

---

# Specifics of integration and differentiation processes in ecology

© N.N. Bushuev, V.V. Bushueva, G.V. Chernogortseva, A.S. Ivanova

Bauman Moscow State Technical University, Moscow, 105005, Russia

We validate the relevance of analysing integration and differentiation processes in ecology. We highlight the dialectical unity of integration and differentiation. We note that the integration and differentiation processes affect all the levels of scientific theory and practice, methodological approaches, conceptual framework, facilities etc. In foreign practice, the significance of the integration and differentiation effects contributes to the development of methodological approaches aimed at solving ecological problems. We consider two foreign techniques that feature contrasting approaches. One of them makes use of an integrative methodology, while the other employs differentiation principles. We analyse two alternative foreign techniques. We recommend using foreign experience for solving ecological problems in Russian practice.

**Keywords:** integration, differentiation, dialectical unity of integration and differentiation, ecology, applied branches of ecology, interaction between sciences, foreign methods of solving ecological problems

## REFERENCES

- [1] Differentsiatsiya i integratsiya v uchebnom protsesse [Differentiation and integration in the process of education]. *Studopedia*. Available at: [http://studopedia.su/15\\_14602\\_differentsiatsiya-i-integratsiya-v-uchebnom-protsesse.html](http://studopedia.su/15_14602_differentsiatsiya-i-integratsiya-v-uchebnom-protsesse.html) (accessed April 30, 2017).
- [2] Napravleniya ekologii [Branches of ecology]. *Texts.News*. Available at: <http://www.texts.news/obschaya-ekologiya/2napravleniya-ekologii-24580.html> (accessed April 30, 2017).
- [3] Lebedev S.A., Bushuev N.N., Bushueva V.V. *Gumanitarnyy vestnik — Humanities Bulletin*, 2016, iss. 7. Available at: <http://hmbul.ru/articles/376/html/index.html>
- [4] Bushueva V.V., Bushuev N.N. Osobennosti resheniya ekologicheskikh problem s ispol'zovaniyem printsipov kreativnosti [Features of solving environmental problems using the principles of creativity. Coll.]. In: *Metafizika kreativnosti* [Metaphysics of Creativity]. Moscow, Pero Publ., 2013, pp. 113–119.
- [5] Aznar G. *La creativite dans l'entreprise* [Creativity in business]. Paris, 1971, 185 p.
- [6] Mathieu-Batsch C. *Invitation à la créativité* [Invitation to creativity]. Paris, 1983, 132 p.
- [7] Potaptsev I.S., Pavlikhin G.P., Bushuev N.N., Bushueva V.V. *Ispolzovanie zarubezhnogo opыта resheniya tekhnicheskikh zadach v inzhenernoy podgotovke studentov* [Using foreign experience in solving engineering problems for training engineering students]. Moscow, Etnosotsium Publ., 2015, 156 p.

**Bushuev N.N.**, Cand. Sc. (Biol.), Assoc. Professor, Department of Ecology and Industrial Safety, Bauman Moscow State Technical University. e-mail: agrohim1@rambler.ru

**Bushueva V.V.**, Cand. Sc. (Philos.), Assoc. Professor, Department of Philosophy, Bauman Moscow State Technical University. e-mail: vbysh2008@rambler.ru

**Chernogortseva G.V.**, Cand. Sc. (Philos.), Assoc. Professor, Department of Philosophy, Bauman Moscow State Technical University. e-mail: irbiscotta@mail.ru

**Ivanova A.S.**, Cand. Sc. (Philos.), Assoc. Professor, Department of Philosophy, Bauman Moscow State Technical University. e-mail: anna-msu@yandex.ru