

will lead me right, and you try it; and after a while you find that it brings you back to where you stood before. So the theory of that path being yours has also to be given up. Yet you could hardly walk through such a forest, and not form a few theories, some wrong, some right, unless you sat down with folded hands and made no advance at all.

Our ancestors might have done this. They might have said, 'Oh, we don't know anything about the stars. No use to trouble ourselves.' Then they would have been at a stand-still in their ignorance; and modern Astronomy, which is built upon the ruins of past theories, would have suffered long delay.

Suppose that, instead of being in a wood, you were on the wide sea at night in a little boat. And suppose that, round about you at different distances were many other little boats; each carrying its tiny light. Suppose that you and they were all moving silently in circles, each round a centre; some in larger, some in smaller circles; some faster, and some more slowly. Can you not fancy how bewildering the effect would be?—how some unreal movements, due to your own motion, would seem to be real; and how some real movements would seem to be unreal?

If, in addition, you suppose that your own motion is quite unknown to yourself, that your boat travels so gently and softly as all the while to seem to be at rest, then the matter becomes much more complicated. Then all changes of position among the other boats are laid to the charge of their own movements, while many of them are really due to your movements. This was actually the mistake made by our ancestors, with regard to the earth and the other heavenly bodies.

Much perplexity existed for early observers in the motions of the planets, viewed, as was then supposed, from a motionless earth. Mars, for instance, would be observed first to make steady and quick advance, day by day; then to slacken his pace; then to come to a complete pause; then actually to go backward; then again to come to a stand-still, again once more to advance. We know now that this complexity of movements is caused partly by our own motion—just as the forward motion of a boat at sea might make another boat, travelling the same way but more slowly, to seem to go back; and also by the fact that Mars, when on his orbit on the other side of the sun, does actually travel in an opposite direction from ourselves.

So long, however, as our earth was counted always the motionless centre of everything, any reasonable explanation of these confusing movements was most difficult to find.

At length Ptolemy, followed by other Greek astronomers, worked out an elaborate plan. He represented the sun as revolving around the earth; and each planet as travelling in a little circle, the centre of which circle revolved round the earth. Venus was supposed to be attached to the sun by a kind of invisible bar, which looks almost like a dim early notion of the force of gravitation, and the sun was supposed to be fastened to earth by a similar bar.

This extraordinary system had one virtue that, to a certain extent, it really did fit in with the apparent motions of sun and planets—not indeed perfectly, but for a time enough to satisfy people. The 'Ptolemaic System' was long looked upon as an established truth, with its most cumbrous arrangement of cycles and epicycles and invisible bars of attachment. King Alphonso, of Castile, a lover of Astronomy in his day, might well say that, if he had been consulted at the creation, he could have done the thing better. Had he known the grand simplicity and order of the Solar System, as now known to us, he would have needed to make no such pungent remark.

AGNES GIBERNE

No one fulfills the plan of his creation,  
Who cannot say  
That he has led one soul from wilful blindness,  
Into the day.

### A Lonely Worker



Ever have such a fashion in modern life of working together in companies, by roomfuls or shopfuls of cheerful, busy girls who borrow and lend, and entertain each other, making the long hours shorter by companionship, that in spite of the wrong side of such a fashion it would be very hard to go back to the time when almost everybody did her work by herself. Long ago in country neighborhoods there used to be occasional gatherings of a social nature to quilt or to pare apples, or even to spin; the women and girls used to take their work and go to spend an afternoon with a friend, but the straw-braiders or shoe binders usually sat quietly at home. 'Many hands make light work,' even when each pair of hands is busy with its own work.

As I have just said, there is a very dark wrong side sometimes to this way of working together, which the larger demands of our increased population and the modern schemes of organization have brought about, but one of the many good effects is that women are no longer left solitary and unfriended as they often were in the old days; in the great shops everyone may come in time to know what the wisest knows; as well as the most foolish, and, best of all, it gives a chance of making friends, and of discovering at least one person who is full of sympathy for one's own hopes and aims, and so life is enlarged and made pleasant. There is nothing so dear, after all, as our best friends. I was thinking, just now, about some of the solitary workers whom I have known, the women who ply some lonely trade in their own corner, those whose pale, unsunned faces we have all learned to know at some window in a by-street, always at the same pane of glass, and bending their looks at the same angle toward their busy hands. The woman whom we know may be binding shoes or finishing for a tailor or braiding or sewing straw, but we learn to think of her as always in that same chair; with the look of a prisoner, whether her window is open in summer or shut in winter. Persons who sit and work in this way, especially those who live alone, are almost always sure to think a great deal about the world they seem to touch so little. Often they cannot help looking at life from a strange point of view; they regard everybody whom they hear about, but do not know, with more or less suspicion, or else they weave little romances about people and things, and live in a lovely little world of their own full of joyful dreams that nobody ever suspects. But of the every-day life of the busy world they know almost nothing. Sometimes one finds these solitary-minded women set in the busy shop-families, where laughter and chatter and gossip never seem to concern them; they sit bent over their work as if they cared as little to hear as to speak, but there is usually some reason for this; they have seen trouble that has dulled them or formed a habit of silence in working for many years alone.

One might go on writing about and remembering these lonely, these unrelated figures, and thinking what our feeling about them ought to be—there is nothing that makes us like our neighbor so quickly as trying to please her—and we ought always to be trying to take such friends into our little circles instead of shutting them out. If you step some day and leave a flower on one of those window-sills that we have just been thinking about and let the lonely worker look up to find it there, with her scissors and spool, or on her sewing machine, you will be laying up many pleasures for yourself whenever you may be passing by and she remembers you and smiles. Sometimes such persons have a great power of aggravating those who see them every day, but this power is more often a misfortune than it is a fault. And there is such a thing as being bound in affliction and iron, which cheerful younger women, happily, cannot always understand.

As I look at a certain quaint little basket it brings back to me a spring day when I was wandering about in one of

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the oddest of the southern cities, adventuring with a friend through the narrow lanes which looked something like Italy, with their high, whitewashed walls, over which orange boughs and lemon boughs and locust trees leaned their heavy-laden boughs, and trails of blossoming vines hung down as if they gave a hand to help you climb over into the gardens. Just at the corner of one of these charming by-ways was a bit of high dilapidated board fence and a shaky gate over which I read a little sign that said 'Grass-work for sale.' We had seen something of palmetto work and of the Indian baskets of the Sea Islands, but this sign was very provoking to my curiosity. I looked over into the overgrown, dark, damp little garden and at the gloomy, small house beyond. 'What can this grass-work be?' I said. 'Suppose we go in!' and so we lifted the latch and entered. We could not help laughing to ourselves as we stood waiting at the door after we had knocked, it was such a funny uncertain way of going shopping.

When the door was timidly opened I saw that we had happened to find one of the lonely workers. She was almost afraid of us at first, and even after we said that we had come to see the grass-work, she looked at us apprehensively and made us many little apologies about the small and unworthy stock she had on hand just then, and even spoke deprecatingly of the condition of her house, though we never had seen a cleaner, more unused and almost empty little place.

When she brought us the grass-work I could hardly keep the tears out of my eyes. There was a tiny group of little baskets and trays, made of the fine, tough, wiry grass which is hardly larger than a thread, wound round and round and sewn together with different colored silks. The exquisite shapes of the little things, the delicacy of the work—I have forgotten how many days she said that it took her to make even the smallest—and her touching complaint that business had fallen off sadly, all appealed to her customers in a way I cannot describe. The light in the little house all seemed to come in through the green leaves that grew against the windows outside—one could not help wondering how the grass work maker managed to eat, drink and be merry there. She was plainly of French descent, the grace of her works as well as her ways betrayed her heritage, but it was impossible not to wish that her thin, skillful fingers had found other training and that her surroundings in life had not been such as to let the sun in and lead her to a wider place among kind and busy people.

I could fancy her going to the parish church in the early morning, sitting quickly along close under the high walls, her thin figure bending a little—so shy and furtive she would be out of doors—and always with downcast eyes. As we made our choice among the little baskets, she grew less timid, and at last made a piteous confession of her poverty and of a special anxiety which it had brought, and which my kind and wise fellow-traveller was able to remedy, before we came away. This was indeed a lonely worker. With all her pride and satisfaction I have often wondered how she managed to carry on her dwindling little trade—the old negro who for many years had brought her the curious grass had died—and to what other employment she could turn her hand, Heaven only knows!

This was one of the people who live in corners, but there was something so determined in her way of keeping on with her work, such a reverent care and eagerness to bring it to perfection, that I believe it counted for much more than most of her prosaic neighbors thought. At any rate, the little baskets were thought to be treasures by those to whom we gave them, and there is certainly something most charming about one that I see before me.

I suppose that the reason why the life of a solitary worker appeals to us so strongly, is that in one sense we are all solitary workers. No matter how cheerful and pleasant and varied our surroundings are, we do our work alone, and there are some days when the feeling of single-handedness is not easy to bear. We take pride in the reputation of

our group of associates in our business or profession, and feel the inspiration of it, but, after all, we face our duties and opportunities alone, and this makes us cherish the kind of help that companionship really can give, and makes us ready to reach out our hands to other lonely workers because dear hands have been reached out to us. I like to put the two phrases together in my thought: 'Bear ye one another's burden's': 'For every one must bear his own burdens.'

SARAH ORNE JEWETT.

## Charles Kingsley

BORN JUNE, 1819. DIED JANUARY, 1875.



CHARLES KINGSLEY was the son of an English country parson, nurtured and taught largely in the open air by Nature; and with the turbulent hero blood of the sea-rovers of Devon flowing in his veins.

By the age of thirteen his education (proper) had begun, and he was at school at Clifton when a serious riot broke out in the adjoining city of Bristol, which, for several awful days, was ruled by mob law.

Boylke, Charles had a curiosity to see what was going on, and slipping out into the streets of the suburb, he looked down on the old city below.

From the hill on which Clifton stands he saw Bristol a sea of fire, with the church towers standing dark amidst the glare, and heard the roar of the flames as of a rushing, mighty wind:

Everything powerful always appealed to his mind, and going down into the tumult he heard and saw worse things yet.

He heard men and women wild with rage and license, shrieking like demons, and ill-treating by word and deed the brave, patient soldiers who stood amongst them hour after hour, resolute not to strike the unarmed mob one moment before it was necessary.

He saw the streets run with spirits, and the rabble on its knees lapping it from the gutters; then he saw the flame from a burning house catch the stream and sweep along the street, devouring alike drunkards and drink.

That awful moment he never forgot through life. 'That sight made me a Radical,' he said long after. 'Whose fault is it that such things can be? Mine and yours.' And the endeavor of his whole life was to make such things impossible.

There were strangely few outward events in Kingsley's life. His mind was so active that in early youth many things puzzled him which others take for granted, but he found a way out of his difficulties before long, and at the age of twenty-three he was ordained a clergyman of the Church of England, and soon after he married and settled down in the parish of Eversley, which was his home for the rest of his life.

From his creeper-covered rectory on the Hampshire heath he watched the stream of history flow on, with an intense sympathy that made him plunge breast high into its waves, whenever he felt he could be of use to the sufferer or the sinner.

Through life he had a very fresh sense of the wonder and glory and greatness of every-day things; he never took the beauty of the world or other people's sufferings or joys as a matter of course.

'Yeast,' Kingsley's first great book, was written when he was nearly thirty. It is a story showing the state of the country poor at that time; how much they suffered from the neglect of the rich, and how little wonder it was that discontent was working like leaven in England.

'Alton Locke' followed 'Yeast' shortly, and carries on many of the same thoughts; but it tells of the mechanics of great cities, and may be considered a completion of the picture. 'Hypatia' and 'The Saint's Tragedy' are stories dealing with the Church in the early and middle ages.