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DNA, History, and Archaeology

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TWO BARBARIANS AND A PROFESSOR OF BARBARIAN STUDIES



Historians today can hardly answer the question: when does history begin? Traditional boundaries between history, protohistory, and prehistory have been blurred if not completely erased by the rise of concepts such as “Big History” and “macrohistory.” If even the Big Bang is history, connected to human evolution and social development through a chain of geological, biological, and ecological events, then the realm of

history, while remaining firmly anthropocentric, becomes all-embracing.

An expanding historical horizon that, from antiquity to recent times, attempts to include places far beyond the sights of literate civilizations and traditional caesuras between a history illuminated by written sources and a prehistory of stone, copper, and pots has forced history and prehistory to coexist in a rather inelegant embrace. Such a blurring of the boundaries between those human pasts that left us more or less vivid and abundant written records, and other pasts, which, on the contrary, are knowable only through the spadework and fieldwork of enterprising archaeologists, ethnographers, and anthropologists, has also changed (or is at least threatening to change) the nature of the work of professional historians.

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“Spontaneous Revolution” in Tunisia Yearnings for Freedom, Justice, and Dignity

BY MOHAMED NACHI

The Tunisian revolution of 2011 (*al-thawra al-tunisiya*) was the result of a series of protests and insurrectional demonstrations, which started in December 2010 and reached culmination on January 14, 2011, with the flight of Zine el-Abidine Ben Ali, the dictator who had held power for twenty-three years. It did not occur in a manner comparable to other revolutions. The army, for instance, did not intervene, nor were there actions of an organized rebellious faction. The demonstrations were peaceful, although the police used live ammunition, bringing the death toll to more than one hundred.

The demonstrations began in the town of Sidi Bouzid, west of the country’s geographical center. On December 17, 2010, a young street vendor set himself on fire following the confiscation of his wares (fruits and vegetables) by the police. Mohamed Bouazizi was twenty-six, and he succumbed to his burns on January 4. The next day, five thousand people attended his funeral. He became the symbol of the liberation of the Tunisian people from the despotic rule of the Ben Ali regime. The population, and predominantly the

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Protests in Tunisia culminated when Zine el-Abidine Ben Ali, who had ruled for twenty-three years, fled on January 14, 2011.

Knots and Quantum Theory

BY EDWARD WITTEN

In everyday life, a string—such as a shoelace—is usually used to secure something or hold it in place. When we tie a knot, the purpose is to help the string do its job. All too often, we run into a complicated and tangled mess of string, but ordinarily this happens by mistake.

The term “knot” as it is used by mathematicians is abstracted from this experience just a little bit. A knot in the mathematical sense is a possibly tangled loop, freely floating in ordinary space. Thus, mathematicians study the tangle itself. A typical knot in the mathematical sense is shown in Figure 1. Hopefully, this picture reminds us of something we know from everyday life. It can be quite hard to make sense of a tangled piece of string—to decide whether it can be untangled and if so how. It is equally hard to decide if two tangles are equivalent.

Such questions might not sound like mathematics, if one is accustomed to thinking that mathematics is about adding, subtracting, multiplying, and dividing. But actually, in the twentieth century, mathematicians developed a rather deep theory of knots, with surprising ways to answer questions like whether a given tangle can be untangled.

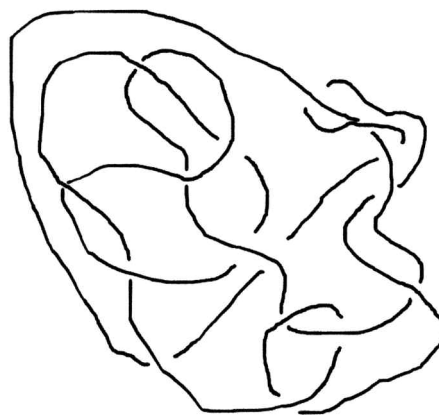


Figure 1

But why—apart from the fact that the topic is fun—am I writing about this as a physicist? Even though knots are things that can exist in ordinary three-dimensional space, as a physicist I am only interested in them because of something surprising that was discovered in the last three decades. Much of the theory of knots is best understood in the framework of twentieth- and twenty-first-century developments in quantum physics. In other words, what really fascinates me are not the knots per se but the connections between the knots and quantum physics.

The first “knot polynomial” was actually discovered in 1923 by James W. Alexander. Alexander, a Princeton native who later was one of the original Professors at the Institute, was a pioneer of algebraic topology. But the story as I will tell it begins with the Jones polynomial, which was discovered by Vaughan F. R. Jones in 1983. The Jones polynomial was an essentially new way of studying knots. Its discovery led to a flood of new surprises that is continuing to this very day.

Even though it is very modern, and near the frontier of contemporary mathematics, the Jones polynomial can be described in such a down-to-earth way that one could explain it to a high school class without compromising very much. There are not many frontier developments in modern mathematics about which

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youth, began to demonstrate with calm determination, in order to demand the right to work and the right to free expression.

Certain questions remain enigmatic when it comes to revolutions in general and to the Tunisian revolution in particular: How is a revolution born? What are the causes from which a revolution originates, the mechanisms whereby it is triggered? How does one move from claims and protests to revolution? The matter is even more

IN THE TUNISIAN REVOLUTION, THE YOUTH, MOST PARTICULARLY THE UNEMPLOYED EDUCATED, PLAYED A CRUCIAL ROLE, FIRST IN TRIGGERING THE DEMONSTRATIONS, AND THEN BY SUSTAINING AND STRENGTHENING THE REVOLT.

mysterious when one considers the Tunisian revolution. How is it, for instance, that the Tunisian people, long silent under the burden of oppression, suddenly rose in revolt? This revolution was unexpected. It surprised everybody, including the very actors involved in it and those who led it. There are revolutions, in other words, but there is no theory of revolution. The Tunisian example will have to be studied the way one studies the French revolution, the Russian revolution, and so forth, and taught for what it is in itself, for its *singularity* and its *exemplarity*.

Over the course of General Ben Ali's rule, the minimal conditions did not exist to exercise citizenship, political engagement, or union activism. The regime controlled everything and left no possibility open for expressing any discontent. Public opinion was muzzled and censorship was omnipresent.

Ben Ali's hold on power and exercise of it had become increasingly centralized and personalized, reducing to the barest minimum the role and function of the political institutions (parliament was no more than a recording chamber), the juridical apparatus (the courts were at the order of the dictator, with unjust trials and verdicts), and the public administration (corruption, nepotism, and so forth). The omnipotence of the executive branch was crushing the country and stifled all political play, reducing all forms of plurality to naught. The president's party (the "Constitutional Democratic Rally" or RCD) was essentially the state, and its interests came before the general interest. The state served the increasing private wealth of the president and the family of his wife, which constituted, according to the American ambassador in Tunisia, a "quasi-mafia." The president of the RCD was the President of the Republic, and he named all the members of the political leadership, from the federations to the local sections of the party.

All this led to the frustration of a population that was constantly subjected to intimidation, to the most blatant forms of injustice, and to feeling increasingly offended, yet with no outlet to express any discontent. No one could denounce injustice or call for justice to be done. The well-policed system of control had managed to normalize an entire society, using the most cruel means of repression: no respect for the most basic rules of law, the fabrication of false evidence, iniquitous judgments, defective legal procedures, harsh sentences, and of course torture, the use of which was rampant.

External observers often pointed to the relative economic success of the Tunisian state. Some went so far as to speak of a "Tunisian miracle" with an alleged growth rate of 4–5 percent. In fact, this was known to not be true. Additionally, it was known that the relative economic prosperity of the country only benefited a small minority, who enjoyed exorbitant fiscal privileges and made massive use of illegal means in order to rob public goods and the resources of the land. Important public enterprises were privatized and sold at derisory prices; private enterprises were created and financed with public funds, and so forth. What ensued was that a wealthy minority (around 10 percent of the population) disposed of a third of the GNP, whereas the poorest Tunisians (30 percent of the population) had to make do with less than a tenth of the GNP. Unemployment affected 15 to 20 percent of the population, and among educated youth it reached 30 percent.

Beyond social inequalities, there were also regional inequalities and disparities. Indeed, economic development, real-estate investment, and tourism were all concentrated around the capital, Tunis, and the coastal regions of the North East and of the Sahel. The interior regions remained rural zones of extreme poverty disproportionately affected by unemployment; whence a profound sense of injustice that was constantly manifested by the inhabitants of these areas. It is no accident that the demonstrations and the demands made by protestors emerged from Sidi Bouzid, a disfavored, rural, and poor region in the interior.

Where is justice in all of this? Why did the Tunisian demonstrators deploy such strong slogans: "Freedom," "Work," and "Dignity"? These slogans have received a considerable echo among the population, mobilizing individuals everywhere, in all the cities, towns, and regions. Such are the first questions that come to mind when seeking to understand the themes and motivations that were at the origin of this "spontaneous" revolution.

In Tunisia, there was an undeniable problem of distributive justice: all Tunisians did not benefit from eco-

ALSO CRITICAL WAS THE FUNCTION OF NEW TECHNOLOGIES OF INFORMATION AND COMMUNICATION, AND OF SOCIAL NETWORKS SUCH AS THE INTERNET, FACEBOOK, AND TO A LESSER EXTENT TWITTER.

nomie development. A privileged group monopolized the resources of the country. For a short while, the middle class was able to draw some advantages from economic growth, but the recent economic crisis rendered its buying power more fragile and uncertain.

Where the rule of law and the most elementary moral values are transgressed or violated, where gestures and signs of deference, of consideration, and of respect are neglected, and where the dignity of individuals is denied, then justice has been replaced with injustice. Indications of understanding and of contentment, signs of approval or acceptance are transformed into screams of indignation, into gestures of denunciation, into protest and revolt. The cry "It is unjust!" demands access into the domain of law. Justice presupposes the principles of respect and of dignity, whereas injustice engenders humiliation and contempt.

According to Ernst Bloch, "the so-called sense of justice ... often reveals itself as composed of the most

diverse feelings and emotions." The explosion of anger in Tunisia provides an opportunity to discern what enters into the mix, what elements compose the drive for justice. Imperatives of impartiality, equality, and merit are one aspect of justice, as is the exigency of respect and dignity for the human being as such, independently of his or her social class or regional belonging. It is impossible in just a few pages to exhaustively cover the importance of all the elements that compose the idea of justice. I will limit myself therefore to an analysis of the central role of respect and of dignity in guaranteeing a true social justice.

The concept of respect is surely very complex. One could say that it is ambiguous and polysemic. It is proximate to esteem, consideration, and deference. Further, it involves rights as well as persons. The imperative is to recognize the individual person as having inalienable rights and obligations.

The most evident link between justice and respect appears quite clearly in the work of John Rawls, for whom the notion of respect occupies a central place in his theory of justice as equality. According to Rawls, respect is a basic condition that is guaranteed by the principles of justice in a well-ordered society. What is at stake is in fact "self-respect," considered to be a primary good, perhaps the most important good in Rawls's eyes. Hence, "a desirable feature of a conception of justice is that it should publicly express men's respect for one another."

In order to analyze in more depth the question of respect, it is important to distinguish "self-respect" from "self-esteem." This distinction is important for someone like Paul Ricoeur who argues in *The Just* both that "there is a bond of mutual implication between self-esteem and the ethical evaluation of those of our actions that aim at the 'good life,'" and that "there is a bond between self-respect and the moral evaluation of these same actions, submitted to the test of the universalization of our maxims of action." Thus, Ricoeur continues, "taken together, self-esteem and self-respect define the ethical and moral dimension of selfhood, to the extent that they characterize human beings as subjects of ethico-juridical imputation." Ultimately, "we ourselves are worthy of esteem or respect insofar as we are capable of esteeming as good or bad, or as declaring permitted or forbidden, the actions either of others or of ourselves."

Ricoeur's distinction could prove useful toward understanding better the reaction of the Tunisian population that was offended and humiliated by an oppressive regime, which totally failed to demonstrate respect and



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consideration. Indeed, Ricoeur argues, self-respect must be considered as "the fact of defending one's rights, to resist everything that can trample them, to refuse to be used, manipulated, exploited or degraded." Self-respect, when dismissed or denied, incites one to refuse all humiliation and provokes indignation, protest, and revolt.

From these limited reflections, I would propose an understanding of social justice that always involves what I would call an *ethics of respect*: respect of individual and collective rights, respect of procedures, and so forth.



The Tunisian people first made a claim for their fundamental right to freedom, to respect, and to dignity.

This ethics of respect must be found at the basis of any social contract, of any political pact capable of grounding a democratic regime, and of any state with a rule of law worthy of that name.

The Tunisian revolution has shown that respect necessitates the establishment of political institutions that will guarantee the protection of dignity and the fundamental rights of citizens. One of the major lessons of this revolution is that the Tunisian people, prior to demanding economic, social, or cultural rights, first made a claim for their fundamental right to freedom, to

THE NEW TECHNOLOGIES PROVIDED AN ENVIRONMENT FOR THE EXERCISE OF CRITIQUE WITH A TEMPORALITY (REAL TIME) AND A VIRTUAL LOCATION (THE NETWORK) THAT ESCAPE TRADITIONAL FORMS OF CONTROL AND OF CENSORSHIP. FROM THE BEGINNING, THOUSANDS OF INTERNET USERS PARTICIPATED IN THE LAUNCH OF PROTESTS AND IN THE ORGANIZATION OF DEMONSTRATIONS.

respect, and to dignity. The basic right to be respected is the necessary condition enabling each Tunisian citizen to establish him or herself as a subject of rights, for him or her to be considered as a person capable of participating in the construction of a political space in which equality and “difference” (*ikhtilâf*) are both legitimated and guaranteed by the rule of law.

Freedom is first of all a conquest—such is one of the major lessons to draw from the Tunisian revolution. However, once won, freedom must be exercised and put to the test of reality. This requires the elaboration of a legal order, which determines the conditions of freedom’s exercise and the spheres within which it can be realized. At stake are in fact borders. Freedom ends where the freedom of others begins, as the old saying goes. The drawing of borders between the different powers (executive, legislative, and judiciary), between the sphere of the state and that of the ruling party or civil society, follows a similar logic. This *art of separation* must be institutionalized, but it requires consultation and public debate, as well as a collective learning, all of which constitute the necessary conditions to establish the rule of law.

But what precisely is the role that law must play in order to ensure the transition from an insurrectional situation toward a process of democratic transition?

One knows that the legal order of the old regime has been *de facto* revoked. That is a consequence of the revolution. The entirety of its juridical apparatus must therefore be put in question, because it has completely lost its legitimacy, because it was established on an unjust basis and unjust principles. The constitution, the electoral law, the law of the press, and more have all served the dictatorship and its staying power instead of the general interest or the popular will. That is why it is necessary to dismantle the juridical apparatus in order to build, from the ground up, a new and just legal order that will draw its legitimacy from the principles of the revolution. That is the task assigned to the High Commission for Political Reforms, at the head of which is the Tunisian jurist Yadh Ben Achour.

The new legal order also must not be severed from the social order, which is by definition heterogeneous and affected by many kinds of contradictions, differences (*ikhtilâfât*), and struggles. These must be translated in order for the law to be legitimate. What is therefore required is a *new social contract* and a *new political covenant*, which must assume and ratify these differences, and which must involve the elaboration of viable political compromises that include all political groupings, all movements, all components of society.

The process of transition requires the institutionalization of conflict, the establishment of new legitimate powers, and the definition of new rules for the political game: procedures of universal suffrage founded on the sovereignty of the people, the selection of the voting system toward the organization of elections (majority or proportional representation), the nature of the political regime (presidential, parliamentary), and so forth. All these questions must be the object of contradictory debates, consultations, and compromises involving the entirety of the nation’s living forces, and not a limited coterie of technocrats or experts (no matter how competent).

And yet, one cannot help but notice that there remain many zones of opacity in the current process of transition. For it requires the shaping of a juridical form in order to institutionalize the gains of the revolution and to determine the new sites of power. Based on the available information, some of the first decisions made by the provisional government failed to involve any true consultation. For example, the nomination of the new governors was the result of a unilateral decision by the Interior Minister. Similarly, the nominations of some

ambassadors by the Foreign Affairs Minister were performed in a spirit of continuity with the old regime. In both cases, and in others as well, such decisions have provoked an angry reaction from the population: people have expressed their opposition with protests and demonstrations. In some regions, they gathered in front of the governors’ offices in order to demand the immediate departure of newly named governors. They succeeded. Following his own strong positions (and probably to appease the tensions), the Interior Minister decided to “freeze the activities of the RCD” until its dissolution by legal judgment, according to the required procedure.

It seems clear (as I write this) that the popular will continues to play its role as a counter-power in order to preserve the gains of the revolution and to change the

FACEBOOK ENABLED THE INSTANTANEOUS DIFFUSION OF INFORMATION AND, THROUGH TESTIMONIALS AND AMATEUR VIDEOS, IMAGES OF THE REPRESSION AND THE FACES OF VICTIMS. THE INTERNET PERMITTED PROTESTORS TO TRANSCEND REGIONAL ENCLOSURES, TO WIDEN THE MOVEMENT, AND TO GIVE THE REVOLUTION A NATIONAL AND EVEN INTERNATIONAL DIMENSION.

anti-democratic practices of the old regime. One can only hope that these practices of resistance continue to accompany the process of transition, in order to ensure the passage from revolution to a truly democratic rule of law. The future of the revolutionary process will depend on the popular will and its readiness to exercise control over the choices and the orientations (institutional, political, economic, etc.) that will be ratified over the course of this transition period.

The revolution turned out to be a formidable moment in the quest for freedom and for dignity. In the transition from revolution to the exercise of freedom and of democracy, law must play a crucial role. There were no doubt abuses and failures with regard to law, but overall the Tunisian people were careful to act within a legal frame, while advancing a new, revolutionary legitimacy.

Let us hope that the Tunisian people will walk on the path of freedom and of dignity without falling by the wayside, or suffering that which they have already suffered enough. ■

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