily, the text of the Ṛksaṁhitā which he knew by *tradition* must be supposed to have contained those readings, and it is, we think, the duty of an editor of the Bhāṣya to point these out *in a prominent manner*, since the Bhāṣyakāra has commented on *these* and not upon *those that have been adopted* in the Ṛk Text that is printed above it. It must be admitted that the editor has faithfully recorded all such different readings in his Sanskrit notes, but our contention is that they ought to have been shown in footnotes under the Ṛk Text itself so as to attract the notice of a reader quickly.

Such variant readings again are not very rare. In the present Part itself they are not less than 7 or 8. Thus Sāyana reads '*Vasuḥ* for *Śuchiḥ* in II, 1. 14*d*; *Dhakṣoḥ* for *Dakṣoḥ* in II, 4. 4*b* (even the Pada Pāṭha here reads *Dhakṣoḥ* like Sāyana; some of the MSS. of the Bhāṣya read *Dakṣoḥ*, but this is clearly an improvement of the scribes as is seen from the explanation of the word given in the Bhāṣya); *Tmanā* for *Tvayā* in II, 7. 3*a*; (*Dadhuḥ* for *dhuḥ* in II, 20. 8, according to the Sanskrit note on p. 83. 15; but this is not correct; see 83. 14. The word *Dadhuḥ* is evidently a mistake of the scribe in this line); *Adardaḥ* for *Adardhaḥ* in II, 38. 4*c*; (*Hasteva* for *Hastāviva* in II, 39. 5*c* according to note on 164. 23; but here *Hasteva* seems to be rather an oversight than a real variant, the cause of the oversight being the following *Pādeva*); *Uta* for

Ut in II, 42. 2*a* (even this may not have been a real variant); *Avivenan* for *Avivenaṁ* in IV, 24. 6*c*; *Sarvā* for *Śarvā* in IV, 28. 3*d*; *Agneḥ* for *Agne* in V, 7. 10*c*; and lastly *Marteva* for *Martāya* in V, 86. 5*b*. It is thus evident that the Tradition of the Ṛk Text known to Sāyana differed in certain respects from the one known to us at present and it is therefore incorrect to maintain that 'there can be no differences with regard to the recitation of the Saṁhitā and the Pada Pāṭha.'

Finally, we heartily congratulate the managing Editor and his collaborators on this fine work in the field of editing and we wish every success to this their great undertaking.

H. D. VELANKAR.

The Nature and Grounds of Political Obligation in the Hindu State. By J. J. ANJARIA, M.A. (Longmans Green & Co.). Pp. 25+323. Rs.7-8-0.

The Problem of the Indian Polity. By PRATAPGIRI RAMAMURTI, M.A. (Longmans Green & Co.). Pp. 12+2+2+475. Rs.10.

An Introduction to Politics. By PRATAPGIRI RAMAMURTI, M.A. (Popular Book Depôt). Pp. 201. Rs.2-8-0.

The first two of these form part of a series of regional and Sociological Studies, mainly Indian, embodying the result of research carried out by post-graduate students at the Bombay University School of Economics and Sociology, and their publication has been rendered possible by the financial support lent by the University. Both the studies bear the impress of youthful enthusiasm and are characterized by an endeavour to look at a much handled subject from a new view point. Mr. Anjaria's theme is indicated with precision by the title he has chosen for the work. He attempted to describe and interpret the Hindu conception of the grounds of political obligation. He reviews with scholarly ability a wide range of ancient Indian literature, reveals the several details of his subject and synthesizes them in terms of the universal principle of Dharma; in conclusion suggesting a revaluation in terms of the accepted principles of modern times—of freedom and democracy—broad-based upon the precious elements of the ancient heritage. His statement is unassuming and readable though not all his conclusions may be acceptable.

Mr. Pratapgiri's work is much more ambitious; he seeks to present the problem of Indian polity in the light of the life of the people. The integral relationship between ancient Indian polity and Dharma, the central concept of the Hindu culture, has already been indicated by several scholars; but none has

endeavoured as Mr. Pratapgiri has done to co-ordinate the principles and concepts of that polity. He proceeds also to examine these ideals in the light of modern conditions and finds that they have outworn their utility. His thesis makes interesting reading, but its latter part evinces an evangelic enthusiasm. An otherwise able exposition is also marred occasionally by digressions, repetitions and polemics.

His Introduction to Politics seeks to survey critically some of the problems of political life from an idealistic point of view. He has, whenever relevant, cited the views of ancient Indian thinkers. The work, however, is comparatively elementary in character.

B. G. M.

The Central Structure of the Mughal Empire. By IBN HASAN. (Milford, Oxford University Press.) 1936. Pp. 398. Rs.18.

For the study of any administrative system it is not enough that we should know the general structure only. We must watch it functioning from day to day, if we would realize how far the system met the needs of the people, how smoothly and efficiently it worked, how far the spirit that had created it also guided it. Such a study of the Moghul administration presents various difficulties. While we have ample material to build up the Imperial Institutions, we are unable to trace their actual working with any confidence or thoroughness. Dr. Ibn Hasan is fully conscious of this, and his attempt is merely ' to give some idea of the working (of the administration) by piecing together the scattered facts of Moghul rule under each head ' (p. 67). For instance, in support of the very important statement that ' the entire system (of administration) moved and every part of it worked in a regular order . . . The phrase at the tip of every tongue was *zābita īnast* ' the author can find only two instances to the point, during a period of ninety years. Similarly the entire section on the judiciary is built up by ' piecing together scattered facts '.

It is important to keep this constantly in mind, for the real value of the book lies in the comprehensive study of the structure of the Imperial Institutions : how the genius of Akbar faced each problem, how after numerous experiments and trials the final form was achieved, which it was the ambition and pride of his successors to maintain. The rest is merely an interesting sidelight on Moghul administration.

The foremost problem with all ruling dynasties had been to secure the throne and the dynasty against its too powerful ministers and nobles. Yet both Muslim theory and practice had favoured an all-powerful Wazir, a sort of an alter ego of the sovereign. Akbar

broke entirely with that tradition of the past and divided the Wazir's powers between four ministers of nearly equal rank and status. The Wizarat sacrificed its powers to retain its dignity.

The division of powers, the separation of the civil and military, and the system of checks and counterchecks were indeed the main principles of Moghul administration. The real head of the Civil Dept. was the Dewan, while the Mir Bakhshi may be regarded as the head of the Military. A similar division of powers had been achieved by Alauddin Khalji by the creation of the Dewan-i-Wizarat (Civil) and the Dewan-i-Arz (military). But while these had been independent of each other, the Dewan and the Mir Bakhshi were just sufficiently independent to be responsible only to the Emperor, and yet sufficiently closely linked to be a check one on the other. This link was achieved through the organization of the whole Imperial Service, civil as well as military, on the Mansabdari basis. The third minister was the Mir Saman, whose presence near the King gave him a status and position much beyond the importance of his functions. The Sadr was the fourth. Akbar curtailed his powers and imposed a strict procedure over his grants, and so clipped the wings by which ambition may soar to giddy heights!

The system of balance did not stop with this division of power. The King worked not through each minister only but through a council of ministers and nobles, and all important civil and military matters were discussed there. Reality was given to these deliberations by the procedure followed: The King presided, each member spoke in turn according to his rank, discussions were frank and opinions were expressed freely, and though the final decision rested with the King, he was certainly influenced by these. A few interesting instances of such councils are given. In one such Akbar asked those present to suggest any measure of reform they thought necessary. Prince Salim suggested the abolition of early marriages; another the establishment of hospitals; while Abul Fazl wanted a census of every town and city, with the name and business of every one; Khan-i-Azam recommended that the Provincial governors should be deprived of their powers to inflict capital punishment, and such other recommendations were made. Surely a very suggestive incident!

The third section of the thesis deals with the administration of justice. It is the first attempt at a systematic study of the Moghul judiciary—perhaps the paucity of materials has warned off the historian; and Dr. Ibn Hasan with all his extensive researches is unable to give any convincing answer to the problem. The Emperors considered the dispensation of justice as their foremost duty, and their constant effort was to give to their meanest subjects free access to their presence and to establish equality before the law. Yet, in spite of wide spread corruption, which all evidence shows to have prevailed, the Judiciary continued to remain, in status, dignity and organization, in marked inferiority to the other

departments of the State. How was it that it escaped Akbar's organizing zeal ?

There is one important omission which we are at a loss to account. In Moreland's *Agrarian Systems of the Moslems* much information is given about the working of the Jagir Department and Akbar's attempts to reform it. There is no reference here to this, which considering the importance of the subject is strange.

The book is undoubtedly a valuable contribution to Moghul Studies, and we must feel grieved at the loss Indian History has suffered by the author's untimely death. It is to be hoped that his notes on the Provincial administration will not be lost to us.

AZEEM H. B. TYABJI.

Fihristi Kitāb-khāna-i Dānishkada-i Ma'qūl wa Manqūl dar Madrasa-i 'Ālī-i Sipahsālār (Catalogue of Persian and Arabic Manuscripts in the library of the Faculty of Arts, Sipahsalar High School, Tehran). By IBN YŪSUF SHĪRĀZĪ. Vol. I, Tehran, 1315 Shamsi = 1937. Pp. 12+700. (*In Persian.*) Royal 8vo.

This is the first volume of what appears to be the first descriptive catalogue of a Persian library, prepared by a Persian, in Persian. It deals with 746 volumes of works on religious subjects : copies of the Coran, works on the study of the Coran, tradition (*ḥadīth*), jurisprudence (*fiqh*), and the principles of jurisprudence (*uṣūlu'l-fiqh*). Each item is given a descriptive note in which the compiler tries to give the date of composition, some idea of the contents, and adds the usual description of the MS. itself.

The work undoubtedly forms an immense step forward as compared with the old-fashioned *daftars* in which the titles of the books only,—rarely the names of the authors,—were entered without any system, in the most illegible form of *shikasta* without diacritical dots. Though this catalogue still retains many typical features of such *daftars*, let us hope that its further issues will ultimately be free from these old defects.

Western students of different Oriental literatures always cherish great expectations when they think about the treasures still believed to be hidden in the inaccessible libraries in the countries of the East. This particularly may be said about the collections of books hoarded in different ancient mosques or shrines of the saints, which so far remained inaccessible to the impious and unclean kafir scholars. And now, when some of the largest of such libraries become known, we may be feeling rather disillusioned. As the author says in his preface, the Sipahsalar library, though of recent origin, is supposed to be the largest in Persia. And yet it contains only 4,300 volumes, manuscript and printed,—a number which is quite insignificant as compared with Western libraries. In the collection of the Persian and Arabic MSS. of the library there is

nothing to be jubilant: almost all MSS. are mostly modern copies of the most common works, many of which were repeatedly printed. There is very little to pick up as items of special interest. Many years ago, in 1920, I had a chance to examine the *daftar* of the great library of the shrine of Imam Riḍā in Mashhad, and the impression was exactly the same. The sad fact is that although the climate of Persia wonderfully preserves books, and ancient copies are none the worse after something like five or six centuries, the best items are usually stolen from the collections, and many are later either used for making packets in druggist's shop, or, in winter, pasted instead of glass pans, or made into cardboard for the bindings of modern cheap lithograph, or simply washed, for using paper for writing again. Formerly there was a way of saving these precious MSS. by buying them for foreign libraries. But modern regulations of the Persian Government penalizing every one who wants to buy MSS. by imposing a complex and lengthy procedure of getting the books for export through a tortuous and slow working machine of their officialdom, and demanding absurdly high custom duties, decidedly doom what old copies are still available in the country to final destruction.

The 'make', i.e. the technical side of this catalogue evokes the usual sad reflections as to the mentality of cataloguers in general. It would appear as if such a 'dry-as-dust' matter as description of old MSS., which is only and entirely intended for specialists, would always follow some strictly scientific and well defined methods, uniform and obligatory to all. In reality, however, every catalogue seemed to be primarily conceived by the spirit of individual tastes and prejudices. Especially catalogues produced in India and generally in the East: however ignorant, inexperienced, and generally uneducated their compilers are in fact, all of them are born reformers and initiators of new eras in cataloguing. They would 'perfect' the system in their own way, not noticing, in their ignorance, that their innovations in reality are the defects found in various old catalogues, which were rejected by subsequent authors. They would invent a new and nonsensical system of transliteration, of numeration, of the notes, classification of the subjects, etc.

It is a great pity that the author of this catalogue, as it appears, did not know foreign languages. Though his methods certainly are those of European catalogues, and it is indubitable that he perused and followed them, at least second hand, yet for some unexplicable reasons he entirely leaves them out in his references. It is difficult to find, whether this is due either to religious fanaticism, or ill conceived 'patriotism', or some other laudable motive, yet his list of authorities and works of reference, given on pp. 10-11 of the preface, is really instructive. Of Western works only two are mentioned,—C. Brockelmann's G.d.a.L., and A. G. Ellis' Catalogue of printed Arabic books in the library of the British Museum (1894). There are very few traces indeed of the author's

using the work of Brockelmann. His other authorities are several *fihrists* of different Persian libraries, the usual well-known biographical and bibliographical works as *Kashfu'z-ẓunūn* or *Wafayātu'l-a'yān*, etc. Even Shahrastānī's work on sects is included. There are also a few catalogues of libraries in other Islamic countries,—the old (1306) list of the Khediviyya library, of the *Dāru'l-kutub* in Cairo; the most important catalogues of the Constantinople libraries are not used. Of Indian libraries there is only one catalogue,—the most admirable lithographed list of the Asafiyya library in Hyderabad-Deccan. Other jewels of the Indian art of cataloguing, such as the Rampur catalogue, or the old lists of the Calcutta Asiatic Society's are sadly missing.

With regard to the arrangement of the catalogue it is sad to see that it is extremely chaotic, and in this respect not gone far from the old *daftars*. It would be simple and easy to arrange the works chronologically, as is done in all standard catalogues, and separate works in Arabic from those in Persian. It does not require much hard thinking to realize the advantages of placing commentaries and super-commentaries on a certain work in one place. And it would obviously be better to retain the old division of works belonging to different schools of Islam. Here works on *tafsīr*, *ḥadīth*, *fiqh*, etc., of all schools are in a hopeless confusion,—Shi'ite, Sunnite, etc. To add to all this, the compiler invented a peculiar system of additional numeration: if there is only one copy of a certain work, it has one number. But if there are several copies of the same work, the author gives a special note on the work itself, under a special number, and then describes every copy under the ordinary numeration. Why it was impossible to describe the work under the first, i.e. the oldest copy of it found in the library, as it is usually done, and then refer to this in subsequent notes on the same work,—is difficult to understand.

It is also not pleasant to see that Arabic names are Persianized wholesale. There are many misprints, which to some extent are rectified in a list at the end. Indexes are not quite strictly alphabetically arranged. It is difficult to understand why the indexes of works described and the works merely referred to in the catalogue should be separate,—would it not be better to combine them both, only using a different type for references?

Much more may be said about a large work of 700 pages than is convenient in a short review. But let us hope that the compilers of other parts of the catalogue will not continue this confusing style, but would stick to the more logical and more up-to-date methods, both practical and critical,—something on the lines of the Catalogue of the Persian MSS. in the India Office Library by the late H. Ethé. Every one who had experience with cataloguing knows how difficult and expensive it is to procure a full set of catalogues. But the matter is not so insuperable. Surely it only requires reasonable and intelligent handling. Many latest catalogues may be received in exchange, and older ones, published by such institutions as the

British Museum, India Office Library, etc., may always be either obtained second hand, or, perhaps, the trustees of these institutions may be approached with a request of sending a complimentary copy.

W. IVANOW.

Glossar zu Firdosis Schahname. Pp. xiii+911. **Supplementband: Verskonkordanz der Schahname-ausgaben von Macan, Vullers und Mohl.** Pp. i+109. VON FRITZ WOLFF. Berlin, 1935. Grand 4vo.

This is an official German publication, issued at the occasion of Firdausi's millenary celebrations. It is a vocabulary of the words used in the Shahnama, together with references to the places in the three principal editions, of T. Macan, Mohl and Vullers, in which the words are met with. Every student of the Shahnama, and of classical Persian will appreciate this work, which may guide him in the question whether a certain expression does, or does not occur in the great poem of Firdausi. It took the author, as is said in the preface, twenty years to prepare it, and, surely, cost a great deal to print it.

Though there certainly will be no doubts as to the utility of the work, it produces an impression of something that is obviously overdone. It may be explained that the three principal editions of the poem, to which the author gives his references, are now either entirely unobtainable to ordinary students, or are extremely rare and costly. The first of them, by Turner Macan, printed in Calcutta in 1829, most probably exists only in a few principal libraries in Europe. In India it is long since non-existent because the paper decayed and crumbled to pieces long ago in all copies. The best edition, by J. Mohl (Paris, 1838–1878), accompanied by French translation, consists of seven huge foliants. It is out of print now and extremely costly. The rather inferior edition of Vullers is incomplete (Leiden, 1878–1884), and also difficult to get. Thus at least 90% of the author's labour, and the expense of the publishers, goes to the benefit of those very few students who not only are interested in the Shahnama, but also happen to reside in one of the principal Western centres of Oriental studies where they would be able to peruse these editions in the libraries. The supplementary volume is pure waste: surely very few students would be so much interested in establishing the correspondence between different editions which remain inaccessible to them. And those to whom these are accessible can easily do this themselves,—this hardly would take much time. Thus we have in this heavy volume a *prima facie* case of intentional or unintentional waste, squandering of labour and money.

At the same time the student has no reliable, inexpensive and handy edition of this great work: Persian editions are bad, and are very difficult to get. Would it not be a thousand times better

if the author would use his time on preparing such a new edition, to which his vocabulary, either without references to pages, or with such references, would be appended, and if the German Government would publish it at a moderate price ?

The author is quite categoric about the meaning of the words in which they appear. One may question this his infallibility : some of his meanings, at least, are very doubtful,—one cannot be convinced in many instances. His transcription is admirably learned : all the much fetichized *wāw* and *yāyi majhūl* (most probably a pure invention of mediæval Indian lexicographers, who never heard good Persian, and portrayed in this their own bad pronunciation)—are in evidence : *afsōs*, *pēš*, etc., which always evoke a burst of laughter from real Persians. Some of his ways of vocalization sound very strange : surely, ' to hear ' is not *šanīdan*, but *šinīdan*. Or *gursne* should be read *gurusne*. And why *Xosrau*, —there is no *wāwi majhūl* ? Then it should be *Pūrāndoxt*, not *Pūrānduxt*. Transcription of Arabic words is also strange : *bait'ul harām*. This, however, may be a misprint,—there are many which do not appear in the list of errata.

Being a jubilee publication, the book certainly had to be made ' monumental ',—' Kolossal ', as the Germans would say. Let us hope that this example will never be followed : nothing is so irritating, inconvenient for use, difficult to carry, to store, etc., as these ' foliants ' with wide margins, thick paper, and other means to swell up the respectability of the work. Let us hope that later on the author may republish it without all his figures, in the form of an ordinary 8vo. book of about 200 pages,—every student of Persian will be greatly obliged to him.

W. I.

Maxims of 'Ali. (Oxford University Press.) 1937. Pp. 72. Rs.1-8.

The original of this little book, attributed to the Caliph Ali, represents the wisdom literature of early Islam at its best. It contains many gems of sententious wisdom, of perennial appeal to all who appreciate pithy and incisive statements of worldly truths. ' The world is like a serpent ; its touch soft, but its bite mortal.' ' A good education hides a low origin.' ' Whoever listens to slander is himself a slanderer.' ' The ugliest verity is that used to praise oneself.' ' A man is no friend of yours, if you need one to arbitrate between him and you.'

The brochure is attractively brought out by the O.U.P., but we might have been spared the apostrophe on the titlepage. Being extremely suitable for purposes of presentation, perhaps it would be ungrateful on our part to raise any questions about the genuineness of the text, especially as the writer of the preface himself confesses that from the original 100 of these ' sayings ',

there have grown today collections containing 'several thousands'. The English translation is the work of Mr. J. A. Chapman.

A. A. A. F.

Government Collections of Manuscripts. Published by the Bhandarkar Oriental Research Institute. Poona. Vol. XII. Alaṁkara, Saṁgita, Nāṭya. 1936. Pp. 22+486. Rs.5.

This is Vol. XII of the Descriptive Catalogue of the Government Collection of Manuscripts deposited at the Bhandarkar Oriental Research Institute, Poona. It is compiled by Mr. P. K. Gode, Curator of the Institute and deals with 308 MSS. on Alaṁkara, 24 on Saṁgita and 15 on Nāṭya (Dramaturgy). The usefulness of the work is enhanced by the addition of an index of authors and another of works, and a corresponding table of MSS. pointing out in what collection the MSS. dealt with in this volume are to be found. References are generally given to Dr. S. K. De's work on Sanskrit Poetics; and Mr. Gode has totally ignored Mr. P. V. Kane's introduction to the Sāhityadarpaṇa which contains a history of Alaṁkara literature. The catalogue will be of great help to scholars engaged in research on Alaṁkara and allied subjects.

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Royal Asiatic Society, Bombay.

TRANSLITERATION OF ARABIC AND ALLIED ALPHABETS

Arabic.

ا	. . . . . *a*	ز	. . . . . *z*	ق	. . . . . *q*	ـِ	. . . *i* or *e*
ب	. . . . . *b*	س	. . . . . *s*	ك	. . . . . *k*	ـُ	. . . *u* or *o*
ت	. . . . . *t*	ش	. . . . . *sh*	ل	. . . . . *l*	ـَا	. . . . *ā*
ث	. . . . . *th*	ص	. . . . . *ṣ*	م	. . . . . *m*	ـِي	*ī*
ج	. . . . . *j*	ض	. . . . . *ḍ*	ن	. . . . . *n*	ـُو	. . . *ū*, *ō*
ح	. . . . . *ḥ*	ط	. . . . . *ṭ*	و	. . . . . *w*	ـَي	. . . . *ai*, *ay*
خ	. . . . . *kh*	ظ	. . . . . *ẓ*	ه	. . . . . *h*	ـَو	. . . *au*, *aw*
د	. . . . . *d*	ع	. . . . . ‘	ي	. . . . . *y*	silent t	. . *ḥ*
ذ	. . . . . *dh*	غ	. . . . . *gh*	.	. . . . . ’		
ر	. . . . . *r*	ف	. . . . . *f*	ـَ	. . . . . *a*		

Persian.

پ	. . . . . *p*	چ	. . . . *ch*	ژ	. . . . *zh*	گ	*g*

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1. A paper may be offered by any Fellow or Member of the Society. Papers by Non-Members must be communicated through a Member.

2. A paper offered for publication should be completely ready as copy for press, *i.e.*, type-written on one side of each sheet and prepared in accordance with regulations printed below, and *should be sent to one of the Editors of the Journal.*

3. The Editorial Committee will determine whether a paper shall be printed, and, if printed, in what form.

4. Every paper consisting of more than 10 pages of type-script or *manuscript should be accompanied by a summary not* exceeding 200 words in length.

5. Contributors are urgently requested to use the system of transliteration now adopted by this Society. A transliteration sheet will be appended to the first issue of the Journal for every year.

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7. Titles of articles in periodicals should be cited in quotation marks; the name of the periodical should be printed in italic. The following abbreviations for the Journals of the principal Oriental Societies should be adhered to :—*Ep. Ind.*, *Ind. Ant.*, *JA.*, *JAOS.*, *JASB.*, *JBBRAS.*, *JRAS.*, *WZKM.*, *ZDMG.* Volume and pagination should be indicated as in the following examples :—*ZDMG.* 27, 369 ff. (*Zeitschrift der deutschen morgenländischen Gesellschaft*, volume 27, pages 369 and following.)

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