

countries. Instead of relying on traditional hand-outs-as-usual approach, they could offer wide-open import markets, foreign debt write-offs, subsidies for private foreign investment, temporary injections of cash to help balance budgets and technology transfer<sup>12</sup>. If the impact of regress is widespread and serious as it happened, for example, in Afghanistan and Somalia, leading to economic collapse, societal collapse and state collapse as Udayakumar points out<sup>13</sup>, step by step disarmament and development must go hand-in-hand and under one supervising and administering authority, whose writ must run trans and supranationally.

That seems to be the way to bell the cat.

1. *World Commission on Environment and Development*, Oxford University Press, Oxford, 1987, p. 303.
2. Panda, K., in *Gandhian Model of Development and World Peace* (ed. Misra, R. P.), Concept Pub Co, New Delhi, p. 25.
3. Baker James, A., *SPAN*, US Information Service, American Centre, 24, Kasturba Gandhi Marg, New Delhi, March 1991, p. 43.
4. Wright Robert, *ibid*, 1995, p. 34.
5. Bush George, *ibid*, 1989, p. 11.
6. Baker James A., *ibid*, 1991, p. 42.
7. *Young India*, 23 September 1926.
8. Clark Greenville and Sohn Louis B.,

*World Peace Through World Law*, Cambridge Press, 1962.

9. *The New Indian Express*, 9 January 2000.
10. Sorabjee Soli, J., *SPAN*, US Information Service, American Centre, 24, Kasturba Gandhi Marg, New Delhi, Sept. 1995, p. 15.
11. Stollis Peter, *Third World Q.*, 1995, **16**, 536.
12. Passell Peter, *The New York Times*, 13 March 1997.
13. Udayakumar, S. P., The Deadly Slide, Understanding Regress, *Gandhi Marg*, 1999, **21**, 133–153.

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FROM THE ARCHIVES



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Science and happiness

From a human standpoint, the concluding portion of Sir James Jeans’ presidential address to the British Association is perhaps the most interesting. Within recent times there has been quite a volume of indiscriminate criticism about the benefits of science, and almost all the travail from which the world is suffering is attributed by a section of public opinion to the progress of scientific knowledge in its applications to the practical problems of life. Assuming that there is an element of truth in such an accusation, we are unable to discover a means of escape. Scientific knowledge has now become an integral part of modern culture, and its advancement is bound to be rapid in view of the assured provision for its encouragement, and few can control its direction and output. It is practically useless to suggest the abolition of scientific inventions or to stop scientific researches in any one country, without other countries undertaking similar obligations. Even if such a proposal were feasible, the net result would be to petrify society, but the

hopes of restoring to man his happiness and peace the loss of which he is generally in the habit of laying at the door of science, would be as for from realisation as ever. Science has widened our outlook and augmented our store of knowledge; but it has also failed to enrich our moral endowment. It is equally true that scientific industrial planning will displace more labour than it can absorb, and all efforts to establish a balance between labour-saving devices and unemployment are bound to be futile.

We cannot ignore the innate tendency of man to press every kind of knowledge into his service, no matter to what branch of science and art it may belong. To acquire control over the forces of nature or to perfect the methods of investigating the facts and phenomena of objective reality, is not in itself fatal to the well-being of man; but the end which he uses the scientific knowledge to achieve, makes a wide difference. Knowledge is neither moral nor immoral. It places in our hands the power of dignifying and saving human life; it also puts at our disposal the weapons of destroying it on a scale to which history scarcely furnishes a parallel. If in the past the Church and the State complacently permitted religious differences to lead to bloodshed, the highly organised modern society need not be shocked when national rivalries, stress of over-population, economic competition and tariff barriers occasionally result in the outbreak of hostilities. The conditions of international relations which generally precede conflicts are the product of scientific deve-

lopment, and the operations on the field when it is taken, pass under scientific management. It is difficult to foresee a time when wars will be totally abolished, though in future they will be less frequent; it is equally difficult to imagine whether any economic planning will produce a permanent and equitable adjustment of labour and capital on one hand, and, on the other, remove the causes of industrial depression, arising from over-production and from a defective scheme of distribution. The conspicuous feature of the twentieth century is the increasing readiness with which the fruits of scientific labours are utilised for sophisticating the human wants and for gratifying the fundamental appetites of man. . . .

Science and human nature are essentially reconcilable. Scientific civilisation ought to produce a change in the attitude and temper of mind radically different from what at the present moment are the dominating motives of individual and corporate action. Human nature being what it is, its transformation must occupy time not easily calculated, but in the meantime the question proposed by Sir James Jeans has to be answered. He asks, ‘Is it not better to press on in our efforts to secure more wealth and leisure and dignity of life for our own and future generations, even though we risk a glorious failure, rather than accept inglorious failure by perpetuating our present conditions, in which these advantages are the exception rather than the rule?’ To strive to enrich the gifts of science is worthy, but to spread their beneficence for the uplift of human nature is nobler.