DNA sequencing: merging ideas and expressions

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Copyright law protects only the expression and not an idea. However, the idea-expression dichotomy gets complicated when the idea and the expression of the idea are inseparable or there is only one way to express or depict an idea. This is the merger doctrine and according to it no one may claim a copyright in that single manner of expression or depiction because that would evict everyone else from the right to express or depict that idea. The expression, if copyrightable, would necessarily give the author a monopoly on the expression of the underlying idea.

Elaborating on an idea

In an interesting judgment recently delivered by Delhi High Court in *Emergent Genetics India Pvt Ltd v Shailendra Shivam*, the court elaborated on the merger doctrine. In it Emergent Genetics, a company engaged in research, development, processing and sale of seeds in India, had alleged that Shailendra Shivam, a former employee of the company, had misappropriated its seeds and was selling it. Emergent Genetics also alleged that Shivam had made its products genotypically identical with that of his own, by reproducing the unique DNA sequencing formula of its seeds. This resulted in copyright infringement of the Emergent Genetics literary work.

The issue before the court was: Is copyright protection granted under Indian law, in respect of the work, for which the Emergent Genetics claims relief?

What the law says

Copyright law does not grant the author of a literary work, protection on ideas and facts (*RG Anand v M/s Delux Films*). It is the creative expression of an idea or fact that gets copyright monopoly for a specified period.

Section 2(y) of the Copyright Act, 1957, defines "work" as any of the following: a literary, dramatic, musical or artistic work; a cinematographic film; or a sound recording. Section 2(o) of the act defines "literary work" to include computer programmes, tables and compilations including computer databases. A copyright can be claimed on a "literary work" under section 14 of the act. Although the compilation of databases is entitled to copyright protection, the law mandates that the work claiming protection ought to be original. Section 13 of the Copyright Act provides that a literary work, in order to qualify as a work in which copyright can subsist, must be original.

How the courts see it

The standard for judging "originality" has undergone a radical change. *Ruling in Eastern Book Company v D B Modak*, and following the approach adopted in *CCH Canadian Ltd v Law Society of Upper Canada* (2004) SCC 13, the Supreme Court rejected the sweat of the brow doctrine, which confers copyright on works merely because time, energy, skill and labour had been expended. It held that the work must be original "in the sense that by virtue of selection, co-ordination or arrangement of pre-existing data contained in the work, a work is somewhat different in character is produced by the author".

Pertinently the apex court noticed that the two positions – the sweat of the brow and modicum of creativity – were extreme and thus preferred a place in between. Thus the law mandates that not every effort or industry or expending of skill, results in copyrightable work, but only those which create works that are somewhat different in character and involve intellectual effort and a degree of creativity.

The court thus held that a gene sequence obtained from nature cannot per se be original. A scientist while constructing a DNA sequence discovers facts from nature and thus does not create a work that fulfils the originality requirement.

The ruling

The court also reasoned that the processes by which these gene sequences are created, so as to develop a unique variety, are expressly denied patent protection under section 3(j) of the Patent Act, 1970. Therefore it is inconceivable that the observation and compilation of the consequences of that process, which is a natural consequence, can receive protection as a "literary work".

Using the merger doctrine the court held that the idea of combining various gene components or constituents can only be expressed in limited ways, therefore granting copyright protection would mean that the others are precluded from expressing such ideas.

The court found the analogy of computer programmes for copyright protection of DNA sequences unfavourable, as the manner of stating the process or method of protein production is confined to only one expression or programme. A specific sequence expressed in a manner, is the only way to express the underlining idea of the gene; therefore there is a merger of the idea with the expression, which precludes the copyrighting of DNA sequences that are codes for proteins.

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