

The Bee's Home Magazine Page

Mysteries of Science and Nature

An Explanation for Springs and Roaring Sounds That Seem to Issue from the Underground

By GARRETT P. SERVISS.

Man and the globe he lives on seem both to be going the same way, toward a similar end.

In the course of time the face of the earth will become a vast sand heap. Already immense regions in northern Africa and central Asia, where vegetation once flourished and states and cities arose, have been turned into desiccated expanses of rolling, wind-driven sand. Unless tremendous geological upheavals should reshape the surface of the planet its atmospheric agencies will eventually disintegrate the rocks, wear away the mountains, level down the continents and fill up the sea basins, while at the same time, the oceans will disappear and little but subterranean water will remain.

That is the most logical explanation of what has overtaken the planet Mars.

The moon, too, although the wrinkles of its gigantic mountains yet remain, appears to have suffered a similar fate. Everywhere photography reveals underlying its vast plains and submerged outlines, like self-diffused skeletons, of its former topographical features. If a great tempest should strike the moon, its face would disappear, swallowed up in clouds of blowing sand.

A world lives as long as it possesses sufficient variety, and dies when uniformity strifes it under the blanket of monotonous sameness.

Sand is the very type of uniformity and monotony. This mental impression which sand makes is emphasized by some recent experiments of Dr. Vaughan Cornish. In sifting desert sand he found that no less than 91 per cent of all its grains are retained by a sieve of 1-64-inch mesh, while only 2 per cent are caught by a 1-32-inch mesh, and not more than 4 per cent are small enough to pass through a 1-96-inch mesh.

The explanation lies in the long and constant rubbing together of the grains, which reduces all to one pattern, and has no mercy for individuality. The moral world presents a striking similitude. For centuries mankind has been slowly tending toward uniformity. Conquests, trade and mechanical invention are the winds and waves which gradually triturate humanity and reduce it all to a single measure. In our time this tendency has been enormously accelerated by the advance of science. Now all the civilized world alike, cats alike, lives alike, speaks alike and thinks alike. It is becoming a vast heap of human sand. Some persons think that it is the manifest destiny of man, and rejoice over it, and make a gospel of it.

It is interesting to look a little more closely into the effects of uniformity as revealed by sand. In doing so we may, perhaps, get a more vivid impression of what the gospel of anti-individualism means.

From time immemorial there has been a mysterious natural phenomenon, manifested in all parts of the world, which has excited either abject superstition or puzzled wonder according to the mental makeup of various observers. It is a phenomenon of sound. Along the seashore it is called sometimes the "Barial guns," sometimes "mistpoppers," sometimes "brontid," according to the varying languages of the people on whose coasts its booming is heard. In Egypt and other sandy regions it is called "stinging," or "vocal sands."

This last term betrays the explanation of the mystery that science has discovered. All these strange sounds, even when they appear to be altogether subterranean, as in the case of the "Moodus noises" in Connecticut, are believed to be due to vibrating sand, and they could not exist if the sand were not composed of grains of uniform size and shape.

It is the voice of a crowd, which is powerful only because it is multitudinous. One of the clearest accounts of this phenomenon with which I am acquainted comes from a recent tourist of rational mental habits who observed it in Egypt. While descending a slope of sand drifted against a cliff in the Nile valley, his feet started a little hill of sand flowing downward. Presently a weird sound thrilled through the air. Quickly it became magnified, although the quantity of flowing sand was not greatly augmented, until it swelled into a veritable roar that seemed to issue from the ground. Then a close inspection showed that the entire mass

of sand resting upon the slope was vibrating in unison. The busy voice of each particle would have been totally inaudible, but millions of such voices, all united and accordant, shook the air as with the howling of some imprisoned monster under the earth.

This implied, as Prof. A. Mallock has remarked in commenting on the story, that each grain of sand was "doing the same thing, at the same time, to a considerable depth," which could not have happened if they had not all been of very nearly the same magnitude.

The same explanation, it is believed, applies to the mysterious noises that many travelers have wondered at in the neighborhood of Mount Sinai, and which, for centuries have greatly increased the superstitious awe with which that celebrated mountain is regarded.

Where We Are Silly

By EDGAR LUCIEN LARKIN.

Thomas Jefferson, one of the fifty-one of the leaders of men and one of nature's masterpieces, wrote these words in July, 1790. He proposed to congress "to reduce every branch of the decimal ratio already established for coin, and thus bring the calculation of the principal affairs of life within the arithmetic of every man who can multiply and divide."

After a lapse of 121 years the American people do the very opposite thing of refusing. Our nation, the leading people of the earth, with an obdurate inexplicable, still use pounds, ounces, grains, inches, feet, yards and miles.

People that will say ten mills make one cent, ten cents one dime, ten dimes one dollar, will with the impulses of a mule, say 47 1/2 grains make one ounce, avoirdupois; sixteen ounces make one pound, 100 pounds one hundredweight, twenty hundredweight one ton.

Here is a mix of 47 1/2 and sixteen with true decimals—36, 36, 100. No explanation has ever been offered. And here is a table of vagaries:

Pounds, Ounces, Drachms, Scruples, Grains.
1 equals 12 96 288 5,760
1 equals 16 256 7,680

The first line is apothecaries' weight and the second avoirdupois.

The standard troy weight, now authorized by the laws of England and copied in our laws, agrees with the apothecaries' weight in pounds, ounces and grains, but differs in divisions of the ounce, which by the former scale contains twenty pennyweights of twenty-four grains each. Thus the troy and apothecaries' weight in pounds are agreed as to 5,760 grains; but the avoirdupois pound contains 7,000 grains; but they are troy grains, this vagary having no grains of its own.

In lengths, volumes and areas the confusion is greater than in the units of mass or weight here given. So great has been the trouble that the government of the United States has at great expense employed hundreds of experts to work out and publish these thousands of comparisons. But had the congress in 1790 passed as law the recommendation of the wise Jefferson at least 124 years of brain-harassing labor would have been avoided.

One would think that the custom house, exchange and mint people would rise and demand plain "common sense" in weighing and measuring. Thus: The metric unit of weight is the kilogram; of length, the meter, and of capacity, the liter. These are divided by tenths, hundredths and thousandths, and multiplied by tens, hundreds and thousands, in your heads, and no pencil and paper are needed. Likewise prices and "so much per."

Inclusionary work could be entirely dispensed with by the adoption of the decimal system by the entire world. Many nations have so adopted by law. The good United States of America is one of the few that have so enacted, but the people still refuse to use the system.

This singular fact has been commented upon by mentalists, and the only explanation is toward tiresome habits. Ancient habits and customs are excessively hard to overcome. Note this fact of a law without a penalty; for if the United States had a law of imprisonment for all persons refusing to use the metric system, then an era almost new in the history of human progress would be here right away.

Go to, now, and use sixteen sixteenths make one inch, twelve inches make one foot, three feet make one yard, five and one-half yards one rod, perch or pole, forty rods one furlong, eight furlongs one mile, three miles one league, sixty-3 1/4 miles (nearly) one degree.

No wonder alienists are astonished to see what senseless things humans will do when they look over hundreds of pages of conflicting measures, used for thousands of years, even from Babylonian times, without change. Mind mystery deepens, for alienists see that man uses these measures long after he knows better.

Shall We See These Costumes Here?

Some of the Gowns Seen at English Races, Showing the Creative Genius of the Modiste



Here is a gown made to give the effect of an Indian shawl.

foot, three feet make one yard, five and one-half yards one rod, perch or pole, forty rods one furlong, eight furlongs one mile, three miles one league, sixty-3 1/4 miles (nearly) one degree.

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Ought a man Push the Perambulator?

By DOROTHY DIX.

Who should push the perambulator when a man and his wife and the baby go out for a walk?

I have received a letter from a man, who writes: "Why should a man have to wheel his child through the city streets? Why should not his wife do it? It is most humiliating to a man to pass his friends while he is pushing a baby cart, and to have to listen to their remarks. It is surely a woman's duty, but I do not like to quarrel with my wife, so I am asking your opinion on the subject, for which I will be very grateful."

What's the matter with pushing the baby carriage as a respectable job for a family man? What is there about it to make a man blush and hang his head in shame? I fail to see in it anything derogatory to masculinity. It seems to me that a man with the perambulator is far more admirable than the man with the automobile, and that it is better to take the baby joy riding than it is to take a chorus girl.

The man who thinks that he looks ridiculous when he is seen taking the baby out riding in his little go-cart would be filled with pride and vainglory at the spectacle he presented tearing up the streets in a high-powered racing car.

Yet he is a million times more usefully and worthily employed in trundling the baby wagon than he would be in smashing records and dodging the traffic police in a gasoline wagon.

And let me remind my correspondent right here that trundling the baby cart may be the shortest cut to fame for him. For in these perambulators that unwilling fathers are pushing are the infants who are going to be the men and women who will do the big things of the future. The only job by which many a man will be remembered is that he used to wheel some little Tommy Edison, or Teddy Roosevelt, or Pippy Morgan about in his go-cart.

In all good truth, the men who are doing the most for the world are those who are raising up nice, fat, healthy babies—who are going to carry on to new heights the banner of human achievement, and why any man should be ashamed of publicly announcing his part

in this great work passes comprehension. Certainly the times are out of joint, and we have gotten to a place where we take a very decadent view of things when a man is humiliated by being seen on the street giving his own child an outing, and when such a spectacle is the subject for the gibes and mocking of fools.

Happily, though, sensible people are still of the opinion that a baby is a thing to be proud of, and not to be ashamed of, and that a young man pushing his own baby carriage is a more admirable spectacle than a have-his youth toting at the leash of a bulldog.

But let no one ever again lay the crime of race suicide at woman's door, since the fathers take so little interest in their offspring that they are not willing to be seen in public with them. Apparently children are no longer considered by their fathers as a crown of glory, but a sort of disgrace that they try to keep hidden and out of sight as far as possible.

As for my correspondent's contention that it is a woman's duty to push the perambulator, that is as may be. To the dispassionate observers it would seem that, inasmuch as a father is just as much a father as a mother is a mother, it's just as much his business to give the baby an outing as it is hers. Of course the mother is harnessed to the baby's go-cart most of the time. Six days out of the seven she pushes it ahead of her whenever she takes her walks abroad, just as she listens to the baby's crying and washes and dresses and cares for it seven days out of the week, and this being the case, it appears to be up to the father to take his turn at the wheel occasionally, even if he is mortified to death at being seen out in the company of his own child.

My correspondent is ashamed to be seen pushing a perambulator. I wonder if he ever passes through the residential part of the city between the hours of 10 and 4 o'clock. The streets are a baby block-lot, each containing a rosy baby and each baby carriage rolled by some mother who has been told by her doctor that the baby must be kept in the air a certain number of hours.

On the shady side of the street in summer, in the lee of some sheltering building in winter, you will find these mothers to death, sweating with heat or shivering with cold, but faithfully and patiently sacrificing themselves to their children, chained to the baby's go-cart as truly as any captive was ever chained to a conqueror's chariot wheel of old.

And not one of these women is ashamed of her task or mortified at being caught pushing the perambulator!

Funny things, women aren't they?



Madame Isbell's Beauty Lesson

LESSON XI—PALE SKIN.

Physical Culture.

Women who lead a sedentary life, who are confined in an office or school room during the entire day, are undergoing a test for endurance that tells for a strain on the strongest constitution. Such a woman is in great need of systematic physical exercise. If she can devote only ten to fifteen minutes twice a day to this, that is far better than ignoring it altogether, and I strongly advise such a worker to look carefully over the exercises I shall give in the next lesson, choose those particularly directed to her needs, and practice them.

I advise her also to walk to and from her work, even if the distance is two or three miles. If the distance is considerable, walk a part of the way. She cannot use her time to any better advantage and after a little perseverance she will find that the walk will refresh rather than tire her. If she walks to her office she will find that she enters on her work with a quickened intelligence, and the walk homeward at night will make the evening meal taste twice as good. It is also a pleasant break in the day's routine, causing her to forget its monotony and occasional unpleasantness.

To derive any benefit from walking, however, the step must be light and elastic, the weight of the body swinging easily from one leg to another. Hold the head erect, the chin well in as if a string were pulling from the middle of the head, lifting it skyward. Take care to breathe deeply and earnestly, through the nose with the mouth closed, taking in long breaths and retaining them some time before exhaling. Begin by holding each breath while taking ten steps and gradually increase this until twenty steps may be taken in one breath.

Walking is not a rapid reducing exercise, but there is nothing better calculated to keep a person in good condition and to promote general ease and health of the body.

Lesson XI to be continued.

Madame Isbell

Advice to Lovelorn

By BEATRICE FAIRFAX.

Affection Always Proper.

Dear Miss Fairfax: Please answer my many questions. I am a young man engaged to be married. I am in love with the young man to whom she is engaged without his asking her if she loves him, or what do you think would be necessary?

Would it be necessary to have place cards at a wedding dinner, and how would the wedding party be seated if the minister is present? How and where should parents be seated? L. M. S.

When an engaged couple is alone affectionate advances from either are entirely in keeping. It is not expected that lovers be always held in check by formalities, and especially after they have pledged their troth by becoming formally engaged. At a wedding dinner or breakfast it is customary to seat the bride and groom at the head of the table with the brideparents at the foot. The wedding party is seated around the table with regard to congeniality. Place cards are not used, nor is a special seat required for the minister, although some give him the head of the table, with the bride and groom on either hand.

Try Again.

Dear Miss Fairfax: Two days ago you published a letter of a young lady of 22 in love with a married man of 42, but feel, act and look that of a man not over 30 and younger, looking for and trying to make the acquaintance of a young lady of about 25 with the view of matrimony, and have not yet succeeded.

I have a steady position with Uncle Sam paying \$10 per month. I am of good habits, use neither strong drink nor tobacco in any shape, and belong to the Young Men's Christian association and the Methodist Episcopal church.

I think I would like to win a young lady attending the same church as I do and I have been led to believe that she had some liking for me until the other day I wrote and mailed her an invitation to go boating with me, but received no reply. What is my best chance of winning any other nice young lady? Respectfully,
W. A.

"Faint heart never won fair lady," but the road to a woman's heart is not always open. However, be persistent, but not offensive in your attentions, and in time you will learn if the object of your love has any affection for you. When the right time comes, ask her in a manly way.

A Question of Etiquette.

Dear Miss Fairfax: I am 15 years old and in love with a man 55 years old. He has no money and only earns \$12 a week. I love him very much and want to marry him, but my people will not consent. HEARTBROKEN.

If you marry a man who is old enough to be your grandfather you will spend your life repenting. Twelve dollars a week may be enough for a young, vigorous man to start life on, but there is no hope that this old man is going to advance. Interest yourself in healthy youth and don't let his age sap your Maytime.

Secret of Winning Popularity

By Mrs. Frank Learned—Author of the "Etiquette of New York"

By MRS. FRANK LEARNED.

Many persons, in speaking of popularity and the way to it, are believed to begin at the wrong end of the subject. Their suggestions point to the acquiring of good manners and pleasing ways for the mere sake of the personal gratification of being admired, of gaining something for self.

The idea is seldom advanced or impressed that the true ethical reasons, the best motives for an aim toward being agreeable, and thus winning popularity are to be found in the desire to use one's gifts, talents, good manners or accomplishments as aids toward making the world a pleasanter place for those who meet in it.

Those who aim for selfish popularity do not deceive anyone. For a short time, perhaps, they may have their own way or receive a large number of invitations, but very soon their vanity and egotism become apparent and they cease to be chosen as friends.

Insincerity and superficiality are easily recognized. A mere polish, an outward veneer in manner may be obtained by observing conventional rules, but the essence of good manners is in a kindly heart.

Unless there is an absence of self-centeredness there is no foundation on which to build popularity. The moment that a person is greedy for rewards, that moment there is failure.

If we observe the truly popular persons among our friends we discern the secret of their charm. They are thoughtful

in showing little attentions, they listen when anyone is speaking. They are good-natured toward tiresome people, patient with uninteresting people.

They do not treat the beautiful ceremony of greeting in a perfunctory way. They offer the hand with a graceful gesture and give a smile and make some pleasant remark. It may be a commonplace speech, but they make it in a pleasing way.

The very simple, social graces need to be practiced. A low, soft voice is more winning than a harsh, rasping tone. A few tactful words are more acceptable than a blunt, ungracious speech.

To understand others we must try to throw ourselves into their interests, listen to what they have to say, share with them in their joys as well as their troubles. We must be truly sympathetic, try to imagine how others feel and to be glad with them and not think we are to reserve sympathy only to be sorry for their sorrows.

There are countless little things of ordinary courtesy and kindness to be done every day—the little things done on the instant—the greetings, amenities, words of cheer, comfort or encouragement spoken as we meet each other.

It is not by waiting for opportunities to do great deeds or perform conspicuous services that we win favor, affection or popularity. Simple acts of simple kindness, done without a thought that they might be helpful, have proved of greater value than the things we have done with care and preparation. The "little, name-

less, unremembered acts of kindness and of love" are the things which win the most enduring sort of happiness for self, and popularity with others.

Little Bobbie's Pa

By WILLIAM F. KIRK.

I asked Pa the meaning of a word—said nite. I was reading a story in the paper & I came to a word that I didn't know. I asked Pa what it was an Oboe.

How is the word used? said Pa. & then the Oboes began playing. I said.

Well, said Pa, I am surprised that a boy of your age doesn't know what an Oboe is. An Oboe is a trumpet, said Pa.

I didn't know that trumps played, I said to Pa.

Indeed, said Pa, & when did you hear that trumps worked?

Doant tantalis Bobbie, said Ma, you know very well that an Oboe is a musical instrument.

I doant know anything of the kind, said Pa, & you doant know it either. An Oboe is a tramp, a loder, a son of rest. You can see them along any of the railroad tracks during these good old Wilson times. I saw ten yesterday. They was sad Oboes, too. Every one of them told me that he had voted for Wilson.

I tell you, said Ma, that you have the words mixed up. An Oboe is a musical instrument, such as is used in

sum orchestras. The word you are thinking about this means the same as a tramp in Hobo, said Ma. It begins with a H.

I will get you a new hat argente a box of cigars, said Pa.

That is the easiest bet in the world, & I will talk it, said Ma. Get me the dictionary, Bobbie.

I got the dictionary for Ma & she found that she was rite & Pa was rong. The word Hobo wasn't even in the dictionary, because it is slang. Pa got kind of red in the face but he said that it must be the editor of the dictionary made a mistake.

That is the Scotch of it, said Ma. I never knew a Scotchman to give in seven after the proof is in black & white, rite in front of his nose. I suppose you went going to get me the hat, now that I have won the bet.

You shall have the hat, dear, said Pa, but I still think I am rite. I am going to call up Professor Von Hortig & find out about this wonderful musical instrument. He knows all the instruments ever invented, Pa said. So he called up the German professor & after he asked him what it is an Oboe he said Oh, is that so? I never heard of such an instrument.

Pa's face was kind of long. I guess I have let the bet, he said, but it only goes to show that one never gets too old to learn. One thing about me, said Pa, I am

always willing to admit that I am rong.

Oh, yes, dear, said Ma, you are willing to admit you are rong wen you have looked up the dictionary & called up every member of the board of education & all the experts that you have a speaking acquaintance with. Then you yond reddily snuff. By the way, dear, I would so many, we will change that bet & you can buy me a dinner gown.

No I wont, said Pa. A bet is a bet & a hat is a hat, & an Oboe is an Oboe. You will get a hat, a reasonable priced hat, & I will be with you wen you get it, said Pa. & after this Bobbie, said Pa, wen you want to know the meaning of a word, ask yure Ma or look it up yureself.

And here is a creation on the left known as "The Balloon Dress," and one on the right with a lattice-work effect.



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