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ABSTRACT Targeting has been defined as a method by which goods, services, or other programmatic actions are delivered to groups or individuals that have specific characteristics. Similarly, politics refers to the social processes that determine who gets what, when, and how. This similarity suggests there may be utility in undertaking an explicit analysis of how the science and the politics of targeting relate to one another. Accordingly, this article outlines a technical/scientific framework regarding targeting and, using one element of this framework (sensitivity and specificity analysis), demonstrates that recent shifts in politics and policy in the United States can be more clearly understood when viewed from this angle. Then, the article outlines a basic framework on politics and uses it to demonstrate that one of the most fundamental features of our training, practices, and outlook (specialization) holds obvious benefits for advancing research but has three undesirable effects in the realm of policy: 1) it directly or indirectly encourages narrow, partial solutions to complex problems, some of which may have unintended effects on health or well-being for the very people we seek to help; 2) it creates a cumulative demand for research dollars, specialized interventions, and policy attention that far exceeds available resources and capabilities; and 3) it often prevents us from developing and advancing the common agendas and mutual support required to be effective in political and policy realms. The article concludes that more explicit analysis along these lines could strengthen our effectiveness in the policy realm.

KEY WORDS: • targeting • food • nutrition • policy • trade-offs • values • rhetoric • liberals • conservatives

Targeting has been defined as “a method by which goods, services, or other programmatic actions are delivered to groups or individuals that have specific characteristics” (1). This is very similar to a widely cited definition of politics: “the social processes that determine who gets what, when, and how” (2).

This similarity has several implications. First, it suggests nutrition professionals might be fundamentally engaged in politics when we recommend which foods, nutrients, or services should be delivered; which individuals or groups should receive them; when and for how long they should receive them; and how they should receive them. The decision to fortify the U.S. food supply with folate is an example. Second, it implies nutrition scientists also are engaged in politics, albeit indirectly, when we decide which nutritional problems, interventions, and population groups to study, and which we will not study. The examples of micronutrient supplements, genetically engineered crops, and food aid in developing countries come to mind. Targeted research often shapes future actions. Third, it implies nutrition professionals should expect to be part of a larger social process when making and promoting certain program, policy, and targeting options, some of which are overtly political and others are not. The controversies related to infant formula vs. breast-feeding, and development of dietary guidelines related to fat, sodium, and sugar illustrate some of these larger social processes. Finally, this similarity calls into question the claim for “value-free science” or policy recommendations based solely on “sound science” or “expert judgment.” All our research choices and policy or program recommendations carry value and political implications, regardless of the scientific or the technical manner in which they are developed, presented, and justified.

This article is based on the premise that most of our analyses and perspectives regarding targeting reflect a technical form of rationality and that the appropriateness and effectiveness of our recommendations and efforts can be improved by taking greater account of the sociopolitical dimensions of targeting (3,4). The article illustrates the relationships between these 2 perspectives and draws some conclusions for practice.

A technical perspective on targeting

In general terms, we usually think about targeting by asking several questions, such as: Who is at risk? Which nutrients, nutritional conditions or needs are relevant? Which foods or other inputs might address these needs most effectively and...
efficiently? How much supplemental food or other inputs may be required to make an impact? In addition, targeting decisions should take into account the objectives of the program, the nature of the available indicators, and the trade-offs among sensitivity (Se) and specificity (Sp) (5). These latter three are described below.

**Objectives of the program.** Two distinct objectives are: 1) to improve access to food, nutrients, education, or other resources on the part of a particular subpopulation; or 2) to improve nutritional status or health outcomes. Although improving access may also improve nutrition or health outcomes, this is not necessarily the case, and the failure to make this distinction is the source of much confusion in program design, targeting, and evaluation decisions.

We can see this confusion in the U.S. Food Stamp Program at the present time. The legislative intent of this program is to improve access to a more nutritious diet but not necessarily to require participants to consume a nutritious diet (6). Yet, the program continues to be evaluated and questioned, implicitly or explicitly, on the basis of outcomes related to nutrient intake, diet quality, and, more recently, obesity.

**Targeting indicators.** When the objective is to improve access, there are several common categories of targeting indicators (Fig. 1) (5):

A. Indirect measures that are a reflection of deficits or limited access in the distant or recent past, such as stunting, hemoglobin concentration, low birth weight, and others;
B. direct measures of current deficits the program is intended to address, such as habitually low food or nutrient intake, low levels of knowledge, or suboptimal practices;
C. measures that predict the risk of harm in the future, such as maternal stature that predicts low birth weight; and
D. indirect measures that are associated with A, B, or C, such as low household income, physiological status (e.g., pregnancy), maternal education, indicators of social marginalization, and others.

When the objective is to improve nutritional or health outcomes, by contrast, the most appropriate targeting indicators (E) relate to the mediating or effect-modifying factors that predict the likelihood an individual will benefit from the particular intervention being provided, with "benefit" in this context being measured by nutritional, health, cognitive, or other outcome indicators. For example, a child’s age may predict which stunted children are likely to benefit from supplementation to a far greater extent than the degree of stunting itself.

Targeting indicators based on A–D often are used because indicators of benefit are not known or feasible. Sometimes, as in vitamin A deficiency, this is perfectly acceptable, because the targeting indicators are directly related to the nutritional deficit, and the intervention at hand, such as vitamin A capsules, also is directly related to this deficit. In more complex cases, however, only a fraction of individuals targeted on the basis of indicators A–D may respond to the intervention at hand. For example, children deficient in vitamin A may not respond to dark green leafy vegetables if they have very low fat in their diets. The actual proportion of responders and the size of response depend on the extent and the severity of the nutrition problems in the population and the nature and the intensity of the intervention.

In some cases (e.g., low extent or severity and/or weak or low intensity interventions), programs may have difficulty demonstrating impact on nutritional and health outcomes (G), and it may be advisable to adopt 1) the more conservative objective of improving access to food, nutrients, or program services; and 2) measures of effectiveness that relate to improved access to or utilization of the program inputs (e.g., food, nutrients, education). (F) The failure to do so, and the failure to keep reminding policy makers and critics of these distinctions, can endanger support for the program if it later is evaluated against the wrong objective and/or is using the wrong evaluation indicators.

**Se and Sp.** In addition to choosing indicators, a major focus of targeting from a technical perspective relates to the Se and Sp of the indicators. Se refers to the proportion of the needy that is properly identified by the indicator, whereas Sp refers to the proportion of the non-needy that is properly identified as such by the indicator. Within any given population, Se and Sp are a function of the validity of the indicator (as an indicator of need), the reliability of measurement, and the cutoff value.

Se increases as the cutoff value becomes more lenient, such that, in the extreme case, all needy individuals can be included in the program if the cutoff is set at the highest value in the population. This improvement in coverage of the needy comes, however, at the expense of Sp (Fig. 2). That is, the ability of the program to exclude the non-needy from receiving program benefits decreases as the cutoff value is made more lenient. From a statistical perspective, the most efficient cutoff value is often set at the point where the sum of Se and Sp is greatest.

**A sociopolitical perspective on targeting**

As suggested in the definitions of targeting and politics provided above, targeting does not simply have political implications. Targeting is at the very core of politics, and some very interesting perspectives emerge by examining our work through a political lens and by examining politics through our technical lens.

It is possible to translate our familiar 2 × 2 table into some language often used in analysis of social programs (Fig. 3). In this context, successful targeting occurs when the needy are provided with services and the non-needy are excluded from services. Unsuccessful targeting occurs in 2 ways: through false positives, representing leakage or the wasting of resources on the non-needy; and through false negatives, representing the
failure to provide services to some of the truly needy. These 2 types of errors are inversely related—an increase in one implies a corresponding decrease in the other.

It also is possible to translate the $2 \times 2$ table into social policy rhetoric from both sides of the liberal–conservative political spectrum (Fig. 4). In this context, and without necessarily having all cells of a $2 \times 2$ table in mind, liberals stereotypically are concerned with the left-hand side and conservatives with the right-hand side, each using distinct language to justify and to motivate their claims.

Liberals stereotypically favor expanding a program by relaxing eligibility criteria (i.e., expanding the definition of "targeted for services" and the upper two cells in Fig. 4). This has the effect of increasing Se but simultaneously decreases Sp. In terms of political rhetoric, this translates into more fully addressing social needs, moral duties, and human rights on the left-hand side, while simultaneously increasing dependency, fraud, waste, and inefficiency on the right-hand side.

The converse also is true—restricting or shrinking a program by tightening eligibility criteria (or otherwise restricting access to the program) has the effect of increasing Sp while decreasing Se. This is justified by conservatives as eliminating dependency, fraud, waste, and inefficiency on the right but castigated by liberals for failing the poor and shirking moral duty on the left.

While these examples have focused on the political implications of changing the cutoff point, neither politics nor public health restricts itself to that dimension of the $2 \times 2$ table. Rather, the very definition of the "truly needy" also is subject to debate and revision (i.e., the horizontal axis in Fig. 4). In this case, liberals (left panel) stereotypically seek to expand the definition of need by identifying more and more problems requiring government’s attention, while conservatives (right panel) seek to restrict the definition of need or to suggest nongovernmental mechanisms for addressing human needs.

Finally, this $2 \times 2$ framework for analyzing politics provides some insights concerning more recent shifts in political rhetoric and social policy. In recent years, conservatives have identified a number of themes that reinforce their traditional space on the right-hand side of this table, such as erosion of moral character (upper-right cell) and personal responsibility (lower-right cell). They also have claimed space in traditionally liberal cells on the left-hand side of this table, however, with themes such as maintaining a social safety net, enhancing opportunity, rewarding work, and compassion, as conservative justifications for "reformed" social programs (upper-left cells). This is in addition to "tightening the belt, fiscal responsibility, and downsizing government" as justifications for restraining the growth of social programs (lower-left cells).

It appears more difficult to identify cases in which liberals have either fortified their claims to the traditional space on the left or captured any of the space on the right. Improving human capital (upper-left cell) and preventing future harm (upper-right cell) are 2 examples that come to mind. Both of these draw upon rather technical and complex arguments, however, and, in terms of political rhetoric, fall rather flat compared with the resonant social themes of the conservatives (7).

These examples confirm the fundamental connection between politics and the technical perspective on targeting, and illustrate some of the insights about politics that can be obtained by explicitly combining the two. The examples provided above, however, only focus on using the $2 \times 2$ table of the technical perspective to understanding politics in a somewhat different way. The next section uses political frameworks to understand our technical work in a different way.

A political perspective on technical rationality

While the technical perspective on targeting emphasizes the outcomes of "who gets what, when, and how," the political
perspective emphasizes the social processes that determine those outcomes. In general terms, the social process involves participants (individuals, organizations, and groups), with diverse perspectives (defined by their identities, expectations about the future, and goals), using their power, resources, and strategies to pursue their goals. This social process produces a variety of direct and indirect immediate outcomes, as well as longer-term effects (8). This perspective on politics is used below to examine some features of the nutrition and public health community, in other words, us.

We participants in nutrition and public health come from government and nongovernmental organizations, academia, and the private sector. Our perspectives are shaped to a large extent by our training and the problems we address, with specialization being a hallmark of this policy domain. Early in our careers, many or most of us are encouraged to specialize in certain nutrients (iron, vitamin A, zinc, iodine, folate), diseases (diarrhea, acute respiratory illness, malaria, HIV), populations groups (pregnant women, neonates, infants, children, elderly, refugees), solutions (supplements, fortification, education, agricultural, or health interventions), or in other terms. Thus, some of the targeting decisions, concerning “who and what,” are shaped by some upstream processes related to specialization.

Commonly, we specialists in any given area become committed advocates for what we have studied or worked on for many years. This becomes a large part of our individual and organizational goals and identities. Our most common strategies are to accumulate evidence and arguments for greater investment in each specialized problem, based on its unacceptably high prevalence, the severity of its immediate or long-term consequences, the social or the biological vulnerability of the most-affected groups, the availability of low-cost or cost-effective solutions, or the higher cost of addressing the consequences of the problem at some later time. Sometimes we advance evidence and arguments not only for certain problems, solutions, or target groups, but also for certain forms of targeting or certain indicators to be used in targeting. This pattern of specialization and advocacy for relatively narrow issues shapes and is shaped by the character of our academic disciplines and subdisciplines; the organizational structure of governments, donors, and nongovernmental organizations; the creation of expert bodies and professional interest divisions; and other institutional structures. Our socialization into specialization is so commonplace, we scarcely recognize it or stop to ponder its outcomes and effects in terms of the policy process.

Among the important outcomes and effects of this pattern are: 1) we directly or indirectly encourage narrow, partial solutions to complex problems, some of which may have unintended effects on the health or the well-being for the very people we seek to help; 2) we create a cumulative demand for research dollars, specialized interventions, and policy attention that far exceeds available resources and capabilities; and 3) we often are unable to develop and advance the common agendas and mutual support required to be effective in political and policy realms.

**SUMMARY**

Whereas we are accustomed to thinking of political processes in terms of electoral, party, or interest group politics, this article highlights the fundamentally political character of even our most technical work and the political and policy consequences of our specialization. A few key points are worth highlighting in closing.

First, the political analysis of ourselves just presented is not a blanket criticism of specialization per se, which has many obvious benefits. Rather, it highlights that specialization may be appropriate in some research, but integration and common interests often must be prioritized in politics and policy development (9).

Second, the perspectives presented here might help generate strategies for framing nutrition in terms more compatible with the existing political will. Two examples are: 1) we can design programs in ways that not only benefit nutrition and the poor but that also create benefits for more influential stakeholders whose political support may be vital for initiating and sustaining the program; and 2) we can do a better job at connecting nutrition concerns and objectives to salient values and rhetoric in the current political discourse. These are offered not as simple solutions to the politics of nutrition but as alternative and complementary ways of thinking about the problem within each political context.

**LITERATURE CITED**