YOU CAN THINK OF THE RANDOM VARIABLE t AS *THE BEST WE CAN DO UNDER THE CIRCUMSTANCES*. ITS DISTRIBUTION IS CALLED *STUDENT'S t*, BECAUSE ITS INVENTOR, *WILLIAM GOSSET*, PUBLISHED UNDER THE PSEUDONYM "STUDENT."


GOSSET, YOU IMPLY THAT OUR PRODUCT VARIES IN EXCELLENCE!

PSEUDONYMIZE YOURSELF...

I NEED A P.C... AND A COFFEE...

(GOSSET WAS EMPLOYED BY THE *GUINNESS BREWERY*, WHICH REQUIRED HIM TO USE A PSEUDONYM, FOR SOME REASON.)

MAKING THE ASSUMPTION THAT THE *ORIGINAL POPULATION DISTRIBUTION WAS NORMAL*, OR NEARLY NORMAL, "STUDENT" WAS ABLE TO CONCLUDE:

THE STUFF GETS YOU DRUNK, NO MATTER HOW LOUSY!

t IS MORE SPREAD OUT THAN z. IT'S "FLATTER" THAN NORMAL. THIS IS BECAUSE THE USE OF s INTRODUCES MORE UNCERTAINTY, MAKING t "SLOPPIER" THAN z.

z DIST.

t · DIST

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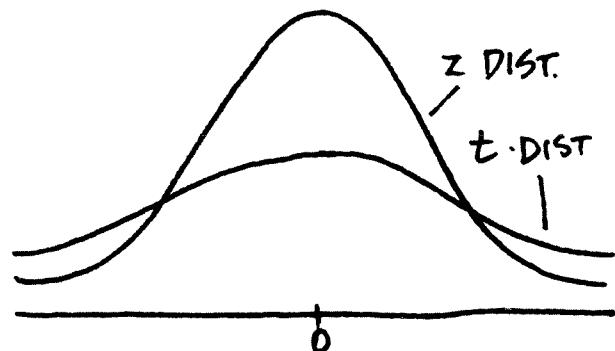
THE AMOUNT OF SPREAD DEPENDS ON THE *SAMPLE SIZE*. THE GREATER THE SAMPLE SIZE, THE MORE CONFIDENT WE CAN BE THAT s IS NEAR σ, AND THE CLOSER t GETS TO z, THE NORMAL.

NORMAL

LARGER SAMPLE t

SMALLER SAMPLE t

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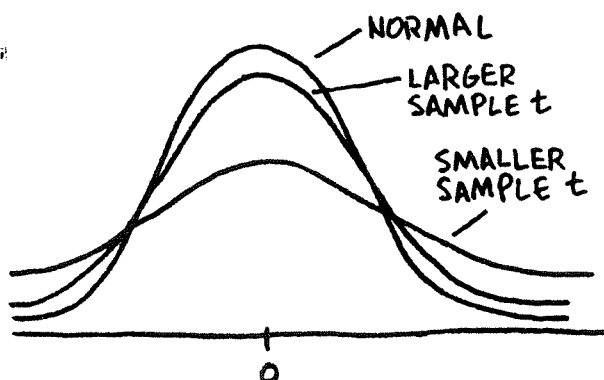
GOSSET WAS ABLE TO COMPUTE TABLES OF t FOR VARIOUS SAMPLE SIZES, WHICH WE WILL SEE HOW TO USE IN THE FOLLOWING CHAPTER.

IN THE MEANTIME, JUST THINK OF WHAT YOU'VE ALREADY LEARNED!