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TAMIL EDITION

OF

A TEXT-BOOK OF ARITHMETIC
FOR LOWER SECONDARY OR MIDDLE SCHOOLS

BY

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Contents.

அத்யாயம் I. எண்மானமும் எண்முறியும் (முழு எண்கள்); II. ஸாலிட்கள்: பரப்புதல்: கோடுகள்: புள்ளிகள்; III. அளவைகளின் வார்பாடுகள்; IV. ஓரினக்கூட்டல்: V. வேர்கோடு: VI. ஓரினக்கழித்தல்: VII. வேர்கோடு (தொடர்ச்சி); VIII. கோமன் இலக்கங்கள்; IX. உத்திகளும் அவற்றின் அங்கங்களும்; X. கோணங்களும் வேர்கோடு உருவங்களும்; XI. அடைப்புக்குறிகள்; XII. ஈஜ உபயோகித்துக் கணக்குப் பார்த்தல்; XIII. வட்டம் (முதல் பாகம்); XIV. காதிதம் மடித்தல்: காதிதம் வெட்டல்; XV. எண்மானமும் எண்முறியும் (பின்னங்கள்); XVI. கால், அரை, முக்காலின் கூட்டலும் கழித்தலும்; XVII. $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{1}{2}$ —ஆகிய பின்னங்கள்; XVIII. அளவுநாடாவால் அளத்தல்; XIX. தசாம்சங்களின் கூட்டலும் கழித்தலும்; XX. அளவு கோலால் அளத்தல்; XXI. ஓரினப்பெருக்கல் (முதல் பாகம்); XXII. ரெக்டாங்கிள்களும் ரெக்டாங்குலர் ஸாலிட்களும்; XXIII. ஓரினப்பெருக்கல் (இரண்டாம் பாகம்); XXIV. காதிதஅட்டையால் மடல்கள் செய்தல் (முதல் பாகம்); XXV. ஓரினவகுத்தல் (முதல் பாகம்); XXVI. கால், அரை, முக்காலும், தசாம்சங்களும்; XXVII. எட்டி அடிவைத்து அளத்தல்; XXVIII. ஓரினவகுத்தல் (இரண்டாம் பாகம்); XXIX. சட்டப்பலகையும் வேர்கோடும்.

XXX. ஓரினவகுத்தல் (மூன்றாம் பாகம்); XXXI. ஸாஸரி; XXXII. வொசத்தாலும் அளவு சட்டத்தாலும் அளத்தல்; XXXIII. பெருக்கல் குறியை விட்டுவிடுதல்; XXXIV. அக்டாங்கன் அடங்கிய உத்திகள்; XXXV. யோஜனைக் கணக்குகள் (முதல் பாகம்); XXXVI. வேண்டிய அளவுள்ள கோடுகளைக் கிழித்தல்; XXXVII. ஒற்றைப்படை எண்களும் இரட்டைப்படை எண்களும் தொடர்ச்சியான எண்களும்; XXXVIII. காண எண்கள்: பகாசிலை எண்களும் பகுசிலை எண்களும்; XXXIX. காண எண்களால் பெருக்கலும் வகுத்தலும்; XL. ஓரினப்பெருக்கல் (சுருக்கமான வழிகள்); XLI. ஓரின வகுத்தல் (சுருக்கமான வழிகள்); XLII. இனமாற்ற; XLIII. பலவினவெண் கூட்டல்; XLIV. பலவினவெண் கழித்தல்; XLV. பலவினவெண் பெருக்கல்; XLVI. பலவினவெண் வகுத்தல்; XLVII. யோஜனைக் கணக்குகள் (இரண்டாம் பாகம்); XLVIII. புள்ளிகள்: கோடுகள்: பரப்புதல்: ஸாலிட்கள்; XLIX. கடைக்கணக்குகளும் வாடிக்கைக் கணக்குகளும்; L. வட்டம் (இரண்டாம் பாகம்); LI. தசாம்ச பின்னங்கள்; LII. மெட்ரிக் அல்லது F ஓன்ச் நீட்டலவைகள்; LIII. வேர்கோடுகளும் கோணங்களும்; LIV. கோணங்களும் அவைகளை அளத்தலும்; LV. அடுக்கும் அடுக்குக் குறியும்; LVI. அளவுகளும் மடக்குகளும்; LVII. கோணங்கள் வரைதல்; LVIII. அயல் கோணங்கள், எதிர் கோணங்கள் முதலியவை; LIX. உத்தம் பொது அளவு; LX. அத்தம் பொது மடக்கு; LXI. சதுரங்களையும் நீண்ட சதுரங்களையும் வரைதல்; LXII. பரப்பளவும் கன அளவும்; LXIII. ப்ளான் வரைதல்; LXIV. சதுரகோண பின்னங்கள்; LXV. பொருட் சுட்டி சதுரகோண பின்னங்கள்; LXVI. சமூச்சு என்னும் திசை காட்டும் கருவி; LXVII. Latitude and Longitude; LXVIII. ஒற்றைமை தழுவிய முறை—பரிசுரைகோவிகள்.

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XXXIV—a

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ஆரம்ப கணிதம்

(சென்னை வித்யா இலாகா அதிகாரிகளால் தொகுக்கப்பட்ட விவரஸூத்திரங்களைத் தயாரிக்கப்பட்டது.)

இலிந்து கும்பகோணம் கவர்ன்மெண்டு காலேஜ் பிரதம ஆசிரியராயிருந்த ராவ்பகதூர் P.V. சேஷு-
அய்யர், B.A., L.T. அவர்களாலும், சென்னை பச்சையப்பன் கலாசாலை ஹைஸ்கூல் பிரதம ஆசிரியர்

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சைதாப்பேட்டை டீச்சர்ஸ் காலேஜ் கணிதபோதகாசிரியர் S. பாலகிருஷ்ண அய்யர், B.A., L.T.,

அவர்களுடைய முன்னுரையுடன் கூடியது.

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(முதல் பாகம்)

பொருளடக்கம்.

I. எண் மானமும் எண் குறிப்பும் :—எண்கள் ; இலக்கங்களால் எண்களைக் குறித்தல் ; எண்களின் சமம்திப்பும் ஸ்தான மதிப்பும் ; ரோமன் வழி. II. கோடுகளும் புள்ளிகளும் நீள அளவையும் :—கீழ்ப் ; ஸர் பெஸ்கன் ; கோடுகள் ; புள்ளிகள் ; கோடுகளின் வகைகளும் கோடுகளைப் பரீட்சிக்கும் விதமும் ; புள்ளிகள் குறித்தலும் கோடுகள் இழுத்தலும் ; நீள அளவு ; டிவைடர்களின் உபயோகம் ; எண்களை நீளத்தால் குறித்தல். III. கூட்டல் :—கூட்டலின் அர்த்தமும் உபயோகமும் ; கூட்டலைப்பற்றிய ஓர் உண்மை ; கூட்டலைப் படத் தால் காண்பித்தல் ; அடைப்புக் குறிகள் ; கூட்டல் ; பெரிய கணக்குகள் ; கழித்தல் ; கழித்தலைப் படத்தால் காட்டுதல் ; பலவகை கழித்தல் வழிகள் ; கூட்டல் கழித்தலைப்பற்றின சில விதிகள் ; கலப்புக் கூட்டலும் கழித் தலும். IV. பெருக்கல் :—பெருக்கலைப் படத்தால் காண்பித்தல் ; ஒரு ஸ்தான எண்ணால் பெருக்கல் ; பாக்டர் களால் பெருக்கல் ; எந்த எண்களைக் கொண்டும் பெருக்கல் ; பெருக்கலில் குறுக்கு வழிகள். V. வகுத்தல் :— வகுத்தலைப் படத்தில் காட்டுதல் ; ஒரு ஸ்தானத்தால் வகுத்தல் ; பாக்டர்களால் வகுத்தல் ; 10, 100 முதலிய வகைகளால் வகுத்தல் ; நீள வகுத்தல் ; வகுத்தலின் இன்னொரு அர்த்தம் ; சில பெருக்கல் வகுத்தல் விதிகள் ; பெருக்கல் வகுத்தலில் சில குறுக்கு வழிகள் ; ஒன்பதுகளை நீக்குதல். VI. பலவின் வெண்கள் :—அளவை வாய்ப்பாடுகள் ; காணாய அளவுகள் ; நிறை அளவுகள் ; நீள அளவு ; பிடித்தல் அளவு ; கால அளவு ; காதித அளவு ; எண்ணிக்கை அளவு ; இனமாத்றுதல் ; பலவின் வெண் கூட்டல் ; கழித்தல் ; பலவின்வெண் பெருக்கல் ; பலவின் வெண் வகுத்தல். VII. கோணங்களும் அவற்றின் அளவும் :—நிசை, நிசைமாத்றம் ; கோணம், கோணங்களை ஒப்பிட்டுப் பார்த்தல் ; கோணங்கள் ; சதுரங்களும் ரெக்டாங்கிள்களும் ; வட்டங்கள் ; கோணங்களின் அளவு ; கோணங்களின் வகைகள் ; ப்ரோட்டாக்டரைக் கொண்டு கோணங்களை வரைதல் ; ஒரு புள்ளியிடத்தில் உள்ள கோணங்கள். VIII. டெஸிமல்கள் :—டெஸிமல்களின் அர்த்தம் ; டெஸிமல் குறிப் பில் ஸ்தான மதிப்பு ; இரண்டாவது டெஸிமல் ஸ்தானம் ; டெஸிமல் குறிப்பு பொது விவரம் ; ஒரு டெஸிமல் ஸ்தானமுள்ள எண்கள் ; டெஸிமல் கூட்டல் ; டெஸிமல் கழித்தல் ; எந்த எண்களையும் கழித்தல் ; 10, 100 முதலியவகைகளால் பெருக்கல் ; ஒரு ஸ்தானமுள்ள முழு எண்ணால் பெருக்கல் ; ஒரு ஸ்தானமுள்ள முழு எண் னால் வகுத்தல் ; பல ஸ்தான முழு எண்களால் பெருக்கல் ; பல ஸ்தான முழு எண்களால் வகுத்தல். IX. உயர்ந்த பொது அளவும் தாழ்ந்த பொது மடங்கும் :—அளவும் மடங்கும் ; பொது அளவும் மடங்கும் ; உயர்ந்த பொது அளவும் தாழ்ந்த பொது மடங்கும் ; பாக்டர்களால் இரண்டு அல்லது இரண்டிற்கு மேற்பட்ட எண்களின் உ. பொ. அ. உம், தா. பொ. ம. உம் கண்டுபிடிக்கும்வழி ; உ. பொ. அளவைக் கண்டுபிடிக்கும் பொது வழியைப் பட்டதாற் காட்டல் ; உ. பொ. அ. பொது வழி. X. சாதாரண பின்னங்கள் :—பலவின் அளவுகளின் பின்னங்கள் ; ஒரு கான்கிரீட் அளவை இன்னொரு கான்கிரீட் அளவின் பின்னமாகச் சொல்லுதல் ; சமமான பின்னங்கள் ; சமமான பின்னங்களைப் படத்தாற் காட்டுதல் ; பின்னங்களின் சமத்துவம் ; தாழ்ந்த

உறப்புகள் ; பின்னங்களை ஒப்பிடுதல் ; பின்னங்களின் கூட்டலும் கழித்தலும் ; ஒரு சாதாரண பின்னத்தை ஒரு முழு எண்ணால் பெருக்கல் ; சாதாரண பின்னத்தை ஒரு முழு எண்ணால் வகுத்தல் ; ஒரு பின்னத்தால் பெருக்கல் ; பின்னத்தின் பின்னம் ; ஒரு பின்னத்தால் வகுத்தல் ; ஒரு எண்ணை ஒரு குறிப்பிட்ட டிஸிமலினே ப் உன்வபடி மாற்றல் ; பின்னங்களைச் சுருக்கல். IX. வாடிக்கை முறை :—பலமாதிரிக் கணக்குகள். பரீட்சைக் கேள்விகள். விடைகள்.

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(இரண்டாம் பாகம்)

பொருளடக்கம்.

பரீட்சைக் கேள்விகள். I. டெஸிமல்களின், பெருக்கலும் வகுத்தலும் : ஒரு ஸ்தான டெஸிமல் எண்ணால் பெருக்கல் ; சமமான பரிசோதனை ; எந்த டெஸிமல் எண்ணாலும் பெருக்கல் ; டெஸிமல்களால் வகுத்தல் ; சமராய்ச் சொல்லல் ; சாதாரண பின்னங்களை டெஸிமல்களாக மாற்றல் ; டெஸிமல்களை சாதாரண பின்னங்களாக மாற்றல். II. சராசரி, ரேஷியோ முதலானவை : சராசரி ; ரேஷியோ ; மாறாத ரேஷியோ ; ரேஷியோவின் உபயோகங்கள் ; ப்ரோபர்டன் ; லாப நஷ்டம் ; வருமான வரி ; கடன் மிகுதல். III. பாப் பளவு ; பாப்பளவு ; ரெக்டாங்கிள் ; இங்கிலிஷ் பாப்பளவுகளும் ப்ரொஞ்சு பாப்பளவுகளும் ; பாப்பளவு வாய்ப் பாடுகள் ; பிளான் வரைதல், அதாவது அமைப்புருவம் வரைதல் ; தரையின் பாப்பளவும் நாற்சுவர்களின் பாப் பளவும் ; கட்டக் காதித்தலின் உபயோகம். IV. பொது எண் கணக்கு—சமீகாணங்கள் : அங்க கணிதமும் பீஜ கணிதமும் ; சில பெயர் வினக்கங்கள் ; சமீகாணங்கள் ; இன அங்கங்கள் ; அடைப்புக் குறிகள் நீக்குதல். V. முக்கோணங்கள் : அவற்றின் பக்கங்களும் கோணங்களும் : முக்கோண விரிப்பு ; முக்கோணங்களின் கோணங்கள் பக்கங்களுக்குள்ள சம்பந்தங்கள் ; ஒரு புள்ளியிலிருந்து சிபத்தனைக்கிணங்க மற்றொரு புள்ளி குறித் தல் ; இரண்டு புள்ளிகளிலிருந்து சிபத்தனைகளுக் கிணங்க மற்றொரு புள்ளி குறித்தல் ; கொடுக்கப்பட்ட அளவு களைக் கொண்டு முக்கோணம் வரைதல் ; வட்டங்களின் சில தன்மைகள் ; முக்கோணங்களின் வகைகள் ; ஓர் புள்ளியிலிருந்து ஓர் கோட்டிற்கு பெர்பெண்டிகுலர். VI. கோடுகளையும் கோணங்களையும் இருசமபாகங் களாக்கல் : இருசம பக்க-முக்கோணங்களின் சில தன்மைகள் ; கோடுகளை இருசம பாகங்களாக்குதல் ; கோணங்களை இருசம பாகங்களாக்குதல் ; கார்ட்ஸ்டையும் வட்ட பாகங்களையும் இரண்டு சம பாகங்களாக்குதல் ; பெர்பெண்டிகுலர்கள் இழுத்தல் ; விம்மெட்டி. பலமாதிரிக் கணக்குகள் ; முதல் பாரப் பாடங்களில் புதிய கணக்குகள் :—கூட்டல் கழித்தல் ; பெருக்கல் ; வகுத்தல் ; பலவின் எண்கள் ; கோணங்களும் வட்டங்களும் ; டெஸிமல்கள் ; உயர்ந்தபொது அளவும் தாழ்ந்த பொது மடங்கும் ; சாதாரண பின்னங்கள் ; பலமாதிரி. இரண்டாம் பாரப்பாடங்களில் பலமாதிரிக் கணக்குகள். பரீட்சைக் கேள்விகள். அறுபத்தாம். விடைகள்.

இரண்டாம் பாகம் 2-வது பாரத்திற்கு, கிரௌன் 208 பக்கங்கள். விலை அணு 10.

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(மூன்றாம் பாகம்)

பொருளடக்கம்.

பரீட்சைக் கேள்விகள் ; அத்தியாயம் I. நூற்றுக்குக் கணக்கிடலும் அதன் பிரயோகங் களும் ; II. ருண எண்களும் பீஜ சமீக்கைச் சேர்க்கைகளும் ; III. சமாதாரக் கோடுகளும் அவற்றின் தன்மைகளும் ; IV. படக் குறிப்புகள் ; V. ப்ரோபர்டன்—நேரானதும் மாறான தும் ; VI. முக்கோணங்களின் சர்வ சமத்துவம் ; VII. முக்கோணங்கள், சமாதார நாற்பக் கங்கள், வட்டங்கள் இவற்றின் பரப்புகள் ; VIII. பருமன் அல்லது கன அளவு ; IX. தனிச் சமீகாணங்களும் அவற்றிற்குக் கொண்டுமே யோசனைக் கணக்குகளும் ; X. பலவகைக் கணக்குகள் ; பரீட்சைக் கேள்விகள் ; பலமாதிரிக் கணக்குகள் ; விடைகள் ; பலவின் அளவு வாய்ப்பாடுகள். Cr. 8vo. 300 pages. விலை அணு 12.

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ANDHRA UNIVERSITY: CONVOCATION ADDRESS

By Prof. C. V. RAMAN, M.A., D. Sc., F.R.S.

UNIVERSITY AIMS AND IDEALS.

I AM deeply sensible of the honour of being invited by Your Excellency to address the Convocation of the Andhra University this year.

One of the most remarkable phenomena we have witnessed during the past decade has been the springing up of a great many new Universities in India. Counting only those which have received the official blessing, thirteen new Universities have been established since 1915, the first of these being at Benares, at the inauguration ceremony of which I was present, and the last at Chidambaram, which Your Excellency's Government have just brought into existence. It is not without interest to enquire into the reasons which have caused this remarkable outburst of new Universities. Broadly speaking it may be ascribed to a feeling of intense dis-

satisfaction with the administration of the older Universities, a growing conviction that they failed to satisfy the educational requirements of the country. The same feeling of dissatisfaction is indicated also in the attempts at reform made by the older Universities. Calcutta inaugurated the new University era in India in 1914 by bringing into existence almost overnight a University College of Science and Departments of Post-Graduate Teaching in Arts and Science. Punjab University, which I visited in the year 1919 to give a special course of lectures, has gone ahead with the creation of University Laboratories and Honours Schools. Allahabad reconstituted itself in 1922 as a teaching University. Bombay and Madras are trying to move, though very slowly. They possess the respectability of age and can therefore afford to be conservative.

Andhra is one of the products of this remarkable University movement. It came into existence by a process very familiar to the biologist, that is the process of fission of one

mitted to continue. But it would certainly be better if the less strongly-equipped colleges should concentrate on improving their Intermediate teaching, and leave the degree work to be done under the auspices of the University, or in such of the colleges outside the University head-quarters as are sufficiently well-staffed, and well-equipped to be given the status of University Colleges.

I think it is essential that all colleges which are permitted to undertake degree work should agree to come under University control to a greater extent than at present. In their case University affiliation should be replaced by University management exercised through the intermediary of a semi-independent Governing Body in which the University Executive is represented, and whose proceedings come up to the Syndicate for review. While such a constitution will leave a reasonable amount of independence to the colleges, it would serve to ensure that their affairs are regulated in a manner more in accordance with University ideals than is the case at present.

The creation of a centre of University teaching as outlined above will certainly be expensive, but I cannot see that it can possibly be put off or avoided. A capital expenditure of 30 lakhs and an annual recurring expenditure of 6 lakhs would be a reasonable estimate of the cost, considering the range of subjects to be covered and the extent of the population whose needs have to be met by the University. With a little judicious pressure from Your Excellency on the Finance Department of the Local Government and upon the wealthy aristocracy of Andhra, the money will, I have no doubt, be forthcoming. This leads me on to consider the question of the financial relations between the Govern-

ment and the University. The present arrangement under which the University receives what I may refer to as an unemployment dole, seems to me wholly indefensible. The policy of a close linking up of the Colleges and the University indicated above, involves as a corollary that all money spent by Government on collegiate teaching, should pass through the University Budget, so that the University may have an effective voice in the distribution of the available funds. It would certainly make for improved efficiency if all the grants to colleges (as distinguished from High Schools) are made on the recommendation of the University. The quality of the work done in the colleges is a matter that affects the University vitally, and I can conceive of no authority more competent than the University to advise whether financial assistance is really needed and deserved by any particular institution in the area.

It is a matter of most serious concern to every one connected with Andhra University that no facilities of any kind exist at present in its jurisdiction for higher scientific, technological and literary studies. It is a most pressing duty of the University to organise such studies, and it may rightly be claimed that Your Excellency's Government is under an obligation to provide funds on the most generous scale for this much-needed expansion.

From University organization we naturally pass to University aims and ideals. The man in the street is prone to regard a University as something which enables his sons (perhaps also his daughters) to pass examinations and obtain degrees and ultimately to secure some sort of remunerative employment. This is not altogether an unreasonable view to take. But it is rather a

superficial one, and a University which regards itself as a degree-giving organization and nothing more, will soon find that its alumni are not wanted by any employer who needs talent. There is a fundamental fallacy involved in regarding University work as merely a glorified kind of school teaching which leads to degrees instead of to school-leaving certificates. School and University alike serve the interests of a community. But to imagine that the ideals of School and University are identical is to commit a grave blunder, which will in the long run injure the interests of the community. To my mind the true aims of University work is the advancement of knowledge and not the imparting of instruction. In the Republic of Learning there is room for many different degrees of ability, knowledge and training, and the leaders may well be required to help their followers over the difficult places on the road to knowledge. But you require as your leaders men who have courage and vision, and themselves know the true road to knowledge which is by personal study and research and investigation. One who does not know the road himself will only lead others astray. You require leaders and teachers for whom the advancement of knowledge is the motive power in life, and who will inspire others with like ideals, and you cannot get or keep such men if your University is just a glorified school and nothing more.

Human knowledge is not at the present time a static structure which just needs to be occupied and will serve as a permanent rest-house for the jaded traveller. It is tremendously vital and dynamic, a something which is ever to be sought and never will be finally reached. It needs for its devotees men of tireless energy and enthusiasm, who seek

for the pleasure of the chase and care not overmuch for the triumph of the conquest. Such men are truly the salt of the earth. They are not discovered by Government Departments and official organizations. It is the function of a University to discover them and furnish opportunities for their work.

The aim of University teaching should be to stimulate and guide the student on the right path, to help him to acquire habits of study and work, and to encourage him to exercise an independent judgment on problems presented to him. Such training is only possible by bringing the student into personal contact with teachers who themselves possess great independence of outlook and live a life of strenuous intellectual activity. To deprive our alumni of opportunities of contact with such teachers and to place them under men of inferior merit is to poison the wells of learning. A University or College which converts its alumni into mere passive absorbers of knowledge is doing incalculable harm to the rising generation.

I have commented on University aims and ideals only to show how immensely important it is that the right kind of University organization is created, that the right kind of teachers are secured and that the right kind of opportunities and training are provided for our students. I have myself an immense faith in the possibilities of achievement which lie in front of a really well-organized and well-equipped University in India. I am not here referring merely to academic possibilities, but also to the services which such an organization can render to the material welfare of the community. Scientific research, as is well-known, even when inspired by purely academic ideals, leads sooner or later,

to results of practical value. It is not a difficult step for a student who has acquired habits of study and research in a University laboratory to apply his mind in the same way to the practical problems he meets in later life. India has still an abundance of natural resources and it is high time that the alumni of our Universities take a hand in the utilization of those resources and not simply remain passive spectators of their exploitation by foreign capitalists. The knowledge and the training required for such efforts to be successful, can only be acquired if our Universities are organized in the right way. I hope Andhra will realise the immense importance of the issues that are at stake, and agree to arrive at some settlement which will place the entire control of University teaching in Andhra directly under the University and enable it to be organized in a manner most beneficial to the interests of the community.

Graduates of the year, I desire to congratulate you on your successes in the University Examinations and the degrees which you have so well earned and received to-day. I hope you will go forth into the world with some enthusiasm and gratitude for what your *Alma Mater* has done for you, and help her so far as you can to attain and fulfil her destiny. I earnestly hope that the training you have received will stand you in good stead in your life hereafter. I wish you all success.

UNIVERSITY OF AGRA: FIRST CONVOCATION ADDRESS

By

THE REV. CANON A. W. DAVIES, M.A.,

Vice-Chancellor.

I COUNT it a very high honour to have been called upon to deliver the First Convocation Address before the University of Agra. It would have been far more fitting, if you, Sir, having taken the trouble to come to Agra specially for this occasion, had delivered this Address, but I suppose my colleagues on the Executive Council, knowing that this would be the only Convocation which I should be able to attend, resolved that among the many marks of goodwill which they have bestowed upon me, this honour should be included. I am the more glad therefore that Your Excellency should have been willing to give us on this occasion the encouragement of the words to which we have recently listened.

When I pass in review the great and learned men who in the Universities of this and other countries are called upon to deliver Convocation Addresses, and when I recall some of their speeches and remember the wide range of subjects dealt with and the weighty opinions expressed on educational questions of world-wide importance, I am filled with dismay at my presumption, and I early decided that it was not possible for me to follow them in a survey of these large and important fields. I resolved that being myself an ordinary Principal of a College, raised for this short period to a position of administrative responsibility in the University, I would do better (drawing partly on my own experience and partly giving expression to ideals and dreams which have come to me

from time to time) to try to set out some of those conditions which in my judgment make for that sound College life which in a University like ours is the very essence and condition of our success.

Let us be thankful that for a time at any rate the controversy about the ideally best type of University has been set at rest. For us its place must be taken by the question: 'What is the ideal for a University conditioned like our own—an Affiliating University with Colleges as far removed from each other as Gorakhpur, Meerut, Jodhpur and Indore?' The aim of a University is often expressed in the very attractive formula—the extension of the boundaries of knowledge. It is indeed a noble ideal, and one which I hope is never long absent from the mind of every teacher and of every student. And yet if we are honest, we must, I think, admit that it is not and cannot be the principal aim of this or indeed of any University that is not solely organised as an institution for research.

And indeed let us confess at once that an affiliating University is not the type best fitted for research. We cannot expect that it will ever be easy for us to compete with the unitary Universities in this respect. For the characteristic excellence of a unitary is not the same as that of an affiliating University. I am not going to say that the characteristic excellence of the one is better than that of the other. It is enough to say that it is different. The unitary University may succeed in developing to a high pitch the residential life of its students by organising that life through college units each having a real corporate life and spirit of its own, but this must in the nature of the case be uphill work and difficult to sustain—the very

efficiency of its centralised organisation tending always to subordinate the interests of the part to the whole; for the less the variety, and the greater the subordination of the parts, the easier will be the working of the central organisation. On the other hand, an affiliating University may succeed in centralising certain branches of study under direct University control either in selected centres or through travelling teachers, but all the time the pull of its separate college units will be the other way. It is not for us to read a lesson to the unitary Universities. Our business is to develop our own characteristic excellence in the best way that we can.

I hope indeed that we shall never be satisfied until research—not the name only, but the thing—has a recognised place in this University. But our principal aim, so long as we are what we are, will have to be directed, not to the establishment of centralised departments of research, however important and desirable these may be, but to the development of the resources of our several colleges, so that they may exert the maximum influence, intellectual, physical, moral and spiritual, upon the students who pass through them year by year.

I can remember as an under-graduate at Oxford being stopped in the street by a visitor who asked me: "Where is the University?" I answered that I did not know what he meant, but I could tell him where the colleges were. And so to-day if the same question were asked in Agra, I should be sorry to think that the questioner would be satisfied to be directed to a rather bare bungalow in the Metcalfe Road. He would have to take a longer journey if he would really gain a full answer to his question, for

we would have to visit every one of the colleges which are represented in the body of this hall to-day. The University of Agra therefore will display what I have called its characteristic excellence, in so far as, and only in so far as, its colleges develop, in the closest practicable co-operation with each other, a sound college life and tradition of their own.

Of the many elements which go to create a sound college life and tradition, by far the most important is the staff. For a college is essentially a society, and the most important element in it must be the most permanent element—that which remains relatively constant where the far larger part of the society is in a state of continuous flux. This relatively constant element is the staff, it is the nerve centre of the society's life. If there is any steady stream of influence passing into the student body, its source is here. Here, then, must be found embodied all those characteristics which it is our hope to find expressed in the men who pass through our colleges. We cannot therefore care too much about that element in the life of our colleges which must inevitably play so large a part if the ideals of our University are to be achieved.

But if our college staffs are to play successfully this important part in the life of the colleges, it is essential that they be loyal and contented. Now contentment for all men requires on the one hand, freedom from financial anxiety and on the other, satisfying work.

I am not going to say much about the financial question. We cannot hope in our colleges to pay salaries on the scale of the unitary Universities but we cannot, I think,

be satisfied with the very large disparity which presently exists. The question has lately been pressed upon the attention of the heads of colleges in the United Provinces, and I do not think I need say more about it now, important as it is.

But, as I have said, contentment demands not only freedom from financial anxiety, but also satisfying work. Dean Inge has said that a woman's joy *par excellence* is to be found in motherhood, while a man's joy—he is not speaking of pleasure—is generally connected with his work in life. "There are few purer sources of happiness," he says, "than the happiness of having actually made or produced something good of its kind. If it was worth doing and if we have done it, or rather are doing it, joy results." We may well ask ourselves whether the tests which the authorities of our colleges and of our University apply to the work of a teacher are calculated to encourage that kind of work in which this highest type of happiness may be expected to be found.

But it is not only the character of the work upon which satisfaction depends. At least as important are the conditions under which that work is done. I am doubtful whether the highest kind of satisfaction is possible where there exists between the staff and the Principal or Managing Committee a relationship which approximates to that between employer and employed. No doubt, in the last resort, that relationship will have to be acknowledged, but no one can be expected to give his best to the life of his college if he is acutely conscious that the Sword of Damocles is suspended above his head. I hope that in all our colleges we shall be able to place a liberal interpretation upon that condition laid down in our Statutes for the affiliation of a

college, that reasonable security of tenure must be guaranteed to every teacher unless he is filling a temporary vacancy or is on probation.

But security is not enough—and security is its dangers. There must be in the relations of the members of a staff to each other and to what are called the authorities of the college a spirit of cordial confidence and co-operation. For my part I have always coveted, if it had been possible, that relationship between the members, at any rate the senior members, of the staff and the Principal, which exists between the Master and Fellows of an Oxford or Cambridge College. And if that splendid word—Fellow—so travestied if it be used as was the case in the Universities of the 14 Act, as a mere synonym for a member of a Senate meeting once or even twice in the year—if that splendid word cannot be used to mark the relationship between the members of a college staff, still let us take the thing which signifies as our ideal. We want our staffs to feel that their opinions carry real weight, that their responsibility is real responsibility, that the college is not the property of the Principal, nor even of the Managing Committee, or Trustees, or of Government itself, but that it is theirs. Because although it is not theirs to close or open, it is in a very true sense theirs to make or mar.

But if we are to develop this sense of corporate responsibility, we must provide the conditions which shall make it possible. The college must be for us all our home and not a distant place of business. And indeed if the difficulty of organising our corporate life would be gone if we could all live in close touch with our colleges. I believe that we could make it an accepted principle that it

is a college's responsibility to make so far as may be provision for the housing of its staff, if not actually in the college premises, at least within quite easy reach of the college. I well know that this will sound—I fear I shall have to say that it actually is—a counsel of perfection. But we need not be afraid to set before ourselves high ideals, and surely this First Convocation is the time to face what even seems impossible. And if this be impossible let us nevertheless do all we can to make the college seem a home. We can develop the staff rooms; perhaps we can allot single rooms for use as private offices in the Hostels. Difficulties have a way of vanishing when we face them with determination and courage.

But there are other things to consider besides the social life of our staffs. No Principal of experience can fail to have learned that there are times when the demands of efficiency seem to conflict—do actually conflict—with this ideal of staff fellowship. And if we are disposed to sacrifice the former to the latter, it is the stern duty of the University to remind us of standards and minimum qualifications. But I am quite sure that we shall be wrong if we think that the only way to secure efficiency is to make impeccable appointments. To have graduated with honours, to have received a desirable teaching appointment, is not perhaps the beginning of our education, but it is certainly not the end. It is one of the inevitable disadvantages of the affiliating system that teaching, in some subjects at any rate, must be carried on by a single teacher with an inadequate library and with none of the stimulus that comes from the presence of other workers in the same field. I have heard Indian students speak

with surprise and admiration of the modesty of Professors of world-wide repute under whom they have studied in a British University. I should like to claim this as testimony to the inherent modesty of the British character. But that perhaps would be to claim too much. No, it is due, where it exists, to the influence which comes from fellowship in study to familiarity with the works of the world's scholars, to the sense that, teachers as they are by profession, they are students too, first and last and all the time. I do not dwell on this in order to emphasise one of the weaknesses of the affiliating type of University, still less of Indian Universities as a class, but in order to remind myself and my fellow-Principals and the members of our University bodies that here is a difficulty which we must face with all the determination of which we are capable. That we must help the members of our staffs to take and to make the best possible use of study leave. That we must encourage associations for the promotion of particular studies—the Science, Philosophical, Oriental and other Congresses that hold their meetings in India—and also must welcome visits from distinguished educationists of this and other lands; not so much for the sake of occasional lectures which they may deliver to our students, as for the stimulus and help which they can give to ourselves and to the members of our staffs.

But important as the corporate life of the staff is—both in its social and its academic aspects, it is possible that it be so developed as to make the staff a close society, cut off on the one hand from association with the life of the locality in which they are living and on the other from the very student body which it is their primary duty to influence and serve.

For we shall never I hope, be satisfied with any conception of the duty of a teacher which confines it to the imparting of instruction in the class-room. I know well that the conditions of our colleges often make very difficult that comradeship between staff and students which must surely be our ideal. There are sometimes considerations—unworthy considerations surely—of prestige. There are the long distances; the exacting nature of much of our class-room work. And yet such things can all in some degree be overcome, and overcome they must be if the ideal of college life which I am trying to commend to you is to be achieved or even approached.

And this brings me to the vital question of the life of the students of our colleges. I confess to a certain impatience when I hear much emphasis laid upon the word *residential* in connection with the unitary Universities as though it could only be applied to Universities of that type. To those who have any such idea I would advise a visit—to speak only of colleges which I know—to Meerut and Bareilly Colleges, to Cawnpore, to Agra. For it is to such colleges at least as much as to the unitary Universities that we must look if we are to see examples of the residential system. Here we may see—in some of these colleges no doubt more than in others—hostels in close proximity to the college and within easy reach of members of the staff. And is not this what we want to foster? I know there are those who feel that in their hostels the students should be free from too close association with their teachers—free to be natural and noisy and at their ease. But does not that feeling arise from the sense that the function of teachers is that of policemen? It is that notion that I wish to combat in every way that I can. It is a very different

relationship for which I am contending—the relationship of friends, companions, guides—and I believe that the Hostel system when made full use of, can provide the most fruitful opportunities for this which are to be found in our college life.

And here I would like to say a word about bricks and mortar. I have built, and I have watched the building of many hostels while I have been in India, and I have seen hostels ranging in type from the barrack to the private house. I have seen colleges, fortunate in the possession of simple intimate hostels, in which the students could shut out the college and the world, abandon them for that dreary type in which nothing but a narrow verandah separates the student from the wide barrenness of the compound or the publicity of the street. The great Headmaster, Thring of Uppingham, used to say: "Build so that you may have the almighty wall on your side." We little appreciate how hard we make the realisation of our ideals for our colleges by the very conditions which we impose upon ourselves and upon our students by the design and arrangement of our buildings.

Nor do our responsibilities cease with the students of our hostels. There is in the large body of Day Students in most of our colleges, a field of almost unexplored possibilities of service. Their life is harder to touch; the corporate spirit far more difficult to evoke. And yet from some points of view the harder task is even more worth doing. For here we touch the city and the home. Here through our contact with our students, we can make our colleges radiating influences for good in the places where they are set.

It would seem to me almost axiomatic that if we would develop in our colleges a rich

and full corporate life, that life must have some corporate expression. Of this there may of course be many forms. To be spectators in a college match, audience at a college drama, members of a college parade—all these are forms in which the corporate feeling may find expression. In our English Colleges, the College Chapel and the College Dining Hall are the principal expressions of this corporate life. Neither of these is practicable, generally speaking, in the conditions of college life in India. It may be that for various reasons the daily or weekly assembly of the students is in some colleges impossible, but I believe with the deepest conviction that where this is so the development of the true corporate spirit is incalculably more difficult to achieve.

There is one condition which I believe essential to the maintenance of that sound college life which I am trying to describe to you to-day. That condition is—a manageable number of students. It is unfortunate that we human beings are so made that numbers have a peculiar fascination for us. I suppose that most of us College Principals have a secret feeling that the worth of our colleges is more or less to be measured by the size of our classes, and I have no doubt that in the eyes of many of our visitors here this afternoon, the relative importance of our colleges has been determined by the number of candidates for degrees who stood up at the call of their Principals, although we all know that only a comparatively small proportion of the candidates from the more distant colleges have been able to come here to-day.

Opinions are bound to differ as to what is the manageable number. Some of us may object to the word manageable altogether. I

use it only as meaning the number that can be effectively welded into a corporate whole. We are still, I am glad to say, far away from the huge numbers that are common in the Colleges of Calcutta, Bombay and Lahore. Nevertheless there is bound to be growth in the number of students in these Provinces, and the advertisement pages of the newspapers during June and July each year, show that Universities and Colleges are anxious to make their several attractions known as widely as possible. That competition between our colleges is in itself a healthy thing, no one will deny. I would only suggest that we should compete with each other for a more worthy prize than that of numbers. I would suggest that each college should set before itself more or less consciously the plan to which it is working—its size and its character—and that it should design its buildings and organise its life with this in view. I have no doubt whatever that such a policy accepted by us all would on the one hand make for mutual trust and confidence between college and college, while on the other, it would make far easier that building-up of the life of each college as an organised society which I have tried to show must be the characteristic excellence of an affiliating University.

I am aware that I have said little that could be of any special interest to you new graduates to whom a Convocation Address is held to be directed. But indeed I feel that for you Convocation must always be something of an anti-climax. For your great moments of emotion lie behind you, the day when you said good-bye to your college, the day when you found your names in the list of successful candidates. As Vice-Chancellor, I am but a name to you; most of you are

strangers to this city and to this hall. But I would like to say one word to you before I close. In many Universities it is the custom for the candidates to make solemn promises before they are admitted to their degrees. They are asked to promise that their lives shall be worthy of the University, the degree of which they are about to receive. They are asked to promise that they will promote in any possible way the cause of sound learning. They are asked to promise that they will devote their powers so far as in them lies to the social betterment of their fellowmen. We ask no such promises of you here to-day. And that perhaps leaves me freer to press those things upon you now. 'How hardly' said Jesus of Nazareth, 'how hardly shall they that have riches enter into the Kingdom of Heaven.' You go forth into the life of India with the riches that you have garnered in your colleges—the riches of learning, the riches of friendship, the riches of ideals. It is so easy to use your riches only for your own profit and pleasure, so easy to forget that you have that which millions of your countrymen and women are starving for in India to-day. You are thinking of your careers—some with the eagerness of the new adventure, many with anxiety about the unknown. The professions are full, openings are hard to find. Whether and how far in the life which you are entering, you are qualified to get, I do not know. I know that you are qualified to give; and I do not think that it is unfitting that at our First Convocation the note of service should be struck.

And surely the main service which your country needs to-day is one which men who have lived in the atmosphere of a true college are supremely fitted to give. You have learned, or you should have learned, to sink the

differences of race and community in the common loyalty which your college demands of you. You have learned to thrill with pride at its successes, to feel common shame or disappointment in defeat. Even as you sit here in the hall to-day wearing the outward symbol of this new body of which you are the members, you must feel the stirrings of a new loyalty and pride. Can you hold this amid the strain of communal jealousies and misunderstandings in the life to which you go? When the lesser loyalties tempt you to the narrow view, the communal judgment, the bitter word or speech, will the memory of your

college—the class-room, the hostel, the playing field—come into your mind and hold you back? One of my proudest moments was when I heard it said of a certain old boy of my college now in the Public Service that the people of the city in which he was posted would say in times of communal tension 'If the matter is left in this man's hands, the trouble will disappear.' That is the kind of gift which I would have our University make to India. If we can send out men of that temper into public and private life, the founders of our colleges will not have built in vain.

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STUDIES IN SANGAM HISTORY

By Prof. V. RANGACHARYA, M.A.,
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(Continued from p. 646).

THE SILAPPADIKĀRAM.*

I

It has been already mentioned that among the works of the so-called Third Sangam, there are generally included the five great epics and that, of these, the *Silappadikāram* and the *Manimēkalai* alone have been acknowledged by even the faithful champions of traditions to have belonged to the Sangam period. A study of these two magnificent works, however, must make an impartial student entertain serious doubts as to the contemporaneity of these works with the majority of the works generally assigned to the Sangam period.

The *Silappadikāram* was written by the Chēra prince Ilāṅkō who, for reasons to be presently given, had given up worldly pursuits and embraced the life of a hermit. The circumstances which led to the composition of this work by Ilāṅkō, together with the argument of the poem, are given in the prefatory poem or *Padikam* which had existed not only before Aḍiyārkkunallār wrote his monumental commentary on it, but also before the earlier commentator known as the Arum-pada-urai-siriya upon whom Aḍiyārkkunallār himself mainly, though not invariably, depended, wrote his very valuable commentary. The *Padikam* now forms practically an integral part of the work; but it is doubtful whether it was the work

* The *Silappadikāram* was first edited by Mahāmahōpādhyāya V. Svinathaiyar (with the two commentaries) in 1892. The second edition appeared in 1920 and the third in 1927. The introduction to the last is of absorbing interest and indicates the greatness of the talented Editor who has done so much to rescue Tamil classical literature from oblivion.

of Ilāṅkō-aḍigal himself. It was probably a later composition added to the epic by some editor who was apparently earlier than Ilampūraṇar and who, it seems to me, might be Śāttanār, the author of the *Maṇimēkalai*, himself; for as will be shown presently, the 25th chapter of the poem itself distinctly says that the poem was written at the instance of Śāttanār by Ilāṅkō.

The account of the origin of the poem as given in the *Padikam* as well as the poem is this. Ilāṅkō resigned the cares of the world and lived as a monk in the temple at Guṇavāyil-kōṭṭam (east of Karur or Vāṇji, the Chēra capital). While thus living a monastic life, he was approached by the Kuṇavas of Śēṅkuṇṅu and informed of the miraculous disappearance of a lady, in their very presence, into the heavens in the company of her husband who came to her from above in a divine form. The great scholar Śāttanār (சாத்தனார்) who was then present, on hearing what the people of Śēṅkuṇṅu said, informed the ascetic prince that he knew the whole story of the lady who thus disappeared as a divinity. He then narrated the story of Kōvalan and Kaṇṇaki. Young Ilāṅkō was so much struck by the ethical aspects of the story that he expressed a desire to put the whole thing in the form of an eternal poem. Śāttanār replied that he was indeed the fittest person to do it, as the poem was commemorative of the greatness of the capital cities of all the three Tamil kings. Ilāṅkō accordingly accomplished his great task and threw Śāttanār into raptures by his recital of it. The *Padikam* gives the same chapters and sub-divisions as they exist at present.

II

The story of Kōvalan and Kaṇṇaki as narrated by Śāttanār and as pictured by Ilāṅkō can be succinctly summarised thus. In the famous-seaport and capital, Kāvēripūṇ-pattāṇam, of the Chōlas, there was a merchant named Māsāttavāṇ who belonged to the last of the three great mercantile communities, Ippar, Kavippar and Peruṅkuḍi. He

had a son named Kōvalan whose marriage with Kaṇṇaki, the daughter of the merchant Mā-nāyka of the same city and community, was celebrated with great éclat. Kōvalan lived with Kaṇṇaki a life of ideal conjugal felicity in a house presented to him by his parents. All the duties of the house-holder were discharged by Kōvalan in an absolutely blameless manner; and the world could not boast of a more amiable pair.*

While living this life of unalloyed happiness and love, Kōvalan, as fate would have it, became attached to a professional courtesan and actor, Mādavi by name, and in his infatuation, neglected his wife and wasted all his property. Kaṇṇaki had lost her lord's heart, the sole key to her happiness, but she never lost her love, never showed the shadow of wavering in her duty as wife. She never murmured, never showed her wretchedness. She assumed an exterior which hardly served as the index to the poignancy of her anguish which made every moment of her life an agony. Like a bird deprived of its wings, she was helpless, but still the old, the constant, the sweet, the innocent Kaṇṇaki, the embodiment of wifely virtue.

Now, there was celebrated, in accordance with the custom of the age, a festival in honour of Indra. The termination of the festival was signalled by a pilgrimage of the citizens to the sea for purposes of bath and other enjoyments. Kōvalan and Mādavi were among them and spent their time in each other's company and entertainment. Now, it happened that Kōvalan snatched the *vinā* from his sweetheart's hands and sang a number of songs† in such an intensely passionate manner that Mādavi feared that he had lost his love for her in the thought of others! In a piquant mood she took over the instrument and played a

* The poem describes domestic customs which indicate Aryan ideals and practices.

† The poem gives here and in the next chapter much technical detail on music.

set of feigned but equally passionate songs which produced in Kōvalan's mind the identical impression. Disgusted and repentant, Kōvalan suddenly gave up her company and went home. He found his noble, neglected wife, who had been oppressed by evil dreams, spending her time in resigned conversation with Dāvandi, a Brahman lady companion and consoler. He approached her, took her faded face in his hands, expressed his great sorrow and shame at an infatuation which had mistaken treacherous inconstancy for loyal truth and led to the squandering of the family fortune; and when his wife, mistaking his motive offered to part with her two anklets (சலம்பு) for the sake of his restoration to his sweetheart's affections, he showed the sincerity of his conversion by expressing his desire to go to Madurai and restore his fallen fortunes with the capital raised by the sale of the ornament so sincerely and altruistically offered by his wife.

Kaṇṇaki started immediately and at the last quarter of the same night, the loving pair left the city of their birth, and proceeding westward along the north bank of the Kāvēri, came to Palli (Jaina hermitage) where a venerable lady Kavunti by name, was engaged in religious practice. This lady was desirous of studying sacred lore at Madura and therefore offered to accompany them. Reaching Araṅgam, they worshipped the *Chūraṇas* who came there and, after crossing the Kāvēri in a boat to its southern bank, they made their sojourn in a grove. While sojourning here, a wicked damsel and her equally wicked lover who happened to see Kōvalan and Kaṇṇaki, laughed at a constancy and a love which was so unworldly and so reckless of material comforts; and their unpleasant officiousness could be silenced only by their being cursed, by Kavunti, to be metamorphosed into jackals. The wronged party interceded for the injurers; and the prayers of Kōvalan and Kaṇṇaki saw the curse moderate

into a transformation of the wicked couple for the space of a year only.

After a day's stay at Uṛaiyūr, they left for Madura. Unacquainted with the route, they were often guided by Brahmanical pilgrims. Kāṇṇaki was sore and stiff from her long tramp and her out-door exposure. The miles of unending trail were agony to her at every step. Her breath whistled between her teeth. Every moment was physical torture to her; but she heeded not in her love. One morning, Kōvalaṇ left his wife and Kavunti in his temporary abode and was gone to a tank to perform his ablutions. Here he was met by Kauṣika, a Brahman of Kāveripūmpattīṇam, who came with the message that his sweetheart was lost in sorrow at his disappearance; that his parents were in inconsolable despair; and that he should return. Kōvalaṇ narrated the story of his disgust, repentance and resolution; and requesting the messenger himself to look after his beloved parents, he came back to his abode and promptly resumed his journey. With the help of the Pāṇas (minstrels) who were met on the road, Kōvalaṇ was able to take the correct route to Madura. Reaching the Vaigai, he paid worship to the river-goddess and then crossed over to Madura. Here, at the foot of the East wall, there was a monastery; and he made his stay there, together with his doting wife and her venerable ady-guide.

III

Next day, Kōvalaṇ revealed to Kavunti his sad story, and comforted by her that he was more fortunate than Rama or Naḷa, he left Kāṇṇaki in her charge and went into the city with a view to have an idea of its riches and its trade. He saw and admired the greatness of the Pāṇḍyan capital, and feeling sure that he would fully retrieve his fortunes, came back to his abode, and there met māḍala, an old Brahman companion of his, who

had come on a pilgrimage, from Kāveripūmpattīṇam. Kōvalaṇ and Kāṇṇaki then took their abode in the house of Mādari, the head of the local community of Idayas, in the Idaiḥchēri (the cowherd quarter) of Madura; Mādari's daughter Aiyai kept Kāṇṇaki company. The simple and obliging Mādari looked after the provision of the new household needs. Kōvalaṇ took his first meal in the new establishment—the meal cooked by his contented queen—and then addressed her: "Love! How grieved would our parents have been to hear of the arduous steps of your tender feet, in the long desert journey to this place! Is this life of misery for us, who have been born to untold riches, a dream? Or is it due to our misdeeds in previous births (*karma*)? I cannot say! In the company of idlers, rogues and slanderers, I sinned and gave up good habits for bad ones. Shall I ever tide over this misfortune and restore you to happiness? Instead of serving and looking after those who have given us existence, I have become a useless son! I have done you gross injustice! Sacrificing prosperity, relatives, supporters, everything which could have made you happy, you preferred to be the sharer and softener of my sorrows! Constancy incarnate! the destroyer of my loneliness and misery! my gold! my flower! my queen! the embodiment of wifely love! Give me one of your anklets. I shall come back in a trice after selling it." Unwilling to part with her, unable to suppress his tears, Kōvalaṇ however eventually tore himself off and entered the city—to answer the call of relentless destiny. Bad omens greeted him; but he did not heed them. Entering the bazaar, he saw an opulent goldsmith leading a retinue of a hundred men of his community, and instinctively recognizing him as one capable of appraising the value of ornaments suitable for kings and queens, showed the anklet and asked him whether it was likely to be purchased.

Now, the goldsmith, to whom Kōvalaṇ addressed himself, was a rogue who had recently stolen away an anklet of the Pāṇḍyan queen. In order to divert suspicion from himself, he resolved to inveigh the stranger whose anklet was exactly like the one he had stolen. Asking therefore Kōvalaṇ to wait till he returned from the palace where, he said, he would arrange for the purchase of the jewel, the goldsmith proceeded to the king Neḍuñjeliyan who was just then leaving his palace for that of his queen, and represented to him that the thief who had so skilfully robbed the queen's anklet was in the neighbourhood of his house. The king intended to order the watchmen to catch the thief red-handed and bring him over, but, as fate would have it, issued the order to have him executed in case he was caught red-handed and bring the recovered jewel! The executioners were so much struck by the noble and innocent mien of the stranger that they hesitated to carry out their mission; but the goldsmith lectured to them on the science of theft and the skilful way in which thieves generally hide their villainy and one of the more impatient of the blood-thirsty men aimed all at once a death-blow at the perplexed Kōvalaṇ and dyed the earth with his life-blood.

At the moment of Kōvalaṇ's slaughter, there were highly untoward and grievous happenings in the cowherd quarters. Kāṇṇaki was instinctively seized by anxiety and more than once expressed her heart's longing to see her lord once again. The cowherdresses assured her that nothing untoward would happen to one so innocent and that any misfortunes could be averted by the performance of the *Kuravaikkūttu* in celebration of Tirumāl (Vishṇu). The festival was performed with full attention to details; but the dictates of past *karma* were so relentless as to check the good effects of present life, and Mādari learnt of the sad tragedy while she went to the Vaigai for the closing ceremonial plunge. The dire

tidings reached the ears of Kāṇṇaki in a moment. She fell immediately in a swoon. Gaining consciousness, she railed at the relentless and ruthless destiny which consigned her to such undeserving sorrow. She had been afraid for Kōvalaṇ's life every moment. Her instinctive fear had proved, alas! too, too literally justified. Life was now a never-ending sea of misery to her. She had lost her husband's love, but yet been happy because of his life. She had lost all her fortune but never felt it as she had possessed the fortune of his love, his company, his service. When she had lost everything generally associated with material happiness, she had found the other extreme of the world of sorrow in possessing the wealth of his devotion. And she lost all this alas, in a moment! The suddenness, the seriousness, of her irrevocable loss tortured her. Unable to endure her anguish, fuming and fretting at cruel fate, she, the object of commiseration and the cynosure of all the *Idaiḥchēri*, stood forth in her agony, in the midst of the sorrowing spectators, and addressed the sun-god, the witness of all good deeds and misdeeds of men: "Oh, Lord of rays! Was my husband a thief?" At once came the reply from the heavens: "Certainly *not*! Your husband was no thief. This city, which called him a thief, would be a food to fire in a short space of time."

Kāṇṇaki vowed to take revenge upon the city, upon the king, who was her husband's murderer. In furious anger, she hurried, with the other anklet held aloft in her hand, along the street, amidst a thunder-struck populace, towards the palace. All the way she thundered: "I shall see my lord and talk to him as if in life. If I fail, let the world laugh at me!" Going to the spot where Kōvalaṇ's body, cut in twain, lay, she fell upon it and embraced it, raising her lamentations to the very skies! Kōvalaṇ recovered his body and his life at her touch, expressed sorrow at seeing her moon-life face fade, and im-

mediately after, ascended to the heavens in the company of the gods!

While these events were happening, the Pāṇḍyan queen was disturbed by a chain of ominous occurrences. And in justification of her fears, Kaṇṇaki announced herself, through the gatekeepers, to the king. She narrated her sad story in the presence of Neḍuñjeliyan and his queen and accusing him of murdering her innocent husband in the name of justice, offered to prove his innocence by having the make of her own anklet compared minutely with that of the queen. On examination it was found that the queen's jewel had a substratum of pearls while Kaṇṇaki's had gems. The king realised that he had hastily and unwittingly condemned an innocent man to death. A worthy scion of a family famous for its justice, Neḍuñjeliyan accepted the charge in its entirety and finding himself unable to sustain life after such a gross betrayal of his family's honour and name, fell down from his throne and expired. His queen, an ideal wife, did not take long to follow him.

Not satisfied, Kaṇṇaki resolved to destroy the city of Madura itself. In the guise of a Brahman the fire-god then appeared before her and said: "I had received of yore a command to destroy this city. The time has come for it! Whom am I to destroy and whom to spare?" Kaṇṇaki answered: "Destroy everything except Brahmans, the virtuous, cows, wives, the old and the children." The city accordingly was consumed by a gigantic conflagration from which the above alone escaped. The Bhūtas which had been guarding the city deserted it.

Unable to endure the fire, the tutelary deity of Madura then appeared before Kaṇṇaki and, after revealing herself, expressed herself thus: "Lady, the Pāṇḍyan kings of this city have never swerved even once from the path of justice. This Neḍuñjeliyan was no exception to the rule.

His apparent injustice was due to past *karma*. Once, Vasu, the king of Śiṅgapuram, and Kumara, the king of Kapilapura, were deadly enemies towards each other. Each desired to kill the other by some means or other. At that time, Bharata, a servant of king Vasu, accused a certain innocent merchant (Śaṅkaman by name) who had been engaged in ordinary business in the bazaar of Śiṅgapuram, as a spy of the enemy and had him executed without proper enquiry. Śaṅkaman's wife Nili, thereupon, wandered in inconsolable grief for 11 days, ascended a hill in order to throw herself down as preliminary to joining her husband, and accomplished her object after pronouncing the curse that those who were responsible for her innocent husband's death and her widowhood, should go through the same experiences in their next birth. *That* Bharata was born as Kōvalaṇ. Hence your tragic experiences. In the space of a fortnight you will similarly join your husband."

Kaṇṇaki, accordingly, left the ruined city and, going westward along the banks of the Vaigai, reached the Malaiṇāḍu. There, at the foot of a *Vēṅgai* tree in the Tiruchcheṅkuṇṇam hill,* she became, at the expiration of the 14th day, united to her husband, who came thither in his god-form, and went up to the heavens with him in a divine chariot.

IV

This remarkable phenomenon was noticed by the Vēṭṭuvās and Vēḍas (hunters) who were in the vicinity and they celebrated the occasion by performing a *kuravaik-kūttu* in honour of Kaṇṇaki. Desirous of informing their king of this event these people came to the court of

* Tiruchcheṅkuṇṇu or Śeṅkuṇṇu is pointed out by the commentator as a hill near Koḍuṅḡōḷūr (Cranganore) and not Tiruchcheṅḡōḍu which is 60 *kāḍus* to the north-east. See Svaminathaiyar's Edn., p. 19.

Chēran-Śeṅkuṭṭuvaṇ who was then encamped,* together with his queen Vēṇmāl and his brother ḷṅkō, at Guṇavāyil on the banks of the Pērār. The king was lost in wonder to hear of this miracle. At that time there had come to the camp the Tamil savant, Śāttaṇār of Madura. He was acquainted with the story of Kōvalaṇ and Kaṇṇaki and he narrated it in detail to the king. At the instance of his queen, who was profoundly and characteristically impressed by the story, Kuṭṭuvaṇ desired to establish an image of Kaṇṇaki in a temple dedicated to her. He consulted his ministers as to wherefrom he was to bring the stone out of which the image was to be engraved. Some suggested that a block from the Podiya hill dipped in the Kāveri would serve the purpose, but others suggested a Himalayan stone dipped in the Ganges. The king accepted the latter. The minister Villavan-kōḍai suggested that as the king had already conquered the Chōlas, Pāṇḍyas, Koṅkaṇas, Kālīṅgas, Karnāṭas, Paṅgalas, Gaṅgas, Gaṭṭiyas and the northern Āryas when his queen-mother had desired to go to the Ganges, the princes of these peoples should be informed of his intention. But the prince of Alumbil, another minister, pointed out that it was unnecessary as the spies of those chiefs were outside the gates of Vaṅḡi. As a result of this, and as the result of the report he had received from certain pilgrims of the north, that Kanaka and Vijaya, the sons of the Arya king Bālakumāra, had spoken low of the Tamil kings, the Chēra king made up his mind to undertake a military pilgrimage to the Himalayas and make those princes carry a stone fragment from the latter, on their very heads, for the carving of the image.

* Canto 25. The poem calls the Chēra king Kōḍai and the Chēras Vāṇavar. It gives a graphic description of the Perumalai scenery and people. It enumerates the articles presented by the hill-tribes to the king while in camp on the sands of the Periyār. The passage is of value in throwing light on economic conditions.

The Chēra army sounded the drum of march, at the time fixed by the astrologer versed in the Zodiacal, planetary and stellar positions described in the five parts of astrology.* It reached Nilagiri.† There the Chēra king received the blessings of sages who came from his destination. He received tributes of 104 dancing girls, 208 pipers, 100 jesters, 1000 gownsmen, 100 chariots, 500 elephants, 10,000 horses and 20,000 cartloads of northern products, from the Nūḡḡavar Kaṇṇar (நூற்றுவர் கண்ணர்). Resuming his journey he reached the Ganges. He crossed the river in boats supplied by the Kaṇṇas (Karnas), and then engaged Kanaka and Vijaya as well as the kings of Uttara, Vichitra, Rudra, Bhairava, Chitra, Śiṅga, Dhanurdhara, Śveta and others at Kuyilālavam. Like a lion pouncing on a herd of elephants, Śeṅkuṭṭuvaṇ fell upon them and did havoc. He destroyed their troops in a few hours and took Kanaka, Vijaya and 52 other charioteers as prisoners. Śeṅkuṭṭuvaṇ then despatched them under his minister Villavan-kōḍai to proceed to the Himalayas for fetching the desired stone. He accomplished the task, besides arranging for the protection of the northern Brahmans. Compelling the two Āryan princes to carry the sacred material, Śeṅkuṭṭuvaṇ recrossed the Ganges with his gigantic array. He had the stone dipped in the sacred river by sages well-versed in the sacred lore. Reaching the southern bank he halted in a magnificent, ornamental tent erected by the Ārya kings and re-

* The poem gives a true insight into the then method of a military expedition. It is summarised elsewhere. It is enough to state here that the king visited the temples of Viṣṇu and Śiva before his march.

† Kanakasabai Pillai identifies Nilagiri with the Orissa hills and surmises that the journey was performed by sea. Both surmises are speculative: for the passage refers to the dances of the Koṅḡus and Koorgs before the king, to *Kuyilālavam* which seems to be Kolar and to receipt of sandalwood and pearl garland from the Pāṇḍya.

warded those who had distinguished themselves in the recent battle. Just at this stage, there came Mādalaṇ, the Brahman of Kāveripūmpattāṇam and friend of Kōvalaṇ, in the course of his pilgrimage. From him the Chēra monarch learnt that many things had happened in the south as the result of the tragedy of Kōvalaṇ. He learnt that the Pāṇḍya king died of grief, that Mādari committed suicide for failing to protect the refugee; that Kavunti had sought death by starvation; that the mothers of Kōvalaṇ and Kaṇṇaki entered the fire on understanding their fate from his lips, that their fathers renounced the world and became Buddhistic and Arha monks, and that even Mādavi, the actor, turned a *Bikkuni*, leaving strict injunctions against her daughter, Maṇimēkalai, being trained in her profession. Mādalaṇ concluded that, as he was the direct cause of all these, he had come to the Ganges to expiate his sin! Śeṅkuṭṭuvaṇ honoured him with fifty *tulas* of gold equal to his own weight. Despatching an army of 1000 gowmsmen (bodyguards) and spies to take the humiliated Kanaka and Vijaya as prisoners to be shown in their humiliation to the Chōla and Pāṇḍyan kings, Śeṅkuṭṭuvaṇ came leisurely with the army, back to his capital Vaṇji. He had been absent 32 months.

On his arrival, Śeṅkuṭṭuvaṇ heard that the two Tamil kings spoke low of his achievements. They said that the capture of two chiefs who fled from the battle in the guise of hermits, was no great credit! Śeṅkuṭṭuvaṇ wanted to chastise the insult and declare war. But Mādalaṇ pacified him. He dwelt upon the ephemeral character of worldly success, described the achievements of Śeṅkuṭṭuvaṇ and his ancestors, and persuaded him* to lead a virtuous life, set free the royal pri-

* Mādalaṇ here addresses Śeṅkuṭṭuvaṇ as the conqueror of Viyalūr on the coast which teemed with elephants, of the nine Chōla princes at Nerivāyil and of the city of Idumpil and of even the sea which he compelled to recede, besides the Ganges. Chap. 28, lines 114-21. His ancestors'

soners and above all perform a sacrifice. And Śeṅkuṭṭuvaṇ constructed a temple with the assistance of Brahmans, astrologers and skilful artists, and placed the image of Kaṇṇaki worked out of the Himalayan stone, therein.† He also provided for the daily offerings

V

Some time after, the lady-friends of Kaṇṇaki—Dēvandikai, Kavunti and others—visited the temple and, for their sake, the apotheosised wife-goddess showed herself to the king who had done so much to perpetuate her glory and blessed him. She referred in glorious terms, it may be added, to the Pāṇḍya who was the cause of her misery as well as her greatness and said he was in the world of Indra regarded by her as her father! Dēvandikai was appointed to look after the daily conduct of worship. (The poem at this stage goes into the details of the past births of the mothers of Kōvalaṇ and Kaṇṇaki in explanation of their experiences in this birth. These stories are plainly on the model of the Buddhistic and Jaina jātakas, but thoroughly Brahmanized. The mother and mother-in-law of Kōvalaṇ are made the daughters of a priest in a Viṣṇu temple condemned to be born in the mercantile community for their worldliness. Mādari, on the other hand, was a shepherdess in her previous birth, but now born as a Brahman Vaishṇava devotee on account of her *kuravai* songs in honour of Viṣṇu. The poem also gives the weird story of Sātāṇ, the primitive God of Kāvēri-pūmpattāṇam, who figures in the life of Dēvandikai, as well as the equally primitive deity Mangaladēvi. The combination of the Buddhistic, the Jaina, the paurāṇic, the *bhakti* and even the *tantric* elements, all under Brahmanical guidance, is a valuable evidence for the discussion of the chronology of the work).

achievements are referred to in the chapter on the history of the Cnēras.

† The consecration ceremony shows an advanced stage of Āgamic worship.

The consecration of the temple to Kaṇṇaki was attended by the kings of the Āryas, Māliṇi, Koṅgu, Koorg, as well as by Gayavāhu of Ceylon (Ilaṅkā). They prayed to the wife-goddess that she should grace their lands with her presence as she was doing the Chēra country, should receive worship from them and bless them with her vision to them. She consented.

The poem concludes with the statement that Śeṅkuṭṭuvaṇ went on the conclusion of the consecration and the necessary arrangements, to the *Yāgasāla* in Mādalaṇ's company, and Ilaṅko proceeded to the temple of Kaṇṇaki. Here Dēvandikai, the priestess, was inspired by the Goddess, to give Ilaṅko his past history. To use his own language: * "I stood before Kaṇṇaki. She entered the person of Dēvandikai and addressed me thus: 'In your childhood you were sitting on your father's lap in the audience-hall. An astrologer then expressed himself to the effect that you had the signs of a ruling prince. Your elder brother Śeṅkuṭṭuvaṇ consequently scowled at you and felt sad. To relieve him from anxiety, you vowed to give up all claims to the crown, and embraced the life of a recluse, making yourself fit for a heavenly crown."

VI

The story summarised above has been divided into three great sections or *kāṇḍams* in the poem, called after the three royal capitals of the Tamil country. The *Puhār-kāṇḍan* has got 10 chapters (usually though not always styled *kāḍai*, derived from the Sanskrit *gāthā*), the *Maduraikkāṇḍam* 13, and the *Vaṇjikkāṇḍam* 7. The 10 chapters of the first deal with the marriage of Kōvalaṇ and Kaṇṇaki, their domestic life, the life of Kōvalaṇ as the lover of the courtesan Mādavi (which gives the poet an opportunity to describe the arts of music and dancing as they prevailed then), the Indra festival, the misunderstanding

* Chap. 30 (*Varantarukāḍai*), l. 171 ff.

between the lovers which ends in Kōvalaṇ's resolve to go to Madura with his wife to retrieve his fortunes, the description of the journey (which gives scope for the display of the poet's knowledge of the then conditions of the Chōla-Pāṇḍya lands as well as of his technical skill), and the arrival at Madura. The *Maduraikkāṇḍam* deals in its 13 chapters with the inauspicious visions of Kaṇṇaki, the performance of the *Vēttuva-vari* at the instance of the friends amongst whom they settled, Kōvalaṇ's entry into the city leaving Kaṇṇaki under the guardianship of the devotee Mādari, the unjust accusation and execution of Kōvalaṇ, the *kuravai* of the cowherdresses in order to get rid of the evil effects of Kaṇṇaki's evil dreams, Kaṇṇaki's grief, her lamentations, her arraigning the Pāṇḍyan king and his justice, her burning the city and her going to Malaingōdu after the interview with the Goddess of Madura. The *Vaṇjikkāṇḍam* deals in its 7 chapters with the life of the primitive Kuṇḍavas of Śeṅkuṇṇu, their witnessing Kaṇṇaki's miraculous departure to heaven in company with her divine husband, Śeṅkuṭṭuvaṇ's resolve to go to the Himalayas for fetching the sacred stone for making Kaṇṇaki's image, his crossing the Ganges, his war with the northern kings and return, his constructing the Kaṇṇaki temple, and the promise of Kaṇṇaki to the contemporary kings to grace their lands with her presence and her blessings after dedication of similar temples to her there.

VII

The poem is a literary marvel in many respects. Its style is perfection itself. For the beauty of expression, the choice of vocabulary, the grandeur of ethical conception, the play of imagination, the description of men and scenes, the description of life and its joy and sorrow in accordance with the inexorable laws of destiny and *kurma*, and the technique of poetic art, it is a miraculous achievement. The reflection of the social customs and habits; of the

life of the kings, nobles and common people; of the arts and culture of the day; of the religious sects, schools and philosophies; of the beliefs among the common people; of the geographical and economic conditions; of the capital cities and the method of town-planning; of the royal codes in connection with justice and statecraft; of the amusements, occupations and festivals; and of various other things, makes the poem a veritable storehouse of historical raw material. It is indeed very difficult to name any other single poem which can lend itself to such a versatile as well as intensive investigation by the historian who has to construct history on the basis of internal evidences from literature. There is no aspect of human culture on which light is not thrown by this grand literary monument. The castes and their customs, the ways of kings, the religious cults and sects, the habits of saints, householders and rogues, the relation between teacher and pupil, jewels, grains, sacrifices, vehicles, weapons, incantations, flowers, plants, trees and animals—everything throwing light on Tamil culture figures on some occasion or other in the poem. The metres and technique of the verses, the *gūṭha* style (a style in which prose and verse occur in a way lending themselves to music) and the apparent desire of the author to suit the style to dramatic gesture and action-song give it a unique literary interest. In fact the most striking feature of the poem is its tragical theme. Alone in Indian literature it is, though it is in the form of a narrative poem, a really dramatic representation of a tragedy. And certainly it produces a far more ennobling effect than *Othello* or *King Lear*. The Sanskrit words occurring therein in the different departments of technical knowledge, again, afford another field of fascinating study. In many respects the poem belongs to a different world altogether when compared with the Śaṅgam works we have already enumerated. In

style, in spirit, in culture and cults, it represents, it introduces, in comparison with the Śaṅgam works, a new era altogether, thus indicating, it seems to me, a different literary epoch.

In considering the chronology of the *Śilappadikāram* not only have these points to be considered but also certain notions which prevailed centuries ago when the commentaries of the Arumpada-urai-āsiriya and the later Adiyārkkunallār were written. One of these is the little section known as *Uraipeṟu-katturai* (உரைபெறு கட்டுரை) evidently added by the commentator at the end of the *padikam* to which reference has been made. We cannot say whether this was added by the earlier or later commentator. It purports to narrate what took place after the last events narrated in the poem. "From that time onward," it says, "the Pāṇḍya-nāḍu was visited by drought and diseases of various kinds, and Verrivērcheliyan, who was at Koṟkai (கொற்கை) solemnized feasts in honour of Kaṇṇaki and by sacrificing a thousand goldsmiths to her, appeased her anger; and from that time there has been plenty of rain, and the country has enjoyed its usual prosperity."

"The king of Koṅgu, named Ilaṅkōvaraśar, having heard of this, solemnized feasts in honour of Kaṇṇaki and performed expiatory ceremonies and had no drought ever since.

"Then the king of Ceylon, named Gayayāhu who heard of that event, built temples to Kaṇṇaki with altars on which daily sacrifices were offered. Hoping that the goddess would remove all troubles and grant all boons, he held festivals in his town annually in the month of Āḍi (July), in consequence of which there was plenty of rain, which made the country very rich and productive.

"Then the Chōḷa king Perunaṅkili, hoping to receive all boons from the goddess, built temples for her at Kōḷi (Uṟaiyūr), and solemnized feasts."

It will be obvious that the above passage, as it is on the poem itself, gives a clue to alleged contemporaneity of these kings with hero and heroine and with Ilaṅkō-aḍigaḷ, the bor. And Tamil scholars have naturally based this all their chronological discussions in favour assigning the *Śilappadikāram* to "the Śaṅgam." The matter, however, is complicated by erudite introduction as well as the commentary of Adiyārkkunallār. Besides giving the ditions of the three Śaṅgams to which reference already been made in the previous articles, says that Ilaṅkō wanted to write a poem on all four kinds of *arthas* and that he wanted to deal with the career of Maṇimēkalai, the daughter of Kōvalaṇ, who had become a nun, but that Śāttanār dissuaded him from it as he had already written the *Maṇimēkalai* on that subject a fact which led Ilaṅkō himself to accept both poems as more or less parts of a single work. This makes Śāttanār, the inspirer of the *appadikāram*, the previous author of the *Maṇimēkalai*—a fact not noted in the poem or *padikam*.

It is a piece of information given by the commentator alone. Naturally some critics doubt whether the Śāttanār of the *Maṇimēkalai* was identical with the Śaṅgam poet of that name. The reference to Bharata and other comparatively late works by the commentator is given as a proof of the possibility of a post-Śaṅgam Śāttanār though the commentator himself was not aware of his committing an anachronism.

The chronology of the *Śilappadikāram* can be properly ascertained only after a critical examination of these traditions together with the internal evidences given by the poem in regard to literary style, religions, philosophies, society, geographical knowledge, economic conditions, etc. Such a study alone can enable one to say whether the alleged contemporaneity of Ilaṅkō, Śāttanār and their hero and heroine to 'the Śaṅgam poets' is true. We shall therefore proceed in the next article to analyse the data afforded by this work.

(To be continued).

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ORGANISATION OF A CHEMICAL LABORATORY.

By Mr. P. A. NARAYANA AIYAR, M.A., L.T.,
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ORGANISATION is the foundation of civilisation and its main character is economy. Perhaps, the term 'organisation' may be defined as the means of obtaining the greatest results with the least expenditure of energy. Though there is a distinct and widespread attempt at a better organisation everywhere, I am afraid that the organisation of our Science Laboratories has not received that much attention which is its due. I propose in this short article to draw the attention of school, college and works authorities to the necessity for sufficient forethought in the construction, equipment and organisation of laboratories in general and a chemical laboratory in particular.

Most people hold the idea that a laboratory is just a place with benches having shelves full of bottles above them and with water and gas laid on and a fume-chamber, and if laboratories differ, they do so by reason of their size or varied arrangements of the work-benches. True that laboratories have these in common but the layout should be guided mainly by the purpose for which it is intended and the expert guide should be the scientist first and the architect next.

There are mainly two considerations to be borne in mind in constructing a chemical laboratory, the first being the building proper and the second its equipment.

The Building. As regards location of a laboratory building, it is most desirable for obvious reasons that a separate building be allotted to it away from workshops and factories, where quiet and comparative seclusion

can be ensured for quick and accurate thought and precise experimental work. Chemical laboratories have as their first and most important essentials light, ventilation and rectangular shape.

Light. A chemist's eyes cost a lot to train and he will consider too many windows pretty enough. The walls and the ceiling should be whitewashed. If money allows it, white tiles are very suitable for walls as they can be washed and so kept white and bright. Plain whitewash is certainly preferable to so-called 'acid proof' paints and enamels as the latter always tend to scale off and fall into everybody's work. If work has to be done at night, electric light is quite good, provided they are in suitable positions on flexible suspensions to be pulled about and fixed up in odd places, if need be. Light where it is wanted and plenty of it should be the guiding principle.

Ventilation. Important as the chemist's contribution is to the advancement of modern civilisation, his welfare should be a primary concern. Working as he does almost always in an atmosphere surcharged with fumes and even under the best conditions inhaling noxious gases several times a day, it is only wise to protect him from these by efficient but safe ventilation. All engrossed in his work and accustomed to noxious gases, the chemist may not notice the unhealthiness of the atmosphere but a willing horse should not be flogged.

Though a number of windows might be erected for providing plenty of light, it will not serve as an efficient ventilator. Always ventilation from the bottom to the roof or tops of the walls is best and may be very easily obtained by openings on the roof properly protected or by fitting fans. These

will ensure general ventilation. An active draught cupboard will contribute greatly to remove noxious fumes that should not be allowed to escape into the laboratory. The following design will be found most suitable for the purpose. The draught cupboard may have a permanently-fixed glass slip reaching about $\frac{1}{3}$ of the way down. The flue is so built that its cross-sectional area at the bottom is equal to the area at any point by which no back pressure can develop. The area may be roughly 6 times the intake of the cupboard. The floor may be one large slab of thick slate.

Shape. This is really of greater importance than at first sight appears. One large rectangular room is of greater advantage over a series of smaller rooms or an L- or T-shaped apartment. Supervision is greatly facilitated, and if the laboratory is also lofty and in no case less than 12 ft. high, accidental explosions are least likely to hurt the operator on account of the large volume of air.

Benches. Though the arrangement of the benches will depend on the shape of the room, it may be said as a general principle that double-sided island benches are most convenient for general work. The best arrangement is to set aside definite places for definite purposes such as titration, distillation, calorimetry, muffles, etc., and for these, wall benches will be more suitable. This will ensure a place for everything and everything in its place, the worker possessing powers of locomotion alone going to each apparatus.

The benches should not be wide as it is otherwise difficult to reach the bottles on the shelves. About 2' is a convenient width and gives sufficient space for every apparatus. It is better that the benches are long with a

good deep sink at each end and provided with taps and runaways. The gas taps may better be under the outside edge of the bench, a perforation being made on the top for their passage.

Gas and water fittings. The governing principle should be efficiency and ease. All gas, water and drain pipes should be clear of the walls and above the floor. Though awkward, they are instantly accessible and they should be divided into independent sections, each being capable of being cut off without affecting the rest. It is also very desirable that water is supplied in two forms, viz., high pressure and low pressure, the latter being most suitable for general washing purposes. The sink for washing should be large and shallow, being placed at a low level and the taps should be large plug taps capable of delivering a smooth column of water. Draining boards should also be provided on either side of the washing racks inclined at a small angle of 3 or 4 degrees and provided with longitudinal grooves. The sinks should discharge into catch-pits of large size as this will ensure dilution of strong acids and prevention of drain corrosion.

Storage. There should be a separate store for the laboratory. It is very desirable that it is split up into acid and corrosive liquid store, an apparatus store and a chemical store. All heavy jars of solids should be at the floor level and nowhere else. It is necessary that the room should be dust proof and all articles kept free from dust.

Balance Room. This is a necessary adjunct to the chemical laboratory. All the requirements of the laboratory regarding lighting and ventilation, specially the former, cannot be too much emphasised in the case of this

room. The opening into this room is better a spring catch-door to allow of its being opened or shut when the hands are occupied. Swing-doors with light springs are specially recommended. The balances must be placed on level benches built to minimise lateral vibration and at a height convenient for a seated worker, *i.e.*, 2' 4" to 2' 6".

The balances should be so lighted that as few shadows as possible can be cast on the beam or the scales.

A small mechanics-room with necessary tools, a constant temperature room, a dark-room and a microscope room will also be welcome additions to a laboratory. Further considerations should be left to the scientist to suit his convenience.

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ADULT EDUCATION

By

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ONE of the urgent needs of education in India to-day is the education of adults. Many of the adults are voters. They need education to understand the value of the franchise and to exercise it in a direction which would contribute to national progress. Again, the parents should be educated, for it is only then we will be preparing the way for sending their children to schools. We cannot expect an illiterate parent to sympathise with the new things his children are learning at school. Again, the danger of incomplete education is that it creates a wide gulf between the educated classes and the rest of their fellow-citizens who are deprived of the beneficial influences of education. This is the way to danger and discontent. Lastly, we may refer to the rational use of leisure time as the fruit of education.

Taking all these arguments into consideration, we find the need for the organisation and promotion of adult education.

Adult education has two aspects. The first aspect is the removal of illiteracy and the second is to create in the minds of the adults a thirst for knowledge. In my opinion, the second aspect is more important than the first. The Night Schools in India have failed because they have not adopted the second method. The Adult School at Saidapet is an institution where prominent attention is given to this aspect. Bhajanas, Kalakshepams, Lantern-Shows, Readings from Hindu Epics and News Telling—these are some of the methods employed to create in the adults a thirst for knowledge.

The adult education movement is still in its infancy both in the East and in the West, and workers in this field have no definite principles to guide them. Despite this difficulty, I would like to point out the following as the lines along which adult education should move :—

(a) For young workers who have spent a day in the factory or shop, attendance at an attendance school is a considerable strain. To obviate this difficulty there must be the co-operation of the employers of labour.

(b) We must find out what the adults want and not what we think the adults ought to learn. The curriculum of the adult class will be different from that of the elementary school. Special books will have to be prepared for the adults.

(c) There may be an adult class attached to every Training School.

(d) There may be an adult class started in every High School. The Headmaster of the school must look out for likely pupils who leave the school for service. Such pupils might be transferred from the day-school to the continuation-school. Their day-time will be devoted to work in their shop or factory, and their evening to the continuation-school. The work of teaching may be shared by several teachers in the school.

(e) There must be a useful library attached to every adult class. The Adult School at Saidapet has a good collection of books. This library has been built up through the kindness of several publishers in the city. It is gratifying to note that this library is well used by the reading population of Saidapet.

(f) Lastly, the success of the movement depends on the capacity of the teacher and on the amount of missionary spirit that enters into it.

THOMAS HARDY—HIS MESSAGE.*

IN the absence of an authoritative account of the life of the subject of this discourse, one is at a disadvantage in attempting a survey or estimate of the forces and influences that went to the making of the total personality as revealed in the writings. Any artist or poet whose appeal is human cannot escape revealing how his mind reacted or responded to the world in which he is placed. In the case of Hardy, biographical details and materials would be of immense value, though so little is as yet known. He lived a retired life, with occasional, rather very few, appearances on the public notice. So we should welcome the volume on his early life—from 1840 to 91, announced recently by Macmillan. Mrs. Florence Emily Hardy, herself a writer once of books for children, is writing that.

Before giving you such information regarding his life as is now available, I think it useful to relate one or two small facts. Hardy was fond of pottering about book-shops. He preferred, on grounds of bodily comfort, old clothes; once, in the countryside, he entered a bookseller's, and noted some classics on the shelf. He expressed great interest in one of them, much to the surprise of the proprietor who was so delighted with a man in the country of such literary inclinations that he sold the volume to Hardy at the very low price of six pence. He did not know the great Cham (supreme head) of literature. Hardy told this story against himself. The second fact is this. When, even after his fame was sure, in response to requests he sent editors a poem, he enclosed a stamped envelope for

* A Lecture delivered recently by Mr. N. R. Haribara Iyer, M.A., of the University College, Rangoon.

return of the manuscript if found unsuitable. He had, at the beginning of his poetic career, such experiences of the return of his pieces and, in old age, as an experimenter, he was diffident and shy. His modesty was characteristic and Mr. T. P. O'Connor wrote that Hardy told him that he cared little if every line that he wrote was destroyed.

Born in June 1840 at the village of Bockhampton near the city of Dorchester, capital of the county Dorset in the south of England, he was educated in the local schools. His mother gave him a copy of Dryden's *Virgil*, a favourite of hers, in his boyhood and, in his sixties, Hardy issued an epic of a new kind—his *Dynasts*. His father was a builder and the parents wished him to enter the church. The Hardy family was ancient and one branch claimed Nelson's captain—Captain Hardy so famous in history. One of his ancestors had founded a school nearly 500 years before, and Thomas Hardy laid the foundation-stone in June 1927, of additional buildings of the Boys' High School in Dorchester when he made a speech—a rare thing. The boy Hardy must have been very sensitive and receptive and he had amusing experiences, instructive in themselves. The Dorchester girls had him as their amanuensis for writing their love-letters, reference to which is made in the story, *The Mayor of Casterbridge*, 'Lord, do ye mind, Richard, what fools we used to be when we were younger? Getting a school-boy to write ours for us; and giving him a penny, do ye mind, not to tell other folks what he'd put inside, do ye mind?' This seems to account for the heroines in Hardy being all young and highly sensitive, and the novelist drew upon his sub-conscious store of the lore of human hearts. At the age of 17, after his schooling in his own town, he

was articled to an ecclesiastical architect by name Hicks as about that time many old churches were restored. Travelling in many places, in charge of plans, the boy added to his wealth of stories and tales of many families so much so, it was said, he knew the history of each in detail in a very large area. The supernatural fascinated him when he spent hours in churches and churchyards which figure so largely in his poems and novels. He lost all faith in the accepted religion, but was more and more humanised when spectral visions of the dead, as in the poem 'Spectres that Grieve,' lipped thus in mournful complaint:

"We are among the few death sets not free,
The hurt, mis-represented names, who come
At each year's brink, and cry to History
To do them justice, or go past them dumb."

With this aim, to do justice, in the volume of short stories called 'Life's Little Ironies,' he narrates the romantic episode of Phyllis Grove and a German soldier Matthäus Tina of the York Hussars with whom she fell in love. Let us hear Hardy.

'Phyllis told me the story with her own lips. She was then an old lady of 75, and her auditor a lad of fifteen. She enjoined silence as to her share in the incident, till she should be dead, buried and forgotten. Her life was prolonged 12 years after the day of her narration, and she has now been dead nearly 20. The oblivion which in her modesty and humility she courted for herself has only partially fallen on her, with the unfortunate result of inflicting an injustice upon her memory; since such fragments of her story as got abroad at the time, and have been kept alive ever since, are precisely those which are most unfavourable to her.'

The tales in 'A Group of Noble Dames' full of thrill and irony owe their origin to 'barren dates being transformed into a palpitating drama by the genius of the architect with the help of the faintest tradition of what went on behind the scenes.' The result was that many bright-eyed noble dames living when the first group was issued gave him many singular events of their family histories which, however, he cherished as proof of their good-nature as he came to give up the writing of fiction about 1895.

From 1857 to '67 he was an architect spending some time in London in the office. In his intervals he wrote verses. He also gained such distinction in his profession as to win a prize and a medal. He attended lectures at King's College, London, studied the Greek classics and the New Testament, echoes of which latter are heard particularly in 'Far from the Madding Crowd' and the poems, and knew much of theology and astronomy. The London life must have roused to activity all his latent powers. In his memorial poem on Swinburne (1910) he refers with feeling to the reading of that singer's early poems which aroused a storm in 1868, as he walked along

'a terraced street whose pavements lay
Glassing the sunshine into my bent eyes—'
a miniscence of his London days.

In spite of his loss of faith he retained an interest in matters relating to the church and, even at 82 was at work, as on a hobby, restoring old fonts. He issued an appeal for re-hanging the bells of Mellstock church in 1925 and wrote a whimsical poem 'An Inscription for a Peal of Eight Bells' after a restoration, on one of which we read

'Henry Hopkins got me made,
And I summon folk as bade;
Not to much purpose, I'm afraid!'

words which whisper in our ears a basic and fundamental feeling in Hardy of the failure of the higher religious impulses among men nowadays. When Rheims Cathedral was destroyed by the Germans in the Great War, the architect in Hardy revolted against the vandalism. He was keen on the preservation of old buildings and in a poem 'A Man,' he offers tribute to the memory of a hired worker who preferred starvation and death to the task of destruction of a Tudor building of standing in Dorchester. He has also enshrined the memory of the mason whose modesty and genius gave the glory of the Cathedral at Gloucester in one of his poems.

One may wonder at the apparent inconsistency of a love of the Church and its architectural glories divorced from faith in God whose house it is. Later in this essay light will be thrown on this.

When Hardy, in 1869, sent his first story 'The Poor Man and his Lady' to the publishers Chapman and Hall, George Meredith, the publisher's reader, sent for him and suggested a story full of plot. Meredith may be credited with the discovery of Hardy's genius. The story was returned and never printed. In 1870 his first novel 'Desperate Remedies' was published at his risk. It was a tale of crime and detection. Hardy said he lost £15 and his labour on the venture. In 1872 was issued the well-known 'Under the Greenwood Tree'. Frederick Greenwood saw his name on the back of a volume at a railway book-stall, was arrested by it and was charmed by the tale of the marriage of Dick Dewy and Fancy Day. Readers should be warned

against being led away by mere plots. The flavour of an old world, the conflict of the new and the old, the rustic villager's feelings on the introduction of an organ for church music displacing their time-honoured string-band, Hardy's love of the countryside and his deep love of his fellowmen, to catch these notes one must go to the book itself where the author speaks to you as to a friend. Greenwood commissioned Hardy to write a serial. The book assured his future and meantime he abandoned architecture. In the next few years he won the friendship of John Morley and Leslie Stephen, who were editing some monthlies. Here it is essential to note how such kindred spirits were brought together. Lady Butcher relates how puzzled she was and what a new idea it appeared to her when she, as a child, heard Meredith say that in many cases the vision of rich people was limited to their personal possessions and that their mental horizon was bounded by their park gates.

The lamp of liberalism was lighted by pioneers like the younger Mill with his plea for women, by Meredith and Hardy who discovered and declared the worth of the common man, and by Morley with his philosophic outlook in politics. If to-day men are proud of enlightened liberal thinking on matters connected with religion, social thought, politics, labour and life in general, not a little of the glory of the work goes to these earlier noble souls. There is a sentence in Hardy's 'A Pair of Blue Eyes': "Few women of old family can be thoroughly taught that a fine soul may wear a smock-frock, and an admittedly common man in one is but a worm in their eyes'. His Gabriel Oak, a farmer, is one full of unselfish devotion to worthy ideals and Bathsheba, under whom he was

a bailiff, who rejected his love at the outset was tamed by her trials into an appreciation of his solid virtues and into a happy union. In this context Hardy's own words on his aims in writing fiction may be quoted: "The conduct of the upper classes is screened by conventions, and thus the real character is not easily seen; if it is seen, it must be portrayed subjectively; whereas in the lower, conduct is a direct expression of the inner life; and thus character can be directly portrayed through the act." In the 14 novels that he wrote with the scenes all laid in Wessex, he has raised fiction to a noble rank, you cannot find the like of it in the numerous volumes issued nowadays. He is not a mere story-teller, though the skill of his art as such is unmatched. You see in him the philosopher, the passionate poet and seer, to whom human life with all its struggles, sorrows, joys and ironies has thrown a challenge. The theory of evolution and all the problems of human life and thought suggested by Darwin's explanations engage his mind. He gives us pictures of man striving nobly in the midst of forces adverse to his striving and placing him in a quandary. The sweetest of the stories is the earlier "Under the Greenwood Trees". As the years grow, and as his thought deepens, the tales are sad, complex and bitter. The tragic note is apparent in them. Like one of his heroes—Clym—in the 'Return of the Native' who came back from Paris, where he was engaged in the diamond business, with schemes of culture and the gospel of high thinking and plain living for his brethren in his native place, Hardy sees creation in groans and feels for the sufferings of man. Conflicts of all kinds vexing the heart of man and woman, between mother and son, between husband and wife, between inherited tend-

encies of character and noble aspirations, between individual and social opinions where the advanced individual cannot fit into the received notions, between the simple human desire to enjoy life nobly and well and the dead weight of unfriendly forces created by human institutions find in his pages their development, often to catastrophes and misery. Two qualities will be apparent to a reader as he goes on. Hardy deals with Life and Love in the manner of a scientist with the passion of a poet. He notes the littleness of man and the greatness of his efforts and endeavours. His educated and polished characters are not half as noble as his peasants. Doctor Fitzpiers with his medical research and metaphysical leanings disturbs the lives of many in the countryside—including his wife Grace, Wildeve, ex-engineer, is a Rousseau in Egdom Heath causing wretchedness in the home of Clym. Angel Clare and Alec D'Urberville break the sensitive Tess. Whereas Diggory Venn, a dairyman, with his loyalty to his first love Thomasin, and Oak, as I said before, with his devotion to Bathsheba's lands and prosperity, come out of their trials dignified and ennobled. Romantic love, as ordinarily understood, has been the ruin of those who yield to the first stirrings. The conclusions of Hardy on marriage are worth noting in view of the current discussions on the subject, of compassionate and civil unions. While he recognises love as Nature's plan for the propagation of the race, he insists in all his short stories and tales and in his poems on a proper and well-formed alliance so that the maximum of spiritual and domestic happiness may be assured. In the story of 'Far from the Madding Crowd,' Oak offered love to Bathsheba and was rejected. Later, when he was her

bailiff, she was dazzled by the flashy soldier Troy who, coming to marry Bathsheba's ward Fanny, changed his mind, broke Fanny's heart and succeeded in capturing the mistress of the farm. Farmer Boldwood, a rich neighbour, who had been long courting her, went mad at the disappointment and shot Troy dead. Oak witnessed all these events and Bathsheba felt his affectionate attachment to her in all the crises. A sort of *loving-kindness*—a word that occurs repeatedly in Hardy—the loving-kindness of the Bible dwelt upon by St. Paul in his epistles drew her to him. Just when he was making up his mind to leave her, she felt that she was being left alone and pleadingly referred to his first offers and induced him to stay. Referring to their coming marriage, the novelist says: "They spoke very little of their mutual feelings; pretty phrases and warm expressions being probably unnecessary between such tried friends. Theirs was that substantial affection which arises (if any arises at all) when the two who are thrown together begin first by knowing the rougher sides of each other's character, and not the best till further on, the romance growing up in the interstices of a mass of hard prosaic reality. This good-fellowship—camaraderie—usually occurring through similarity of pursuits, is unfortunately seldom super-added to love between the sexes, because men and women associate, not in their labours, but in their pleasures merely. Where, however, happy circumstance permits its development, the compounded feeling proves itself to be the only love which is strong as death—that love which many waters cannot quench, nor the floods drown, beside which the passion usually called by the name is evanescent as steam."

before and during the war—these are touching in the mental performance of the drama that the poet asks of the reader. One day it may be filmed and then a great educational agency for peace will be gained. I should like to give one sample of the poet's vision and imagination from the Chorus of the years and the Pities from Part III—before the battle of Waterloo.

Chorus of the years.

The eyelids of eve fall together at last,
And the forms so foreign to field and tree
Lie down as though native, and slumber fast!

Chorus of the Pities.

Sore are the misgivings of thrill we see
In the artless champaign at this harlequinade,
Distracting a vigil where calm should be!
The green seems opprest, and the Plain afraid
Of a Something to come, whereof these are the
proofs,—

Neither earthquake, nor storm nor eclipse shade!

Chorus of the years.

Yea, the coneys are scared by the thud of hoofs,
And their white scuts flash at their vanishing
heels,

And swallows abandon the hamlet-roofs,
The mole's tunnelled chambers are crushed
by wheels

The lark's eggs scattered, their owners fled;
And the hedgehog's household the sapper
unseals.

The snail draws in at the terrible tread,
But in vain: he is crushed by the fellow-rim;
The worm asks what can be overhead,
And wriggles deep from a scene so grim,
And guesses him safe; for he does not know
What a foul red blood will be soaking him!
Beaten about by the heel and toe
Are butterflies, sick of the day's long rheum,
To die of a worse than the weather-foe,
Trodden and bruised to a miry tomb

Are ears that have greened but never will be gold
And flowers in the bud that will never bloom.

Chorus of the Pities.

So the season's intent, ere its fruit unfold,
Is frustrate, and mangled and made succumb,
Like a youth of promise struck stark and cold!
And what of these who to-night have come?

You too ask, with the poet, why all this
should be. We can only hope that the Will
may grow aware of what is going on in the
world and then mend. The 'Dynasts' should
be better known and read. In a London
library it was reported that it was most in
demand once. Statesmen should make it
their friend. In the concluding lines of the
drama, the poet hoped that wars would cease
as in the poem 'The Sick Battlegod' he
anticipated the death of the god of war. But
he expressed disappointment when the Peace
of Versailles was signed. To him, human
nature is capable of better things than
butchery in the field and he would build upon
the basic goodness in man. The noble son-
net 'Often When Warring' is proof of his
optimistic faith in man as brother-man.

"Often When Warring."

Often when warring for he wist not what,
An enemy-soldier, passing by one weak,
Has tendered water, wiped the burning cheek,
And cooled the lips so black and clammed and
hot;
Then gone his way, and may be quite forgot
The deed of grace amid the roar and reek;
Yet larger vision than loud arms bespeak
He there has reached, although he has known
it not.

For natural mind-sight, triumphing in the act
Over the throes of artificial rage,
Has thuswise muffled victory's peal of pride,
Rended to ribands policy's specious page

That deals but with evasion, code, and pact,
And war's apology wholly stultified.

During the war he worked as Chairman of the
Anti-Profiteering Committee, in Dorchester,
and wrote the 'Song of the Soldiers' which
endeared him to many of them. One who
read him in his campaigns returned after the
war to the old poet and got his copy of his
poems autographed. Mr. Clive Holland, a
friend of his, has given an account of a talk
he once had with the poet prior to the great
war. "In my opinion war is doomed. It is
doomed by the gradual growth of the intro-
spective faculty of mankind, of their power
of putting themselves in another's place, and
of taking a view that is not their own. In
another aspect this may be called the growth
of a sense of humour. Not to-day, nor
to-morrow, but in the fulness of time, war
will come to an end, not for moral reasons,
but because of its absurdity." Hardy was
interested in international understanding. Mr.
Galsworthy quotes a sentence from him.
"The exchange of international thought is the
only possible salvation of the world." And
Hardy has written much as a poet that will
surely distil clemency in our hearts and
make us more human, and humorous in his
sense in a way that will rouse our conscience
to a realisation, effective and practical, of the
larger values of life. We shall listen to his
musings in the poem 'His Country' written in
1913 when the Palace of Peace was opened
at the Hague.

His Country.

I journeyed from my native spot
Across the south sea shine,
And found that people in hall and cot
Laboured and suffered each his lot
Even as I did mine.

Thus noting them in meads and marts
It did not seem to me
That my dear country with its hearts,
Minds, Yearings, worse and better parts
Had ended with the sea.

I further and further went anon,
As such as I still surveyed,
And further yet—yea, on and on,
And all the men I looked upon
Had heart-strings fellow-made.

I traced the whole terrestrial round,
Homing the other side;
Then said I "What is there to bound
My dehizenship? It seems I have found
Its scope to be world-wide."

I asked me! Whom have I to fight,
And whom have I to dare,
And whom to weaken, crush, and blight?
My country seems to have kept in sight
On my way everywhere."

I have thus far dwelt on the novels and the
'Dynasts.' They are full of significance, in
themselves, of human experiences felt, ap-
prehended and visioned by an imagination of
power and range. Two aspects of Hardy's
poetic imaging and criticising of life are
evident in them. He rejects accepted notions
of God and heaven, of a benevolent Ruler of
the Universe, who created the earth for
human happiness. He rejects them intellec-
tually, as heir of the thought of the century
which went into the origins of religion, life,
social developments and human advancement.
More even than Tennyson he has been open
to the new light of science and investigation
in all branches. Mr. Edward Clodd of the
Rationalist Press Association, author of the
Childhood of the World, Pioneers of Evolu-
tion and the Life of Christ, Sir Leslie Stephen
of the Agnostic's Apology, Sir Frederic Harri-
son of the Positivist School and Lord Morley

were all his friends—with a common sincere striving towards a new system of religion and belief that will quench the thirst of the spirit freed from traditional trammels. The received notions cut his emotional life to the quick. Having lived long in the country, Hardy read Nature like a book, and his descriptions will heighten our enjoyment of the beauty of things about us. Nature was red in tooth and claw. Birds in winter, suffering in the cold, shook his faith in an Almighty caring for the sparrow. And man believing in his lordship over creation added to the quandary in which the lower creatures are placed by nature, delighting in shooting and sports as his pastime. Throughout his life, Hardy was active promoting movements against these. Civilisation seemed to him a misnomer in man's attitude to the animals lower than he. The meliorative activities of his life were many and should be better known. The poems reflect his deepest feelings and moods and in some of his lyrics he voices the conscience of humanity. He enters into the musings of birds and beasts. One poem must suffice now.

The puzzled game-birds—muse,
They are not those who used to feed us
When we were young—they cannot be—
These shapes that now bereave and bleed us?
They are not those who used to feed us,
For did we then cry, they would heed us,
—If hearts can house such treachery
They are not those who used to feed us
When we were young—they cannot be!

Dogs and cats found shelter in his home. He described himself as against dog-chaining and bird-caging. His story of the bird-catcher's boy who spoke against his father's trade of making birds life-long captives

has a very sad end. The father ordered him to dismiss such chaff from his mind and the boy left him, never to return, and later was found washed ashore by the sea. Birds pour forth melody in return for man's cruelty in blinding them and caging them. When once in London he noted cages in every house and birds in harmony making a heaven. He wrote the touching poem 'The Blinded Bird' which I must read to impress on you the value of any message Hardy has for man.

The Blinded Bird.

So zestfully canst thou sing?
And all this indignity,
With God's consent, on thee?
Blinded ere yet a-wing
By the red-hot needle thou,
I stand and wonder how
So zestfully thou canst sing.

Resenting not such wrong,
Thy grievous pain forget,
Eternal dark thy lot,
Groping thy whole life long,
After that stab of fire;
Enjailed in pitiless wire;
Resenting not such wrong!

Who hath charity? This bird,
Who suffereth long and is kind,
Is not provoked, though blind
And alive ensepulchred?
Who hopeth, endureth all things?
Who thinketh no evil, but sings?
Who is divine? This bird.

Gabriel Oak, the shepherd, lost his flock by an accident in 'Far from the Madding Crowd'. As he surveyed the dead sheep, he reflected. "Oak was an intensely humane man: indeed, his humanity often tore in pieces any politic intentions of his which bordered on strategy, and carried him on as by gravitation. A

shadow in his life had always been that his flock ended in mutton—that a day came and found every shepherd an arrant traitor to his defenceless sheep. His first feeling now was one of pity for the untimely fate of these gentle ewes and their unborn lambs." The day is indeed far-off that will witness kinder treatment of animals that are dumb and helpless. Hardy was a member of the R. S. P. C. A. and wrote an ode on the centenary of the Society in 1924—"Compassion." Evolutionist as he is he is not nursing extravagant hopes but pleads for chivalry that 'will hear the call of honour towards the too-dependent frail.' The self-satisfied glory of 'The Lady in the Christmas Furs' that was achieved at the cost of others' pain is in no manner relieved by good will. As any little poem of Hardy frames a world of thought and feeling, this may be read:

"I'm a lofty lovely woman"
Says the lady in the furs,
In the glance she throws around
On the poorer dames and sirs.

"This robe, that cost three figures,
Yes, is mine," her nod avers.

"True, my money did not buy it,
But my husband's, from the trade;
And they, they only got it

From things feeble and afraid
By murdering them in ambush
With a cunning engine's aid.

"True, my hands, too, did not shape it
To the pretty cut you see,
But the hands of midnight workers,
Who are strangers quite to me;
It was fitted, too, by dressers
Ranged round me toilsomely.

"But I am a lovely lady,
Though sneerers say I shine

By robbing Nature's children
Of apparel not mine,
And that I am but a broomstick,
Like a scarecrow's wooden spine."

Before I leave this theme, it is profitable to read from a letter of Hardy written in 1910 to the Humanitarian League on the rights of animals. "Few people seem to perceive fully as yet that the most far-reaching consequence of the establishment of the common origin of all species is ethical; that it logically involved a re-adjustment of altruistic morals, by enlarging, as a necessity of rightness, the application of what has been called the Golden Rule from the area of mere mankind to that of the whole animal kingdom. Possibly Darwin himself did not quite perceive it.

"While man was deemed to be a creation apart from all other creations, a secondary or tertiary morality was considered good enough to practise towards the 'inferior' races; but no person who reasons now-a-days can escape the trying conclusion that this is not maintainable. And though we may not at present see how the principle of equal justice all round is to be carried out in its entirety, I recognise that the League is grappling with the question."

It is this, the second aspect of his life's strenuous and unselfish endeavour towards the making of a painless and just world for man and animals; that should receive our attention in a study of his books. The words of Mr. Galsworthy in a recent speech aptly summarise what Hardy has said in his writings. "I always think that the human being has got an altogether too complacent notion of his position in the scheme of things; that man first, second, and third,

beast, bird and fish left at the post, does not adequately describe the scheme of creation. And I welcome with very heartfelt gratitude the existence of any talent which will make any sort of hole in our urban, not to say suburban, satisfaction with human superiority.

"If you think of it, when we are interested in beasts and birds and their natural surrounding, it's almost always not for themselves and their good, but for ourselves and our good. We're interested in them commercially; we like to make money out of their feathers or their skins; or æsthetically, we like to wear them in our hats or round our necks; or as sportsmen we're terribly fond of some creatures to do other creatures in; or as collectors we love to look upon their stuffed or pinned or bottled beauty; or as cooks, we dote on their flavours, and do our best to destroy them with sauces; or, as musicians, we like to hear them singing on the Radio; or as race-goers, we like them to win at 33 to 1—when we have backed them; or as scientists and valetudinarians, we appreciate them as animals with extremely healthy glands which we can appropriate to ourselves.

"Not many of us, I think, delight in them as creatures with a love of life as strong as or perhaps stronger than our own; certainly in the mass more beautiful than ourselves—I went to the Derby the other day—and still in a world of ungarnished Nature which goes back to a time when man was not. When a man or a woman succeeds in watching wild life just for the pleasure of watching it, and without any thought of the benefit it may bring, he or she has gone far towards that forgetfulness of self which many people regard as a sign of

mania, but which is really the keystone of happiness."

A mind like Hardy's is naturally drawn towards religion. He was ever interested in it. I said he moved away from the traditional views. But his language is steeped in the Bible and St. Paul is referred to in the novels and poems. Christmas poems too set him look back on life's purpose and achievement. The titles of some poems may shock many. A few are 'God's Funeral', 'God's Education,' in reference to which it was once said that 'Swinburne planted, Hardy watered and the Devil gave his increase.' But Hardy was never a cynic, scornful or heartless. Fundamentally his is a most religious mind. He would say that religion lay in the heart of the worshipper and that the idea of God has been evolved through the ages, changing its ethical content. A jealous God, fierce in his dealings with man, gave place to a just and merciful one. Man needed some solace in his troubles. Society wanted some organised control and discipline. So, from priest-kings and early man, began the development of religion. When forms and ceremonies multiplied, the essence of it was often lost. Under the advance of reason and science a personal God in or out of the heavens was held absurd. Science laid down the relation of cause and effect. Prayers do not change the unswerving course of causation. So in an age of doubt Matthew Arnold with his gospel of 'sweetness and light' defined God as a stream of tendency making for righteousness, and man should be on the side of God in this sense to fulfil any divine plan of the Universe. Belief in God may have no shaping influence on conduct which, we all know, is the essence of life. Ceremonial observances may cloak hypocrisy. The new ideas of God are not to

be despised. They have permeated even ecclesiastical strongholds and the higher criticism of the scriptures. The new ideas call for spiritual and moral strength in each of us. Surely men have gained in spiritual enlightenment more than they have lost by the new outlook in religious criticism. The gain in intensity of personal ennoblement is not light. Faith is individual and the more it is based on intellectually earned convictions and moral grounds, the better for each of us. It is ideas like these that Hardy gives us in his poems, in sincerity, humility and sadness of thought. Read them and you get over the first shock. There is no flippancy or trickery in them. They are his intense broodings, now shared by many thoughtful men and women. He is of those liberal souls that seek the widest range, and are moved to admiration of a religious exaltation by the ordered marching of the universe of moons, stars and planets. But, as he notes in a chapter heading in the 'Return of the Native,' 'humanity enters hand in hand with trouble.' 'And mankind seems to have blundered unbidden into the Formidable Work of the seven days' as Conrad put it in one of his stories. Hardy feels the presence of the divine in the urge of life in June in the field and woods. "It was the first day of June, and the sheep-shearing season culminated, the landscape, even to the leanest pasture, being all health and colour. Every green was young, every pore was open, and every stalk was swollen with racing currents of juice. God was palpably present in the country, and the devil had gone with the world to town." One who wrote these words is not to be accused if his intellect and feelings seek an ampler satisfaction than is possible in the traditional religion. Creeds broaden, in ethical and moral value,

with time, and old creeds die though they die hard. So in the poem 'Aqua Suiis' the old Goddess of Roman times speaks from below to the Christian God whose altar has been built near the site of the old temple, of the work of each in their time and their gradual decay. And in the poem 'A Plaint to Man', while the idea of 'a mercy seat in God for ills that no hope can beguile here' is admitted as a device, the truth is driven home of

The fact of life with dependence placed
On the human heart's resource alone,
In brotherhood banded close and graced
Will loving-kindness fully blown,
And visioned help unsought, unknown.

Man has to take thought to add to his moral height and only by strenuous endeavours along the line of 'evolutionary meliorism,' can man help the plan of creation. As it is, the world is full of wrongs, physical, social and inherited, for which remedies are possible. A liberal spirit in the working of institutions, regardless of the letter of the law, and an open mind, like that of the Athenians in Mars' Hill, which Hardy commends, when Paul went to preach in that city are essential for the growth of the human spirit. Hardy will inspire us with a fortitude for breasting the ills of man's lot. He will tell us that Life is full of surprises and ironies and that it takes away with the left-hand what it offers with the right and that

'We come to live, but are called to die.'

He believes true manly courage lies in seeing things as they are without indulging in fanciful illusions. He feels we cannot know much of God and hopes the power behind creation grows more and more 'percipient' of the affairs of the earth and 'mends' in course of time to make life more than and other than an expense of spirit in a waste of pain.

He welcomes the death of wrongs and such death he glorifies in his songs. He makes us gird our loins to see the last of all such wrongs. To him the service and the happiness of man are significant meanings. He is for true religion, though he fears the age is threatening to be dark. *True poetry includes religion, for religion and poetry are the 'visible signs' of mental and emotional life and 'must keep moving, becoming'.* He pleads for reconciling true science or rationality with religious thought by keeping to the vision and 'removing things that are shaken'. *He believes in the Church with its 'scope for transmutability,' 'its strength of associations and its architectural spell' for keeping the shreds of morality together.* There may be a plan of Good in creation, but evils evidently outweigh as he sees. The good is often thwarted. As he sits by the fire, he falls into a mood of introspection and is moved to regret that many noble impulses of noble souls

of that enkindling ardency from whose maturer glows

The world's amendment flows

are benumbed, paralysed and marred by chances and by wiles so that the earth is deprived of such influences. He hears the voice of the earth and is sad that such splendid opportunities are being reduced to nought. The twilight conveys to him *the sighing of the wind among the pines.*

The wind blew words along the skies,
And these it blew to me.

Through the wide dusk: "Lift up your eyes,
Behold this troubled tree,

Complaining as it sways and plies;
It is a limb of thee.

Yea, too, the creatures sheltering round—
Dumb figures, wild and tame,

Yea, too, thy fellows who abound—
Either of speech the same
Or far and strange—black, dwarfed and
browned,
They are stuff of thy own frame."
I moved on in a surging awe
Of inarticulateness
At the pathetic Me I saw
In all his huge distress,
Making self-slaughter of the law
To kill, break, or suppress.

At the end of a long life of idealism he wrote that gem of a lyric—'Survivor.' Mark the accents and the voice. He sat by the fire and mused.

A cry from the green-grained sticks of the fire
Made me gaze where it seemed to be:
'Twas my own voice talking therefrom to me
On how I had walked when my sun was higher
My heart in its arrogance
"You held not to whatsoever was true"
Said my own voice talking to me;
"Whatsoever was just you were slack to see;
Kept not things lovely and pure in view,"
Said my own voice talking to me.
"You slighted her that endureth all,"
Said my own voice talking to me;
"Vaunteth not, trusteth hopefully;
That suffereth long and is kind withal,"
Said my own voice talking to me;
"You taught not that which you set about,"
Said my own voice talking to me;
"That the greatest of things is Charity—"
And the sticks burnt low, and the fire went out,
And my voice ceased talking to me.

Surely his long life has seen awakenings of a deeper charity, sympathy and goodwill, pity and tenderness in men and women in their mutual relations and in social and humane movements towards the bettering of the lot of their own and of their kin of all kinds. Hearing these words quoted above, we are in the presence of a divine mentor.

He died in January of this year. In the words of his friend, Sir George Douglas, "his ultimate view of life, as expressed in his poems, proceeds directly, if not solely, from the intensity of his sympathy with all forms of suffering. In this sense Hardy's development has been from a "delightful pantheism" as Gosse happily called it, to the character of the New Man of sorrows, as tenderly apprehensive of all griefs and pains, oppressions and injustices, of this England of the twentieth century as was Jesus Christ himself of their equivalent in the Palestine of twenty centuries ago."

His ultimate song is of hope,
With that I will conclude.

There seemed a strangeness in the air,
Vermilion light on the land's lean face;
I heard a Voice from I knew not where:—
"The Great Adjustment is taking place;
"I set thick darkness over you,
And fogged you all your years therein;

At last I uncloud your view,
Which I am weary of holding in.
"Men have not heard, men have not seen
Since the beginning of the world
What earth and heaven mean;
But now their curtains shall be furled.
"And they shall see what is, ere long,
Not through a glass, but face to face;
And Right shall disestablish wrong:
The Great Adjustment is taking place."

Referring to the charge of pessimism levelled against him, we can say that only a man with faith in the human spirit and the possibilities of making a better world of happiness and justice could go on writing till 88, genius unimpaired and sympathies widening. The attacks on him are made very often without a grasp of the mode of activity of the consciousness of a poet and its spiritual reactions. He is an optimist in the sense that "he cannot bear the world as it is, and is forced by his nature to picture it as it ought to be—"

Herein lies the message of Hardy.

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THE TULU VERB

By Mr. L. V. RAMASWAMI AIYAR, M.A., B.L.,
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TABLE OF VERB-FORMS.

Root: *kēṇ*, to hear.

Present.	Preterite.	Future.	Imperative.	
<i>Kēṇuvæ</i> <i>Kēṇuva</i> <i>Kēṇuve</i>	<i>Kēṇdæ</i> <i>Kēṇda</i> <i>Kēṇde</i>	<i>Kēṇumbæ</i> <i>Kēṇumba</i> <i>Kēṇumbe</i>	SINGULAR.	
			1st person	<i>Kēṇuge</i>
			2nd "	<i>Kēṇ'a</i> or <i>Kēṇu</i>
			3rd "	<i>Kēṇadæ</i>
			PLURAL.	
				<i>Kēṇuga</i>
				<i>Kēṇule</i>
				<i>Kēṇadu</i>
<i>Kēṇuva</i> <i>Kēṇuvaru</i> <i>Kēṇuveru</i>	<i>Kēṇda</i> <i>Kēṇdaru</i> <i>Kēṇderu</i>	<i>Kēṇumba</i> <i>Kēṇumbaru</i> <i>Kēṇumberu</i>		
Present Perfect.	Past Perfect.	Future Perfect.	Conditional.	Subjunctive Present.
<i>Kēṇmdæ</i> <i>Kēṇmda</i> <i>Kēṇmda</i>	<i>Kēṇmdittæ</i> <i>Kēṇmditta</i> <i>Kēṇmditte</i>	<i>Kēṇmduppæ</i> <i>Kēṇmduppa</i> <i>Kēṇmduppe</i>	<i>Kēṇmdvæ</i> <i>Kēṇmdva</i> <i>Kēṇmdve</i>	<i>Kēṇuvæda</i> <i>Kēṇuvæda</i> <i>Kēṇuvæda</i>
<i>Kēṇmda</i> <i>Kēṇmdaru</i> <i>Kēṇmdaru</i>	<i>Kēṇmditta</i> <i>Kēṇmdittaru</i> <i>Kēṇmditteru</i>	<i>Kēṇmduppa</i> <i>Kēṇmdupparu</i> <i>Kēṇmdupperu</i>	<i>Kēṇmdva</i> <i>Kēṇmdvaru</i> <i>Kēṇmdveru</i>	<i>Kēṇuvæda</i> <i>Kēṇuvæda</i> <i>Kēṇuvæda</i>
Potential.	Frequentative.	Intensive.		
<i>Kēṇoli</i> —for all persons <i>Kēṇboḍu</i> do.	<i>Kēṇvæ</i> , etc. (Present and Future) <i>Kēṇde</i> , etc. (Past)	<i>Kēṇdræ</i> , etc. (for all persons)		
Participles.		Gerunds.		
Present and Relative: <i>Kēṇu</i> Past: <i>Kēṇdi</i> Perfect: <i>Kēṇadi</i>		Present: <i>Kēṇonḍu</i> Past: <i>Kēṇḍudu</i>		

Brigel's classification of Tulu verbs on page 45 of his Grammar is not complete. There are two main classes of Tulu verbs:—

(a) Bases produced from radicals with the help of enunciative vowels or with the endings -pu or -pi which happen in the Present Tense and Verbal Noun forms:

(i) Bare roots with enunciative vowels: *kēṇu*, *būru*, etc.

(ii) Radicals which have incorporated the ending -pu or -pi (the aoristic abstract ending of Dravidian < *vai*) in the Present Tense and verbal noun forms: *māḷpu* (to make); *pappi* (to say); etc.

This difference in the form of the bases of verbs is marked by certain interesting features which might be indicated here briefly.

(a) Most of these verbs belonging to class (i) above, denote action which is more or less passive in nature and in which the wish or the will of the doer is not prominent at all. Such verbs usually have either a long vowel in the root-syllable followed by the enunciative vowel, or two short vowels of equal moristic value, one in each of the two syllables. Examples of the former variety have been given above. Of the latter, the following are instances:—*are*, to pulverise; *eri*, to burn; *kari*, to expire, etc. It is remarkable that the

DEC. 1928.]

THE TULU VERB.

717

latter variety is represented by a large number of verbs formed from derivative roots.

The verbs of class (ii) above, on the other hand, signify actions in which the will or the wish of the doer is very prominent. Even if the verbs are intransitive, they always refer to actions which involve the volition of the doer. The addition of -pu or -pi to the roots serves to confer on the verbs this extra significance, i.e., that they denote actions involving volition on the doer's part.

This distinction is not peculiar to Tulu but is found in Tamil and Malayalam which last supplies the best kind of illustrations:—

Class (i): *ōḍu* (to run), *viḷu* (to fall), *viḍu* (to leave), *tāḷu* (to sink), etc.

Class (ii): *naḍakku* (to move on), *kuḷikku* (to bathe), *viḷukku* (to call), etc., and numerous transitives (of causative origin) like *aḍekku* (to shut), *eḷekku* (to shake), *oḷekku* (to break), etc., etc.

The affix conferring the peculiar significance on the second set of verbs in Tamil and Malayalam is -kku or -ku (< *kei*, to do). In Tamil and Malayalam, this affix appears in the Infinitive, Future and some of the minor verb-forms only; while in Telugu, the corresponding affix -tsu (< *k*) appears in all verb-forms as an inalienable part of the verb-base.

(b) As we have indicated above, the verbs of class (i) keep up a dimoristic value by having either:

(i) a long root vowel and a following half-short enunciative; or

(ii) one short vowel of equal value in each of the two syllables;

while the verbs of class (ii) indicating active significations have one short vowel of equal value in each of the two syllables composing such words.

Derivative verbs with final -ṅ and -mb * as in Tamil: *iṇaṅgu*, to become tame; *niṅgu*, to swallow; *nindu*, to swim; *nurumbu*, to pluck off; *baraṇṭu*, to dry up, etc., etc.

(1) *Pronominal Terminations of verb-forms.*

These are regular and consistent in Tulu.

1st person singular æ goes back to common Dravidian an: æ < æ̃ < æn < ẽn.

2nd person sing. a < ai (common Dravidian suffix) traceable through ai to i, the second personal pronominal root of Dravidian.

3rd person sing. masculine e < ẽ < æn < ẽn

Do. " Fem. aḷ is obviously the common feminine ending.

Do. " Neuter ṇḍu < ṇdu < ḍdu < adu or, probably, we have here ṇḍu (Past-Present form of uḷ)

1st pers. plural a < ẽ < ẽm (common Dravidian).

2nd Do. ar < ər < ir (").

3rd Do. er < ər < ar (").

3rd Do. Neuter a (common Dravidian, cf. Tamil *ava*.)

The Pronominal Terminations for the other tenses are similar.

Even in Tamil, the final nasals of the 1st Person Singular and Plural and 3rd person singular verb-forms are dropped either with or without the nasalisation of the preceding

* The formative verb-endings -ṅ, ṇṭ, ṇḍ, mb, so prolific in Tamil, Telugu and Malayalam appear with modifications in the ruder dialects of the North in a sufficiently large number of forms to enable us to note that (i) these formative affixes are not peculiar to the Southern languages and (ii) that the contrast between the bold individuality which they have in the South and the attenuations to which they have become reduced in the dialects of the North, points to the exceedingly conservative character of the Southern languages.

vowel. Tulu seems to have fixed this process completely, just as the two rude dialects Kaikādi and Burgāndi have done. Similarly the final -i of second person singular verb-forms has also been dropped in Tulu.

The final nasals have disappeared partially in Kui and completely in Brāhūi.

(2) *The Present Tense*: Caldwell (followed by Vinson and the Linguistic Survey) describes the Tulu Present tense form as an adaptation of the future form with final -vi, -bi or -pi. The connection between the Present and the Future does not appear to be so direct. In my opinion, the Present Tense is formed directly from the verbal nouns merely with the addition of the pronominal terminations to these verbal nouns:

Kēnuv+ēn > kēnuvēn > kēnuvān
> kēnuvā > kēnuvæ.

Malpu + ēn similarly gives malpuvæ.

The close resemblance indicated by Koḍagu Present Tense and Future forms may seem to lend support to the view that the Future base gave rise to the Present base or at least that these two bases were originally identical; but even in Koḍagu we find sufficient indications to show that the process of formation of these tenses, though effected with the same affix -v-, was on independent lines. The affix from the ancient root *vai* (to place) should have been used to denote two significations originally, the abstract noun-idea and the Future meaning; the former was requisitioned for the purpose of forming the Present Tense in Tulu, Kui and Koḍagu.

The Present Tense forms of Tamil, Kannaḍa and Telugu are comparatively late formations, as we have to infer from the different suffixes they severally employ: old

Kannaḍa -dap-; middle and modern Kannaḍa -ut; Telugu -ut-; Tamil -gir; etc. The older variety of the Present Tense formed of the bare radical or base *plus* pronominal terminations is represented in Kui and Brāhūi:

Kui: siī, *I give*, etc.

Brāhūi: tikhiv, *I place*, etc.

Tulu appears to have followed the older process, with one difference, however, *viz.*, that the pronominal terminations were added on to the verbal nouns.

It would in these circumstances scarcely be correct to say that the Present Tense of Tulu is only a direct variant of the Future.

(3) *The Past Tense*: Both the Dravidian past affixes -i and -tu are used in Tulu; the selection of the affix in each case having been based on euphonic considerations. Kittel's view that -i is only a euphonic or enunciative vowel, at first used in certain past tense forms with -t-, and then generalised into a separate affix, is doubtful in view of the fact that this -i figures not only in Tamil, Kannaḍa and Telugu but also in Kurukh and Kui which may reasonably be presumed to have branched off at a very early stage from the main Dravidian stock.

Any way, in Tulu we have both the affixes. -tu is retained in its unvoiced state in Tulu in many words, while the voiced form also appears in conjunction with voiced sounds.

(4) *The Future Tense*: The characteristic Dravidian affix -vi with its variants -bi or -pi appears in the Future forms. This affix is common to almost all dialects of Dravidian (Tamil, Kannaḍa, Malayālam, Brāhūi, Kurukh and Kui); presumably it is a very ancient affix. Old Tamil shows a rare -gu which is connected with the Gōṇḍi Future ending -ka

and with the old Kannaḍa aoristic -gum. Tulu does not show this affix at all.*

In malpe, the affix -vi assumes the value of -pi for euphonic reasons; the Future forms of roots with final nasals take on the spontaneous nasal before the Future affix -be (<ve) *e.g.*, kēṇumbe. The Future forms of sei (to die), par (to drink), etc., show the affix -v in seive, paruve, etc. That the verbal nouns on which the Present Tense forms are based, are not exactly identical with the Future forms is shown by the fact that the ending of the verbal nouns of these words is -pi (formed, apparently, with -vu and -i, the noun-forming affix).

(5) *The Present Perfect* in Tulu is not, as it is supposed by some, a unique feature of this dialect. Corresponding forms are found in Tamil, Kannaḍa and Malayālam, but whereas in these latter this compound tense, as also the compound tenses dealt with below, could be resolved without difficulty into their component forms, the Tulu form seems at first to be incapable of being resolved in a like manner. The prominent Present Perfect forms of Tamil are illustrated by the following:

ṣeyd-irukk-ēn

Ṣeyd-utṭi (viṭṭi)-ēn.

Malayālam has:

Cheyd-ittṭi (viṭṭi)-uṇḍa

Chēyd-ēcchu (vechu).

Kannaḍa has:

Māḍiddāne, etc.

The Tulu form may similarly be resolved into its component elements:

* Koḍagu Future third person shows the old aoristic -kum while the first and the second personal forms show -v-.

paṇṭ (I have said), for instance, could be resolved into paṇ, the root and -t-, the perfect ending and the pronominal termination æ.

What is the origin of this -t-* or -d- as it appears alternatively? I am inclined to relate it to -at, the Past form of the Tulu substantive verb āpuni (*cf.* Tamil āgu). The Perfect tense form paṇṭæ, then, should go back to an original paṇ + at + æ. This brings the Tulu form more or less on a line with the Tamil compound tense with -ir.

The only alternative suggestion possible is that -t- may be derived from ṭ- (< -iṭṭ) but this does not appear to me to be so plausible.

(6) *The Past Perfect Tense*: Brigel correctly suggests that the Past Perfect was formed by the addition of the past participle of itte (from the root -ir extinct in Tulu) to the Present Perfect tense. Though Brigel was unable to explain the affix of the Present Perfect stem itself, he has correctly recognised the affix -itte.

The meaning of the Present Perfect was primarily due to the past meaning contained in -at from which the affix -t- was adopted; the idea of the Past Perfect was evolved from the Present Perfect with the addition of itte. Compare, in this connection, the Brāhūi compound forms which are all produced with the help of forms derived from the substantive verbs uḷ and ar (< ir).

(7) *The so-called Future Perfect* in Tulu is not directly connected with the Future. Its

* The substantive verbs are commonly employed in many Dravidian dialects for the formation of compound tenses: Brāhūi uses ar (< ir) and uḷ (< uḷ) freely; Gōṇḍi, Kui, Kuvi and Kurukh employ *man* or *men* (Vuḷ); Koḍagu employs *ir*, *uḷ* and *āg* freely and its Present Perfect affix -itt- is traceable either to -āt- (the Past Tense of āg), like the Tulu Present Perfect ending) or to irt (the Past Tense of ir).

meaning, besides expressing priority of an action with regard to a future action, expresses also a doubt with regard to a *past* action. The latter meaning should have been the primary one, as shown by the constitution of the form :

kēṇḍudw, (which is not exactly the ablative form of the past participle base) + uppe, the future of an old root uḷ which has in Tuḷu merged with the other substantive verb -ir.

That kēṇḍudw (described as Past Gerund by Brigel) only contains the affix -id- of the ablative ending of Tuḷu is clear from its use :

Esāu tindudw, lekkadw, pidaḍḍw pōye (Esau ate, rose and went away).

i ṛugw battudw āji varṣa āṇḍw (It is six years since I came to this place).

The ablative ending of Tuḷu -ḍdw is composed of -iḍ and wd (from irdu) ; it is the latter portion that is connected with the ending of the Future Perfect base.*

Strictly speaking, the presence of the Past Participle base in this so-called Future Perfect form makes it a *Conditional Past*, though the Future Perfect meaning is also expressed by it :

Cond. Past : Yānw teltwuduppe (I might have laughed).

Cond. Past : Āyi banneṅgi yānw maḷtw-duppæ (If he came, I might do it ; if he had come I might have done it). As expressing the Future Perfect idea, this sentence may also mean, "If he comes I shall have done it."

* Cf. the Koḍagu Future Perfect ending -ittippu in which -itt- is clearly traceable to the Past form of the root ir, just as Tuḷu wd is traceable to ird.

(8) *The Conditional Tense* : What Brigel describes as the conditional proper is more generalised in meaning and is formed of the Present Perfect base (Kēṇḍ) and the Future Termination -v-. The Present Perfect base, as we have seen above, is constituted of the root and the Past Participle of the root ā (cf. āgw of Tamil).

(9) *The Imperatives* :

The first personal singular is formed of the root and the affix -ge, while the plural has -ga.

No dialect of the South except Tuḷu shows -g- in the First Person Singular of the Imperative ; Malayālam uses -ka in the Plural. Kannaḍa employs -ge, -ke, -kke not in the First Person but in the Third Person.

What is the origin of this Tuḷu affix which should be directly connected with the similar affixes employed in Malayālam and Kannaḍa (though in the latter for a different Person) ?

Kittel explains the Kannaḍa forms as men verbal nouns with final -ke or -ge. This, in my opinion, does not take us sufficiently far as the method by which Kittel derives the Imperative meaning from the verbal noun is not convincing.

I am inclined to trace the -k- or -g- in these instances to the affix -kw, derived from kai or gey (to do) which conveys the idea of action in many contexts of Dravidian Kēnugæ then will be *hear I shall do*.

The Second Person Singular and Plural forms of the Tuḷu Imperative contain, in my opinion, the traces of the root ol which in Dravidian means *to be necessary*, etc. The singular form kēṇla, then, could be resolved into kēṇ, the root + ol + a (second person singular pronoun termination of Tuḷu ; simi-

larly the plural kēṇule would be kēṇ, the root + ol + e (the reduced form of the second person plural pronoun termination).

ol appears with the negative affix ā, in Malayālam as olā which is used as a prohibitive ; compare also Telugu forms like pōvali, etc., which contain the root ol (to be necessary).

The Third Personal Imperative in Tuḷu * is formed of the root and wd : barāḍw (he or they may come, etc.) Brigel observes appropriately that this has usually an optative meaning only. The use of Tamil pōgaṭṭum (let him or them go) is quite similar. The Tamil -ṭṭum has itself to be traced to oṭṭu (allow) + um, the emphatic particle of Dravidian which has a conjunctive significance.

I am inclined to trace the Tuḷu affix -wd only to the old root iḍ (to place, leave, etc.) The optative meaning then receives sufficient justification.

This form should be distinguished from the other Tuḷu form maḷpāḍu, etc., which expresses necessity of action ; here āḍu should be described as the reduced form of bōḍu (< vēḍu < vēṇḍu) which is ultimately connected with the root vēḷ, *to wish, require, etc.*

(10) What Brigel calls the Tuḷu Subjunctive is only the verbal noun base *plus* eḍa or wāḍ. wāḍa is certainly connected with the ancient and middle Kannaḍa aḍe which appears, alternatively in Middle Kannaḍa and exclusively in Mod. Kannaḍa, as are.

Kittel wrongly traces the affix to uḷ ; uḷ cannot give the idea of time which this affix invariably conveys. One of the old Dravidian roots conveying the idea of time is eḍ which gives us modern Telugu ēṇḍu (year) and

* Koḍagu shows the same ending in the first and third personal forms.

Tamil-Malayālam āṇḍu etc. ; (*vide* my article on "To-day, Yesterday and To-morrow in Dravidian" in the *Madras Journal of Oriental Research*, September 1928).

The Kannaḍa and Tuḷu affixes should be traced to this elementary root eḍ conveying the idea of time.

(11) *The Present Gerundial* form has the affix -oṇḍu (kēṇoṇḍu). Its use, described by Brigel on page 125 of his book, is purely adverbial ; -oṇḍu, in my opinion, should be considered to be the reduced form of koṇḍu (past participle form of koḷ). The reduced form occurs in Koḍagu gerunds with exactly the same meaning. The compound forms in Tamil and Malayālam (constituted of the past participle of the root and koṇḍu) in colloquial lose the initial -k- of koṇḍu :

eḍuttu koṇḍu eḍuttoṇḍu, etc.

(12) The *Infinitives* are characterised by the ending -ini affixed to the bases of the various tenses. The Infinitives are frequently used instead of the personal forms of the verb : dāne battini (why didst thou come ?) This suggests that the ending -ini induces a generalised noun-idea into the base. -ini, in such a case might be related to -il, one of the noun-forming affixes of Dravidian + i, the common ending of neuter nouns in Dravidian. The suggestion that the final -i may be the genitive affix is not borne out by usage or meaning.

(13) What Brigel describes as the *Second Infinitive* or the *Supine* is only modified form of a derivative noun with final -ere

(er < ær or ar + e).

Its use as in the following :—

ā bele maḷpere battæ (I came to do that work), shows the partial noun-character of

the form. The idea of purpose is probably furnished by the particle *e*; (for which, compare the final *ə* in Tamil *kuḍikkə vandān*, he came for the purpose of drinking).

(14) The *Frequentative* form in Tulu is unique being formed by infixing *ā* between the Base and the Tense ending. Brigel describes the infix as *e*, but I think that the *-ə-* appearing in the forms is only the resultant of the combination of the final vowel of the base and *ā*. No other Dravidian dialect shows such Frequentatives as fixed forms.* The origin of *ā* is not clear. Very probably, it is only one of those demonstrative particles which were used by Dravidian in very early stages for the production of new significations.

(15) The *Intensive* infixes *-r-*; The possible verb roots in Tulu, so far as I could see, which might have given the infix *-r-* are *arav*, to heap up, to strengthen, and *are*, to pulverize to press. Compare *kui-kuoi* affix *-ka* used for emphasis.

(16) The Negatives :

The Negative Particle *-a-* appears in Tulu only in the Future Tense forms; in all other cases, *ijje* (< *iyje* < *ilye* < *ille*) is added between the Tense Base and the Pronominal endings.

In the Imperatives, the First Personal forms are compounds: *maḷpande uppuge* (singular) and *maḷpande uppuga* (plural). *-ande* of *maḷpande†* is from *-andru* (< *altu*)

* Cf., however, the Kuwi usage of lengthening vowels for emphasis: *wāṭeri* (did certainly come).

† Malayālam *cheyyāṇḍu* (without doing), *pākāṇḍu* (without going) and similar forms in Kōḍagu should not be confused with this Tulu Imperative; they are contractions of *cheyyāte-kopḍu*, etc.

found in Tamil. *Maḷpandru* is a generalised negative base. The Second Personal forms show the negative particle *-a-*: *maḷpaḍa maḷpaḍe*.

(17) Causal Verbs :

The Dravidian causal affix *-v-* (< *vai*) appears in Tulu in causal verbs like *paripu* (to make tear) from *pariyu* (to be torn); *uripu* (to blow) from *uriyu* (to burn); etc.

But the affix *-pu* should have gradually lost its active causal signification in Tulu, and new affixes came to be employed: *ā* (to become) and *-ḍu* (< *iḍ*, to place) are seen in the following :

maḷpāu (to cause to make), etc.

būruḍu (to cause to fall), etc.

In Tulu, only few traces are found of the oldest method of causal formation, *i.e.*, by the hardening of the sonant plosives in formative positions and, further, by the addition of *-t-* (< *at*) to the base. While Tamil, Telugu, Kannaḍa and Malayālam show such causals in profusion, Tulu presents a contrast in having only *rare* trace. On the other hand, the *-p-* causals are very frequent. Many causals formed on the basis of the older method of hardening, etc., in the major dialects, are represented in Tulu by causals formed with *-ā-* or *-p* (< *v*), *e.g.*, *paḍe*, *paḍepi* *eḷeṅgu*, *eḷeṅgāvu*; *būru*, *burāvu*; *parṇdu* *parṇḍāvu*; etc.

All verbs ending in vowels other than mere enunciatives form their first causals with *-p-*, *e.g.*, *nōyi* (to ache) with its causal *nōpi* (to cause to ache); *mugiy* (to cease) with its causal *mugipu* (to cause to cease); *paḍe* (to suffer, enjoy) with *paḍepi* (to cause to suffer, to enjoy); etc.

This affix *-p-* became so active that it was used also for forming the *kārita* verbs (*vide*

above). Though no causal idea is induced in these cases, the force of the affix was presumably derived from the same source (*vai*, to place) that generated the causal idea. The affix of such *kārita* verbs in Tamil and Malayālam is *-k* or *-kk* (*naḍakk*, to walk; *kuḍikk*, to drink; *eḍukk*, to take, etc.); Telugu and Kannaḍa *-ts-* and *-s-* respectively represent the development of the Tamil *-k*. If we consider that these Tamil *kārita* verbs are themselves causals of certain non-causals now lost in use, then it may not be unjustified to postulate that the old affix for these also was *-v-* (now merged) and that in such a case Tulu *-p-* represents only an early stage; but there are many *kārita* verbs in Tamil which cannot be easily explained as causals, and further, it is difficult to account for the disappearance of such an active *-v-* in all cases. We have therefore to consider the Tulu affix of *kārita* verbs to be entirely separate in origin from the Tamil affix *-k-* which we have to trace to the ancient *kei*, to do.

Tulu went further still in its activity of causal formation. It employed two new affixes *-ā-* (< *āgu*, to become) and *-iḍ-* (< *iḍ*, to place) to form causals from (i) all *-p-* verbs (whether causals or *kārita* verbs) and (ii) all verb-bases ending in consonants (followed by enunciative or supporting vowels only). Thus we have

naḍepāvu } (to cause to walk) from *naḍap*
naḍapuḍu } (to walk)

nigupāvu (to cause to fill) from *nigup* (to fill) which last itself is an old causal from *nigiy* (to be filled)

paḍepāvu (to inflict, etc.) from *paḍep* (to get, lose) which last is from *paḍe* (to suffer, to enjoy, etc.)

XXXIV—96

būrāvuni (to cause to fall) from *būru* (to fall), etc.

While Tamil forms its double and triple causals with *-v-*, Tulu has successfully requisitioned new affixes. No other Dravidian dialect shows *-ā-* or *-iḍ-* as a causal-forming affix; Kurukh *ā'*, *ana*, etc., does show an *-a-* or *-a-* but it is likely that it is of Hindi origin.

There is no doubt that *-pu* (< *vu* < *vai*) originally conferred the causal signification in Tulu, just as in Tamil, Kannaḍa, Telugu, Brāhūi, etc.

(18) *Auxiliaries and Defectives*: The ancient auxiliaries of Dravidian: *-ir* and *-uḷ* have coalesced in Tulu; the Present and Future forms are from *-uḷ* and the Past and Perfect forms are from *-ir*. Dialectally, *ir* (> *ipp*) also occurs with all its full forms.

The auxiliary *āpu* (to become) is fully inflected; *-p-* is a direct development of *-v-* of Tamil *āgu* or *āvu*.

The Past Participle of *koṇ* (< *koḷ*) to hold is commonly used in verbal combinations like *koṇḍu barpini* (bring), etc.

Kariyu to pass is another defective auxiliary corresponding to Tamil *kāl*. Besides the other Southern dialects, Kurukh also has it (*khach*) as an auxiliary.

balli (not to know) is a defective in Tulu with a negative meaning incorporated in it, as in Kurukh *bal* (not to know, not to be able). Kannaḍa *balli* is affirmative; the negative idea in Tulu and Kurukh arose probably from the association with the negative particle *al* (from *alla*).

SIXTH CONFERENCE OF THE INDIAN MATHEMATICAL SOCIETY AT NAGPUR.

By

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THE Sixth Conference of the Indian Mathematical Society met at Nagpur under the auspices of the Nagpur University on the 24th, 25th and 26th December 1928, in the New University Buildings.

The members of the Indian Mathematical Society were specially fortunate in choosing Nagpur for their deliberations; for they could not have received a more cordial and generous welcome elsewhere than at the hands of the Nagpur University and the elite of Nagpur. The three days were one continuous treat for us in more ways than one with *At Home* parties, lunches, dinners, excursions to the mines near Kamtee, to the beautiful hill temple at Ramtek, the Kinsee tank and so on. The intellectual part of the programme was no less entertaining. The opportunity for the members from all parts of India to meet and exchange thoughts with one another and with the brilliant professors and educationists of Nagpur on not only their pet mathematical theories but on points of general educational interest—on the hospitable platform of Nagpur—was indeed a unique one. Herein lies the moral of a Conference and the advantage of corporate intellectual activity through the medium of a Society like the Indian Mathematical Society is quite obvious.

The opening day, Monday, the 24th December 1928, must be considered one of the memorable days in the history of the Indian Mathematical Society for various reasons. The address of welcome by the Chairman of

the Reception Committee, the Hon'ble Sir Shankar Rao Chitnavis, Kt., B.A., I.S.O., was a great inspiration. The message of His Excellency the Governor, Central Provinces and Behar, was very sympathetic and to the point. Rai Bahadur Gopal Singh Chowla's Report of the Society's work was very hopeful. Then we had the brilliant Presidential Address by Dr. C. V. Raman, M.A., D.Sc., F.R.S. Dr. Raman, as is usual with him, did not read any prepared matter but came out with his spontaneous flow of words brimming with beautiful and striking ideas tempting one almost to give up one's present job and turn to research in Physics. The spoken lecture was a lucid commentary to the printed inaugural address 'New Concepts of Matter and Radiation.' I am sure the members will take the hint and make the Indian Mathematical Society the source of a new mathematical radiation illuminating the problem of physical radiation and its inter-relations with matter.

In the informal discussion of the affairs of the Society among the members, in the afternoon, there was an important suggestion from Dr. Raman that this Society should hold its Conferences jointly with and under the auspices of the Indian Science Congress. It remains to be seen how far this suggestion will be found agreeable to the general body of members of the Indian Mathematical Society, who have had a taste of independent status for the last 21 years and have been able to organise successful conferences of their own for the last 12 years, enjoying the support of the several Local Governments and Indian States like Mysore, just like the Indian Science Congress. If Dr. Raman's suggestion is taken up, a new orientation may take place in the life of the Indian Mathematical Society.

The same evening, we had another intellectual treat from Dr. Raman under the auspices of the local Science Society.

On the second day, there was an interesting public lecture delivered by Dr. S. R. U. Savor, B.A. (Cantab), D.Sc. (Lond.), F.R.A.S., on 'Meteorology.' This lecture was illustrated by numerous lantern-slides.

A word about the papers presented to and read at the Conference. About a tithe (7 hours out of the 72 hours the Conference lasted) was devoted to the reading of mathematical papers covering a fairly wide range of topics from the most ancient to the most modern branches of Mathematics. Geometry and Theory of Numbers seem to be the most fascinating subjects for the Indian mind, especially the South Indian mind. There was a Ramanujan to show us the way in the Theory of Numbers and we are happy that Dr. Vaidyanathaswamy is in our midst, the guiding star for geometrical researches. Seismic effects of Prof. Hardy's influence might be seen in the papers on a class of integral functions, a Diophantine Problem and so on. The banks of the Ganges appear to stimulate interest in Differential Equations and their Solutions, periodic and

quasi-periodic. There were also some papers in Applied Mathematics and Statistics. On the whole, 37 papers were presented to the Conference by 23 authors, though only about two-thirds of the papers were actually read at the Conference. All this mathematics was inflicted on the students of the Nagpur University and the affiliated Colleges, as well as the public of Nagpur, who chose to attend the deliberations. The members of the Society have to be extremely thankful to their non-mathematical Nagpur friends for their Spartan patience and kindly spirit of toleration.

It is generally the complaint of the intellectuals that they ask for bread and get only a stone. In the Conference at Nagpur, however, the situation was reversed. We mathematicians gave hard mathematical stones and sometimes crude ores, and got in return nice bread, chapatis and tea and what is more delightful the company of the great professors, the public men and the leaders of thought of Nagpur.

To conclude in one sentence, the Sixth Conference of the Indian Mathematical Society at Nagpur was a great success.

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PHYSICAL DETERIORATION OF STUDENTS.

PART II. ITS REMEDIES.

By Mr. S. ANANTHA NARAYANAN, B.A., L.T.,
Inspector of Schools, Pudukotah State.

TAXING, nay grinding, examinations, neglect of physical education and efficiency on the part of parents and the educational authorities, want of appreciation of games, social and distressing economic conditions, faulty furniture, etc.—these are some of the causes I have tried to outline as responsible for the breakdown in the health of the present-day student. Is there no remedy, no panacea for these evils? Is there no hope of redemption or salvation of India's youth and manhood?—one is tempted to ask. Yes, there is, if we would rouse ourselves from our long slumber. Signs of awakening are not wanting as I said even at the outset; the nation has now come to realise and begun to take stock of its responsibility. All over India there has been a simultaneous call to the youth to rally his powers and to show himself up as worthy of India's glorious traditions in the past.

Various schemes have been formulated to raise the youth up from his physical degradation and to rejuvenate him—we hear of rejuvenation for old people nowadays, whilst our youngsters are badly in need of it. Conferences on physical education have been held; medical examinations have been made compulsory. What of all that? In many schools a farce of a medical inspection is enacted: the registers and reports thereof go to swell the dusty volumes on the office shelf. What in the name of justice is done to give effect to the instructions and suggestions of the medical officers? What interest does the

parent evince in these? He generally mistakes the medical inspection report for the progress card and if told it is nothing of that sort, he argues how his son is the better for it and throws it aside as if it were a card announcing some death. What does the intellectual guardian of the pupil do? Perhaps he asks the painter to renovate the maxim *mens sana in corpore* inscribed on the school-wall with many a superb decoration which well displays the skill of the artist and the interest he has taken in doing his work. Perhaps he is complacently satisfied that one more routine work of the year is happily over and that there is no more trouble about it for yet another year.

There is a way out of all these difficulties—it lies in educating the parent, and in educating the student as well.

If the parent is already an educated man in the sense in which we generally use the term, he knows the importance of playing and the utility thereof; in that case it is enough if we remind him of his duty towards his children and appeal to his common sense. Illiterate parents must be attacked from all possible sides and through all imaginable ways as inviting them to witness in large numbers the physical contests celebrated in the school, by lantern lectures, cinema shows, etc. The student must certainly be educated—he must be made to understand the extreme importance of, and the necessity for, physical culture, the indispensable need for laying a good and solid foundation to enable him to fight the battle of life successfully. In this connection it will not be too much to say that Physical Culture, Personal and Public Hygiene must form part of the A Group or A-I Group if there be one like it. Special lectures and discourses on the subjects must be

arranged to be delivered preferably by experts with the help of such convincing and external aids and appliances as would take a strong hold on the imagination of the student for creating in him and about the school an atmosphere saturated with, and conducive to, healthful activities and pursuits. Good, intelligent and morally elevating and stimulating literature on the delicate topics connected with matrimony and its implications should not be tabooed but must be supplied to the student in the form of such decent books as those contributed by Dr. Stall, an American (Bishop) Doctor, wherein he treats of 'What a young boy ought to know,' 'What a young man ought to know,' 'What a young husband ought to know,' etc., which will be very inspiring and instructive reading and the effect of their perusal will indubitably be telling on his young and plastic mind.

Encouragement must be extended to the scholar and ample facilities offered to help him to take part in group activities of the school as the Scout Movement, the U. T. C. and such other organisations. The University Training Corps has been looked upon and welcomed as a right step in this direction and the great rush for seats therein is surely proof enough of its appeal to and hold on the mind of the college student. In spite of the repeated interpellations and resolutions in our own Provincial Council and beyond, it has been sanctioned only for a few centres and there too the scope is greatly restricted. It is quite evident from their action that these legislatures mooted this question more than once from the manifold benefits such a training offers to the student during and after his college course. Though some are not willing to concede all the benefits claimed for

it, yet the results now obtaining go to disprove their ill-informed opposition.

The Scout movement too offers the young boy excellent opportunities for the improvement of his physical powers. For example we have the Scout drill and Scout games which are as useful as other systems of drill and indigenous games. The other activities connected with a Scout's life and movements when he is in camp are surely on the side of healthful and health-acquiring pursuits. But in the development of the body, games should be given preference and greater predominance.

The general instruction in the matter of physical education given by the Department is to have as many periods of drill as we can possibly afford to allot in the short compass of the time-table without detriment to the other work at school. So far as our juniors are concerned, *i.e.*, our Secondary School children, drill except very rarely is not attractive and palatable to them and hence not much appreciated by them. Drill, as taught at present, is against child instinct, child psychology and child development. And if at all the young boys show an enthusiasm to rush to the drill class, it means they prefer the less troublesome Drill Instructor—I do not mean to cast any slur on him or his disciplinary powers and the breezy open to the foul and cramped atmosphere of many a classroom, where there are greater opportunities for free movements and also for making merry. The movements of drill are stiff, irksome, and after a time, too mechanical and monotonous to be done with a will, and under such circumstances the class degenerates into mere mockery and fun. In some cases the exigencies of the time-table cannot or will not permit of the exclusion of

drill in the first hour of the afternoon session when the student comes to school with a fully-stuffed stomach. It is indeed a pity to see these 'cropful' urchins gasping and panting under the directions of the Drill-master with the scorching sun staring them in the face—in schools which are too poor to have shady trees planted in the compound. It is certainly unhygienic and unsystematic to subject the young school-boy to this torture since he cannot withstand the strain and exertion such a course imposes on him. Ask a child which of these two—exercise or games—he prefers and there will be no two answers. He is for freedom, spontaneity, joy and unrestrained fellowship. Since the children at this stage are not intellectually fit to appreciate the disciplinary value of drill and the mental and aesthetic benefits it confers, greater time devoted to drill is practically of very little utility. Instead of three-quarters of an hour it is better to give him half an hour as recess to play, rush, frisk and kick himself about, and the effect is found to be something marvellous. Some heads of institutions consider time set apart for this a mere waste and some are known to have even curtailed such 'breathing spaces' where they existed. We cannot condemn their action in too strong terms and would refer them to Dr. John Brown's instructive and critical essay on 'Education through the Senses.' Our business must be to study their tastes and inclinations in respect of games and provide them with the necessary facilities and suitable opportunities.

With senior students we may devote greater time to systematic drill and gymnastic exercises. These are fit for continued strain, and capable of understanding its utility. This reminds me of my High School days at Tiruk-

kattupalli where the Headmaster and his Assistants used to do drill as they went on conducting these classes after the regular work of the school was over. Even here it is not desirable to tie down the students to not more than 2 or 3 drill classes in the course of the week.

Compulsion, I think, will go a great way to bring about a thorough change in the situation. Hostel-students might be left under the care of their respective Wardens and Superintendents. Every student should be compelled to play or engage himself in some game or exercise in the open-air for at least an hour if not more: taking the attendance is no sure way of insuring his taking part in the games provided for him. So long as there is no education on this subject, it will be a matter of resentment for the students and it will be no better than a leap in the dark. Every possible facility and incentive must be placed before the student if compulsion should prove successful. In really needy cases the student must be supplied with bats, rackets, sticks and other requisites. "What! is it not very expensive? Is it not a loss to the management?"—the Manager with a Shylock's mentality may say, as in fact there are many among them who consider the school a commercial concern. 'Yes, sir,' we might as well as say "You must not mind cost if you want to do things efficiently and whole-heartedly. You award scholarships and prizes for poverty and merit. It is not unreasonable to ask for an extension of this practice to the field of physical culture since this is in fact more important than mental culture, the former being the foundation whereon the latter rests and flourishes." If we really want the youth to be strong, efficient and fit for his task, we must never grudge

cost but must imitate the Army Department of the Government of India which supplies its soldiers with all sorts of amenities thereby enabling them to maintain their efficiency. Even the smallest cut in the expenses, it is said, interferes with and impairs their efficiency. Even so must we spend if we would make the student fit and keep him efficient; if we would enable him to remove the taint of unmanliness that has crept upon him and if we are for removing the blame of unworthiness and the reproach of negligence and indolence he has inherited.

That compulsion has proved successful and has justified its introduction in the fulfilment of its aims in practice is borne testimony to by many Universities in the world. In the University of Toronto, physical training is required of every student proceeding to a degree. In the case of men it applies to the first two years of their course: in the case of women students it applies to the first year only. Failure on the part of any student to comply with this requirement debars him or her from proceeding with his or her course. In England and other countries, physical training has a prominent place assigned to it in the school course. Even nearer home it is assuming an importance hitherto not attached to it and the signs which are visible augur of a good future. The following is an extract from the Government College Miscellany of Mangalore: "The tutorial system has this year been harnessed to the system of compulsory games so as to provide an effective supervision of the students' games. Under this combination the Tutors who have on an average 20—25 students in their care, apart from looking after the welfare of their wards, advising them in their difficulties, etc., are expected to see that they play some game or

other regularly in the college. A terminal report from each Tutor adds to the efficiency of the new system which has been found to be excellent in practice. The members of the staff have taken to it enthusiastically and much appreciation of the system has been expressed by the parents and guardians of students. The introduction of compulsory games in the evening has had a decidedly good effect on the tone of the college."

Mr. H. C. Buck, during his recent inspection and information tour, visited a number of colleges and recommended a scheme of compulsory physical education for the benefit of the college class students to be put into practice in the near future. The scheme will be found to be more fruitful if introduced and initiated in the lower rungs of the educational ladder.

Alongside of imparting information and introducing compulsion, we must also hold out plenty of inducements to attract the students and make them take themselves voluntarily to physical activities. For, herein lies the success or failure of the scheme. Terminal races and monthly competitions, frequent inter-school and inter-collegiate competitive sports with sufficient allurements in the form of prizes and medals may be brought into existence. I am not suggesting anything new or novel but only plead for a recurrence, a more frequent repetition of the District, College, or School-day sports with a view to create a taste for sportsmanship—not an ephemeral taste, one dying as soon as born, but one calculated to bear fruit for a long time and that permanently too. Generally School-day or College-day sports are now announced and started some 3 or 4 days prior to the celebration and stop when—why for the matter of that—even

before the medals are awarded. Prizes for improvements in physique within certain specified periods may be awarded which will have the effect of stimulating initiative in the student.

Now this leads me on to the main efforts towards the prevention of degeneracy in physique which consists in physical measurement, record, and by general medical examination. Physical measurements properly graded have some valuable information to impart. To be of value, these measurements must be made at the beginning and end of each term. Terminal loss of weight is common and if no evident cause appears, should lead to more careful examination, and observation of the subject during the next term. All physical measurements must however be considered in relation to other conditions—nutrition, fitness, etc.

Dr. Lempriere, O. B. E., commenting on the improvement attained by the English public schools, says that "the boy entering school to-day is less robust, more of a sybarite and more of a weakling than his predecessor." The average weight and height of boys entering public schools were observed in the manner indicated above and have been found to produce beneficial results on the whole. Applying his suggestions to our conditions, there is required of our schools a much higher standard of cleanliness, more careful arrangement of the hours of work for younger boys, compulsory physical training or games and a more rational form of dress, if the same results are desired.

A treatment on this subject will not be complete without a reference to certain types of physical activities which do not require compulsion but attract large numbers of

participants on account of the interest they rouse and command in the pupil. Gardening and planting are useful forms of physical activities, especially for children in Elementary and Secondary schools. The interest they show while engaged at these things makes them proof against the physical exertion even where it exists. The various activities and movements involved in such processes as 'digging and delving,' drawing water, and watering the plants, provide much room for manual labour besides instilling and sustaining in them a taste for such occupations early in life. This will indirectly be helpful in removing the charge generally levelled against us that we have a natural aversion for manual labour.

Another sphere of such amusing activity is the Kolattam which is a special feature of the schools in these parts—both in boys' and girls' schools. Kolattam and dancing to music, now slowly dying out and looked down upon as the remnant of an uncultured society, deserves every encouragement in our schools and especially in girls' schools and women's colleges. It must be remembered that many a civilised nation now holds that dancing is a natural and instructive form of exercise and that its practice helps to bring about a uniform growth and is able to correct structural defects and deviations. Kolattam, practised on sound lines, trains the young nerves in deftness and agility besides providing enough exercise to make one 'melt' profusely in half an hour, if not less. This can well form a suitable substitute for the gymnastic exercises so often recommended for women. One has only to gaze at those who take part in such amusements to have an idea of the delight they feel and the eagerness and spirit of emulation they display in the course of the game.

Yet another aspect of this matter which has received so little attention at our hands deserves a special mention in view of the enormous importance attached to it elsewhere. Swimming and rowing are very rarely practised in our schools and colleges with the exception of a few centres like Kumbakonam. Every year we hear of students who have distinguished themselves in the boat races among the English University men. Equal importance is attached to swimming in Europe. In spite of the climatic and other advantages we have, as compared with those countries, it is a pity that such activities do not commend themselves to the generality of our student population.

These in short are a few suggestions for promoting the physique of our students. Young India has to realise its responsibility, has to rouse itself up to attain the goal; for, without their actual, whole-hearted and active co-operation, all is nought and will be a mere waste of energy and effort. It is by

such means that we should aim at creating an unflagging enthusiasm and lasting love for physical culture, physical perfection and physical excellence, which is the *sine qua non* of a well-ordered life and the path leading to the mansion of human happiness.

These plans and schemes fulfilled and effectively carried out, what do we see in the land? A great and irresistible nation of stalwarts seems to stalk the land as of yore, and India which boasted of men like Bhima and Arjuna of old, and now boasts of giants in the guise of people like Ramamurthy and Tara Bai of the present day—to cite only one example from each sex—feels proud of her sons, lifts her head in majestic equality and feels happy in the thought that her children are second to none, not only in physical powers but in the intellectual and moral spheres as well. That is the India of my vision, India as she was and ought to be.

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XXXIV—97

STRIKES AND DISCIPLINE IN SCHOOLS.

By Mr. M. VENKTESIA, M.R.A.S., M.R.S.L.
Curator, Mythic Society, Bangalore.

THE Government of Mysore have recently appointed a Committee with Mr. K. R. Srinivasa Iyengar, Retired Member of Council, as Chairman, to ascertain the causes of Students' strikes which have now-a-days become frequent, to suggest proper measures to prevent them and to deal with them when they occur, and to improve and enforce discipline in schools. Though Committees of Enquiry have been many in India, the Mysore Government have to be congratulated on their wisdom in appointing a Committee for the all-important aspect of education, viz., disciplines.

STRIKES.

The mentality of the Indian—at any rate that of the Hindu—has been so submissive and law-abiding that well or ill-advised opposition to any measure of those in power is rarely heard of. Organised effort to tone down the authorities is rarer. Strikes in general are a recent import from the West: while students' strikes are more or less novel.

CAUSES.

The cause of a strike may be anything; but can never be deemed unimportant. It may be due to a simple affair, as often it is; but the very fact that it has led to a general acquiescence by the students as a body, ought to be regarded as proof positive of its importance. Strikes may be organised for political purposes, like the *hartals*: they may be due to religious causes, like the recent Bangalore strike: they may be due to dissatisfaction at the attitude of the Principal or

the teacher towards either a whole class or an individual student, like the Calcutta strike: they may be due to indiscreet rules passed by the department, a case for which I am unable to quote. In fact there may be strikes for a thousand and one reasons. The new outlook on life has dawned. And strikes there have been, and strikes there will be. The student to-day is no more the sheepish boy sitting at the feet of the master, quietly submitting to the old ways of severe punishment for all sorts of ordinary and human errors, and getting home to receive a second instalment of caning and ear-twisting if only he should say he was punished in the class. The Western ideas of independence, liberty, equality, self-respect and the like have got into our schools, at least in the cities and towns. The student no more regards the teacher as a demi-god and a tyrant, but looks to him as a friend and guide, and more often than not, as a simple Government servant paid to do the work. Along with the enviable qualities of the West, if we had also imported others more stringent and hard to adopt, it were a consummation devoutly to be wished. But alas, the human mentality is to copy what satisfies the craving and leave aside others untouched, unlearned and unpractised. It is just here where a real service can be done to society by bringing to the notice of the uninstructed, such qualities by means of persuasion, propaganda and legislation where possible and necessary. I mean the students who are eager to declare independence do not ordinarily bestow their thought to its corollaries, discipline, duty and the like. And unless and until these distinguishing characteristics of students are brought home to their minds, the causes of strikes cannot be removed even to an extent.

PREVENTION.

This condition fulfilled, many an ill-advised strike can be averted. But on no account can it be presumed that strikes can be made to vanish from the earth once for all. If the League of Nations should become the Heavenly Court on Earth, if all the weapons of battles and warfare should be erased from the world, if the whole world should live in peace and harmony without one nation interfering with another, if there should be no words like warfare, ill-will, prejudice, grievance and the like in our dictionaries, then indeed, will the saintly aspirations of the Mysore Government be fulfilled.

We have only to consider whether it will not be possible to prevent at least a good number of strikes from happening. The strikes organised on political grounds are the most difficult to be handled.

STUDENTS AND POLITICS.

Here a question arises whether students may be allowed to participate in politics. The boys of to-day are the men of to-morrow who have to guide the destinies of the Nation. 'The Child is father to the man.' If a boy is denied all knowledge of the conditions, claims and aspirations of his country, he will be too old, weak, conservative and pessimistic in his political outlook when he becomes a man. He will then rest contented with what is given to him out of grace and will not be suited to take the cause of his country and fight it out. It will be a matter of degeneration from generation to generation; and particularly the unhappy Indian will never see the light of liberty. The youth has a propensity to be bold, dashing and enterprising. If these qualities are not properly cultivated in the growing stages and allowed

to get rusted, the man becomes timid, and lets matters take their own course. He does not grumble, he does not feel insulted when insults are offered to him and he will be all submission. In order to make him realise the needs and wants of his country, to devote at least some time for its cause, to be patriotic and to repel unwarranted and impertinent attacks, it is most necessary that the training and impetus should be given in his boyhood. A martial spirit in action as well as in words must be imbued into the minds of the boys. They should, by all means, be allowed to discuss political matters calculated for the good of the country as a whole. After a certain age, they must be allowed to participate in the political activities of the country in a passive manner. But let it be never supposed that this should be done when it becomes detrimental to the boy's duties as a student.

POLITICAL STRIKES.

Reverting to the question of strikes for political purposes, they must be treated with an amount of leniency. If, for instance, the boys of all the schools should join a *hartal* which is being observed all over the country, it should not be taken serious notice of. On the other hand, it should be regarded as a useful lesson on patriotism and unanimity. We have not as yet had cases of political strikes of students deterring them seriously from their studies; and hope we will not have such things in future also, unless all our leaders should become simultaneously insane.

RELIGIOUS STRIKES.

India is most unfortunately rank with religious animosities and differences. Attempts are being made to wipe them off, but a Mustafa Kamal Pasha has not so far

incarnated in this land. Strikes organised for religious causes can be easily averted by the tactful and timely action of the authorities, if not by allowing some discretion to the head of the institution who will be in a position to study the mentality of the boys and effect a quick compromise.

OTHER STRIKES.

As regards strikes on account of alleged misbehaviour of the teacher, it is best that the teacher behaves so intelligently as not to give room for dissatisfaction. It should be his first and foremost concern to win the love and esteem of everyone of his pupils even at the risk of receiving censure from above. If, however, he should get into the pool of indiscreetness by some misfortune, he should not shirk from compromising his position to some extent in the interests of his higher duty, and thereby gradually regain the goodwill of the boys. If he considers himself unfit for the task, he has no business to remain there. Just as a leader is backed out if he loses popularity among his following, so is a teacher to be backed out by the authorities if he loses the confidence of his pupils.

It is impossible to foresee all the kinds of strikes that may occur in the schools. Whatever the nature of the strike may be, it may be safely said without fear of contradiction that, by timely, sympathetic, tactful and politic action, many a strike will not see the light of day.

REMEDIAL.

The remedial measures are more or less the same as the preventive. Where strikes are for causes outside the school and the Education Department, the action is only passive. The teachers should put up all efforts to induce the boys by pacific means to return to work. They should keep in daily communica-

tion with the higher authorities and should on no account be allowed to open the class-rooms and sit there as on-lookers and say that was all their duty. If the causes of the strike happen to be possible of redress by either the head of the institution or the educational authorities, they should be removed wherever possible, and that before the strike assumes a huge proportion; and no question of prestige and other superficial reasons should be allowed to have the upper hand. This cannot be said to be giving the boys an encouragement to go on strike for all sorts of complaints. Strikes are difficult to organise; and if it should be so, it is all the more so among the boys unless it is due to a cause of their own and launched on their own account. The theory of professional strike-leaders may have some justification in the case of labour: but it cannot stand for a moment with the boys. Drastic measures during strikes of any kind have been found to be disastrous. Is it not more so during students' strikes? Boys are after all boys. They have no worries of family life. They have no higher officer to be submissive to. They are at the height of independence added also with an amount of irresponsibility (with apologies to the student population). Prevention is always better than cure: and nature cure is the best of all remedies. The most natural way of appeasing the wrath of the boys and of meeting their demands is by far the most effective remedy. Strikes may be effectively called off by arbitration also. The parents of the boys and the leaders of the public may be called in and requested to settle matters amicably.

DISCIPLINE.

All this may appear, in a sense, like subordinating discipline in schools: but it is not so. If there is proper discipline, there is

no reason for strikes being organised for all sorts of purposes. If the strikes are numerous and for petty reasons, and disorganised, they presuppose want of discipline. But if they are properly organised, for really good reasons and are few and far between, then there really must be a serious grievance which certainly requires redress. On the other hand, if they are *hartals* and other political strikes, they do not exhibit want of discipline; but they do exhibit a growing new spirit.

TEACHERS.

To deal with the subject of discipline, we must first concern ourselves with the teachers. The teachers as at present are poorly paid and discontented. On account of the small starting and little prospects, the right kind of men do not come forward. Training colleges and schools there have been, but they do not appear to have done much in the way of giving us high class men. What is wanted is a better class of teachers who know and realise their great duty to mankind, and who will devote their heart and soul to that end. The responsibility of the teacher in framing and moulding the character of the future generation is very great. He must realise that he has been deputed to train the future men of the country. The teacher must also be aloof from the Secretariat. He must have no fears to shun and no favours to win. The appointment, promotion or dismissal of a teacher must never be determined by a reference to his political, religious or other views, but only to his character and merits as a teacher. The existing fear among the boys that the teacher is after all a Government servant and that where its interests are concerned he will not come to the aid of the boys, must be removed. The teacher must

move freely among his students and must know the capacity, weaknesses and requirements of each boy. He must realise that his responsibility does not cease with a couple of lectures a week. He must love the boys and in return gain their affection. He must study and acquaint himself with the latest methods of pedagogics and must be an up-to-date man in his own field.

ASSOCIATIONS.

Each educational institution must have a parent-teacher association where both meet together and discuss how best to make good citizens of the boys. There must be a free intermingling between the parents and the teachers. Teachers' Associations and Councils must be formed and mutual exchange of views among the teachers encouraged.

INSPECTORATE.

The inspectorate ought to be more active. Mere circuits as per programme, and visiting the headmasters in the schools are not what are required. The Inspector is certainly not a post-office to receive and transmit reports, circulars and the like. He must be an educationist of a high calibre. He must visit the schools, intermingle with the boys, know their efficiency and draw-backs and ascertain their wishes and grievances. He must join them in social parties and identify himself with the staff of the school he visits. Halting at the travellers' bungalow, paying a flying visit to the school and expecting teachers to behave towards him with a distant awe and respect are to be deprecated. On the other hand, the teachers and boys must welcome the visits of the Inspector and have a feeling of friendliness with him. The Inspector must be in constant touch with the boys and the parents, and must always be too willing to

meet their requirements. He must realise that he is more an educational propagandist than a simple Government machinery for correspondence purposes.

THE CLASS-ROOM.

Then we come to the class-room. It must be scrupulously clean, neat and tidy: everything in its place and in fit condition. Mending pencils, spilling ink, throwing papers carelessly about; all these little matters must be corrected, and it is, in fact, these little things that conduce to good discipline. No class should contain more than 25 or 30 boys. Huge numbers in classes become uncontrollable and the teacher often knows not who is in and who is not. Minimising the number in a class necessarily involves greater expenditure on staffing; but if a good educational system is to be maintained, the funds must be found. Another important thing that must be done in a better manner is to make one teacher responsible for one class. This system is no doubt in vogue; but the class teacher has not as much responsibility for his boys as he ought to have. The attendance registers must be scrutinised in each period. Boys have a tendency to take an aversion for either certain teachers or certain subjects. This must be strongly discouraged and boys absenting themselves for certain periods only must be severely dealt with. There needs no ghost come from the grave to tell us that punctuality and regularity are the first step for discipline. But it is to be regretted that while boys are fined and otherwise penalised for joining *hartals*, their irregularity and unpunctuality are taken little notice of, if at all. They must be insisted upon to be in their places exactly in time, not to move about in the class-room disturbing the other boys and not to be going out and

coming in as they choose. It is the veteran students that ordinarily take the lead in these irregularities: and they must be properly watched and severely reprimanded when they go wrong.

SCOUTING, ETC.

Scouting, physical training, gymnastics, and organisation of volunteer corps play a very important part in enhancing discipline among the boys. These must form necessary features of every school and each boy should be compelled to attend one or more of them. They must form an additional compulsory group of subjects for the examinations. The instructors must be either teachers of the school, or men of good educational qualifications. A man of meagre academic qualification will not command the respect of the boys, whatever his capacity in his own line may be.

SCHOOL UNIFORM.

A system of prescribing a school uniform as in the European Boarding Schools will also be conducive to good discipline. It may not be costly. The kind of uniform may be made to suit the requirements of the locality. The clothing may be made out of the cheapest cloth, khaddar, or costly fabrics according to the means of the parents. But the design and the colour scheme must always be uniform. A white dhoty, a blue coat and a black cap would do quite as well as anything else. This system of wearing regulation dress as against the existing most irregular ways of dressing will be more decent. One thing must here be taken exception to: and that is the issue of circulars from the department giving vague ideas of discipline: prohibiting teachers and students from appearing with an open collar

THREE EDUCATIONAL ADDRESSES.

By Mr. N. K. VENKATESWARAN, B.A., L.T.,
Teacher, S. M. V. School, Trivandram.

coat and no tie, and from entering the class-room with slippers or sandals on. This last is, particularly, most offensive to the mentality of the Indian.

PUNISHMENT.

Lastly comes the most unpalatable portion without which there can be possibly no discipline: I mean, punishment. The old ways of harsh words and caning will no longer do. Neither can it be said that marking the boy absent or sending him out of the class will be effective on the present-day boys. A high sense of honour must be imbued into the minds of the students and the teacher must so command them by love and affection that even a look of contempt must be enough to move the boy. In addition, courts of honour must be established in each school and the boys meted with proper punishment for their errors.

CONCLUSION.

Many of the lines suggested will, no doubt, involve increased expenditure on education. But if any Government is really anxious that the country's youth must be trained to become loyal, honourable and useful citizens in after-life, the money is well worth spending even at the risk of retrenchment in other directions.

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HERO AS POET

WITH INTRODUCTION AND NOTES

By the Rev. S. GNANAMUTHU, M.A.

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IF there is one word which more than any other describes faithfully the nature of the times we live in that word, it seems to me, is educational. If we just look around and think a little, we must be compelled to admit that education has become the common gospel of all peoples in this age. There are forces that challenge the educational idea, but even these far from wanting to abolish education only seek to make it better. Education is well on its way to the conquest of mind and a new faith sprung from it and hardly less sacred than any of the revealed religions is spreading light over the dark spaces of the earth.

These thoughts have been prompted by the perusal of three recent Convocation Addresses. A University Convocation Address is generally the expression of long-cherished personal ideals and as the character of all ages is largely determined by the individuals that lead the highest and fullest lives, these Convocation Addresses have more than passing interest.

"Remember life is not a livelihood," said His Excellency Lord Goschen, addressing the new graduates of the Madras University. "Knowledge is not only a momentary asset. For, the possession of knowledge in its true sense leading as it does to an ever-increasing desire for more as a healthy appetite is created, brightens and enriches life by creating fresh and varied interests and makes the happiness not only of the student himself but of those amongst whom he moves." Here is an acid test of education and every Univer-

sity graduate may well apply it to himself or herself by way of a little inward search. There is the real danger that men and women might fancy themselves blessed in education while they have only obtained the dubious graces of an inferior deity. The test must be applied to see how far we have been true to the *one god*. If the educated do not make others as well as themselves happy, it is clear that they have either derived instruction at a spurious altar or that they have read the right instruction backwards.

His Excellency dispersed the notion often entertained in some quarters that the English are trying to anglicize Indian learning. "Do not think that we are endeavouring to force an English education on you, to anglicize your learning or to confine students to any sphere of knowledge. Education is not English or Indian. It is international. . . . Our sole desire is that the latest and most up-to-date knowledge culled from the brains of the most eminent men in their separate branches should be at the disposal of students." It is impossible to exaggerate the international character of education. When people speak of reforming the prevailing educational system to make it more suitable to the actual everyday needs, they often forget that the glory of education mainly lies in its essential oneness in all countries. Let us come to this oneness nearer and nearer and if any reform holds out help in this endeavour, let us by all means put it through. The only justification for desiring to make education more and more national must be the vision of a truly international education.

Concluding His Excellency uttered some noble words whose meaning mingling in the life-stream of men will exalt them to the estate of the elect even if life's uncertain

opportunities had denied them the felicities of a University degree. "Set before yourselves your ideals and start with courage on the road, and do not let disappointment check your ardour if you are hampered on the way; for it is the high endeavour, the fine effort, that counts. . . ."

Addressing the new graduates of the University of Bombay, His Excellency Sir Leslie Wilson, the Governor of Bombay, expressed the same great sentiment. In a spirited appeal he asked them,

"To set the cause above renown,
To love the game beyond the prize,
....."

Quoting a famous passage from R. L. Stevenson, His Excellency said: "O toiling hands of mortals! O unwearied feet, travelling ye know not whither! Soon, soon, it seems to you, you must come forth on some conspicuous hill-top, and a little way farther, against the setting sun, descry the spires of El Dorado. Little do ye know your own blessedness; for to travel hopefully is a better thing than to arrive, and the true success is to labour." *It is the fine effort that counts.*

We all know that education entitles us to wear a coat but His Excellency was of opinion that his young audience must be prepared to take off their coats. "Unless a University degree makes a man better all round," said His Excellency, "there is, you may depend upon it, something wrong with it. . . . The Headmaster of one of the greatest Public Schools in England recently urged his boys to be prepared to start in any line of real work at the bottom of the ladder. A public schoolboy, he said, would make all the better a Railway Director because he started his

career by punching tickets. . . ." His Excellency said that he could not imagine any higher work for the young patriot than to give of his best in order to develop the natural resources of this great country. It is sad that this excellent advice, which has again and again been offered to the young has not yet met with a much greater response than momentary approbation.

Speaking about education in general, His Excellency said: "Education, rightly understood, is a preparation, not merely for a professional occupation, but for life itself. Universities and Public Schools and all other institutions which resemble them will render the best service to the nation by educating good citizens, who in, Milton's great words, are fitted "to perform justly, skilfully and magnanimously all the offices of peace and war." Borrowing a famous phrase from Bacon, His Excellency said: "You young men are the merchants of light of your generation; it is your privilege to spread abroad, when you go out into the world, the light you have acquired in this 'Solomon's House' of yours among your fellowmen. This, believe me, is the truest and highest form of patriotism." These words are a University education in themselves. Standing on the threshold of life with the blessings of their University on them should the young men decide to bear the torch and become real *merchants of light*, they must soon descry spires of gold rise before them in a land of glory greater than El Dorado. Men hanker after glory and find it rarely in a life that glory would fain adorn.

Mr. C. R. Reddy, M.A. (Cantab.), Vice-Chancellor of the Andhra University, in his Convocation Address to the Mysore Univer-

sity's graduates of the year, varied from the quality of University education to its organization. Quoting Lord Bryce, he said that freedom was the life-blood of University-teaching. He claimed that the Andhra University was easily and by far the most autonomous corporation of its kind in India. He strongly pleaded for the 'vernacular medium' while insisting that every care should be taken that English was properly and adequately studied as a language. He suggested *vernacularization* on a subject basis instead of by grades. Speaking about the education of women he said: "If one of the objects of an educational system is to broadcast existing knowledge, to carry it to every household including those in the remotest villages and irrigate our darkness by channels of light, and if it be further conceded that in the conditions in which they are placed the imparting of the maximum of knowledge in the minimum of time to girls is possible only under the regime of the mother-tongue, it is a matter for consideration whether India should decide for a differentiation of her media of instruction on a sex basis, making English the medium for boys and the vernacular the medium for girls!" It is very good that our girls would agree to nothing of the sort. They stand or fall with boys in most matters although in view of the fact that according to Mr. Reddy, Mrs. Sidney Webb thought that Indians were the most unhygienic nation in regard to food, they may not be quite unwilling to stand apart for a space to learn a little of household and social sciences.

The young audience of Mr. Reddy must have left the hall with an appropriate flea in the ear, for he said, referring to the graduates of our Universities, "They know how to

prepare themselves for examinations, but the series of examinations having ended, they do not know what to do with themselves. If there were examinations and parental financial assistance till they reached 55 years of age when they could retire on a pension, that would be near to their notion of an earthly paradise. If the intellectual and social discipline.....connoted by a four years' University career has not helped them to find their bearings in life.....no Convocation Address could avail to save such ineffectual craft from foundering miserably.....I am tired of the annual letting off of idealistic fireworks in the convocation sky and sentimental adoration of the departed glories of Nalanda, Takshasila and Amaravati. The Hindu-mind revels in myth-craft; and once you are departed, you can safely reckon on becoming a glory! It is the duty of those that are not amply confident of building a big future to reverse their attention and create a glorious past, and this duty we have always fulfilled to our entire and exclusive satisfaction."

This is somewhat tart for those who are about to launch their life's little boats, and what is more, somewhat true, but the remedy lies in living up to the great ideal of education sketched by their Excellencies at Madras and Bombay. *It is the fine effort that counts.* Let them then put forth a fine effort to be true 'merchants of light.'

Reviews and Notices.

MARLOWE'S DOCTOR FAUSTUS, EDITED BY A. H. SLEIGHT (ENGLISH LITERATURE FOR SCHOOLS). (CAMBRIDGE UNIVERSITY PRESS). Price 1s. 6d. net.

This is an attractively got-up little book provided with a useful introduction and necessary notes at the end.

FRANCIS THOMPSON AND HIS POETRY, BY T. H. WRIGHT (POETRY AND LIFE SERIES). (G. G. HARRAP AND CO., LTD.) Price 1s. 6d.

This is a welcome addition to a well-known series of critical books on English poets. As the details of Thompson's life are not generally well-known and there is a mystery about the way in which his life found expression in poetry, the present able study which interprets the life and poetry in mutual terms is a valuable commentary on the author of the "Hound of Heaven."

BALAUSTRION'S ADVENTURE, BY ROBERT BROWNING, EDITED BY DR. E. A. PARKER. (MACMILLAN AND CO. LTD.) Price 1s. 9d.

It is a good idea to offer Browning's modern version of the "Alcestis" of Euripides in this edition, provided with an informing introduction and necessary notes. The story of Alcestis is bound to be looked at differently by moderns from what Euripides made of it, because the old Greek life like even the modern Indian one, regarded woman only from man's point of view. Browning has made of Admetus a character-study which Euripides could not suspect. Dr. Parker does not mention the version of the Alcestis' story told by William Morris.

A TUTORIAL HISTORY OF ENGLISH LITERATURE, BY A. J. WYATT. (UNIVERSITY TUTORIAL PRESS, LTD., LONDON). Price 4s.

This is a reprint of an old book with some additions. There is a list of the English classics

prefixed to the book, recommended for study by the reader. An eleventh chapter treats of Stevenson, Hardy, Kipling, Barne and Shaw.

JUNIOR COURSE OF ENGLISH COMPOSITION, BY E. W. EDMUNDS. (UNIVERSITY TUTORIAL PRESS, LTD., LONDON). Price 2s. 6d.

This is a second edition of the book, calculated to be very useful in the High School and in the Intermediate classes. All varieties of Composition are comprehended in the book.

POETIC VALUES—A GUIDE TO THE APPRECIATION OF THE GOLDEN TREASURY—BY E. A. GREENING LAMBORN. (OXFORD UNIVERSITY PRESS). Price 3s. 6d. net.

This is a delightful book. The author has some very bright things to say about poetry in his introduction. The comments on the individual poems should be very precious and helpful to all readers.

GOLDEN TREASURY OF SONGS AND LYRICS, BOOK FIFTH (19TH CENTURY), SELECTED AND ARRANGED BY LAURENCE BINYON, WITH NOTES BY J. H. FOWLER. Price 2s. 6d.

This book will naturally suggest a comparison with the above. Both the annotators offer apology for annotating poetry. But Mr. Lamborn argues with greater brilliance. The notes are also characteristic. Take for instance, Mr. Browning's "A Musical Instrument." Mr. Lamborn explains the higher "poetic values." He begins with: 'The poet's fate is here in emblem shown.' He points out later: "If ever there was a fine example of the 'fine excess' which has been said to characterize poetry, it is in the repetition of *sweet* in the sixth stanza." We miss such fine discrimination in Fowler. But his prosaic notes should still be very useful to students.

CHITOR AND OTHER POEMS, BY SHYAM SUNDAR LAL CHORDIA, WITH A FOREWORD, BY E. E. SPEIGHT. (D. B. TARAPOREVALA SONS AND CO., BOMBAY). Price Rs. 4.

This is a collection of twenty-nine sonnets written with real poetic feeling. Though one may pick up imperfections of concept and verbal form here and there, we congratulate the author on the very appropriate themes he has chosen for his poetic exercises. Udaipur and Rajput heroism come in often but there are several other subjects too. A sonnet on 'Sacrifice' condemns bloody offerings at temples and concludes:

"Could crimsoned altars be his dwelling place?
O soulless pilgrims of a savage race."

THE COMMISSION AND AFTER, BY A LIBERAL. (D. B. TARAPOREVALA SONS AND CO., BOMBAY, 1928). Price Rs. 3.

This little book published a few months back is by an anonymous politician of the Liberal School of Thought, who first traces the announcement of the appointment of the Simon Commission, its reception by the various shades of the Indian Press and politics, the debate in Parliament over it and its rejection by the December All-India Conferences. He then stresses that democracy, so far as it has been introduced and worked in our land, has worked as well as, or even better than, in Europe or America, and urges that our future constitution must be Parliamentary in its nature, whether it is dubbed Eastern or Western—it being the only way in which the people of a large country can keep in touch with or influence the conduct of the Government. The writer then examines the problem of the Indian States which will have to keep themselves abreast of the times by introducing the constitutional procedure of British India and over which the Central Government will have to maintain its authority unimpaired. Adverting to some of the outstanding features of Indo-British relations, the Labour Party is looked on

with suspicion, and it is unwise to expect too much from it. Mr. Montagu and Lord Chelmsford were wrong when they suggested the expedient of decennial inquests to test the measure of India's progress; these are bound to be as they have been, followed by the clamourings of each community and sub-community intent on establishing and increasing its own privileges. It is expected by the writer that the Statutory Commission will, in any case, recommend the establishment of a constitution that draws its motive power from within and with sufficient safeguards to change its own constitution. Also the place of India in the Empire requires to be clearly fixed especially since Dominion status has been fixed by most politicians as our goal, and as it will be a mistake to cut ourselves from contact with progress in the Dominions by non-co-operating with the Imperial Conference. The Liberals are in general agreement to have reform on the lines laid down by the All-Parties Conference in Delhi in February last and since embodied very successfully in the famous Nehru Report. This book, though a little out-of-date, can still be read with profit, as the suggestions are put forward with skill and clarity.

A NEW HUMAN GEOGRAPHY OF THE INDIAN EMPIRE AND CEYLON, BY C. MORRISON, M. A., LL. B. TRANSLATED INTO TAMIL BY N. SUBRAHMANYA IYER, M.A., L.T. (MACMILLAN AND CO., LTD., 1928). Price 1s. 12.

This is the Tamil version of the book written by the author with a view to show prominently the influence exerted by geographical environment on human activity. This is based on the method adopted in his previous work: *Our World—A Human Geography*, and emphasises the use of land as man's dwelling-place, his field and his workshop and shows how our country has been modified and used to our needs, in its physical features as well as in its resources. After a preliminary treatment of the method of learning geography,

he explains the physical features, seasonal peculiarities, rainfall, how these have affected the life of the people and how cities and ports have grown. The life of the people dwelling in hill and plain regions, the production of our food-crops and commercial crops, the river-valleys and their activities, navigation and other aspects of human activity are all brought out with great force, marked by effective repetition. The occupations of the different sections of the people, and finally the appearance of the land and towns on a coastal voyage are all graphically described. The maps are suggestive and the illustrations are numerous. The book written by an experienced teacher and observer and translated by a competent scholar is such as will, if properly handled, stimulate thought and observation on the part of the pupil.

THE MAHRATTA RAJAS IN TANJORE, BY K. R. SUBRAHMANIAN, M. A.—WITH A FOREWORD BY P. T. SRINIVASA IYENGAR. (PUBLISHED BY THE AUTHOR, 60, T. S. V. KOIL STREET, MYLAPORE). Price Re. 1.

This small book is a clear and readable account of the Mahratta period of the history of the rich Kaveri delta stressing on the renaissance of art and letters in the Tanjore country in the 17th and 18th centuries that received so much support and encouragement from the Mahratta dynasty which planted itself on the ruins of Nayak rule about the close of the third quarter of the 17th century. The Mahratti inscription in the great Tanjore temple, dated S. 1725, has been made use of, in addition to other available epigraphic and literary material. We do not know how long Tanjore could have remained united to the central core of Mahratta dominion in the Western Deccan, and the isolation of Tanjore with the inevitable result of its ultimate submission to the pressing Muhammadan power could not have been avoided by any amount of wisdom on the part of its Mahratta rulers who by their very geographical situation had to remain isolated and emasculated

by lack of reinforcements, moral and material, from the Deccan base. The jealous attitude of the Nayaks of Madura and of the newly-rising Nawabs of the Carnatic, not to speak of the troubles from the turbulent feudatories, further hastened the decline of the principality. But what they lacked in military prowess was more than made up by their patronage of arts and letters. The rich crop of literature that marked the reign of Shabji and that served as a foil to illuminate the genius of Ramabhadra Dikshit was equalled by the brilliance of Sarfoji's court which built up the splendid palace library and maintained a printing press with Devanagari type, besides a small museum and an interesting coin cabinet. The writer devotes one chapter to the description of the administrative system and another to an account of the charities and religious and other benefactions. Swartz was the guide of Raja Sarfoji, and he, like others before and after him, had a free field for Christian missionary activity. A survey of the economic conditions including land-tenures, concludes the book which should be in the hands of the students of Tanjore district.

EUROPE, BY E. A. FREEMAN—REVISED AND BROUGHT UP-TO-DATE BY F. J. C. HEARNshaw—MACMILLAN & CO, LTD. 1926.) Price 1s. 9d.

This famous student's manual of European History tracing the life of the Continent from the days of the early Greeks, by the pen of Freeman, has always been popular and served its reader very well. It was first published in 1876 and has been revised with a very few alterations and some additions by Professor Hearnshaw, who has brought the narrative down to the present day and supplemented it with a chronological table. A classic type of close, reasoned and well-compressed treatment, the book remains and will continue to remain for long unsurpassed in its brevity and lucidity and in its use both for the young student as well as for the lay reader.

SIVAJI AT PRATAPGARH, BY S. K. DEVASIKHAMANI, IN TAMIL—WITH A FOREWORD BY K. S. RAMASWAMI SASTRI. (CHRISTIAN LITERATURE SOCIETY FOR INDIA, 1928). Price 6 as.

The author's object in this book is to shatter the old notion that Sivaji killed Afzal Khan by treachery and thus remove a wrong impression and enable the great hero to rise higher in our estimation. It traces the early activities of Sivaji and the influence exerted on him by his mother and teacher; the conviction that a higher power always protected him was ever present in his mind and emboldened him in all his deeds; and all this is woven into a narrative account leading to the Afzal Khan episode and the climax of his assassination, if we may use such a word, and Sivaji's victory over the enemy forces. The style is chaste and has an easy flow, though it is in places rather too high for the average Secondary School student. More of these books teaching our boys in enthralling narrative form the noble deeds of our ancestors should be forthcoming; and the author has done a real service in thus presenting Sivaji to Tamil boys, in all his chivalry and heroism in exploits and daring.

KALIDASA

Being a critical appreciation of his works

IN TAMIL

By K. S. RAMASWAMI SASTRIAR, B.A., B.L.

Sub-Judge, Tanjore.

Crown 8vo. about 200 pages. Price 12 as.

Approved as suitable for school use. Vide Fort St. George Gazette, Pt. I-B. dated 19th April 1927.

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Deputy Inspector of Schools, Periyakulam Range.

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The Educational Review.

We congratulate the organisers of the recent Provincial Educational Conference held at Chidambaram on the success which has attended their efforts. Mr. P. T. Srinivasa Iyengar delivered an excellent Presidential Address (which receives special value in view of his long educational experience), in the course of which he reviewed very ably some of the most outstanding problems of to-day. Speaking at Chidambaram he naturally started offering his felicitations to the Annamalai University which is to be inaugurated at the beginning of the next academic year. Mr. Srinivasa Iyengar hoped that it will be "a centre of culture, a focus where are concentrated and whence radiate rays of enlightenment, artistic and scientific, such as will tend towards securing emotional and intellectual satisfaction of those who can rise above the prose and that the very ugly prose of ordinary worldly life, to the poetry of science and arts which can make life worth living in a sense that the uncultured cannot realize. And this culture whose purposes the new University of Chidambaram can subserve ought to be primarily national, with which ought to be blended the foreign modern culture, which the sudden vanishing of national boundaries by the rapid development of mechanical transport and international commerce, intellectual as well as material, is bound to spread all over the world." We hope

XXXIV—69

that Sir Annamalai will make a wise choice for the Vice-Chancellorship of the new University and choose a person who will not merely attend to the routine of office-work, but be able to direct the academic life of the University in a spirit of large vision. It is for Sir Annamalai to choose between one brought up in familiarity with red tape and another who understands real University life and can be expected to preside with distinction on a vital centre of higher learning.

Mr. P. T. Srinivasa Iyengar made some very sensible observations on the use of the English language in India and his remarks deserve special attention in these days of ill-founded talk on the use of English and vernaculars in India. "English studies are so important," he said, "that they cannot but occupy the most prominent place in any scheme. It is the language of administration; it is the language in which civil and criminal law is embodied; it has got a tremendous money value, which no other language can have in India; it is the *lingua franca* which has unified us politically; it is the language of commerce which is the chief human activity, now that the world has definitely entered on the Vaishya phase of human evolution; above all, it is the language through which we can most easily acquire modern European knowledge."

We are particularly pleased with the concluding part of his address in which he made a powerful appeal for organising the profession and we hope his

xhortation will make some impression on the teachers of Southern India and in the rest of the country :—

"Gentlemen, I have not discussed any of the numerous problems, that exercise the minds of teachers at the usual meetings of their guilds, such as the revision of the Grant-in-Aid Code, the necessity of paying a living wage to men engaged in teaching, etc. We know our minds on these subjects and have constantly expressed our wishes by way of resolutions. The real problem is how to get our wishes respected, our aims realized. I have only one remark to make to help to solve this problem. Education has become the subject of democratic control and not autocratic direction. An autocrat is amenable to reason because he is a single man and generally a cultured man. Democracy is not amenable to reason but only to the compelling influence of the vote. Therefore it behoves us, teachers, so to organise ourselves that our votes can influence the policy of ministers. We have not yet taken to democratic ways seriously. Democratic ways mean organisation and demonstration. King Demos is deaf and we must shout in his ears. King Demos is uncultured and cannot be reached by sweet reasonableness. Notice what he has made of the Madras University. He has evoked a number of bodies where not culture but interests predominate. King Demos can understand the conciliation of interests, for interests control votes. It behoves us therefore to become an interest, to enter actively into the conduct of elections, to organize ourselves and make our influence felt in the councils of the land. Let us develop our Protection Fund, for without money we cannot fight for the betterment of our cause. If silver bullets are necessary for the bloody wars of nations, they are more necessary for the bloodless fights of democratic states. Unless the whole body of teachers in the Presidency organize as a solid phalanx, I fear, we shall continue to

be the most-depressed classes among the public servants."

The question of co-education is perhaps not yet an acute one in India, though its complete adoption will result in considerable economic saving to a poor country like India and should be welcomed. The conservative instincts of India are responsible for the prevailing wrong notions on the subject, which are sometimes prevalent even in circles which ought to know better. We invite the attention of our readers to a comprehensive discussion of the subject in a new volume, entitled *The Mixed School*, by Mr. Howard (University of London Press). Mr. Howard is not a mere theorist and his book is based on years of acquaintance with mixed schools in various parts of England. He has no hesitation in saying that boys as well as girls acquire valuable characteristics in a mixed school which they cannot acquire in institutions set apart for the sexes. The boys in a mixed school acquire an additional grace and refinement by association with girls and *vice versa*; girls acquire additional pluck and commonsense by association with boys. Co-education does not of course imply that any differentiation in courses and training is not possible for the two sexes; there is no danger that girls cannot acquire the special training they may need in Music and Domestic Science. Mr. Howard has also demonstrated that in matters like athletics, boys in mixed schools do not show any inferiority to other institutions. The most valuable

part of Mr. Howard's book is however the advice and guidance which he gives on the problems arising in connection with the management of a mixed school. The time is probably not far distant when these problems will press themselves upon the attention of educationists in India, and it is wise to profit by the experience of other countries in the matter.

One of the most encouraging signs of educational effort to-day is the attempt which is being made by various workers to bring into existence world-organisations of various kinds for co-ordinating educational activities. Reference has been made in these columns, more than once, to the periodical Conferences held under the auspices of the World-Federation of Educational Associations, the ensuing session of which is to be held at Geneva in August 1929. It is interesting to note in this connection that India will be represented at the Conference by a number of distinguished educationists headed by the President of the All-India Teachers' Federation, Principal Seshadri of Cawnpore. The League of Nations has also been responsible for valuable work in the same direction, through the agency of the Sub-Committee appointed for the purpose of fostering International Intellectual Co-operation. The International New Education Fellowship is also arranging a World-Conference on Education in August 1929, in connection

with which the following notification has been issued :—

The New Education Fellowship, an international organisation of teachers and parents in all parts of the world, is holding its fifth biennial Conference at Elsinore, the famous scene of *Hamlet*, near Copenhagen, Denmark, from 8th to 21st August 1929. The beautiful Kronborg Castle, overlooking the sea, will be the head-quarters of the Conference.

At the Fellowship's last Conference at Locorno, over 1,200 educationalists were present from 42 countries, and we are very glad to note in this connection that India has sent nearly 20 representatives to the Locorno.

Among the speakers for 1929 are the following :—

Prof. J. Piaget (Geneva), Prof. F. Cizek (Vienna), Prof. Percy Nunn (London Day Training College), Prof. G. J. Thomson (University of Edinburgh), Prof. W. Boyd (Glasgow University), Dr. H. Rugg (Lincoln School of Teachers' College, New York), Miss Helen Parkhurst, Dr. O. Decroly (University of Brussels), Dr. Adolph Ferriere, Dr. O. Pfister, Dr. Raup (Columbia University), Prof. K. Lewin (Berlin), Prof. Pieron (College de France), Herr H. Begtrup (Folk High School, Denmark), Dr. J. Son Bergqvist, Director-General in Chief, Board of Education, Sweden, Dr. E. Kaper, Director of Education, Copenhagen, Dr. Elizabeth Rotten (Germany), Dr. Rabindranath (from India, health permitting).

In addition to daily lectures delivered to the whole Conference, there will be study and discussion groups, courses each in charge of a well-known leader. Some of the groups and courses are :

The psychology of the new education technique of teaching, curriculum research, the Decroly method, the problem child, the Dalton plan, the

Winnepka technique, the child and religion, education for International understanding, the new schools in action (State and private), Parent education and child in the home, testing its place in education.

A special study will be made of the Danish folk high schools. There will be an exhibition representing Scandinavian culture and school work as well as an exhibition of educational apparatus from different countries.

The Conference is planned to be a holiday for its members and plenty of time will be allowed for the enjoyment of the beautiful country and sea at Elsinore and its environs. Over a hundred well-known pioneers in the field of progressive education have already consented to take part in the Conference. It will be therefore a rare opportunity for teachers and parents to meet many of those who are already known to them by name as pioneers along the new path of education.

Educational text-books have an inevitable tendency to deteriorate into mechanical and soulless publications devoid of life and inspiration. The needs of uniformity and the desire to reach the lowest stages of instruction reduce the books to a level of dull mediocrity which may not always be vividly realised inside educational circles. It is significant that the Board of Education in England should have appointed a Committee to consider the quality of school text-books and the conclusions reached by the Committee must be of considerable interest to India also. The complaint is that in elementary schools only third-rate stuff is provided for the reading of children. It

is urged that no standards of truth and beauty are being set up. Schools are not using all that is noblest in literature to help pupils to distinguish what is beautiful, true or helpful from what is third-rate, "sloppy and sentimental or inane." The description would apply with even greater truth to text-books in use in Indian schools, the majority of which are written by people devoid of any literary talent and rely more or less on the official positions of their authors for their introduction and use in schools. An enquiry of the same kind in India would reveal conditions which would astonish those who have any sense of literary appreciation.

It is a notorious fact that educational authorities in India are very chary of entrusting any responsibility

Teachers and Examinations.

to teachers in the matter of examinations, though it is only a policy of trust and confidence that can ensure the best of results. The want of confidence is so serious that in some parts of India, it is the practice to exclude teachers of Secondary Schools altogether from participation in the Matriculation examination. Some recent reforms in Switzerland must serve as an eye-opener to these narrow-minded authorities, and we commend them to the notice of all concerned. In awarding the Matriculation certificate, Swiss authorities have deviated from the existing system of many countries. Most of the State Secondary Schools and a few private ones are entitled to award their pupils the Matriculation certificate on the

completion of their course. An agreement has been reached between the Universities on the one hand and the Boards of the various Secondary Schools on the other. Pupils are weeded out in some measure during the school course. If a student fails to secure a percentage of marks, he is sent down. The written examination is also followed by a *viva voce* test in as many subjects as possible and it is supervised by some members of the School Board. We wish that a beginning was made in the direction in India also, however much it may shock old-fashioned educationists. As the *Literary Supplement* of the *London Times* observes: "To entrust the examination to the Secondary School puts indeed no mean responsibility on its shoulders; on the other hand, as experience shows, confidence in man calls forth the will to justify the trust placed in him."

It is a long way from Cairo to India, but some of the educational problems confronting Egypt are, curiously enough, similar to those in India. The famous University of Al-Azhar in Cairo, though it has had a high

reputation in the past, has become so out of date in its work and spirit, that it has had to be transformed. Till recently it was like some of our Oriental *patasala* in India where people are content to cram for years text-books and commentaries exercising the faculty of memory and nothing else. It has however been resolved now that the courses at the famous University should be changed and brought more into line with the requirements of modern life. A primary and a secondary course are to be introduced into the school and no student is to be allowed admission unless he can show that he has received elementary education. The primary and secondary courses are to take nine years and higher education another eight years. Scientific education is also to be introduced to prepare students for technical careers. When the ancient University of Cairo has found it necessary to change its ways, it is time other educational institutions of the old type did the same. It is folly not to recognise the altered conditions of modern life and perpetuate systems which however excellent at one time have survived the days of their usefulness.

Approved as a suitable Text-book for School use.—*Fort St. George Gazette*, 24th July 1923, page 67

A NEW INDIAN ALGEBRA

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The Madras Mail, Friday, October 31, 1924:

Books which deal with the problems of educational psychology from the Indian point of view are too few and we, therefore, welcome most cordially one which makes such a study and makes it well. Miss Gordon's contribution to this field is one which ought to be read carefully and digested thoroughly by all those who have to do with the education of children, whether teachers or parents.

The value of Child Study is first twofold, from the point of view of theoretical psychology, and second of education. Education along with psychology has much to learn from the science of biology which suggests to both of these sciences the unit for study, viz., a reaction which is a response to a stimulus. The mental life ought to be viewed as is the physical from this point of view. Further, biological science is showing the usefulness both as to method and content of the observation of development. The study of child-nature is in accord with the genetic method which characterises all the biological sciences. Educationally we have more to do with children than with adults in our schools and so from the practical point of view also the more that we can learn about the natures of educands the better for our work. Miss Gordon's book is thus a real contribution to our literature, for it considers these questions with special reference to conditions in South India.

One of the most important of modern developments in this science is that made through the observation of individual differences. Although education is a social process and children are social in nature, yet we cannot deal with them too much in groups without doing great injustice to matters in which they are unlike. Studies made in Europe and America have their value for Indian teachers, but observations made in India, as Miss Gordon's have been, are of great value in enabling us to ascertain the similarities and differences with children of other countries, and the differences among groups and individuals here. Miss Gordon has not only given the result of her own observations but—what is even more important—she has shown teachers and others how they may observe for themselves.

The book surveys the more important problems connected with the study of child-nature. It deals with the stage of child development, with the processes of sense-perception, with play, hand-work, and fatigue, with exceptional children, both sub-normal and supra-normal, with measurements of intelligence, and with the application of the Kindergarten system to the Indian system. It is one of the books which the Academic Council on the recommendation of the Board of Studies in Teaching has declared as suitable for candidates for the L. T. degree. We hope that it may have a wide circulation as its influence is sure to be for good.

Education (Allahabad), March 1925.

The distinguished author of the book under review is one of the few enthusiasts in India who have taken to a systematic study of child-nature. The book embodies the results of close study by the author, not merely of the existing literature on the subject, but of the actual, mental and physical growths of children, as witnessed by her in several schools in Britain and India where she has had the opportunity to work. Within a brief space of 200 pages, the author has contrived, in her plain, matter of fact, and at the same time, engaging style, to elucidate the various topics connected with child life such as the sense perception, play, the service of Hand in Mental Development, fatigue, exceptional children, measurement of intelligence and the Kindergarten system; touching the various theories on these topics and supplementing them by her own views based on personal study and investigation. We would especially commend to our readers the beautiful and inspiring chapter on the Kindergarten system in which without going into technical detail, the author has surveyed the basic principles of the system and pleaded in accordance with these principles for the indianisation of Indian education. We are sure that this

little book will prove an excellent handbook for teachers as well as parents and others interested in the subject and kindle in them a deeper interest therein. It has been already recommended by the Academic Council of the Madras University as a suitable text-book for the students appearing for the L. T. Examination and we hope that other Universities will soon follow suit. We congratulate both the author and the publishers on this valuable publication and recommend every teacher to secure a copy thereof.

The Madras Christian College Magazine, January 1925.

The study of child-nature is exceedingly important for both of the sciences of Psychology and Education. Its importance for Psychology is from the genetic point of view. In the child one is able to observe in simpler forms many of the processes at work which in adult experience become so complex as to make them difficult of analysis. Its importance for Education is too obvious to need extended notice, and yet there are some who are so short-sighted as to neglect it. Here in South India there are a great number of schools in charge of teachers who do not know the elementary facts about child-nature. But with the progress of education the time will surely come when it will be considered as dangerous to employ a teacher who is ignorant of child-nature as it is to employ a man for a physician who knows nothing of anatomy and physiology. Such a book as that which Miss Gordon has written will serve a useful purpose in hastening that day by putting teachers in possession of a primer which contains the fundamentals of the subject in a readable style. It is the type of book which we would like to see translated into our South Indian vernaculars, because it not only includes the principles of the science, but states them with special reference to the needs of Indian teachers.

A personality is the outcome of forces which are both hereditary and environmental so that child study must take account of both sets of factors. Much more is to be gained by teachers through the study of children for themselves than the mere perusal of books on the subject, however authoritative they may be. The trouble with so many students of other things as well as of child-nature is the evident desire to be spoon-fed. They desire to get their information at second-hand rather than take the trouble to study for themselves. In many instances teachers have not the technique necessary to observe intelligently. Very valuable, then, is Miss Gordon's chapter on 'How to Study a Child,' particularly for those who are beginners in child study, and it is a matter of vital concern as much for the parent as for the teacher.

Certain subjects have been especially studied recently by educationists, and Miss Gordon gives useful accounts of the results of these studies. One chapter is devoted to the place of play in child life and in the educative process. It is a wholesome corrective for the old fashioned idea that play is a superfluity. The author brings out some of the most useful services which are rendered by play, for play has direct educative value, assisting in the training of the judging and other mental processes, as well as in the spirit of fair-play and other moral qualities. The play-ground affords a splendid type of voluntary democratic organisation. Another chapter is devoted to 'The Services of the Hand in Mental Development.' Sometimes the school in emphasising the development of the mental processes has tended to neglect the fact that intelligence is sometimes motor, and that these two factors, the mental and motor, are closely related to one another. The questions of 'Exceptional Children' and 'The Measurement of Intelligence' are closely related, since it is through the latter that we get our most accurate knowledge of the former. A final chapter deals with a question on which Miss Gordon is surely competent to speak, 'The Kindergarten System and Its Application to Indian Children.' Altogether she has succeeded in writing a most useful little book, and we hope that it may have a good circulation among teachers and parents who cannot but profit by what she has written on the nature of children and how they should be educated.

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