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## Dodiri i promišljanja prirodne filozofije, alkemije i kemije u *Prilozima za istraživanje hrvatske filozofske baštine*

Kao što je poznato, u doba kasnog srednjeg vijeka i renesanse spoznaje o zakonitostima prirodnih znanosti inkorporirane su u prirodnu filozofiju. Ona je bila jedna od triju predmeta (moralna filozofija i metafizika su bili ostali) na kojima se, nakon sedam slobodnih umijeća, diplomiralo na srednjovjekovnim sveučilištima. Sintagma 'prirodna filozofija' sve se češće koristi i u modernoj znanosti u smislu tražanja za zakonitošću u prirodi, živoj ili neživoj, bez usmjerenja prema posebnim istraživanjima o tome kako djeluje ovaj ili onaj zakon.

Pokazat će se da je za pisanje članaka u *Prilozima* o hrvatskim alkemičarima bilo nužno, pored poznavanja povijesti znanosti, i poznavanje filozofije te religijskih tradicija. Filozofski temelj argumenata *contra artem* i *pro arte* istarskog liječnika i alkemičara Petra Bona (14. stoljeće) bila je svojevrsna sinergija platonizma i aristotelizma: platonizma u smislu istinske težnje prirode ka savršenstvu, a aristotelizma u smislu definicije o građi metala i preobrazbi njihovih svojstava. No, Bono je pored znanstvene i filozofske uveo i religijsku komponentu u smislu kršćanskog misterija. Znanost je ono što znamo, filozofija ono nepoznato što spoznajemo, a religija ono nespoznatljivo. Slična je gledišta zastupao i njegov sunarodnjak Daniel Istranin (početak 15. stoljeća), s tom razlikom što je on u svojoj *Poemi o kamenu mudraca* izložio i postupak za pripravu kamena i životnog eliksira.

Nešto kasnije, Giulio Camillo Delminio (početak 16. stoljeća) napisao je svoj rukopis o transmutaciji u obzoru novoplatonizma, a alkemičare je nazvao imenima »filozofi koji se bave prirodnom transmutacijom« ili »pretvoritelji prirodnih stvari«. Polazio je od pratvari svih stvari svijeta, koja se razlikovala od one Aristotelove. Transmutacija je božanska, govorna i prirodna (alkemij-ska), i to tako da se ne izostavlja utjelovljenje Isusa Krista u spoznaji pratvari.

U jednom članku *Priloga* istaknuta su i gledišta varaždinskog fizika Ivana Leopolda Payera (kraj 17. stoljeća), sljedbenika Paracelsusa i van Helmonta, filozofa i liječnika u jednoj osobi. Ta se gledišta odnose na odbacivanje triju počela: vatre, zraka i zemlje te se kao jedino počelo uzima voda u kojoj boravi sjemenje svih stvari svijeta. Ta slika svijeta podrazumijeva i posebnu vrstu spoznaje u smislu »čitanja znakova« prirode.

Na kraju, u članku napisanom za *Priloge* i objavljenom u povodu 450. obljetnice rođenja hrvatskog renesansnog mislioca Frane Petrića istaknuta je važnost Petrićeve odredbe ljepila (*gluten*) koji djeluje između čestica tvari. Tom svojom tezom o strukturi tvari Petrić je, u obzoru renesansnog novoplatonizma, prvi put u povijesti dao naznaku o postojanju kemijske veze, koja je dokazana i oblikovana tek početkom 20. stoljeća

## Touches and Considerations of Natural Philosophy, Alchemy and Chemistry in the *Prilozi za* *istraživanje hrvatske filozofske baštine*

As it is well known, in the late Middle Age and the Renaissance period, the understanding of the principles of natural science was incorporated into natural philosophy. It was one of the three subjects (the others were moral philosophy and metaphysics) with which you could graduate attending the university in the Middle Ages, after seven free arts. The phrase 'natural philosophy' is often used in modern science in terms of searching for the laws of nature, live or inanimate, without routing to special researches about how this or that law is impacting.

It will be shown that for writing articles in the *Prilozi* of the Croatian alchemists it was necessary, beside the knowledge of the history of science, the knowledge of philosophy and the religious traditions. The philosophical foundation of arguments *contra artem* and *pro arte* from Istrian doctor and alchemist Petar Bono (14th century) was a sort of a synergy of Platonism and Aristotelianism: Platonism in terms of true aspiration of nature to perfection, and Aristotelianism in terms of definition of the structure of metals and the transformation of their properties. But, Bono beside the scientific and philosophical introduced also the religious component in the sense of the christian mystery. Science is what we know, the philosophy is the unknown what we are perceiving and religion is that what is incomprehensible. A similar point of view was supported by his compatriot Daniel Istranin (early 15th century), but the difference was that he in his poem *About the philosopher's stone* displayed the process for the preparation of stone and elixir of life.

Sometime later, Giulio Camilo Delminio (early 16th century) wrote his manuscript about transmutation in horizon of neoplatinism, and he called the alchemists »philosophers who deal with natural transmutation« or »converters of natural things«. His start point was the prime matter of all the things of the world, which was different from that of Aristotel. Transmutation is divine, comprehensible and natural in the way that does not omit the incarnation of Jesus Christ in perciveing of prime matter.

In one article in the *Prilozi*, the views of Varaždin's physic Ivan Leopold Payer (early 17th century) were featured; he was the follower of Paracelsus and von Helmont, philosopher and doctor in one person. Those views are related to the rejection of the three principles: fire, air and earth, and the water is considered as the only principle in which resides the seeds of all things of the world. This picture of the world includes a special kind of knowledge and terms of »reading the signs« of nature.

At the end, in the article written for the *Prilozi* and published on the occasion of the 450th birth anniversary of Croatian Renaissance philosopher Frane Petrić, the importance of Petrić definition of the glue which acts between the particles of the substance of things, was highlighted. With this thesis on the structure of matter, Petrić gave for the first time in history, in the sense of the Renaissance neoplatonism, an indication of the existence of chemical bond, which was not proven and shaped until early 20th century.