

by World Science Staff

What is phys-i-cal beau-ty, in a per-son? In re-cent years, much sci-en-tif-ic opin-ion has gath-ered in sup-port of a some-what dreary an-swer: beau-ty is just the av-er-age. There's something to that, stud-ies show. Vol-un-teers gen-er-ally rate av-er-age faces, cre-at-ed by com-pu-ters as composites of many others, as bet-ter-look-ing than un-usual faces. Blend-ing even just a few faces—even un-at-trac-tive ones—tends to pro-duce sur-pris-ing im-prove-ments. (Try it your-self here).

(a), composite of 60 faces; (b), of the 15 most attractive. (Courtesy L. DeBruine et al.)

But if it's dis-heart-en-ing to pon-der the idea that our fan-tasies cen-ter on a qua-li-ty so, well, av-er-age—take heart. A new study may have re-stored a tou-ch of the old mys-tery that beau-ty once had. Psy-chol-o-gists have found what would seem to be a slight but def-i-nite dif-fer-ence be-tween av-er-age faces and the most love-ly, as rat-ed by vol-un-teers. There are spe-cif-ic non-av-er-age char-ac-ter-istics that are par-tic-u-larly at-trac-tive, wrote the re-search-ers, de-tail-ing their find-ings the De-cem-ber is-sue of the Jour-nal of Ex-pe-ri-men-tal Psy-chol-o-gy: Hu-man Per-cep-tion and Per-for-mance. Our re-sults sug-gest that while av-er-age-ness is one com-po-nent of at-trac-tiveness, there is at least one oth-er... not ex-plain-a-ble by av-er-age-ness. The study did-n't delve in-deeper ques-tions beau-ty rai-ses: for in-s-tance, just what that non-av-er-age com-po-nent could be; and what beau-ty's ev-o-lu-tion-ary func-tion might be (many sci-en-tists agree it probably helps sig-nal good health, though ex-actly how is un-cer-tain.) But the new find-ings did high-light the pos-si-bil-ity that even the lim-it-ed sci-en-tif-ic agree-ment sur-round-ing such is-sues may be prem-a-ture. A pre-vi-ous stu-dy, for in-s-tance, sug-gested beau-ty is that which the brain finds easy to pro-cess. But that con-ten-tion de-pended largely on the as-sump-tion that beau-ty is an av-er-age; the brain pre-sumably finds that easy to grasp, be-cause av-er-age is typ-i-cal. In chal-leng-ing the beau-ty-as-av-er-age-ness hy-po-the-sis, the new study was-n't break-ing en-tirely new ground. At least one past study has al-so chal-lenged it. But crit-ics had ques-tioned the con-clu-sions of that work. The new study claimed to shore up some of the weak-nesses that spurred those doubts. In that 1994 stu-dy, re-search-ers from the Un-ivers-ity of St. An-drews, U.K., av-er-aged 60 im-ages of faces with a com-put-er. They then sep-a-rately av-er-aged the 15 faces that vol-un-teers had judged as best-look-ing of the bunch. It turned out peo-ple rat-ed this smaller av-er-age as hand-som-er than the full-group av-er-age, rais-ing doubts about beau-ty as a sim-ple av-er-age. But oth-er sci-en-tists raised ques-tions. Could-n't it be—they asked—that the top 15 faces were in-deed so av-er-age, that their com-bina-tion re-flected the av-er-age of the hu-man race even bet-ter than the whole 60? The new-est study at-tempted to set-tle the ques-tion by re-peat-ing the ex-pe-ri-ment, but adding sev-er-al oth-ers to serve as strict tests of the in-i-tial re-sult. The re-search-ers, Li-sa M. De-Bru-ine at the Un-ivers-ity of Ab-er-deen, Scot-land and col-leagues, again made an av-er-age of 60 faces—all white fe-males—and a sep-a-rate av-er-age of the 15 pre-ti-est. View-ers again rat-ed this as more al-lur-ing than the full-group com-pos-ite. Fur-ther tests, the re-search-ers said, so-li-di-fied the con-clu-sion that av-er-age and gor-geous weren't quite the same. For ex-am-ple, view-ers them-selves in-de-pend-ent-ly rec-og-nized the larg-er av-er-age as be-ing more av-er-age than that of the smaller group, ap-par-ently con-tra-dict-ing the idea that the smaller com-pos-ite might have been the tru-er ul-ti-mate av-er-age. In anoth-er test, De-Bru-ine and col-leagues sub-jected their hap-less vol-un-teers to a bar-age of at-trac-tive-face im-ages. Pre-vi-ous stud-ies had found that look-ing at many im-ages of one type, tem-po-rarily skews what view-ers con-sid-ers av-er-age to-ward that type. Thus, the re-search-ers rea-soned, if the beau-ty-is-just-av-er-age hy-po-the-sis is cor-rect, then the vol-ley of win-some im-ages should have per-suaded vol-un-teers to see ad-di-tion-al beau-ti-ful faces as even more

atÂ-tracÂ-tiveâ€™”beÂ-cause they look more avÂ-erÂ-age. InÂ-stead, they wrote, the opÂ-poÂ-site hapÂ-pened: the viewÂ-ers saw new imÂ-ages of siÂ-mÂ-iÂ-lar faces as slightly uglier than beÂ-fore. Yet anothÂ-er test served as someÂ-thing of a probe of just how far from avÂ-erÂ-age â€œiÂ-deal beauÂ-tyâ€™” might be, to viewÂ-ers. The apÂ-parÂ-ent ansÂ-wer: even furthÂ-er than the earÂ-lier exÂ-perÂ-iÂ-ment sugÂ-gested. The sciÂ-enÂ-tists used a comÂ-putÂ-er to idenÂ-tiÂ-fy the difÂ-ferÂ-ences beÂ-tween the orÂ-diÂ-nary avÂ-erÂ-age and the â€œatÂ-tracÂ-tiveâ€™” avÂ-erÂ-age, then exÂ-agÂ-gerÂ-ate those difÂ-ferÂ-ences. That is, the maÂ-chiÂ-ne took the â€œatÂ-tracÂ-tiveâ€™” comÂ-poÂ-site, and disÂ-tortÂ-ed it by amÂ-pliÂ-fyÂ-ing what it had calÂ-cuÂ-latÂ-ed as the beauÂ-tiÂ-ful charÂ-acÂ-terÂ-isÂ-tics. By deÂ-grees, the chiÂ-n got smaller; the nose narÂ-rower and more button-like. EventÂ-ualÂ-ly, the face started lookÂ-ing just biÂ-zarre. But beÂ-fore that, someÂ-thing inÂ-terÂ-estÂ-ing hapÂ-pened. The study volunteers kept likÂ-ing the imÂ-ages more and more unÂ-til they were disÂ-tortÂ-ed by someÂ-where beÂ-tween one-and-a-half times, and twice, the iniÂ-tial â€œavÂ-erÂ-age-beauÂ-tiÂ-fulâ€™” diffÂ-erÂ-ence. Only after that did peoÂ-ple start to call the picÂ-tures uglier inÂ-stead of pretÂ-tiÂ-er. In othÂ-er words, the reÂ-searchÂ-ers wrote, â€œat some point, carÂ-iÂ-caÂ-turÂ-ing an atÂ-tracÂ-tive shape will reÂ-sult in a face that is so abÂ-norÂ-mal that conÂ-curÂ-rent prefÂ-erÂ-ences for avÂ-erÂ-ageÂ-ness will outÂ-weigh prefÂ-erÂ-ences for the atÂ-tracÂ-tive shape diÂ-menÂ-sion.â€™” To put it more simpÂ-ly, Plain Jane is not withÂ-out her charm.

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